

Sustainable Environmental Management in Nigeria: An Appraisal

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Abstract

Sustainable development necessitates that a nation must meet the needs of the present without compromising the ability of future generations to meet their own desired goals. Therefore, there is need by all nations to struggle to maintain a balance between its economic development and the sustainability of its environmental resources. There have been a lot of efforts by Nigeria, since her independence in developing the right framework aimed at protecting the environment, including the marine and coastal environment, the conservation of natural resources, and the management of trans-boundary hazardous wastes. However, issues of environmental degradation occasioned by hydrocarbon production in the Niger Delta area and solid mineral mining still persist. There are also cases of improper waste disposal and unavailability of waste collection services to many households and industries. This has resulted in some severe and diverse environmental problems such as ecological problems, unplanned growth, domestic and industrial waste pollution. In fact, some of these hazards are irreversible, and resulting in loss of lives and means of livelihood of the local communities. This review is an appraisal of the efforts by the Nigerian government in attaining sustainable environmental management by examining the Nigeria's Environmental Legal Framework, assess the compliance with the sustainable development standards, identify the challenges and suggest the way forward.

Keywords: Nigeria; Environment; Sustainability; Standards; Legal frame work.



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1. Introduction

Nigeria is an oil rich country which lies between 4°N and 14°N, and between 3°E and 15°E in Western Africa and occupies a total area of 923,768 km² (comprising mainly of 910,768 km² land and 13,000km² water). Nigerian climatic conditions vary. It is tropical in the center, equatorial in the South and arid in the North. Nigeria is bordered to the North by the Republics of Niger and Chad, to the West by the Republic of Benin, to the East by the Republic of Cameroon and to the South by the Atlantic Ocean (Collins, 2008); (FGN Report, 2012). Nigeria has an estimated total population of over 170 million people based on the 2006 Census figure. The principal mineral resources of Nigeria include fossil fuels (petroleum, natural gas, coal, and lignite), metallic minerals (tin, columbite, iron, lead, zinc, gold), radioactive minerals (uranium, monazite, and zircon), and non-metallic minerals (limestone, marble, gravel, clay, shale, feldspar, etc.) and arable land (Collins, 2008).

Nigeria like other African countries relies heavily on natural resources to achieve her development objectives which leave behind adverse foot print on the environment for future generations. It is reported that the focus of the government of Nigeria at the first decade of independence (1960-1970) was to promote industrial growth to support the nation's economy and development. The policy thrust in 1980s went a step further to emphasize the utilization of local resources. However, little attention was given to resource conservation and sustainability (Eneh, 2011); (Erhun, 2015). For any nation to achieve environmental sustainability, she must possess adequate legal framework, technology and manpower with necessary managerial skills and training to properly handle waste (hazardous and non-hazardous), in an environmentally safe and sound manner (Binali, 2014). However, according to Ogunba (2016) environmental regulation in Nigeria did not start as a systematic effort to provide a progressively inclusive framework for managing its natural resources. For a considerable number of years after the country's independence in 1960, the nation was preoccupied with providing basic social amenities and advancing national economic development. Environmental concerns were not a priority. On the contrary, they were rather regarded as luxurious or esoteric preoccupations that posed a threat to advancing industrialization. As a consequence, Nigeria's environmental resources were sadly neglected.

Sustainable development was brought into common use in 1987 by the World Commission on Environment and Development in its seminar report called "our common future". Since then sustainability has become a principal benchmark against which economic development policies are assessed by national governments, development agencies and non-governmental organizations (NGOs). Although the adoption of sustainability as a benchmark for development has been hampered by ambiguities in definition and interpretation, there is a consensus that sustainable development implies an active role for government in efficient and equitable management of natural and environmental resources (World Bank, 2012); (Ejumudo and Nwador, 2014); (Qureshi *et al.*, 2015); (Qureshi *et al.*, 2017); (Rasli *et al.*, 2018).

The three interdependent and mutually reinforcing pillars of sustainable development are economic sustainability, environmental sustainability and social sustainability (Erhun, 2015). The objectives of environmental sustainability are summarized as rational resource consumption and reduction of environmental pollution while the

administrative aspect encompasses policy, management, research and training, responsibility issues and technologies used to provide the waste management service. Also, the social sustainability aspect deals with ensuring human health and well-being in the present and future generations and economically sustainable waste management takes into account all external costs into the total cost established for waste management (Batagarawa, 2011); (World Bank, 2012); (Erhun, 2015).

Through the various National Development plans and the National Environment Policy of 1999, Nigeria has shown increased commitment to the complex relationships between environmental quality and development. This is attributable to the occurrence of ecological disasters such as Sahelian draught, the impact of accelerated urbanization on the quality of life, the destruction caused by human settlements and farmland by erosions as well as the health hazards posed by the toxic wastes (Egunjobi, 1993). In fact, Nigeria aspires to be among the best 20 economies of the world through her vision 20-2020 and this cannot be achieved without a stable and sustainable environment (Nigeria Vision 2020 Program, 2009); (Erhun, 2015). However, studies have shown that there still exist environmental management policy gaps, poor commitment to the implementation of environmental policies, poor environmental management practices as well as weak development agenda (Collins, 2008); (Ejumudo and Nwador, 2014); (Erhun, 2015). This paper therefore, is an appraisal of the efforts by Nigerian government in attaining sustainable environmental management by examining the Nigerian's Environmental Legal Framework, assess the compliance with the sustainable development standards, identify the challenges and suggest the way forward.

2. Nigerian's Environmental Legal Framework

Nigeria being an integral part of the global village, the applicable environmental laws include the national laws, regulations and byelaws; all international and regional agreements/conventions/protocols (Anago, 2002); (Eneh, 2011). Environmental law in Nigeria is a body of rules and regulations which have as their object or effect the protection of the environment from pollution and wasteful depletion of natural resources and ensure sustainable development. Constitutionally, the issue of environmental management is on the concurrent legislative list empowering both Federal and State Governments to enact and provide regulations for a sound and good environment (Binali, 2014). In broad term, we have the common law and legislative regime on environmental protection in Nigeria. The legal protection of private persons and propriety rights at common law gives liability for environmental pollution. While in civil law, it is mostly based on actions in the tort of trespass to land, nuisance, negligence and liabilities for damages cause by escape of noxious substances from production activities (Erhun, 2015).

The statutory framework of environmental protection in Nigeria is made up of the Nigerian Constitution, *The Criminal Code, The Urban And Regional Planning Act, The Harmful Wastes (Special Criminal Provisions Etc) Act, The National Gas Policy Act, The Environmental Impact Assessment Act etc..* Aside from statutes, there are also some regulatory agencies and other institutional frameworks for environmental governance in Nigeria such as *The Federal Ministry of Environment, The Effluent Limitation Standards, The National Policy on the Environment, The National Gas Policy, Environmental Guidelines and Standards for the Nigerian Petroleum Industry, National Environmental Regulations, Effluent Limitation Standards etc.* Erhun (2015). A study of the trajectory of Nigeria's environmental legislation by Ogunba (2016) reveals a growth pattern that can be classified into four distinct stages.

2.1. Colonial Period (1861-1960)

Nigeria was a British colony beginning in 1861 when the British annexed Lagos. By 1900, the entire country was colonized, and remains occupied until Nigeria's independence in 1960. During this time, there seemed to be an overall disinterest in, or lack of awareness about, environmental issues. The colonial administrators who were involved in national governance between 1861 and 1960 did not pursue or prioritize environmental protection. Rather, they were preoccupied with their political and economic interests. The colonialist environmental concerns about natural resource protection were actually meant to promote trade and enhance the economic growth of their countries (Ogunba, 2016). During this period, local legislation and public health laws had only a minimal bearing on the environment. These include the Criminal Code Law of 1916 and the Public Health Act of 1917.

2.2. Petroleum- Focused Environmental Legislation Period (1957–early-1970s)

During this period the country's economy, which has been agro based switched its focus to petroleum exploration resulting in the enactment of some petroleum-focused environmental laws. They include: revised Oil Pipelines Act (1990) Cap. (338) (later complemented by Oil and Gas Pipelines Regulations No. 14 (1995) S.I.); Oil in Navigable Waters Act (1968) Cap. (337); Petroleum Act 1969) Cap. (P10); Nigerian Mining Corporation Act (1972) Cap. (317); Hydrocarbon Oil Refineries Act (1965) Cap. (H5); Exclusive Economic Zone Act (1978) Cap. (116); Territorial Waters Act (1967) Cap. (T5). However, in 1964, a non petroleum based law was created to regulate agricultural imports in an effort to control the spread of plant diseases and pests. Among other provisions, the law required that an authorized officer destroy any imported sand, seeds, soil, containers, and straw suspected to be infected with any disease or pest (Ogunba, 2016).

2.3. Rudimentary and Perfunctory Legislation Period (1970s–pre-1987 crisis)

During this period, laws on effluent limitation and pollution abatements were enacted.

Notable amongst these was the Factories Act (Factories Act (1987) Cap. (F1)). The 1987 Factories Act (which is still a valid law) was made primarily to provide for the registration of factories, and for the safety of workers exposed to occupational hazards. Its provisions cover: cleanliness, overcrowding, ventilation, lighting, drainage of

floors, and sanitary conveniences. Other provisions relate to staff welfare, first aid, and the supply of drinking water. Penalties are also provided in case of breach of these provisions. Others include, the 1978 Land Use Act; the 1979 Energy Commission of Nigeria Act; the 1985 Endangered Species (Control of International Trade and Traffic) Act; the Sea Fisheries Act (later repealed by Sea Fisheries Decree 1992); and the 1986 River Basins Development Authorities Act (Ejumudo and Nwador, 2014); (Ogunba, 2016).

The Land Use Act vests all land in the respective state governments to be held in trust for the use and common benefit of all Nigerians. An important provision in the law is the ownership of all improvements on the land by holders of rights of occupancy, including the groundwater flowing beneath their land. While the Energy Commission of Nigeria Act was promulgated to regulate the development of the various energy resources in Nigeria.

2.4. Contemporary Period (post 1987– present).

This period saw the start of serious legislation and is characterized by increased environmental awareness and sophistication. In August 1987, an environmental catastrophe ignited and energized efforts to pass meaningful environmental legislation. An Italian company imported several tons of toxic industrial waste and deposited it in Koko, Delta State, within Southern Nigeria. This led to the enactment of the Harmful Waste (Special Criminal Provisions, etc.) Act which criminalizes activities involving the sale, purchase, transportation, importation, deposit, or storage of harmful waste, either singly or in conjunction with others on Nigeria's soil, air, or sea. Harmful waste is defined as injurious, poisonous, noxious, or toxic substances, particularly nuclear waste that emits any radioactive substances. In the same year, the governing Federal Military Government promulgated the Federal Environmental Protection Agency (FEPA) Act. This Act established a Federal Environmental Protection Agency with broad powers to manage and protect environmental resources and to develop environmental research technology. The Act also empowered states within the Federation to set up their respective State Environmental Protection Agencies, primarily to maintain good environmental quality in relation to pollutants within the states' control. Also, in 1992, the Environmental Impact Assessment (EIA) Act was passed. This law mandates prior appraisals of likely environmental impacts of intended projects. The law requires that projects belonging to both the public and private sectors must undergo an EIA process. The objective of the EIA is to ensure that environmental aspects are addressed and the potential impacts are foreseen at the appropriate stage of the project (Batagarawa, 2011); (Eneh, 2011).

In 1999, in response to concerted efforts to compensate affected communities, the Niger-Delta Development Commission Act established the Niger Delta Commission to tackle ecological problems that arose from the exploration of oil minerals within the Niger Delta (Ogunba, 2016). Also, the Federal Ministry of Environment was created in year 1999 by merging Federal Environmental Protection Agency (FEPA) with various relevant units in other Ministries, Departments and Agencies (MDA's) in order to bring environmental issues in Nigeria under a regulatory umbrella. The broad responsibility of the Ministry is to coordinate environmental protection and natural resource conservation for sustainable development and specifically (FGN Report, 2012):

- Secure a quality of environment adequate for good health and well-being;
- Conserve and use the environment and natural resources for the benefit of the present and future generations;
- Restore, maintain and enhance the Ecosystem;
- Raise public awareness and promote understanding of the essential linkages between the environment and development;
- Encourage individual and community participation in environmental improvement efforts; and
- Steer the country's administration to implement and respect all international treaties and conventions that Nigeria is signatory to.

The National Environmental Standards and Regulations Enforcement Agency (NESREA), was established by the Federal Government of Nigeria as a parastatal of the Federal Ministry of Environment (FMEnv), under Act No. 25 of 31st of July 2007 thereby repealing the FEPA Act (Binali, 2014). The Agency's vision is to ensure a cleaner and healthier environment for all Nigerians, and its mission is to inspire personal and collective responsibility in building an environmentally conscious society for the achievement of sustainable development in Nigeria. Section 5 states that telecommunications masts and towers shall be erected and operated in compliance with the provisions of the Environmental Impact Assessment Act, Cap E12 Laws of the Federation of Nigeria 2004 in addition to the submission of site specific Environmental Impact Statements to the Agency.

Some of the functions of NESREA include the following (FGN Report, 2012):

- enforce compliance with laws, guidelines, policies and standards on environmental matters
- coordinate and liaise with stakeholders, within and outside Nigeria, on matters of environmental standards, regulations and enforcement
- enforce compliance with the provisions of international agreements, protocols, conventions and treaties on the environment
- enforce compliance with policies, standards, legislation and guidelines on water quality, Environmental Health and Sanitation, including pollution abatement
- enforce compliance with guidelines, and legislation on sustainable management of the ecosystem, biodiversity conservation and the development of Nigeria's natural resources
- enforce compliance with any legislation on sound chemical management, safe use of pesticides and disposal of spent packages thereof

- enforce compliance with regulations on the importation, exportation, production, distribution, storage, sale, use, handling and disposal of hazardous chemicals and waste, other than in the oil and gas sector
- enforce through compliance monitoring, the environmental regulations and standards on noise, air, land, seas, oceans and other water bodies other than in the oil and gas sector;
- enforce environmental control measures through registration, licensing and permitting systems other than in the oil and gas sector
- conduct environmental audit and establish data bank on regulatory and enforcement mechanisms of environmental standards other than in the oil and gas sector
- create public awareness and provide environmental education on sustainable environmental management, promote private sector compliance with environmental regulations other than in the oil and gas sector and publish general scientific or other data resulting from the performance of its functions.

From 2007 to 2012, NESREA has developed twenty four (24) Environmental Regulations which have been gazetted and are in various stages of operationalization. These Regulations have key provisions for environmental control, clean-up and remediation (FGN Report, 2012).

Other institutions include the Forestry Research Institute of Nigeria (FRIN), National Parks and Environmental Health Officers Registration Council of Nigeria (EHORECON). FRIN is mandated to conduct research into all aspects of Forestry, Wildlife Management, Agro-forestry and Forest Products Utilization; as well as train technical and sub-technical personnel for the forestry and agro allied services in the country through its colleges (FGN Report, 2012).

3. Appraisal of the Present State of Nigeria Environment

3.1. Progress so Far

For a country or a region to become environmentally sustainable, it means that all the parameters that confer environmental sustainability must have been adequately taken care of. There will also be less poverty among its citizens, food security, less conflict, use of clean technology in the industrial sector etc. In general, the environment provides all life support systems in the air, on water and on land as well as the materials for fulfilling all developmental aspirations.

Like any developing nation, Nigeria faces some challenges in its developmental stride and efforts to improve the quality of life of its citizens. However, to promote environmental sustainability, the National Environment Policy of 1999 is a key policy document that stipulates the principles for sustainable development. Policies and programmes under broad categories of the environmental pillar are related to forestry, biodiversity, pollution control, land degradation, water management, climate change, marine and coastal environment, clean energy, and environmental crime. Government has taken the issues of environmental pollution and degradation seriously. Various national efforts have been put in place at all levels of governance to promote environmental sustainability in the context of national sustainable development. To complement the effort of the Federal Ministry of Environment, agencies such as *National Oil Spill Detection and Response Agency* (NOSDRA) and *National Environmental Standards and Regulations Enforcement Agency* (NESREA), were created respectively in 2006 and 2007. NOSDRA has the mandate to implement the national oil spill contingency plan. NESREA has responsibility to enforce all environmental laws, guidelines, policies, standards and regulations in Nigeria, as well as enforce compliance with the provisions of all international agreements, protocols, conventions and treaties on the environment to which Nigeria is a signatory (FGN Report, 2012).

Towards addressing climate change, Nigeria has put in place institutional structures and policies for national implementation of the UNFCCC, the Kyoto Protocol and any other instruments put in place. Towards the achievement of sustainable development through the tenets of green economy, government is pursuing initiatives that will enhance its global competitiveness and best practices by:

- Promoting the elimination of environmentally harmful subsidies and replacing them with market based incentives.
- Employing near market based instruments with target instructions to green key sectors.
- Enforcing its environmental rules and regulations in important sectors such as agriculture, biodiversity, forestry, water resources, fisheries and renewable energy.
- Strengthening the economic programmes by adopting the System of Environmental and Economic Accounting (SEEA) which has been prepared by the UN statistical Division. This approach will provide a free indicator of the real level and visibility of growth, income and employment.

3.2. Limitations

Despite the progresses made so far, it could still be observed that the issues of environmental pollution and degradation associated with the oil exploration in the oil rich Niger Delta area still persists and has led to various dimensions of political, social, economic, health and other developmental challenges. This region has suffered high level of air, water, land and thermal pollution and improper waste disposal has affected the flora and fauna (Abdullahi and Muhammad, 2006); (Eneh, 2011). The trail of natural resource degradation in places like Oloibiri, Kokori, Sangama, Boma and other oil-bearing communities are testimonial (Ejumudo and Nwador, 2014) Shell Petroleum Development Company (SPDC), the oil conglomerate on behalf of the NNPC/Shell/Elf/Agip Joint Venture as at 1996, operated oil mining licenses covering an area of over 31,000 square kilometres. The company operated an extensive network of about 900 producing oil wells; 100 flow stations/gas plants; 4500m of oil and gas

flow lines and over 1500km of trunk lines through which oil flows from the aggregates of overlapping and superimposed pools of accumulations of petroleum located in the geological structures of the oil region to the two major terminals at Bonny and Forcados (Ejumudo and Nwador, 2014). It is on record that 95% of associated gas from crude oil production which translates to 2 Million Standard Cubic Feet per Day is flared and about 6,500m barrels of oil were spilt in 700 separate incidences each year in Rivers, Delta, Bayelsa and Akwa Ibom states (Eneh (2011); (World Bank, 2008).

There are also cases of non-compliance with EIA regulations. The key defaulters in this exercise are the various levels of Government; federal, state and local. These levels of Government routinely approve projects within the mandatory study list, before any kind of Impact Assessment is made. For example Niger Delta Development Commission dredged the Ayetoro canal prior to any EIA. Therefore most EIA Reports are actually “post mortem” documents contrived to “fulfill all righteousness” and fence-off resistance from concerned Non-Governmental Organisation and affected host communities (Anago, 2002).

Also, cases of sheet and gully erosions occur nationwide. Gully erosions are particularly severe in Abia, Imo, Anambra, Enugu, Ondo, Edo, Ebonyi, Kogi, Adamawa, Delta, Jigawa and Gombe States. Anambra and Enugu States alone have over 500 active gully complexes, with some extending over 100 meters long, 20 meters wide and 15 meters deep. Coastal and marine erosion and land subsidence occur particularly in the coastal areas of Ogun, Ondo, Delta, Rivers, Bayelsa, Akwa Ibom and Cross River States. The most celebrated case of the effects of coastal erosion is the over-flow of the Bar Beach in Lagos by the surging waves of the Atlantic Ocean now a regular feature since 1990, threatening the prime property areas of Lagos (Abui *et al.*, 2015).

Annually, flooding occurs throughout Nigeria in three main forms; coastal flooding, river flooding and urban flooding. Coastal flooding occurs in the low-lying belt of mangrove and fresh water swamps along the coast. River flooding occurs in the flood plains of the larger rivers, while sudden, short-lived flash floods are associated with rivers in the inland areas where sudden heavy rains can change them into destructive torrents within a short period. Urban flooding in towns located on flat or low-lying terrain especially where little or no provision has been made for surface drainage, or where existing drainage has been blocked with municipal waste, refuse and eroded soil sediments. Extensive urban flooding is characteristic of the annual rainy season in Lagos, Maiduguri, Aba, Warri, Benin and Ibadan (Abui *et al.*, 2015).

Drought and Desertification remain very serious ecological and environmental problems, affecting about 15 states in the northern-most part of the country. Nigeria also has had to contend with global environmental issues such as climatic change and ozone layer depletion. There is excessive pressure on available urban resources, infrastructure and space evident in cities such as Lagos, Port Harcourt, Ibadan, Umuahia, Kano, Kaduna, and Maiduguri and, of recent, Abuja and its satellite towns. Pollutions from the industries and improper municipal waste disposal constitute serious hazards to the environment. Solid waste heaps dot several parts of Nigerian major cities, blocking motorways and making passages along alleys and pavements difficult. Also disturbing is the practice where some industrial facilities bury their expired chemicals and hazardous waste in their backyards, threatening the water quality of innocent neighbors who rely on their dugout wells for drinking water (Abui *et al.*, 2015).

Nigeria’s wildlife is rapidly disappearing due to various environmental malpractices. Animals that have disappeared from Nigeria in recent times include the cheetah, the pygmy hippopotamus, the giraffe, the black rhinoceros and the giant eland. It has been further estimated that 484 plant species in 112 families, including many medicinal and fruit trees, are also threatened with extinction because of habitat destruction and deforestation (Ajayi and Ikporukpo, 2005).

These limitations can be attributed to the following factors:

- i. **Poverty:** The scourge of poverty is still having a major impact on the African continent with about two-thirds of the populations in African countries living in rural areas, deriving their main income from agriculture. The prospect of achieving sustainable environmental management in Nigeria is a mirage. Africa is by far the poorest region of the world. There are some 400 million people who live on less than \$2. Trees are cut for fuel wood, land-degrading farming systems have been adopted, wildlife are being hunted to extinction, all in an effort to satisfy today’s pressing livelihood needs. Unfortunately, these activities have not only worsened the situation of the poor living in Africa today, but they will also have implications for future generations to come.
- ii. **Over dependence on extractive industries:** For a country that is majorly dependent on its natural resources to achieve growth, the challenge of ecologically-friendly sustainable development is daunting. In Nigeria, oil spills and gas flares have polluted the environment significantly for more than 50 years. The 2008 target set forth to eliminate gas flaring increasingly appears to be impossible to achieve.
- iii. **Rapid population growth:** Nigeria has an estimated population of 170 million based on 2006 census figure. According to the World Bank, the sub-Saharan population is growing at the rate of 2.5 percent per year as compared to 1.2 percent in Latin America and Asia. At that rate, Africa’s population will double in 30 years. Rapid population growth has put a lot of stress on Africa’s ecosystems. Problems such as food security, land tenure, environmental degradation and the lack of water supply are often related to high rates of population growth.
- iv. The institutions on environmental governance in Nigeria have not succeeded in effectively arresting the further deterioration of the environment due to their inability to enforce appropriate laws and regulations;
- v. Most of our environmental laws are out-dated and penalties stipulated are grossly inadequate;
- vi. The attitude of the courts in this regard is not encouraging as they often fail to ensure that relevant authorities fulfill their obligations in safe-guarding the environment.

- vii. Inappropriate agricultural practices, the destruction of watersheds, and the opening up of river banks and other critical areas leading to silting of river beds and loss of water courses;
- viii. Uncontrolled logging, accentuated by lack of re-stocking in many parts of the country. This practice carries with it loss of precious biological diversity which is the nature's raw materials for future development;
- ix. Bush burning for farming and ever-increasing depletion of young forests for fuel wood;
- x. Mining waste land and mining pits without addressing reclamation as provided for in the Minerals Acts, as in the mine fields of Nasarawa, Jos, Ilesa and Enugu;
- xi. Dumping of non-natural but trade-related expired and contraband chemicals and pesticides; and
- xii. Uncontrolled use of agro-chemicals and the resultant problems of chemical persistence in the soil in humid areas and soil-crust formation in arid climates leading to destruction of vast agricultural lands.

4. Way Forward

To actualize the Nigeria's goal for sustainable environmental management, the following measure should be taken.

- i. There is a need for the full utilization of the law as an instrument of social change or social engineering to achieve a balance between environmental protection and development activities.
- ii. Due to the high poverty rate, there is need for multilateral initiatives such as the Global Environmental Fund (GEF) to help strengthen Nigeria's capacity to implement multilateral environmental agreements.
- iii. Nigeria should seek international assistance to improve effectiveness of institutions, policies and regulatory capacity. This will help to boost human, technical and financial resources required for effective environmental management.
- iv. There is need for capacity development to carry out strategic environmental assessments of current policies and programs.
- v. There is also a need for governments to engage the private sector effectively to provide business solutions to environmental challenges. Governments should also reward innovation that enables the achievement of national environmental priorities.
- vi. Through increased awareness, attitude re-orientation and the provision of alternatives, individual and communal action could be a vital force in the long run in achieving ecologically friendly sustainable development. At the community level, the message of environmental management ought to be re-packaged to reflect African values. The recognition of the need not to starve coming generations of resources needed for their future development should be an incentive for present Africans to use resources in a more sustainable way, given the importance that Africans place on inheritance.

5. Conclusion

This appraisal revealed that environmental legislation in Nigeria has progressed in the right direction from a state of virtual non-existence to its present state of environmental laws and institutions, with centralization of environmental management in environmental protection agencies. However, in spite of all measures put in place, Nigeria is still experiencing regulatory failure in environmental governance. Environmental concerns are not faithfully integrated into economic and development activities in such a manner as to give any significant impact. These limitations are due to poverty, over dependence on extractive industries, rapid population growth, lack of enforcement of environmental laws, non-compliance with laid regulations among others.

There is therefore need for full utilization of the law as an instrument of social change or social engineering to achieve a balance between environmental protection and development activities. Nigeria should encourage broad based participation to enable her deal effectively with her environmental challenges. Such public participation should include local communities and their representatives.

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