

CLIMATE CHANGE; OUR ENVIRONMENT; AND THE LAWS IN NIGERIA.

C.I.N. EMELIE, Ph. D

Chukwuemeka Odumegwu Ojukwu University, Uli,
Igbariam Campus Anambra State
E- mail: reachmeifeyinwa @ yahoo.com

Abstract

"An ever -increasing body of evidence suggest that human action are changing our global climate. The forcing factor behind these changes is our release of gases, in particular carbon dioxide that trap heat and warm the atmosphere." This study by way of literature review and oral interview examines how Climate Change has affected our environment. It will also examine the legal framework available for regulating climate change and for preserving our environment. It will also show that a link exists between climate change and our Environment, that the uncontrolled impact of the changed climate on our Environment, will amount to paying lip service to the intent and purpose of the notion of sustainable development .Finally it recommends among others that carbon dioxide which is by far the most important cause of climate change be reduced to a more tolerable level.

Introduction

Climate is the regular pattern of weather Condition of a particular place¹. Climate Change means a Change of Climate which is attributed directly or indirectly to human activities that alters the composition of the global atmosphere and which is in addition to the natural Climate variability observed over comparable time periods.²

An ever increasing body of evidence suggests that human actions are changing our global Climate.

Worldwide, average annual temperatures have increased over the past Century. Alpine Glaciers are melting rapidly; arctic sea ice is about half as thick and one third less extensive than it was a century ago. Many plant and animal species are shifting their range into new territories or changing their behavior to accommodate the changing Climates³.

According to a researcher, at the beginning of the industrial age, 250 years ago, the atmosphere had about 280ppm of CO₂. The level has risen to about 380ppm now. If current trends continue, we could triple the preindustrial CO₂ levels by the end of the century. Although predictions about the timing and consequences of such a drastic change in our atmosphere vary, most of them are grim⁴. The obvious effect of Climate Change affects the world at large and Nigeria in particular. It is a global long term problem and it involves complex interactions with Environmental,

¹ A.S Horby 'Oxford Advanced Learner's Dictionary of Current English' 7th ed. Sally Wehmeier (Ed) Oxford University Press, Oxford, 1993 . P, 264.

² The United Nations Framework Convention on Climate Change, 21st March 1994.

³ W.P. & M.A Cunningham, 'Principles of Environmental Science' 4th ed. McGraw Hill Co, New York.2008 p.86..

⁴ Cunningham, *ibid*

Economic, Political Institutions, Social and Technological Processes⁵. As serious as this global issue seems, the Nigerian politics and public discussions are barely addressing the global concern over the years, public and private issues were so much dominated by the internal questions of Political issues, Corruption, Insecurity among others, than problem like the Climate Change. The burden of Climate Change only attracted the attention of environmental experts or NGOS⁶.

The Nigerian environmental media (that is land, water and air) is experiencing adverse Climate conditions with negative impacts on the welfare of millions of people. The situation is not hopeless, in that Nigeria has put in place a number of laws to protect our environment. Recently on September 23, 2016 the Nigerian President General Muhammadu Buhari said that his signing of the Paris agreement on Climate Change demonstrated Nigeria's Commitment to a global effort to reverse the effect of the negative trend of Climate Change. However, the agreement is an expression of interest by the nation to commitment towards reducing "Green House Gas Emission unconditionally by 20 percent and conditionally by 45 percent". Generally, the purpose of every legislation is to make adequate provision for the subject matter intended to be cured by the legislation, whether the available laws, policy and expression of commitment has been able to mitigate the adverse effect of the Climate Change and protect our environment is a serious question that needs urgent answers and attention.

Forcing Factors or Mechanisms Behind Climate Change in Nigeria.

Most Scientists now regard human caused global Climate Change to be the most important environmental issue of our times⁷. Factors that can shape Climate are called *Climate forcing or forcing mechanisms*. These include processes such as variations in solar radiation, variations in the earth's orbit, variations in the reflectivity of the continents and oceans, mountains, buildings and continental drifts changes in green house gas concentrations. These forcing mechanisms can be either "internal" or "external". Internal forcing mechanisms are natural processes within the Climate system itself. External forcing mechanisms can be either natural or anthropogenic (human caused). However, whether the forcing factor is internal or external, the response of the Climate system might be fast, slow or a combination⁸. As far back as 1988, the United Nations Environment Programme and World Meteorological Organization, Intergovernmental Panel on Climate Change (IPCC) in their report observed that:

Global warming is unlikely to be the result of natural variability alone, we have altered the Chemical composition of the atmosphere through the buildup of greenhouse gases primarily carbon dioxide, methane and nitrous oxide.

The major forcing factor is our release of gases in particular carbon dioxide that traps heat in the atmosphere. Human activities have raised carbon dioxide (CO₂), the principal greenhouse gas to its highest level in the atmosphere in 800,000 years. The accumulation of green house gases has raised global temperature to their warmest levels in 1,300 to 1,700 years⁹. The IPCC analysis confirms that orbital cycles and other natural factors account for only 7% of observed warming.

⁵ B. Metz, O. Stewart & J. Pan (Eds) 'Climate Change 2001 Mitigation Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change'. Cambridge University Press, 2001, p.65.

⁶ M.I Medugu - Effects of Climate Change www.environmental_synergy.wordpress.com accessed 28-9-2016.

⁷ W.P. & M.A Cunningham, 'Principles of Environmental Science' 4* ed. McGraw Hill Co, New York.2008 p.90..

⁸ Climate Change- Wikipedia, the free encyclopedia. P.7 <https://en.wikipedia.org/wiki/Climate-change>. Accessed 29 06 2016.

⁹ P. Gonzalez "Science for Natural Resource Management under Climate Change". See <http://issues.org/27.4/Gonzalez> accessed 7/23/2016.

Motor vehicles, power plants, deforestation and other human sources emit twice the amount of greenhouse gases that vegetation, soils and oceans can naturally absorb. This is the fundamental imbalance that causes Climate Change. Gas flaring which is the resultant effect of Nigeria being one of the major oil producers in the world has taken its toll. On the Climate of the nation, Nigeria remains one of the top countries in the world where huge volume of gas is flared with about 2.5 BCF flared daily. These gases otherwise known as the greenhouse gases are constantly released into the earth's atmosphere as a result of human actions. Higher concentration of these atmospheric gases increased trapping of infrared radiation. As a result, the lower atmosphere has warmed and continues to warm, changing the weather and Climate. This phenomenon is called the greenhouse effect. The greenhouse effect is a natural atmospheric process that is necessary to life, however, too much greenhouse effect caused by other factors such as making of cement, burning of forests and grass lands, wet rice paddies, coal mines, landfills and pipeline leaks among others, outside gas flaring causes harmful environmental change.¹⁰ Notably, Nigeria as at 2005 has the highest rate of deforestation in the world. Between 2000 and 2005 the Country lost 55.7% of its primary forests and the rate of forest change increased by 31.2% per annum. Forest has been cleared for logging, timber export, subsistence agriculture and notably the collection of wood for fuel which remains problematic in Nigeria and Africa in general.¹¹

Adequacy of The National, Legal and Policy Framework on Climate Change.

The place of legislation in protecting our Climate cannot be over emphasized, as no meaningful progress will be made in achieving a protected Climate without having in place the do's and don'ts on the Climate. Our Climate being one of the environmental media is controlled by the regulations relating to environmental protection in Nigeria. The legislations include:

The Petroleum Act¹² This is an Act which came into effect on the 27th of November, 1969, to provide for the exploration of petroleum from the territorial waters and the continental shelf of Nigeria and to vest the ownership of and all on-shore and offshore revenue from petroleum resources derivable thereof in the Federal Government and for all other matters incidental thereto. By the provision of section 2, the Minister of Petroleum and solid minerals is empowered under 2(a-c) to grant a license, to be known as an oil exploration licenses, to explore for petroleum; a licenses to prospect for petroleum; and a lease to be known as an oil mining lease, to search for, win, work, carry away and dispose of petroleum. Section 8 (a) states that the Minister shall exercise general supervision over all operations carried on under licenses and leases granted under this Act, and to report annually to the Federal Government on the progress of the oil industry in Nigeria.

It is obvious that the above provision leaves the minister with an enormous powers and duties, and does not also place such duties or powers of the Minister under any obvious check, as the minister is to report directly to the Federal Government. The minister having such powers may decide to abuse such wide powers and may even refuse or neglect to perform such duties.

Although section 12 provides that the minister may by writing under his hand delegate to another person any power conferred on him by or under the Act, unfortunately, the minister by virtue of

¹⁰ Cunningham, *op cit* p. 68

¹¹ Adebayo & Arowolo, *op cit*

¹² Petroleum Act, Cap P.10, Laws of the Federation of Nigeria, 2004

the same Act cannot delegate the powers to make orders and regulations. To say the least, the powers are too wide and ought to be curtailed. The powers to make regulations prescribing anything requiring to be prescribed for operations carried out under this Act, includes among others, ensuring safe work conditions, conservation of petroleum resources; prevention of pollution of water courses and the atmosphere, making of reports and returns (including reports of accident) and inquiries into accident¹³.

Abimbola Salu¹⁴ is of the view that the provision relating to the regulation of activities under the Act, did not only intend that the minister will make regulation for the protection of the waters of Nigeria, but also empowers the minister to make Regulations for the prevention of pollution of the atmosphere.

It is abundantly clear that oil exploration is a major source of pollution in the country, the lawmakers in enacting the petroleum Act, did not see the activities of oil production as capable of causing untold havoc to the environment, thus they did not focus on pollution in the provisions as an item of great and considerable importance that should be controlled. Although the Act vested in the Minister the power to make Regulations for the prevention of pollution, such power is at most discretionary, and leaves the Minister with the choice of either exercising his discretion or not. Little wonder that section 9(b) (iii) provides generally for the prevention of pollution of water courses and the atmosphere without providing for any detailed procedure on how to actually enhance and achieve the prevention of pollution, thus leaving such important and crucial issue as the protection of the environment in the hands of a Minister who may or may not decide to exercise his powers. In order to ensure that proper method and practices as well as good conservation measures, and proper environmental protection are observed in the oil producing environment, it is suggested that the head of Petroleum Inspectorate should be given the power to give orders to the oil producing companies on how best to prevent pollution and that failure by the oil companies to comply with such orders would be a ground for the revocation of their licenses. This is because, the head of the petroleum inspectorate is more on ground and most likely to monitor the activities of the oil companies closely than the Minister.

The Oil Pipeline Act:¹⁵ This is an Act to make provision for licenses to be granted for the establishment and maintenance of pipelines incidental and supplementary to oil fields and oil mining, and for purpose ancillary to such pipelines. Provision on environmental protection is found in the Oil and Gas Pipelines Regulations under the subsidiary legislation. Regulation 8 provides that where the test pressure results in a hoop stress greater than 75 percent of the specified minimum yield strength of the pipe line and when a pipeline crosses or passes within 100 meters of a water course, that the operator shall assure the department that adequate contingency plans have been made for protecting the environment. This provision is vague as no detailed procedure and process of protecting the environment is provided for, there is no direct assignment of responsibility as such, the implementation and enforcement of the regulation is in doubt. Environmental protection is an important issue that should not be left in the air without solid procedure on ground to properly address incidents of attempts to degrade the environment.

¹³ See section 9(b) (1 - v) of the Petroleum Act.

¹⁴ Abimbola Salu, "Securing Environmental protection in the Nigeria oil Industry",

¹⁵ Oil Pipelines Act, Cap 07, Laws of the Federation of Nigeria, 2004

The Constitution of the Federal Republic of Nigeria, 1990¹⁶

The Constitution is the system of laws and basic principles that governs a country. It spells out the responsibilities of the various organs of government as well as the relationship between the citizens.¹⁷ For Nwabueze, "a constitution is a body of fundamental principles according to which a state is governed. It is therefore a declaration of how certain goals are to be achieved in any society"¹⁸. The constitution of the Federal Republic of Nigeria, 1999 provides under the second schedule part I and II, for the legislative powers of the various levels of government in Nigeria. Part I of the said schedule, provides for the Exclusive legislative list while part II provides for the concurrent legislative list. Looking at the provisions of the constitution, it is quite clear that no legal mandate places the responsibility of environmental protection on the shoulders of the Federal Government in particular and the state and local Government in general. A mockery of a legal framework for the protection of the environment is seen under section 20 of the Constitution and it provides thus: The state shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria. On the face of this provision, one is tempted to believe that the environmental protection right is provided for in the constitution of the Federal Republic of Nigeria, and that since the constitution is "a body of fundamental principles according to which a state is governed", the rights so provided for in such an instrument are inalienable and deserves to be protected. Regrettably this is not the intention of the draftsman of the constitution for the fact that the chapter under which the said section appeared is an integral part of the Fundamental objectives and Directive Principles of state policy, which are not law so called, as they are not justiciable, with the effect that non-observance of these provisions cannot be challenged in any court of law in Nigeria. This was the position of the court in **Morebish v Lagos State House of Assembly**¹⁹, where it was held that the provisions of chapter 2 of the constitution which contains the fundamental objectives and directive principles of state policy is not justiciable, although they remain pillars of guide and focus of attention of all tiers of Government. Also, the court of Appeal in **Okogie v Attorney General of Lagos State**²⁰, properly stated the position of the provisions of chapter 2 of the constitution of the Federal Republic of Nigeria, when it held that the Educational objectives under section 18 of the then 1979 constitution which is in all fours with the provision under chapter two of the 1999 constitution are directives to the government and not to private citizens. To this extent, I humbly disagree with my respected colleague O. Okukpon who has applauded the provision as creating an obligation on the part of the government to protect the environment. Of what value is a provision that is not backed by law? thus, the question whether the constitution of the Federal Republic of Nigeria has provided for the protection of the environment, is to be answered in the negative, as the purported provision seeks to expose and mock the insincerity in our pretentious quest to protect the environment.

Be that as it may, there is now the need for express inclusion of environmental protection under chapter four of the constitution as a fundamental right, the time to act is now, since there is presently to have the constitution amended. However, the protection of the environment should not be restricted to a specific guarantee, hence Steiger opined, that different legal techniques for

¹⁶ Cap C23, Laws of the Federation of Nigeria, 2004

¹⁷ Alfred Okukpon in L. Atsegbua (ed) *op. cit* 27

¹⁸ B.O. Nwabueze, *The Presidential Constitution of Nigeria* 35 First & Company, London 1982, 7.

¹⁹ (2000) 3 WRN 134.

²⁰ (1980) FNR 445.

the protection of the environment should be adopted. He suggested the following techniques among others:

- (a) Specific environmental guarantee in the constitution
- (b) By combination of such guarantee with other Fundamental rights.
- (c) By using other fundamental rights directly to secure protection of the environments
- (d) By connecting state policy guidelines. The protection of the individual's right to clean environment.²¹

We cannot pretend to be protecting life as provided in section 33(1) of the constitution when materials that are endangering our lives are all around us. Thus, while we wait for the amendment of the constitution, it is suggested that, a forward looking and activist interpretation of the provision of section 32(1) on the Right to life; will place an obligation on the shoulders of the powers that be, to adequately protect the environment from degradation that will consequently, affect the lives of the citizens.

The National Oil Spillage Detection and Response Agency

(NOSDRA): The National Oil Spillage Detection Response Agency (NOSDRA) was established in 2006 to tackle persistent environmental degradation and devastation of the coastal ecosystem arising from incessant oil spill especially, in the oil producing areas of the Niger-Delta region. The Agency is mandated to play the lead role in ensuring timely, effective and appropriate response to all oil spills as well as protect threatened environment and ensure clean up of all impact sites to the best practical extent. The structure of the Agency provides for zonal offices in the oil producing areas of the Niger-Delta region.²² The Agency is to receive and review oil spill reports, inspect and remedy past impacted sites. According to the Minister of Environment, between January and June 2009, the Agency received and reviewed oil spill reports of eight oil industry operators, inspected more than 425 past impacted sites out of which about 270 have been certified as having been restored to their natural state. The agency in collaboration with oil companies has set out an action plan for the decommissioning of their abandoned well-heads and other oil facilities, with the intention of rehabilitation of burrow pits with a view to converting them into fish ponds and other economically viable projects. Also, it is said to have completed the environmental sensitivity index (ES) maps of Nigeria Coastal lines from Badagry to Calabar, stretching 50km inland for the purpose of guiding and ensuring appropriate response mechanism required for different environmentally sensitive areas in the event of oil spills. Because oil spill management requires acquisition of satellite based data. The Agency has established a Geographic Information system (GIS) Command and control center to facilitate prompt detection and effective monitoring of oil spill incidence as well as solving management problems . This agency, however, seems to exist on paper as not much is known about the activities of the Agency. According to an official of the Agency²³, "we have so many problems from finance to provision of vehicles, boats among others. We cannot even assess the main areas where oil spill occur, because we lack competent personnel and equipment to carry out the job" To this end, the

²¹ H. Steiger. "The Environmental Right to a Decent Environment,

²² *ibid*

²³ Name withheld on Request.

setting up of the Agency is a welcome development, however, the agency needs to be enabled and provided with all that is necessary for its proper and effective functioning. It should be properly staffed and financed and well equipped to carry out its functions.

The National Environmental Standard and Regulation Enforcement Agency(NESREA)

The Agency was established by the National Environmental Standard and Regulations Enforcement Agency (Establishment) Act 2007, which repealed the Federal Environmental Protection Agency Act, which was promulgated in response to the fraudulent dumping of toxic waste at Koko town in Delta State in 1988. Before the replacement of FEPA with this new agency it is important to note that Nigeria had no well articulated institutional arrangement or mechanisms for environmental protection and waste Management, and for the enforcement of environmental protection laws and Regulations. The Agency was established on 31st of July, 2007 with Dr (Mrs.) Ngeri S. Benebo as the Director General. It has the responsibility for the protection and development of the environment biodiversity conservation and sustainable development of Nigeria natural resources in general and environmental technology, including coordination and liaison with relevant stakeholders, regulations, rules, laws, policies and guidelines.

Although the provisions of the Act establishing the Agency is laudable, all-embracing, progressive and depicts a nation that is serious and honest in all forms to protect its environment, the Act however, is not without some obvious flaws. **Like** the exclusion of the Agency in performance of its function and exercising of its powers over the oil and gas sectors²⁴. One wonders why such important sector would be removed under the control of an Agency acclaimed to be the eye of the nation as far as environmental issues are concerned. Added to this, is the fact that the activities of the oil and gas sector poses the greatest threat to the environment as a whole. The exclusion of the sector is somewhat nebulous and simply points to the fact that the drafters of the Act is in the ocean of contradiction of ideas and probably lack of understanding of what environmental protection and public safety means. No doubt the provision must have been hunted by the dilemma of the legislators.

The Act is fraught with provisions that do not put into consideration the victims of environmental degradation. The Act cast criminal liability on the violator of the Act or regulation which is redressed by the Agency by conducting criminal proceedings in respect of the offences²⁵. The affected victims are not empowered in the Act to institute civil action against the offenders of the Act for compensation or restitution, unless in tort laws which of course, has its own limitations. The victims of environmental degradation should not be allowed to go without compensation. This is a serious over-sight on the part of our legislators. There is no exhibition of hindsight regarding the position of the victims in enacting these laws. The Act provides for the payment of fine to the Government, while the victim who suffered the impact of environmental degradation goes empty-handed, an anomaly that needs to be revisited and straightened out, for even in the face of a conviction for an offence under the Act, the victim should have the backing of the Act to proceed to court against the offender for civil action for compensation, what is more, the court should also be able to make an order requiring the victim to be paid

²⁴ Section 7 (h) for example, provides that the Agency shall enforce through compliance monitoring, the environmental regulations and standards on noise, air, land, seas, oceans and other water bodies other than in the oil gas sector

²⁵ Section 32 (3) of the Act

compensation for damages suffered. Another indeterminate, uncertain and ire or anger raising piece in the Act under section 3(c) deals with the three other persons to represent the public interest to be appointed by the Minister of Environment". The questions are how can just three persons represent the public interest of a nation with six (6) geopolitical zones, 36 states, a federal capital territory and seven hundred and eighty-one (781) Local Government areas and six (6) Area Councils at the Federal capital Territory, Abuja? Who shall these three persons be and which part of the geopolitical zones shall they come from? This piece of provision is very subjective. The appointment of these three persons lies in the inner recesses of the Minister of Environment. To make it worse, there is no approving body for the appointment exercise, which may probably question the basis for the Appointment. Just the opinion of the Minister of Environment. The legislation gives leeway for self-opinionated decision to appoint without any reasonable consideration. The representation of the public interest by just three persons solely appointed by the Minister of Environment looms larger than life over the management of the affairs of the victims of environmental pollution and degradation. When it is considered, the deritorious effect of environmental abuses suffered by the victims, one should appreciate the delicate balance on which the fate of the public affected by environmental degradation is hanging and the need for a review of the provision of the section under consideration. It is suggested that the various State Commissioners of Environment be allowed to represent their States in the composition of the Governing Council of the Agency.

The Environmental Impact assessment Act of 1992²⁶. This Act sets out the general principles, procedure and methods to enable the prior consideration of environmental impact assessment on certain public or private projects. It prohibits the establishment of public or private projects without prior consideration of the environmental impact prior to establishment. For better understanding, "Environment Impact" is defined as the alteration of environmental conditions or creation of a new set of actions, or environmental conditions, adverse or beneficial, caused or induced by the action, or set of actions under consideration. The attention given to environmental conditions referred to will vary according to the nature, scale and location of the proposed project²⁷. The impact therefore is the difference between the present environment as modified by the project and the future environment "as it could have naturally evolved without the project" Environmental impact Assessment has been said to be a systematic process involving the identification, predicted evaluation and presentation of the probable as well as possible consequences, (positive or negative) of a proposed project, policy or program, at a stage in the decision-making process where serious environmental damages can either be avoided or reduced. Simply put, it means the study of the biological, physical and socio-Economic impacts of a proposed development action,²⁸ This laudable innovation in protecting the environment of Nigeria, could be traced to the 1981-86 National development Plan

²⁶ E.E. Okon,op.c;r213

²⁷ *Ibid*

²⁸ M.T Okorodudu - Fubara *op. cit* 187

guidelines, which required²⁹ that; Feasibility studies for all projects both private and public should be accompanied with environmental impact statements.

In 1989, the National Policy on the Environment provided as one of the major strategies for implementation of the National Policy on the environment, prior environmental assessment of proposed activities which may affect the environment or the use of a natural resource. The above provision, informed the then Minister of Environment, Major General Kontagora in his address to the National Council on the Environment in November 1990 to press for the need of Environmental Impact Assessment as a prerequisite for all new developmental project.³⁰ The baptism of the Minister's assertion by the National Council on the Environment gave birth to the Act under review. No doubt, the Act is an embodiment of steps in enhancing the protection of the environment in the face of executing developmental projects. From the above expositions, it will not be an exaggeration to assert that the country has laudable provisions for regulating environmental impact assessment, and that if the provisions are adhered to, high level of sustainable development of the environment will be achieved. To this end, environmental degradation and pollution will be reduced to the barest minimum, and the environment, preserved as a global heritage for both the present and the unborn generations.

The Criminal Code Act³¹ This is an act to establish a Code of Criminal law. Section 234 of the Act, provides for the offence of "common nuisance" which correlates with the common law offence of "Public Nuisance" as was held in the case of **Esso Petroleum v South-Port Corporation**³². This offence is committed where a person does anything which obstructs or causes inconvenience or damage to the public in the exercise of rights common to all members of the public. An offender under this section is guilty of a misdemeanor and is liable to imprisonment for two years. It has been posited³³ that this offence which is closely related to the offence of public nuisance, should be invoked to punish unlawful discharge of oil pollutants on public land and water because it amounts to "inconveniences and damage to the public in the enjoyment of these rights likely to be caused". Unfortunately, whether this section can come to the rescue of environmental protection depends on the Attorney-General of the Federation who is empowered to bring such action. Also, it is observed that an owner of a vessel who obstructs or causes inconvenience to the public in a Navigable water is not guilty of this offence. It appears, to some extent that the application of this section is restricted to land alone as the offence appears to be in the conflict with the provisions of the oil in Navigable Waters Act. It is interesting to note, that some pollution offence against public health attracts criminal sanctions. For example section 245 of the Act states that any person who corrupts or foul (pollutes) the water of any spring, well, tank, reservoir, 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. Again, section 247 provides that any person who vitiates the atmosphere in any place so as to make it noxious to the health of persons in general dwelling or earning on business in the neighborhood or passing along a public way; or 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 to life. whether human or animal is guilty of a misdemeanor and is liable to imprisonment for six months. These provisions good as they are, are hardly invoked in pollution cases, as no known polluters have

²⁹ E.E. Okon, *op. it*, 214.

³⁰ Criminal Code Act, Cap. C38, Laws of the Federation of Nigeria. 2004.

³¹ A. Jaff, **Standing to sue in Conservation Suits**. Law and Environment, Bahimand, 1970, 123.

³² (1954) 2 QB, 182.

been prosecuted under these provisions. Omotola³³ has expressed the view that section 247 is a fertile ground for the punishment of oil companies who engage in gas flaring. Again, the question is, will the Attorney General of the federation, the state and our court be disposed to do business? So far, they have all been found wanting in giving the lead needed for effective environmental protection. There is need for all hands to be on deck.

The Associated Gas Re-Injection Act³⁴This is an Act that compels every company producing oil and gas in Nigeria to submit preliminary programs for gas re-injection and detailed plans for implementation of gas re-injection. This Act became necessary because most oil companies in Nigeria were engaged in the flaring of gas which occurs naturally and is released when petroleum exploitation is carried out. The flaring of gas is not only a waste of resources, but it also, pose a serious threat to the environment where this activity is carried out.³⁵ Looking at the provisions of this Act, section 1 places a duty on every company producing oil and gas in Nigeria, to submit preliminary schemes for the viable utilization of all associated gas produced from a field or group of fields and for projects or projects to re-inject all gas produced in association with oil but not utilized in an industrial project section 2 provides for submission of detailed plans for implementation of programs relating to the re-injection of all produced associated gas; or schemes for the viable utilization of all produced associated gas. Curiously, no penalty was stipulated in the Act for failure by the oil companies to comply with the re-injection and utilization programs. Section 4 which is the penalty section, relates only to the provisions of section 3 which makes it an offence for companies engaged in the production of oil and gas after 1 January, 1984 without the permission in writing of the minister. This, of course is a great lacuna in the Act, as the effect of gas flaring on the environment is there for all to witness, the various move by the Government to stop gas flaring seems to be a huge joke as the same government keeps postponing the date for the oil companies.³⁶ By the 1998 National gas policy review, gas flaring was to end in 2005, this policy is yet to be implemented in 2009. No doubt, excess gas that are flared continually for over forty years, has left its toll on the people of the area and their environment.

Be that as it may, it has been expressed that the 1998 review of the national gas policy which increased the penalty for gas flaring to 10 Naira for every 28.32 standard meters (equivalent to 1,000 cubic feet) of gas flared, against 0.50 Naira for the same quantity under the previous policy, and the 1999 supplementary Budget increase by 100 per cent, raising it to N20 per 1,000 standard cubic feet, is still more cost effective for the oil companies, to pay the penalty than to put the re-injection scheme in place.³⁷ Although the federal Government has continued to offer some new incentives to the oil companies to enable them abate the pollution of the environment through gas glaring, there is however doubts whether the new incentives will compel the oil companies to stop the flaring of gas. Judging by their past activities, there seems to be no light at the end of the dark tunnel. The way out is for the Government, national and international environmental protection organizations to mean business, determine to end gas flaring and the oil companies will have no choice but to obey the clean air order which is the order of the day.

³³ J.A. Omotola, (ed) **Environmental Laws Including Compensation**,

³⁴ Faculty of Law University of Lagos, 1990, 251.

³⁵ Associated Gas Re-injection Act, Cap A24 Laws of Federation of Nigeria, 2004.

³⁶ Associated Gas Re-injection Act, Cap A24 Laws of Federation of Nigeria, 2004.

³⁷ E.T. Kachukwu, "Legal Issues in Oil and Gas Industry". *Gravitas Review of Business and Property Law*, Vol.2, No.9 1989, 39.

Looking at the regulation, the truth is that our nation had no properly defined and articulated law and policy in addressing Climate Change. These laws simply put, do not touch on Climate Change, as they are not specifically meant as legislation for addressing Climate Change. The fact that the government of the nation is ignorant of the dangers posed by Climate Change, was brought to bare at the 17th Conference of Parties (COP 17) to the United Nations Framework Convention for Climate Change held in Durban, South Africa from November 28th to December 9th, 2011, where the conference sidelined the nation's participation because the nation lacks Climate Change Commission. Nigeria's participation remained at the ministry level with no legal and structural commitment for implementation. This is because a bill intended to bear the Climate change Commission is yet to be assented by the president as at July 2012. It is at the level of the Commission that the Country can be regarded as a leading voice seeking justice for the African continent through the Green Climate Fund³⁸.

However, the recent signing of the Paris agreement by President Muhammadu Buhari, his pledge to ensure the ratification of the Paris agreement before the 22nd Conference of Parties to the UN framework Convention on Climate Change in Marrakesh Morocco in November 2016 and the institution of an Inter-Ministerial Committee on Climate Change, appears a right step in the right direction. We wait to see how far this sudden awakening to the chills of Climate Change will go in addressing the already threatening issue. Will ratification of the Paris agreement amount to paying lip service to the global issue without more, as there are numerous International Convention and policy geared towards mitigating the effect of Climate Change, but which has not achieved the intended purpose.

The Link Between Climate Change and Our Environment.

Climate Change degrades our environment and poses a threat to the Citizens in every Country, including Nigeria. A change in the type, distribution and coverage may occur given a chance in the Climate. Some changes in Climate may result in increased precipitation and warmth, resulting in improved plant growth and the subsequent sequestration of airborne CO₂³⁹.

Climate Change is already beginning to transform life on earth. Around the globe, seasons are shifting, temperatures are climbing and sea levels are rising. Meanwhile our plant must still supply our environment with air, water, food and safe places to live. If we don't act now, Climate Change will rapidly alter the lands, air and water we all depend on for survival, leaving our children and grandchildren with a very different world.⁴⁰

Some of the most dangerous consequences of Climate Change on our environment are:

Higher Temperature: Over the last Century the average global temperature has climbed to about 0.6 °C⁴¹. The hottest year since the instrumental temperature record began was 1998. The hottest of all was 2015 with records of hundreds of wildfires, hurricane seasons and heat waves ever seen was experienced all over the globe including Nigeria⁴².

³⁸ M. Simire and A. Abutu, "Nigeria's Wanting Status in Climate Negotiation". In B. Anam, Rethinking Sustainable Development in Africa, Africa Development Charter Series I. Ethereal Bliss, Nigeria, 253.

³⁹ Kinver, Mark (2011) "UK Trees Fruit Ripening 18 Days Earlier" Bbc.co.uk Bbc.co.uk. Accessed 6- 29-2016.

⁴⁰ The Nature Conservancy" www.nature.org/our_initiatives/urgent_issue/global-warming-climate-change/threats. Accessed 6-29-2016

⁴¹ Cunningham, *op cit* 95.

⁴² Climate Change Guide" www.climate-change-guide.com. Accessed 7-1-2016.

Increase in Natural Disasters: Climate Change has caused an increase in both the number and ferocity of droughts and dust storms as witnessed in some northern parts of the country, flood disaster has also become an order of the day. The effects of flooding that became a natural disaster are still fresh in our minds. The devastating damage on people each year is getting more. People were displaced because of rising sea levels, floods and cold wave and a great number of crops were destroyed. There was at that time more environmental refugees than political and war refugees.⁴³

Impact on Lakes and Rivers: Another effect of Climate Change on our environment is the shrinking of rivers. A decrease in precipitation caused by climate change has caused rivers especially in the middle belt and northern parts of the country to decrease in size, with no water found in some of the rivers. According to a report from the Climate Change Guide for a more sustainable future, Climate change and population pressures have caused Lake Chad in Africa to shrink by over 90% since 1963. Even worse, although Lake Chad was once one of the largest lakes in the world, it could disappear in about 20 years time.

Desertification: The process of Conversion of once fertile land to desert is called desertification. This process has been accelerated by Climate Change. Millions of square kilometers of once agricultural land have become barren.

Shortages of Food and Water: The United Nations Food and Agriculture Organization (FAO) expect agricultural production to continue to grow over the next few decades. Where the current world food supply would be sufficient if equitably distributed, to provide an average of 2,800 Kael per person per day. The FAO predicts that by 2030, there will be enough food available to supply 3,050 Kael per day to everyone or about 30% more than most of us need⁴⁴. However, with Climate Change, shortages of food and water are now and will become a common place in the future. As the world and the nation's population is growing, there is a higher demand for these vital resources. However, agricultural output in the nation is depleting because of drought, desertification, heat waves, wild fires and changes in precipitation. Also fresh water supplies are decreasing due to the melting of glaciers, the shrinking of lakes and water contamination.⁴⁵

Spread of Diseases and Food Poisoning: An increase in temperature will also spread Malaria and dengue fever (diseases caused by a virus carried by mosquitoes), as well as several other diseases. Malaria would spread to millions of people in the near future, with devastating consequences. Climate Change will increase the frequency and intensity of dust storms which will also spread diseases. The spread of disease and food poisoning is among the least known effect of Climate Change.

How to Control or Reduce Climate Change Effects

At the center of the 1992 United Nations Earth Summit meeting in Rio de Janeiro was the Framework Convention on Climate Change, which set an objective of stabilizing greenhouse gas

⁴³ M.I Medugu - Effects of Climate Change www.environmental_synergy.wordpress.com accessed 28-9-2016.

⁴⁴ Cunningham, *op cit.* 216.

⁴⁵ M.I Medugu - Effects of Climate Change www.environmental_synergy.wordpress.com accessed 28-9-2016.

emissions in order to reduce the threats of global warming.⁴⁶ . There are many ways to slow or reverse Climate Change; some of them are listed below:

a) Greenhouse" emissions should be reduced to the barest minimum by substituting natural gas with coal, and promoting energy efficiency in homes and industries. This apart-" from stabilizing our Climate, saves money, conserves resources and it has other environmental benefits.

b) The need to capture and store Carbon dioxide. Vegetation naturally reduces global warming by removing carbon dioxide from the atmosphere and storing it in biomass. According to Lackner⁴⁷, trees could capture carbon dioxide from the air and 90,000 tons of carbon dioxide per year from the air, an amount e(|Ual to the carbon dioxide produced by 15,000 cars. It wifl take a quarter of a million of them to remove all the carbon dioxide produced annually by humans. Farmlands also can serve as a carbon sink if farmers change their crop mixture and practice minimum till cultivation that keeps carbon in the soil.

c) Also, it has been observed that the injection of carbon dioxide into underground strata or deep ocean waters helped in the storage of carbon dioxide. For example in Norway, Statoil has been pumping more than 1 million metric tons of carbon dioxide per year into an aquifer 1,000 feet below the sea floor at a North Sea gas well.⁴⁸

d) Laws - There is need to put laws in place that will address the issues of Climate Change. There seems to be no national policy on Climate Change in Nigeria. The Nigerian senate had passed the bill on establishment of National Climate Change Commission since July 22, 2009, but lack of assent to the bill will prevent Nigeria from accessing the Climate fund of \$200 billion that industrialized nations had agreed to make available annually by 2020 at the COP 16 in Cancun Mexico.⁴⁹

It is at the level of Commission that the Country can be regarded as a leading voice seeking justice for the African Continent through the green Climate fund. However, all hope is not lost, this fact is made obvious by the recent statement of President Muhammadu Buhari while addressing the opening of the meeting on taking Climate action for sustainable development in New York. When he stated;

We have instituted an Inter-Ministerial Committee on Climate Change to Implementation Of my country's Nationally Determined Contributions (NDCs), thereby ensuring a strong Cross-sector approach, coherence and synergy for climate action. In addition, we are set .To launch our first ever Green Bonds in the first quarter of 2017 to fund a pipeline of projects. All targeted at reducing emissions towards a greener economy.⁵⁰

Furthermore, the Nigerian government, the public, the nongovernmental organizations and all stakeholders involved in the global phenomenon needs to increase public awareness, promote research and establish a Commission or an Agency that will handle issues related to global warming and Climate Change⁵¹. Collectively or individually, these bodies are required to fund

⁴⁶ Cunningham, *ibid*.

⁴⁷ K.S, Lackner "Building of Synthetic Trees" www.mhhe.com/cunningham He. Accessed 18-10-2016.

⁴⁸ C.S Hopkinson & S.S Vallino "Efficient Export of Carbon to the Deep Ocean through.

⁴⁹ Dissolved Matter". 2005 Journal of Nature, in Principles of Environmental Synergy E. Umejei, "Nigeria Climate Change Commission Still a Mirage" (2011) in B. Anam: Rethinking Sustainable Development in Africa, African Development Charter Series- 1 Ethereal Bliss Company.

⁵⁰ M.I Medugu - Effects of Climate Change www.environmental_synergy.wordpress.com accessed 28-9-2016.

⁵¹ M. Simire & A. Abutu, "Nigeria's Waning Status in Climate Negotiation" 2011 in as above.

Climate Change projects in Nigeria for sustainable Solution⁵¹. Climate Change is already beginning to transform life on earth.⁵²

Conclusion

Climate Change is inevitable if emissions of greenhouse gases continue unabated, future changes will substantially exceed those that have occurred so far. The effects of Climate Change are extremely important in today's Society and have a large impact on human life across the world. In the future, wars over natural resources could result in millions or even billions of casualties. Indisputably, Climate Change is mankind's greatest Challenge and we cannot afford to ignore it any longer. Therefore;

Science has made enormous inroads in understanding Climate change and its causes, and is beginning to help develop a strong understanding of current and potential impacts that will affect people today and in coming decades. This understanding is crucial because it allows decision makers to place Climate Change in the context of other large challenges facing the nation and the world. There are still some uncertainties, and there always will be in understanding a complex system like Earth's Climate. Nevertheless, there is a strong, credible body of evidence, based on multiple lines of research, documenting that Climate is changing and that these changes are in large part caused by human activities. While much remains to be learned, the core phenomenon, scientific questions, and hypotheses have been examined thoroughly and have stood firm in the face of serious scientific debate and careful evaluation of alternative explanations.⁵³

⁵² The Nature Conservancy" www.nature.org/our_initiatives/urgent_issue/global-warming-climate-change/threats p.3. Accessed 6-29-2016

⁵³ United Nations Research Council, 'Advancing the Science of Climate Change ' in Climate Change- Wikipedia, the free encyclopedia. P.7 <https://en.wikipedia.org/wiki/Climate-change>. Accessed 29 06 2016.