Abstract
Contemporary concern over polluted air does not stem from any disenchantment with the fruits of industries in operation in Nigeria. The existence of belching smokestacks still serves to reassure many Nigerians that the economic is strengthened and unemployment somehow reduced other negative environmental factors such as desertification. Hooding erosion and so on, has also being of concern to people because of the un-commendable consequences exerted on (he environment. The essence of this paper is to examine the harmful effects posed by three negative environmental factors in the place of air pollution, desertification and flooding with the view of making possible recommendations for redress.

Introduction
Ever since the discovery of oil in Nigeria in 1950, the country has been suffering the negative environmental consequences of oil development. The growth of the country's oil industry, combined with the population explosion and a lack of environmental regulations led to substantial damage to Nigeria's environment, especially in the Niger Delta region, the center of the country's oil industry. The country also faces environmental challenges from air pollution, flooding and desertification, with the encroachment of the Sahara desert in the North, severe pollution in overcrowded cities such as Lagos and Abuja and flooding occurring in almost every part of the country particularly in Revenue areas.

Desertification is the degradation of terrestrial eco-systems through human activities. It result in a lower crop production potential, a reduction in the land capacity to support livestock, increased environmental deterioration as a result of water and wind erosion and usually a reduction in the resident people's standard of living (Joseph et al., 1980).

Nevertheless, even with the end of gas flaring, air pollution is likely to remain a problem in Nigeria, as other sources such automobiles and diesel fired electricity generators contribute to the choking air in cities such as Abuja and Lagos, which are plaque by daily smog shrouding the skyline of the central cities. Studies carried out by the federal environmental protection agency (FEPA) show a moderate - to-high concentration of pollutants such as carbon monoxide, sulfurdioxide, nitrogenoxides, organic acids and hydro-carbons in the atmosphere.

The threat to lives and property by flood is now becoming an annual event in many Nigeria urban centers. Flood results when a mass of water cannot be contained in its normal path, for example when river overflows its bank, the areas around such a river are flooded. Flooding is basically a natural phenomenon, which can be intensified or even caused in some areas by human activities Ward, 1989. From a geological perspective, floods are natural courses quince of stream flow in a continental changing environment (Nelson, 2001), Sada (1988), defines Hooding as unusually high rates of discharging often leading to inundation of land adjacent to streams, and it is thus usually caused by intense or prolonged rainfall or a combination of these two. Floods are natural phenomena rather than natural disaster; they form part of the normally occurring range of stream flow conditions. Flood disasters could be manmade as they occur where and when man puts at risk by developing and occupying floodable areas or flood prone areas.

The consequences exerted by various negative environmental factors are tending to alarming states that, calls for serious and pragmatic approach to salvage our environmental from acute deterioration.

Desertification
It is no longer news in Nigeria that the Sahara Desert is moving Southwards at a rate of 0.6km yearly. What is news is that about 35 million people in Northern Nigeria are suffering from the effects of desertification, and the menace is posing a serious threat to the nation's economy, food security and employment.

Causes
Desertification, as this destructive process is called is a major problem on every continent
accept Europe. Some of the major causes of desertification includes amongst the following:

The shelterbelts established by government along desert fringes of eight Northern states including Borno State under the World Bank assisted afforestation programme have not being very effective as the trees have been cut down for firewood, while some have withered due to high temperature and drought. A report from the federal ministry of environment says that Nigeria plunders its forest by more than 30 million tons for firewood annually due to pressure by the urban poor who resort to the cheapest means of cooking. "The rate of fuel wood consumption far exceeds replenishment rate. The consequence of human dependence on wood for fuel and construction is that about 350,000 hectares of land is under the threat of deforestation annually, while the annual rate of reforestation is estimated at about 30,000 hectares.

Another causes of desertification is erosion on dry farmed areas, as population pressure force cultivation into marginal areas during good rainfall years, the stage is set for high rates of desertification when the inevitable drought come. Like most processes, soil erosion has secondary effect, as the soil qualify and quantify decline, crops land become less productive and yields drop. Streams and rivers experience accelerated situation, in countries where the topsoil is heavily laden with agricultural chemicals, erosion-borne silt pollute water suppliers.

One of the main causes of desertification according to the UN food and agricultural organization (FAO), is increasing pressure on land resulting from rapid demographic growth and poverty, often aggravated by increasingly recurrent droughts.

Effects of Desertification

The food and agricultural organization (FAO) reported in 2001 that more than 100 countries covering 3.6 million hectares were seriously affected by desertification which affected vegetative cover of croplands, pastures and wood lands with its negative impact on biological diversity, soil fertility, the hydrological cycle, crop yield and livestock production.

It was reported that at least 50,000 farmers in about 100 villages scattered along the desert fringes of Northern State of Yobe, one of the eight affected by desertification were at risk of at a particular farming season due to sand dunes. The dunes are threatening life-supporting oasis burying water points and in some cases engulfing major roads in the affected areas. Trees planted by government as shelter belts to check the advancing dunes are withering due to lack of attention.

The document, compiled by the ministry of environment in Yobe State, says Arial photographs taken indicate that productive and mass land occupied by the dunes has increased from 25,000 hectares to more than 30,000 hectares with its attendant negative impact on food and livestock production.

"Considering a conservative production of five bags of 100kg of grains of millet or sorghum per hectare in the area, it means the 30,000 hectare destroyed by the dunes is capable of producing over 1,500 bags of millet with an average grain requirement of 100kg of millet per family of four per month, it then follows that 1,500 bags can support 12,500 families of four or 50,000 people per year. The big question is how do these 50,000 people survive in this area?" The distribution of the 30,000 hectares of agricultural land has a negative impact on livestock survival in the State, which has a high concentration of animals in the West Africa country.

The shelterbelts established by government along desert fringes of eight Northern State including Borno State under the World Bank Assisted afforestation programme have not been very effective as the trees have been cut down for firewood, while some have withered due to high temperature, inadequate rainfall and drought.

Air Pollution

Pollution is the change in the chemical condition or biological content of environment that prevents or limits further use of it or impairs man's aesthetic enjoyment from environment (Flinn, 1979). Air pollution from industries and other sources constitute major environment hazards.

The mixture called air (depending on the locally) is made of molecules and particles of thousands different materials. These materials are separable into chemical and biological materials. Dust and fumes may be regarded as chemical material although a dust particle may actually be a complex conglomerate of minerals and absorbed gases and vapors. Non-the-less, there are large numbers of chemical substances in air, which are non-toxic.

Our knowledge about the biological forms in the air is limited mainly to those which particularly are associated with specific pathology for example, the distribution of virus which causes psittacosis from birds to man and pathogenic bacteria in operation rooms or intensive care units are
limited to the air environment.

In a developing country like Nigeria where government creates incentives to investors in order to boost her massive industrialization as a means of poverty, it becomes imperative to strike a balance between protecting the environment and achieving a reasonable and sustainable rate of economic growth no matter the cost of protecting the environment, it is not comparable to the consequential cost of industrial pollution which air pollution is part of it to both humans and the entire eco-system.

Sources of Air Pollution

In Nigeria, there about 3,000 industries according to a World Bank Report (1993), and over 80% of the industries discharge solid, liquid and gases effluent directly into the environments without prior treatment. The general characteristics of polluted environment are well known and harsh problems of environmental havoc are closely related to the imprudent pursuit of economic growth as it is found in most developing countries of toady (Walford, 1986).

Sources of Pollutants

Air pollution originates from an omission source major emission sources are transportation, electric power generation, refuse burning and industrial processes pollutants are emitted to the atmosphere which is the transport medium. It also dilutes and act as medium for physical and/or chemical transformation. Subsequently, the pollutant may be detected through man, animal plants or by means of instruments. When this happens, there will be a response, which often manifest as an irritation in one way or the other. The responses to the pollutant would lead to a modification of either the emission source or the source control either through automatic remote sensing of air borne concentration or through public pressure and subsequent legislations.

Table 1: Major Sources of Primary Air Pollution

<table>
<thead>
<tr>
<th>Types</th>
<th>Major Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbo</td>
<td>Combustion of fossil fuels</td>
</tr>
<tr>
<td>Carbo</td>
<td>Incomplete combustion of fossil fuels, mostly</td>
</tr>
<tr>
<td>Hydr</td>
<td>Combustion of fossil fuels, petroleum</td>
</tr>
<tr>
<td>Nitro</td>
<td>Transportation vehicles, power plants</td>
</tr>
<tr>
<td>Sulfur</td>
<td>Combustion of sulfur containing fuels</td>
</tr>
</tbody>
</table>

Effect of Air Pollution

In Nigeria, there is evidence that air pollution effect the health of human and animals and that it can damage vegetation and soil, it deteriorates materials, affect climate, reduce visibility and solar radiation, contribute to safely hazards and generally interferes with the enjoyment of life and properly. Some of the effects are specific and measurable like damage to vegetation and materials or reduced visibility but most are difficult to quantity.

Effect on the Atmosphere

Air pollutants affect atmospheric properties by reducing visibility, causing precipitation and fog formation, reducing solar radiation and altering temperature and wind distribution. In Nigeria visibility reduction is perhaps the most noticeable. Visibility limitation is both aesthetically unpleasing and may lead to hazards. The prevailing visibility of any locality is the greatest distance in a given direction at which it is just possible to see and identify a prominent dark object in the daytime and an unfocused, moderately intense light source at night which is attained or surpassed around at least half the horizon circle but not necessary in continuous sectors.

Effect on Materials

Air pollution can lead to soiling of materials or their chemical deterioration. Clothing and structures may be soiled by high smoke and particles level while acid or alkaline particle especially those containing surplus corrode paint, electrical, textile and metals.

Effect on Vegetation

Generally, gas pollutants enter plant through their stomata on the course of normal plant respiration. Once on the leaf the pollutant destroy the chlorophyll, thereby disruption photosynthesis. Damage ranges from growth reduction to the death of the plant. The symptoms of the damage are
usually manifested on the leaf and particular symptoms usually indicate the nature of the pollutant.

<table>
<thead>
<tr>
<th>Table 2: Pollutants and Symptoms on Leaf</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
</tr>
<tr>
<td>O</td>
</tr>
<tr>
<td>z</td>
</tr>
<tr>
<td>S</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>E</td>
</tr>
<tr>
<td>(C2H4)</td>
</tr>
</tbody>
</table>

**Effect on Ozone**

Ozone, the same chemical that is a noxious pollutant near the ground is essential in the stratosphere. There approximately 10-24 kilometers (6-15mi) above the ground, ozone forms a protective blanket called the ozone layer which shields all forms of life on earth over exposure to lethal ultraviolet (UV) radiation from the sun. Mounting evidence indicates that emissions from a variety of chemical are destroying the ozone layer. Most important are family of synthetic chemicals developed in 1931 and known as chlorofluorocarbons (CFCs), CFCs are found in hundred of product. They are used as coolants for refrigerator and air conditioners; as aerosol spray propellants and as a component in form packing, home installation and upholstery.

**The Green House Effect**

One of the most hotly debated topics in recent years had been what is popularly termed the green house effect. Put simply, the theory is that certain gases concentrate in the atmosphere, where they function as insulating barrier, trapping infrared radiation that would otherwise be radiated back into the upper atmosphere and reradiating it earth ward. In other words, like glass in a green house, the gases admit incoming solar radiation but retard its re-radiation back into space. The earth has a natural green house effect, provided mainly by water vapor that has evaporated from the ocean or evaportranspired from land. The water vapor remains a constant but during the last 150 years or so, human activities have increased the amount of other green house gases in the atmosphere, augmenting its heat-trapping ability. Much scientist fear that an enhance green house effect could result in a gradual increase in the earth average surface temperature with significant impact on the earth's ecosystems, a process called global warming.

Carbondioxide (Co2) is the primary green house gas whose amount has been increased by human activities. Although it occurs naturally, excessive quantities of it are released by burning fossil fuels. At the same time, much of the world forests have been destroyed by logging and to clear land for agriculture.

Deforestation adds to the green house effect in two ways, it means there are fewer trees to capture carbon dioxide and produce oxygen, burning the wood sends CO2 back into the atmosphere at an accelerated rate.

Other green house gases influenced by human activities are:
- Methane, from natural gas and coal mining, agriculture and livestock, swamps and landfills.
- Nitrous oxides, from motor vehicles, industry and chemical fertilizers.
- Chlorofluorocarbon and halons, widely used industrial chemicals.

Although these gases may be present in small amounts, some of them trap heat thousands of times more effectively than does Co2. Fluorocarbon 12, for example, has 20,000 times the capacity of Co2 to trap heat and fluorocarbon 11 has 17,500 times the capacity of Co2. Nitrogen oxide is 300 times more potent than Co2 and even methane is thirty times more potent than Co2 in absorbing heat close to the earth.

**Flood**

Flooding refers to the abnormal rise in the stage of a river or water bodies flooding has been
Experience in the Niger through Benue basin and Sokoto basin in the flooding years of 1987, 1991 and 1994 and this affected agricultural land use to a great extent. On the other hand, the ocean flow in Victory Island and that of the Ibadan by Ogunpa stream have affected urban areas.

On River Niger (there are) two distinct flood occurring annually in the river. The first is the black flood that originates from the high rainfall area in the headwaters. The black flood arrives Kanji (Nigeria) in November and fast until March Jebba attaining a peak rate of 2,000m3s⁻¹ in February (Oyebande et al., 1980). The second flood, which becomes prominent only downstream of Sabon Gari. Soon after the river enter Nigeria, is the white flood usually heavy laden with silt and other suspended particles. The flood derives its flow from the local tributaries and reaches Kanji in August.

**Causes of Flooding**

Flooding in Nigeria has been due to natural and artificial factors. The unevenly distributed rainfall in terms of amount of duration, and the climatic variability resulted in abnormal run-off generation, which the channels capacities cannot hold.

Human action and interference with the natural environment constitute the major causes of urban floods. Hammer (1972), observes that, in developed countries storm sewers are incorporated in the urban design to convey surface run off through the basin to nearby stream channels. In contrast, storm sewers are poorly developed in urban centers of developing countries. Consequently, excess run off drains freely into either nearby storm or swell urban stream peak flood and - or drains into adjoining low lying areas to form flood poundage and flash floods on the streets. It is in this regard that Nelson (2001), argues that, in less developed countries, humans are particularly sensitive to flood causalities because of high population density, absence of zoning regulations, lack of flood control and lack of emergency response infrastructure and early warning system. Of course, in rapidly growing and expanding urban centers of Nigeria, a lot of devastating floods have been reported (Odememho, 1988).

**Effects of Flooding**

Flooding during the raining season tends to dump into the water treatment plant thereby disrupting its operating, resulting in muddy treated water being pumped to consumers.

Flooding tends to destroy properties (residential buildings and business premises) as well as farmland and basin infrastructure. In Kaduna, flooding of 6th September, 2003 and over 2,000 properties as well as agricultural farmland were destroyed. Approximately 2,500 families were made homeless.

**Recommendations**

With the country losing as much as 350,999 hectares of land yearly, to desertification as well as arable land being lost to desert encroachment, there is need for the government to establish more Green Belt across the Northern State that are threaten by desert encroachment, spanning a length of 1,500 kilometers and a width of one kilometers. Existing Green Belt areas should be given attention to salvage them from drought. Also the government should come-up with an appreciable price for the sell of kerosene, a major source of cheaper alternative to fire wood.

The atmosphere is very vital for the survival of mankind and other living organism. Strategies for achieving a clean air situation should include:

1. Provision of standards for factories and other activities, which emit pollutants into the air.
2. Provision of guidelines for the abatement of air pollution.
3. Prescribing stringent standard for the level of emission from automobile exhaust, and energy generating plants and stations.
4. Designing and mapping of National Air control zone (ACZ).
5. Declaring air quality objectives for each designated National Air control zone.
6. Licensing and registry of all major industrial air polluters and monitoring their compliance with laid down standards.
7. Promoting regional cooperation aimed at minimizing the atmospheric transportation of pollutants across international boundaries.

Flooding on its own part can be controlled by the construction of dams to store the excess water. The demolition of structure along the stream or riverbank and the construction of more
drainage to contain runoff water.

**Conclusion**

The idea of public campaign is very important because if we do not carry our people along in whatever plans we have for our environment, we are not likely to succeed. Every member of the society ought to know his or her role in making where we live better. The roles of the people and the government should be complementary; each helping the other to achieve the best for the community, after all each is equally guilty for the state of affairs, we have found ourselves in, with respect to our environment.

**References**


