

# RECONCILING INDUSTRIAL DEVELOPMENT AND ENVIRONMENTAL SUSTAINABILITY: AN ASSESSMENT OF THE LAW ON AIR POLLUTION

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**Abstract:** The planet earth as a habitat consists of man and his environment which is the totality of the relationship between the air, land, water, mineral resources, plants, animals and humans. Environmental sustainability has become a major issue of discussion in the international system because it touches upon the very existence and survival of man. Without the environment, life cannot exist or flourish and thus, any damage to the environment is damage to life itself. However, man has used and exploited the environment to a dangerous life threatening level. Most of the acts that have degraded the environment were and are considered developmental activities. The 1986 United Nations General Assembly Declaration on the Right to Development states that development is an inalienable human right and it sees the human person as the central subject of development. Various definitions of the term “development” connote advancement and progress to the exclusion of anything negative. In other words, any development that results into setback in any area either in the present or in the future cannot by any means fit into any definition of the term development and should not under any disguise be accepted as such. Since the industrial revolution, the world has experienced tremendous ‘development’, however, this development became a harbinger of danger in the form of pollution to land, pollution to the waters, emission of all manner of gaseous substances into the air from the numerous factories all over the globe and other different ills culminating into ill health to man and immeasurable danger to the environment. Air especially has been noted as being essential to life not only to man but to all living and non living things. The quality of air as being a global common, a natural resource that does not respect geographical or national boundaries makes it unique and dictates that all hands must be on deck against whatever could cause air pollution, since it is a case of injury to one is an injury to all. This paper discusses at length the definitions of the terms environment, pollution, the right to good environment and sovereignty, it also assesses the international law on air pollution and states that the enforcement of such laws should not be left in the hands of each state alone, air being a resource that the whole world shares in common and concludes that developments are bound to turn awry where the observance of the laws on global commons are not strictly monitored or enforced.

**Keywords:** Development, Environment, Pollution, Sovereignty, Sustainability.

## INTRODUCTION

Man’s activities of exploring and exploiting the environment for his survival has been continuously of negative implication to the environment generally. As the activities continue, the continued existence of the earth and consequently that of man continues to hang in balance as pollution of the air, the sea and the land on an unprecedented level becomes a recurring affair resulting in such calamities as the ozone layer depletion problem, biodiversity loss, erratic climatic changes, land degradation and the like. McClymonds ( 1992 ) consents that the earth is threatened by a mounting global environmental crisis which is due in large part to human activities which has placed tremendous strain on the natural processes that help keep the condition of the planet within livable limits. The danger posed to the environment by man as aptly described by John is that the greed of our present generation gives little thought to the survival of future generation, a scenario which has imposed

tremendous strain and stresses on the environment, especially in the past two centuries which had put our planet in perilous danger. He concludes that ours indeed is a planet in peril (John, 2009).

The magnitude and the rate of environmental pollution linked to worldwide industrialisation has continued to generate fear and concern. The different types of pollution identified includes water pollution, thermal pollution, land pollution, pesticide pollution, radiation pollution, noise pollution and air pollution (Funmilayo, 2012). The several laws, conventions and treaties notwithstanding, the battle is far from being won and it is either the battle is won or the existence of mankind becomes history. The argument is that development should not have negative impact either on the short run or on the long run as this is bound to automatically affect man negatively since it is not always the fact that the environment can be returned to how pure it was before pollution, as some conditions are irreversible.

Air is peculiar being the most common resource that man takes for granted (Amokaye 2004). Personal use of land could cost money and so also water to drink, bath and use generally but air never does, therefore the tendency to ignore issues as concern air is rife. It is equally important to note that no one is exempted as we all breathe air and it is abundantly available and free. The global commons, that is, water, land and air are common to the whole planet but in terms of being common to man and life and all living things generally, air takes the lead as none can avoid breathing or drawing air. Air enjoys pride of place as no living thing can survive without air. Murray (1976) Based on the foregoing, adequate protection of air is an issue which cannot be overlooked or trivialized. This paper assesses the 1979 Geneva Convention on Long Range Transboundary Air Pollution and related protocols and makes recommendation for more effective implementation of the law on air pollution to save mankind from the impending doom.

#### **DEVELOPMENT AND ENVIRONMENT: AN OVERVIEW**

According to Todaro (1980), development is a multidimensional process involving changes in structures, institutions, and attitudes as well as the acceleration of economic growth, the reduction of inequality and the eradication of absolute poverty. Adenuga (2014) also defines development to be the increase in the well being of the people of a state. Accordingly, Baderin (2011) sees development to be the primary pursuit of most societies.

Since creation everything that man employs for his development, advancement and survival are found in his environment, in fact the complete dependence of man on the environment for feeding, clothing, shelter and technological advancement is an indisputable fact. The environment by its various definitions consists largely of the global commons which are the seas, the air and the land and as such the well being of these obviously translates into the well being of man and ensures his survival and advancement. According to Isaichel (1999), the environment provides the basis for human exploits for agricultural, industrial, commercial, technological and tourism development of a society, while Miller (1976) describes the term "environment" as "the aggregate of external conditions that influence the life of an individual or population, specifically the life of man and other living organisms on the earth's surface" The National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007 which is the current legislation governing environmental matters in Nigeria in Section 37 defines 'Environment' to include 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.

#### **THE NEGATIVE IMPACT OF DEVELOPMENT ON THE ENVIRONMENT**

The demand for better and more comfortable existence calls for large scale conversion of raw materials into finished products for human consumption. The industrial revolution began in Britain and went round the globe and necessitated an upsurge in the number of factories and industries for production purposes. It has been established that manufacturing industries in the process of production release large amount of carbonmonoxide, hycarbons, organic compounds and chemicals into the air, water and land. Michael Prather et all quoting *Haagen-Smit*, 1951]. stated that

"The air we breathe can contain noxious substances in the form of trace gases and aerosols. Ozone (O<sub>3</sub>) is identified as one of the more serious of these air pollutants, and the large abundances of O<sub>3</sub> observed within and downwind of metropolitan regions are clearly identified with emissions of ozone precursors, specifically, oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO) and volatile organic compounds (VOC), by the industrial and transportation sectors"

The mid 1800s witnessed many legislations aimed at combating pollution occasioned by industrial and domestic smoke. The era, which equally witnessed rapid deforestation and reduction of trees which could have emitted oxygen to sanitize the air, witnessed an unprecedented level of environmental degradation. The relationship between industrialization and development, be it economic, political, social has been established but the inevitable fall out being the increase in the level of pollution to the environment as a result of the waste generated from these factories which constitutes both short and long term danger to health, life and ecology has not been denied. Scientists in the 1960s did establish the fact that sulphur emissions in continental Europe was involved in the acidification of Scandinavian lakes and between 1972 and 1977 it was confirmed that air pollutants could travel several thousands of kilometres before deposition and damage occurred(. Economic Commission for Europe Handbook for The 1979 Convention On Long-Rangetransboundary Air Pollution and Its Protocols)

According to McEldowney (2010), the twenty- first century has begun as an era dominated by the market economy and globalization, setting new challenges for our environment. This includes the development of a global economy in energy; the increase in the use of air transport and in car use; and in the consumption of fossil fuels. The impacts of globalization are complex and not simply based on consideration of international markets. Thus, attempts should made to resolve apparently competing aims, namely the maintenance of high growth in world economies against the protection of the environment. It therefore stands to reason to state that stock must be taken and the environmental costs of the said developments in terms of loss of lives, reduced life spans and diseases of various sort as a result of polluted environment and most especially polluted air weighted .China cities have been rated as having some of the world's most polluted air and as published by the Lancet British Medical journal, 1.2 Million premature deaths in 2010 was attributed to bad air. The Washington post reported that while other countries have cut air pollution by limiting emission from factories and cars, China had resisted efforts aimed at making it to toe the same line.

#### **AIR AS A GLOBAL COMMON**

Geographical boundaries are manmade and delimitation of political boundaries over which nations exercise sovereignty are artificial and are part of human ingenuity for ease of governance .Air as a natural resource along with seas and land are no respecter of manmade boundaries. For example some rivers flow across countries and even continents, an instance is the *Danube* River which begins in the Black Forest region of Germany and flows across central Europe and the countries of Austria, Hungary, Croatia and Yugoslavia. It then forms the border between Romania and Bulgaria, turning north across Romania to eventually end in the Black Sea. Likewise land stretches and only changes in topography and texture but remains the same land throughout the earth and the same goes for air as a global common.

Air occupies the lower atmosphere (the hemisphere) and can be defined as the invisible mixture of gases (such as nitrogen and oxygen) that surrounds the Earth and that people and animals breathe or mixture of nitrogen, oxygen, and minute amounts of other gases that surround the earth and forms its atmosphere. Gaseous composition of dry air includes Nitrogen (N<sub>2</sub> )-78.084,Oxygen( O<sub>2</sub> )-20.947,Argon (Ar )-0.934,Carbon dioxide (CO<sub>2</sub> )-0.0350,Neon (Ne)-0.001818,Helium (He) -0.000524,Methane (CH<sub>4</sub>)-0.00017,Krypton (Kr)- 0.000114,Hydrogen (H<sub>2</sub>) -0.000053,Nitrous oxide (N<sub>2</sub>O)- 0.000031,Xenon (Xe) -0.0000087,Ozone\* (O<sub>3</sub>) -trace to 0.0008,Carbon monoxide (CO) -trace to 0.000025,Sulfur dioxide (SO<sub>2</sub>) -trace to 0.00001,Nitrogen dioxide (NO<sub>2</sub>)-trac to 0.000002,Ammonia (NH<sub>3</sub>) -trace to 0.0000003.Mackenzie, F.T. and J.A. Mackenzie (1995)) Air sustains life acts as navigation paths for aircrafts and technologies telecommunications, broadcasting, electronic wave length broadcasting.

#### **THE CHALLENGES OF CLEAN, HEALTHY AND SAFE AIR**

Air pollution is the main challenge to clean, healthy and safe air. Pollution has been severally defined. The Business Law Dictionary defined pollution as the presence of matter (gas, liquid, solid) or energy (heat, noise, radiation) whose nature, location, or quantity directly or indirectly alters characteristics or processes of any part of the environment, and cause (or has the potential to cause) damage to the condition , healthy, safety , or welfare of animals, humans, plants, or property. In Nigeria, the Federal Environmental Protection Agency Decree, 1988, defines "pollution" as "man-made or man-aided alteration of chemical, physical or biological quality of the environment to the extent that is detriment to that environment or beyond acceptable limits. The Black law's Dictionary posits that pollution is the presence of harmful substances (either physical or gaseous),noise or energy

(radiation) within a certain area, that causes harm to the surroundings, altering the natural environment around which it has been erected. Omorogbe (2001) defines environmental pollution as the addition to the natural environment of any substance or energy form (e.g. heat, sound) at a rate that results in higher than natural concentrations of that substance, and therefore has an adverse effect. The National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007 of Nigeria in Section 37 defined pollution to mean man-made or man aided alteration of chemical, physical or biological quality of the environment beyond acceptable limits and pollutants shall be construed accordingly. According to World Health Organization (W.H.O., 1974), the environment is considered polluted when it is altered in composition or condition directly or indirectly as a result of the activities of man in that it becomes less suitable for some or all of the uses for which it would be suitable in its natural uses. Pollution is the introduction or escape of any material in such amount as act to cause negative alteration of the natural environment. These materials have been variously referred to as gases, fumes, pollutants and dusts.

Under the interpretation section of the Ogun State Environmental Protection Agency Law Vol.3, air pollution was defined as the presence in the atmosphere of one or more contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant or animal life, to health, or to property to unreasonably interfere with the enjoyment of life or property. Air pollution, in the words of Atsegbua, Akpotaire & Dimowa (2003) is the upsetting of the natural arrangement of different gases in the air. Air pollution is the accumulation of substances in the air, in sufficient concentration to produce measurable effects on man, plants and animals. It involves the erosion of harmful substances into the atmosphere, which cause danger to any living thing". According to them, "It is the contamination of the atmosphere by gases and solids, produced in the in the burning of natural fuels, chemicals and some industrial process and in nuclear explosions". Air pollution is a general term that covers a broad range of contaminants in the atmosphere and it can occur from natural resources or from human activities. The 1979 Convention On Long-Range Transboundary Air Pollution And Its Protocols defined air pollution as the introduction by man, directly or indirectly, of substances or energy into the air resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems and material property and impair or interfere with amenities and other legitimate uses of the environment while Long-range transboundary air pollution was defined as air pollution whose physical origin is situated wholly or in part within the area under the national jurisdiction of one State and which has adverse effects in the area under the jurisdiction of another state at such a distance that it is not generally possible to distinguish the contribution of individual emission sources or groups of sources.

Research revealed that air is a media and that a great percentage of air pollution is from sources located on land like motor vehicle emissions, stationary combustion, that is, fumes from generating sets from factories and homes, industrial processes have been identified whereas some other sources are emissions from volcanic eruptions, earth quakes, aircrafts and others (Akanki 1990). The Deutschland E6 report stated sources of emissions as power plants 24% slash and burn deforestation 24%, agriculture 14%, Industrial Production 14%, transport 14%, heat energy 8%, other energy use 5%, waste 3%. Amokaye quoting D. Elsom identified some air pollutants such as particulates, sulfur dioxide, (SO<sub>2</sub>), volatile organic compounds (VOC), persistent organic pollutants (POPs), carbon dioxide (CO<sub>2</sub>), and chloroflourocarbons (CFCs) and if combustion is achieved, carbondioxide (CO<sub>2</sub>), water vapour, SO<sub>2</sub> nitrogen oxides (NO<sub>2</sub>) and volatile and non volatile metal such as arsenic (As), cadmium (Cd), lead (Pb) and mercury. (Earth and UNEP 1992)

An enquiry into the relationship between air pollution and mortality in six U.S. Cities showed that air pollution with fine particulates, including sulfates actually have strong association with mortality. (Douglas W. Dockery, et al) .Ikoni (2010) listed generally the effects of air pollution to include sudden death, increasing heat and excessive perspiration, health hazards and environmental hazards. Air pollution increases rate of death, introduces hitherto unknown hazards to man and the ecosystem and may also result in birth defects, reproductive dysfunctions, genetic mutations and neurological disorders, lung cancer, arteriosclerotic heart diseases (Akanki, 1990). Poor air quality also has effect on animal and plant life, long term effect of poor air quality changes quality of water and soil and damages the fabric of buildings. (McEldowney, 2010). Production of greenhouse gases which causes climate change and gasses that deplete the ozone have also been linked to air pollution. It should however be noted that the list of the ills of air pollution is endless, long and frightening.

## SUSTAINABILITY AND SOVEREIGNTY

The environment is vulnerable, consequently the space at which developments are taking place are raising alarming changes which in turn are generating alarming challenges in the environment. The fundamental question has been how to keep up industrial development and ensure at the same time the well being of the environment. Sustainability as a term has been widely propagated as being the way out of resource and environmental degeneration. According to the CIGDL Concept Paper<sup>1</sup> Montreal, 2005 sustainability can be seen to refer to the need for development to be integrated, socially, economically and environmentally sound, oriented to the long-term, and hence, able to last while Marni Evans posits that sustainability is about stabilizing the currently disruptive relationship between earth's two most complex systems—human culture and the living world when applied to the environment, his definition agrees with John Pirelli's who described environmental sustainability as a condition of balance, resilience, and interconnectedness that allows human society to satisfy its needs while neither exceeding the capacity of its supporting ecosystems to continue to regenerate the services necessary to meet those needs nor by our actions diminishing biological diversity. In the peculiar area of industrial air pollution and the maintenance of air quality, international co-operation becomes imperative in the face of air quality as a global common. This brings up the relevance of limitation in the concept of sovereignty.

Neil Walker defines sovereignty as a discursive claim concerning the existence and character of a supreme ordering power for a particular polity. H Steinberger discusses sovereignty in the sense of contemporary public international law, to him it denotes the basic international legal status of a state that is not subject, within its territorial jurisdiction, to the governmental, executive, legislative, or judicial jurisdiction of a foreign state or to foreign law other than public international law.

The Montevideo Convention on Rights and Duties of States of 1933, Article 1 provides:

“The State as a person of international law should possess the following qualifications:

(a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to enter into relations with other States”.

Though sovereignty in this context implies a legal order independent of any superior order, it is delimited and qualified to observe some rules even within its confines to ensure that it does not constitute danger to other States. Principle 21, of the Declaration of the United Nations Conference on the Human Environment, states that States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. H.E judge Nagendra Singh, president, international court of justice, in his forward to the report of the expert group on environmental law of the world commission on environment and development, expressed the concept of sustainable development as follows

“The right to development does, however, have certain limitations in as much as it can not be asserted at the expense of the community even at the expense of neighbouring states whose prospect may be jeopardized”.

The principle of territorial sovereignty over natural resources is presently seen as full sovereignty of rights and duties of states.

## AIR POLLUTION FROM THE OIL AND GAS SECTOR

With special reference to the petroleum industry, oil has been referred to as the most important source of energy, but the process of turning crude oil into useable consumer product that is exploration, production, transportation, refinery, distribution is fraught with activities generating pollution to the environment generally. The New York Human Rights Watch in its assessment noted that oil production has had damaging effects on the environment on the oil-producing region, though the extent of damage is subject to dispute. Despite decades of oil production, there is surprisingly little good quality independent scientific data on the overall or long-term effects of hydrocarbon pollution on the delta, yet oil led development has clearly seriously damaged the environment and the livelihood of many of those living in the oil producing communities. The oil companies operating in Nigeria maintained that their activities are conducted to the highest environmental standards, but the Nigeria environmental laws, in most respects comparable to their international equivalents, are poorly enforced. (New York Human Rights Watch, 1999). Research revealed that about 95% of associated gas produced in the process of crude oil extraction

Nigeria is flared. Flaring of natural gas contributes to global warming through emission of greenhouse gases and other ills like formation of acid rain and ozone depletion. It is however disturbing that despite the known ills of gas flaring, all known attempt to put a stop to it in Nigeria has proved abortive as at 1993, Nigeria has flared more gas than any other country in the world (Worika, 2002) .

### **RIGHT TO HEALTHY ENVIRONMENT**

The fact that man met a pollution free environment on creation depicts that the creator intends man to live in a pollution free condition and as such living in healthy environment should be an inalienable right of man. (Atsegbua, Akpotaire & Dimowa, 2003). The African Charter on Human and People's Rights in article 24 provides that all peoples shall have the right to a generally satisfactory environment favourable to their development. Okonmah (1997) stated the obvious that environmental pollution is a breach of man's right to live in a clean and healthy environment and he also noted that the right to a healthy environment, the right to development and the right to peace have been categorized as third generation rights. According to Awolowo (2011), the third generation of rights are the most recently recognized category of rights and can be distinguished from other categories of rights because their realization is not only dependent upon the affirmative and negative duties of the state but also upon the behavior of individual. Okonmah (1997) submitted that right connotes an entitlement to something. He stated further that it means an entitlement to a clean and healthy environment. Thus, a right to a clean and healthy environment is the right of everyone to the conservation of his or her environment, free from the degrading effects of pollution, and other human activities. It has been argued that the recognition that human survival depends upon a safe and healthy environment, places the claim of the right to a clean and healthy environment fully on the human rights agenda. Living in a healthy environment is condition precedent to man's enjoyment of rights especially the right to life, According to Ayanleye (2013), the right to life is only meaningful to a person who is healthy and the right to freedom of movement has no value for a person who is rendered immobile by a preventable disease. It is a popular saying that health is wealth and a healthy nation is a wealthy nation. Thus, health is an issue of central concern to all countries and societies as it is a crucial cornerstone for socio-economic development and progress. This therefore means that living in a healthy environment bears a crucial relationship to development. The productivity approach in a related but radical contribution the issue of importance of the environment to human productivity measures damage to health by its effects on economic output. It asserts that individuals are reproductive capitals and if individual suffer immature immortality due to environmental causes (e.g air or water pollution) if their productivity as measured by days lost from work is impaired due to morbidity, the value of the economic output foregone is the damage.( Charles S. Pearson ;2000)

A healthy environment translates into a healthy people, a healthy workforce, able, willing and available to contribute to national development while it is only a healthy environment that can produce a maximum output for the survival and well being of the present and the future generation. Though the right to healthy environment is yet to be accepted by all nations as part of their organic law, countries like Peru, Spain, Poland, Portugal etc have entrenched in their constitutions the right to healthy environment. Man as the sole beneficiary of any development should have his interest, health and welfare in the present and future as the sole consideration and this is tantamount to the consideration of the welfare of his environment without which man cannot survive.

Air pollution (poison in the air) has been identified as cause of lung, throat, eye, heart and diseases of all sorts. In this case the indispensability of air to life makes whatever degrades the quality of air and makes it dangerous to man's well being conflicts with and negates the right to life . The awareness of the danger inherent in air pollution has necessitated the promulgation of many laws to stem the tide of hazardous activities polluting the air and generally in enforcing environmental practice with well being of man in focus.

Section 20 of the Constitution of the Federal Republic of Nigeria 1999 provides that "*The State shall protect and improve the environment and safeguard the water, air and land and wildlife of Nigeria*" . Though it has been argued that the provisions is not enforceable in the law courts since it is non justiceable, the Nigerian government has made enforceable provisions to combat air pollution within it's domain . These include provisions under the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007 which is the current legislation governing environmental matters in Nigeria. Section 20(1) of the NESREA act provides that, "The agency may make Regulations setting specification and standard to protect and enhance the quality of Nigeria's air resources as to promote the public health or welfare and the normal development and productive capacity of the nation's human, animal, marine or` plant life, and include in particular

- a. Minimum essential air quality standards for human, animal, marine or plant health;
- b. The control of concentration of substances in the air which separately or in combination are likely to result in damage or deterioration of property or of human, animal, marine or plant health;
- c. The most appropriate means to prevent and combat various forms of atmospheric pollution;
- d. Control of atmospheric pollution originating from energy sources, including that produced by aircraft and other self-propelled vehicles, industries, factories and power generating (situation) stations or facilities.
- e. Standards applicable to emission from any new mobile or stationary source which in the Agency's judgement causes or contributes to air pollution which may reasonably be anticipated to endanger public health or welfare; and
- f. The use of appropriate means to reduce emissions to permissible levels.

According to Usman (2012), the said paragraphs may be divided into two subtopics based on the issues they seek to deal with. The two subtopics the paragraphs can be divided into are Sources of Air pollution and Legal Framework for the Regulation of Atmospheric Pollution.

The Ogun State Environmental Management ( Miscellaneous Provisions) Law Section 50 provides that no individual or corporate body shall cause any harmful change in the ambient air status of an environment and that no individual or corporate body shall introduce foul odour into residential areas and industrial by virtue of its activities, while the section 51 provided that the air pollution standards prescribed by FEPA, NAFDAC, WHO, AND OGEDA shall be taken as the minimum standards. The ministry shall have the exclusive right to set more stringent standards in recognition of any implication arising from scientific, health and community developments from time to time and Sections 57 and 58 made provisions for air quality standards and air quality general regulations.

Section 247 of the Noxious Act states that:

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

The Petroleum Act 1990, section 9 (1) empowers the minister to make regulations for the prevention of pollution of water courses and the atmosphere. Also section 99 of minerals and mining Act mandating holders of mining title to take such necessary steps as may be necessary to prevent pollution of the environment which may result from mining operation.

The Federal Environment Protection Agency Act 1988 , Section 4 lists the duties of the Agency ,section 5 provides that the Agency shall establish criteria, guide lines ,specifications of standards for the protection of the nations' air and interstate waters as may be necessary to protect the health and welfare of the population from environmental degradation. Section 17 which requires the Agency to establish criteria, guidelines, specifications and standards to protect the quality of our air resources including [a] minimum essential air quality standards for man, animal and plant health [b]the control of substances in the air that are likely to endanger, human, animal and plant life [c] the most appropriate means of controlling atmospheric pollution [d] control pollution from energy sources stationary or mobile [e] emission standards and [f] the use of appropriate means to reduce emission to permissible levels and subsection 2 permits establishment of monitoring stations for locating sources of air pollution and determine actual and potential danger. Section 15 states penalties for the discharge of hazardous substances constituting harmful waste into the land, water or air.

Equally Nigeria is party to the Convention on the African Migratory Locust, 1962(Kano), the Treaty Banning Nuclear Weapon Tests in the Atmosphere in Outer Space and underwater, 1963 (Moscow), Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and their Destruction.(London, Moscow, Washington)

#### **THE 1979 GENEVA CONVENTION ON LONG RANGE TRANSBOUNDARY AIR POLLUTION AND RELATED PROTOCOLS**

The UN General Assembly by Resolution 2398 (xxiii) which covered the 1972 Stockholm conference noted that there was "an urgent need for intensified action at national and international level to limit and where

possible eliminate the impairment of the human environment". The Stockholm Declaration further stated in part that the protection and improvement of the human environment is a major issue which affects the well-being of people and economic development throughout the world.

Environmental issues are issues of international concern and pollution in all its forms has attracted concern from all and sundry. Research in the latter half of twentieth century discovered that industrial processes have changed the earth in many fundamental ways. The seas are polluted to the detriment of various marine flora and fauna; the desert is expanding; the ozone layer is getting damaged, the global climate is being altered; and there is a rapid extinction of plant and animal species. According to Omorogbe,( 2001) , the conversion of raw materials into finished products involves production and consequently gaseous emission of waste into the air. Where the global commons are concerned international convention, declarations are many. The legislative efforts over the years by way of laws directed at the regulation and possibly the reduction of air pollution to ensure pure air by way of multilateral, bilateral agreement, treaties include among others:

1. Treaty banning Nuclear weapon tests in the atmosphere, in outer space and underwater, 1963 (Moscow)
2. Convention on the African Migratory Locust, 1962 (Kano)
3. Convention on the prohibition of the development, production and stockpiling of Bacteriological and toxin weapons and on their destruction Resurrection 1971
4. International Agreements on atmospheric pollution
5. Environmental Protection: Aircraft Engine Emissions Annex 16, vol. 2 to the 1944 Chicago Convention on Civil Aviation, Montreal, 1981.
6. Framework Convention on Climate Change (UNFCCC), New York, 1992, including the Kyoto Protocol, 1997.
7. Georgia Basin-Puget Sound International Airshed Strategy, Vancouver, Statement of Intent, 2002.
8. Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985, including the Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal 1987.
9. 1968 Treaty on the Non proliferation of Nuclear weapons.
10. Kyoto Protocol agreement in 1997
11. European Climate Change Programme (ECCP)
12. The clean Air Act
13. Vienna convention for the protection of the Ozone layer 1995
14. 1992 united nations conference on Environmental Development
15. Regulations for the prevention of Air pollution from Ships.
16. Motor Vehicle Air pollution control Act was enacted to focus more specifically on automotive emissions standards
17. 1972's United Nations Conference on Human Environment and Development.
18. 1983's World commission on Environment and Development.
19. 1992's United Nations Conference on Environment and Development.
20. 2002's World Summit on Sustainable Development have been particularly important.
21. The control of Air pollution and Green House Gases using International law.
22. Principle 21 of the 1979 Stockholm Declaration on Human Environment.

The convention on long – range trans-boundary air pollution which has been assessed as having addressed some major environmental problems of the UNECE region opened for signature on 13 November 1979 and entered into force on 16 March 1983 with an objective to protect the human environment against air pollution and to gradually reduce and prevent air pollution, including long-range transboundary air pollution. The Convention has 8 protocols, these are;

- The protocol on Air Pollution-Nitrogen Oxides concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes. It opened for signature on 31 October 1988 and entered into force--14 February 1991 .It aims at providing for the control or reduction of nitrogen oxides and their transboundary fluxes.
- The protocol on Air Pollution-Sulphur on the Reduction of Sulphur Emissions or Their Transboundary Fluxes by at Least 30%. It provides for a 30% reduction in sulfur emissions or transboundary fluxes by 1993 it entered into force on 2 September 1987.



- The protocol on Air Pollution-Sulphur 94 on Further Reduction of Sulphur Emissions for a further reduction in sulfur emissions or transboundary fluxes The protocol entered into force on 5<sup>th</sup> August 1998.
- The protocol on Air Pollution-Volatile Organic Compounds concerning the Control of Emissions of Volatile Organic Compounds or Their Transboundary Fluxes to provide for the control and reduction of emissions of volatile organic compounds in order to reduce their transboundary fluxes so as to protect human health and the environment from adverse effects . The 1991 Protocol entered into force on 29 September 1997.
- The 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone entered into force on 17 May 2005.
- The 1998 Protocol on Persistent Organic Pollutants (POPs); Status of Ratification entered into force on 23 October 2003.
- The 1998 Protocol on Heavy Metals; Status of Ratification entered into force on 29 December 2003.
- The 1984 Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) entered into force 28 January 1988. (Environmental Security Study Appendix F. International Protocols, Treaties, and Conventions related to Environmental Security)

The Convention was the first international legally binding instrument to deal with problems of air pollution on a broad regional basis. The fundamental principle to the Convention is the determination to protect man and his environment against air pollution by making effort to limit and gradually reduce and prevent air pollution including long-range transboundary air pollution. The Convention intends to achieve its fundamental objective by means of exchanges of information, consultation, research and monitoring, developing without undue delay policies and strategies which shall serve as a means of combating the discharge of air pollutants, taking into account efforts already made at national and international levels.

The convention and its protocols were really passive in its provisions to parties to develop national strategies, plans and programmes to reduce air pollution. Parties were allowed to determine the pace which is convenient for them to achieve reduction of air pollution within their boundaries. The use of such terms as Best Available Technology, (BAT), Best Practical Technology (BPT) Uniform Effluent Standards (UES) in emission control technology as employed by the convention and its protocols have been criticised as being uncertain in scope, vague, nebulous, and subject able to abuse and this has a slow down effect on the effectiveness of the convention.(Amokaye 2008). Lastly the convention lacked every element of sanction. This is critical in view of the sensitivity of the issue it aims to address .

## CONCLUSION

Development should be positive and sustainable, in other words, development should attract no negative side effect either now or in the future. Sustainable development implies the fulfillment of several conditions including preserving the overall balance, respect for the environment, and preventing the exhaustion of natural resources. As the environment provides all the raw and basic materials for any development, a discussion of development that leaves out the environment requires an urgent and immediate revisit. Principle 4 of RIO Declaration of 1992 states that in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation .Since the goal of any development is to make the earth a more comfortable place for man and his progress, any development that depletes his comfort and inflicts him with health hazards is vehemently opposed. The United Nations General Assembly Declaration on the Right to Development states in its article 1 that the human person is the central subject of development and should be the active participant and beneficiary of development. On the basis of the objective of achieving sustainable development, environmental protection is required to form an inseparable part of the development process. Air as a global common is an environmental resource that is important to the continued existence of life here on earth. The need to make and effectively enforce laws, at both national and international levels, that will guarantee the preservation and protection is crucial. It is equally that the enforcement of laws on preservation and protection of air should not be left in the hands of each state alone but rather should be strictly monitored or enforced as it has been aptly demonstrated that the whole world shares air in common .

## RECOMMENDATIONS

There should be basic and universal legal frameworks on the control of air and environmental pollution which must be binding on all countries in the world whether they are signatories or non signatories to these laws. Air is a global common that knows no boundary and the air that is polluted by the developmental activities of a country will not only affect its inhabitants but also the citizens of other countries which may be non- air pollutant countries. To this end, measures to ensure cooperation between experts on air pollution across national boundaries should be encouraged. The United Nations and other supra national, regional, and non-governmental organizations should institute machinery for effective implementation and enforcement of the laws on the control of air pollution in member states. It has been established that any developmental activity that pollutes the environment is not sustainable. Thus, the environmental cost of any development must be weighted before its implementation and where the environmental cost outweighs its economic importance, it should be discarded for a more environmentally friendly alternative.

Factories and industries must also be compelled by law to maintain high standards of public hygiene. High powered and heavy machines which emit poisonous gases and other materials which pollute the air should be banned. Also, technologies that are environmentally unfriendly, such as the flaring of gas, should be proscribed. Sanctions for failure to comply should be stringent and implementation and monitoring must be effective. It has become an imperative for global, regional, national and non-governmental bodies to fund research that will ensure environmentally friendly technology. Such technology, in the interest of global health, peace, and prosperity, should be transferred to developing countries which lack the capacity to develop such technologies. Since human beings are at the center of concerns for sustainable development, global awareness on the need to be committed and be determined to reduce air pollution should be created.

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