

CHAPTER 1

Environmental Sustainability In Nigeria: An Overview

ENVIRONMENTAL SUSTAINABILITY IN NIGERIA: AN OVERVIEW

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ABSTRACT

Man's overdependence on the environment in the pursuit of economic growth has continued to degrade it. This degradation calls for proper resources management through regulations so that a balance is maintained. However, in Nigeria despite decades of efforts at achieving environmental sustainability the problem of degradation and pollution is on the increase. Relying chiefly on existing literature, the paper examined drivers of environmental degradation in Nigeria and appraised the existing national environmental policies and programmes for the attainment of environmental sustainability. This paper concluded that rethinking existing economic, social, political and technological decisions and approaches that induce harmful practices and evaluating the current policies in the light of current reality will steer Nigeria towards environmental sustainability.

Keywords: Environment, Nigeria, Sustainability, Policy, Drivers

INTRODUCTION

A book in honour of a distinguished academic in his lifetime is a veritable "celebration publication". I commend Prof. M. O. Onuh and the other mentees of Prof. N. C. Ohazurike for coming up with this book on Man, Environmental Safety and Sustainability: The Role of Research to celebrate him. Being a distinguished academic and a brilliant man Prof. Ohazurike deserves our special attention and respect; he merits the honour being accorded him.

He is a trailblazer in the study of plant diseases and has made efforts at establishing the nexus of botany, agricultural science and environmental science. His sustained research and several publications in plant health and the environment, his involvement in the environmental impact assessments of some multinational companies, his activism in environmental conservation and his ardent participation in World Environment Day (WED) events are reflected in the different chapters of this book. I am happy to be given the privilege of contributing this lead chapter titled "Environmental Sustainability

in Nigeria: An Overview.” This chapter examines key concepts of environmental sustainability as well as the drivers of environmental problems in Nigeria. It highlights national environmental policies and programmes and proffers some recommendations.

CLARIFICATION OF KEY CONCEPTS

The Concept of Environment

Environment refers to our surroundings. According to Musa and Akpokerie, (2013) it consists of abiotic and biotic components, namely, animals, plants, microbes and ecosystem comprising biological diversity and water, soil and air, which form the physical components of habitats and ecosystem which interact. Gana and Toba (2015) define the environment as both the physical and social circumstances which surround people and have influence on them such as water bodies and the life therein, land mass, forests, grasslands, deserts, animals and fellow humans and all the interactions between them.

Environment is also defined as the conditions under which any person or things lives or is developed; sum-total of influences which modify and determine the development of life or character (Ogbodo, 2009). Regardless of how the environment is defined, however, its sustenance is regarded as the duty of man (Ene, 2021).

Environmental Sustainability

The concept of environmental sustainability was coined in 1972 at the meeting of the delegates at the United Nations Conference on the Human Environment held in Sweden. It submits to the utilization of resources and the protection of the natural environment such that human and ecological health is preserved rather than being threatened. According to Goodland (1995), environmental sustainability seeks to improve human welfare by protecting the sources of raw materials used for human needs and ensuring that the sinks for human wastes are not exceeded, in order to prevent harm to humans.

Morelli (2011) defines environmental sustainability as meeting the resource and services needs of current and future generations without compromising the health of the ecosystems that provide them. Environmental sustainability is also defined as the conversion, management and rational use of natural resources in order to maintain the wholesomeness of each ecosystem, support all the life forms and guarantee that biodiversity is preserved and that environmental degradation is prevented (Gbenda, 2012; Leke & Leke, 2019).

Environmental sustainability has to do with the need to get a source of livelihood be it crop farming, animal husbandry, fishing, mining, trading or construction and still maintain good quality environment (Oyebanji, Adeniyi, Khobai & LeRoux, 2017). Environmental sustainability looks at the ways through which resources will not be used up faster than they are being replenished, and the transition towards low carbon emission despite the increasing population (Kahn, 1995).

Musa and Akpokerie (2013) opine that environmental sustainability is the destination of sustainable development due to the fact that it is aimed at the making of decisions and conduct of activity in such a manner as to ensure persistence over an apparently indefinite future in the improvement and maintenance of ecosystems. According to Leke and Leke (2019), environmental sustainability is one of the pillars of sustainable development and can be traced to the 1987 Bruntland Commission of the United Nations. Environmental sustainability is inseparable from nature, and nature needs to be protected from human activities that are considered highly predatory to the environment.

Environmental Policy

Environmental policy is defined as government's plan designed to modify and improve environmental conditions under which people live. It is also an instrument for achieving greater equity and social justice (Adeyemo, 2008). It is important to understand that environmental policy is geared towards ensuring a safe and healthy environment that is sustainable. According to NEEDS (2004) environmental policies are measures aimed at combating environmental degradation. They are to improve human welfare conditions, mitigate bio-diversity loss, and achieve sustainable development. The 2015 Sustainable Development Goals statement of the United Nations reveal that environmental sustainability is still a key concern globally as most of the goals are tied to protecting natural resources.

DRIVERS OF ENVIRONMENTAL PROBLEMS IN NIGERIA

Natural resources are key assets that underpin development and wealth creation. Environmental problems stem primarily from man's activities which deplete natural resources and endanger ecosystems. Over-exploitation of natural resources harms the health of the ecosystems and by extension human health. For instance, when vegetation is stripped at random it can easily lead to land degradation. Again, gas flaring has not ceased in Nigeria, and carbon emission is still on the increase.

Nigeria is considered an emerging market which is expected to continue growing economically. With such expectations come the challenges of environmental degradation. Nigeria, like many other industrially underdeveloped countries is beset by serious environmental problems like deteriorating urban spaces, desertification, deforestation, soil erosion and flooding which emanate from human activities.

Poor awareness of issues of environmental management constrains Nigeria in making significant progress in the area of environmental sustainability. There is need for deep understanding of how the environment is being degraded and why the degradation is occurring. The term 'drivers' means underlying causes and these are embedded in the way we live our lives, our economic activities, our social behavior and preferences and so on. Industrialization is a major driver. Nigeria has numerous industries and most of them are concentrated in the urban areas. The siting of some industries near residential areas with relatively no recourse to planning principles exposes the city dwellers to pollution. Large quantities of industrial wastes are dumped in the nearest rivers and other water-bodies making the water unfit for human consumption and for most aquatic life. The development of land for many industries sited in hinterlands violates wildlife habitats. Industrial wastes also impact negatively on groundwater.

Heavy reliance on fossil fuel is another driver of environmental problems. With rising energy need, oil exploration and exploitation activities (e.g. drilling, dredging, production, refining and transportation) are heightened in the Niger Delta region (NDR) of Nigeria. The large and rising population, expanding economy and increasing numbers of automobiles depend on petroleum products. The resultant combustion pollutes the air. Industrial pollution takes the form of chemicals, toxic discharges, smoke, heavy metals, sewage and untreated hazardous wastes. Nigeria's industries often use generating sets for energy needed in the production process and these produce thick and offensive gases.

The gas flared at oil flow stations in the NDR produces methane, carbon dioxide and benzene which also pollute the air. Other activities in the region such as bunkering and illegal refining of crude oil lead to oil spills and acid rain which are also dangerous and injurious to the environment and man. Oyebanji et al. (2017) bemoan the excessive accumulation of carbon dioxide in the atmosphere because it is tending towards a level that will make it

difficult for the atmosphere to maintain an acceptable global mean temperature. Nigeria ranks among the top 10 gas-flaring countries in the world with 6.63 billion cubic metres in 2021 (Uduu, 2022). The gas flared is a complete waste of natural resources that could have been channeled to provision of electricity. Continuous energy depletion will cause prices to rise leading in the long-run to high level of poverty, and sustenance will be very difficult as a result of over-dependence on our non renewable energy sources (Oyebanji et al., 2017).

Urbanization and migration drive environmental problems in Nigeria. Urbanization increases by 3.9 percent annually, and 53 percent of Nigerians live in the cities (World Bank, 2021; World Data.info, 2023). Most of the natural vegetation has been cleared in the name of industrial growth and advanced civilization (Imasuen, Oshodi & Onyeoba, 2013). It is this continuous clearing of bush and forest areas that leads to huge numbers of migrants congregating to form new urban centres and enlarge existing ones. Rural-urban migration is a major factor in increasing environmental degradation. The daily influx of people from rural to urban areas is due to greater chances of obtaining better employment, the presence of infrastructure and an abundance of functional facilities in cities.

Rapid urbanization fueled by rural-urban migration and other factors such as economic growth have led to the huge accumulation of wastes and the littering of streets with trash in most Nigerian cities. When wastes, particularly the non-biodegradable type, are not properly handled and evacuated they facilitate flooding and other environmental problems. Air pollution is also brought about by rapid urbanization due to the fact that a large number of poorly serviced vehicles on the streets emit smoke and gases. Again, most residents in the cities depend on their generating plants as a result of the irregular power supply by government Electricity Distribution Company and it causes both noise and air pollution. Accumulation of greenhouse gases (GHGs) in the atmosphere leads to unfavourable climate change (Adejumo & Adejumo, 2014). The building of houses on protected areas and verges occasioned by rapid urbanization and unplanned residential districts have resulted in perennial urban flood with devastating consequences.

Nigeria's environmental problems stem from worsening levels of poverty, low literacy rate and poor governance as well. Poverty can have a harmful effect on the environment. Amaechi (2012) firmly believes that a linkage exists

between environmental degradation and poverty. Poverty leads to overcrowding, deforestation, poor sanitation and other forms of pollution. The poor people's over reliance on natural resources for food, shelter, fuel and their livelihood such as agriculture can harm the environment. Negative environmental practices like bush burning, overgrazing, open grading, over cropping/continuous cropping are associated with the poor. According to Sasu (2023) poverty rate is rising in Nigeria, and nearly 12 percent of the world population in extreme poverty lives in Nigeria. Previous statistics showed that over 30 percent of Nigeria's population is in severe poverty and 62 percent is below poverty line (World Bank, 2015). The Nigerian Economic Summit Group (NEGS) (2023) projected that Nigeria's unemployment rate will increase to 37 percent while the poverty headcount will amplify to 45 percent. Degraded farmlands and polluted water bodies reduce productivity and worsen impoverishment particularly in the rural areas. Pitifully, living from hand to mouth seldom allows people to think of the future with regard to the environment (Dokpesi, 2013).

According to World Population Review (2023) Nigeria's population is equivalent to 2.64 percent of the total world population and Nigeria ranks number 7 in the list of countries (and dependencies) by population with a growth rate of 2.62 percent. Nigeria's population is expected to quadruple by 2050 (Dunguma, Minang, Aynekulu, Carson, Nzyoka, Bah & Jamnadass, 2020). Population growth is a driver of environmental problems and large population implies an increase in pressure on natural resources. Population increase leads to increased need of space for agriculture and industrial and infrastructural development as well as new human habitation. Overpopulation precipitates and exacerbates land and general environmental degradation. For example, the rate at which fuelwood which is the traditional biomass adopted for cooking is currently being exploited in Nigeria is far greater than its regeneration coupled with the attendant problems of exposure to lung diseases, burns and possibly death. Government needs to address environmental problems in Nigeria through the inclusion of other stakeholders in its programmes for sustainable development and for a healthy and safe environment.

TOWARDS ENVIRONMENTAL SUSTAINABILITY IN NIGERIA: POLICIES AND PROGRAMMES

Due to the need to sustain the environment and restore its health government has over the years formulated policies and developed programmes. With scientific evidence pointing to the fact that humanity is living unsustainably,

policies and programmes are very important in returning human use of natural resources to within sustainable limits (World Resources Institute, 2005). The target of environmental sustainability is to reverse the loss of environmental resources. Several strategies such as the enactment of comprehensive and modern set of environmental laws, the development of five-year environmental plans, the development of high quality framework for pursuing environmental sustainability, the upgrade of traditional industries and the phasing out of outdated technologies and equipment, the closing down of severely polluting and resource wasting factories, the organization of campaigns and the award of schemes to support implementation at the local level can help in the achievement of environmental sustainability in Nigeria.

Government intervention in matters concerning the environment and its sustainability in Nigeria dates back to the 1960s. Members of the United Nations (UN), Nigeria, inclusive were signatories to the 1968 African Convention of Conservation of Nature and Natural Resources. The United Nations Conference on the Human Environment was held in Stockholm in 1972. It preceded the United Nations Conference on Environment and Development convened in Rio de Janeiro in 1992 (tagged the Rio Earth Summit). In both conferences delegates from Nigeria and other countries endorsed principles seeking to protect the environment via the monitoring of environmental conditions and the creation of environmental ministries and agencies (Eneh, 2011; Ajibade, 2013). In Nigeria the Nigerian Conservation Foundation (NCF), a Non-Governmental Organisation was set up in 1980 to help preserve the nation's natural resources.

A national policy on environment was only formulated in 1989 after the government of Nigeria had witnessed the dumping of toxic waste in Koko village in the Niger Delta Region in 1988 which led to the promulgation of the Harmful Waste Act and the establishment of a Federal Environmental Protection Agency (FEPA) all in the same year. The Decree No. 58 of 1988 as amended by Decree 59 of 1992 empowered FEPA to have control over all issues relating to the Nigerian environment. At inception the agency was charged with the enforcement of environmental laws. Also in 1989, the National Resource Conservation Council was created and in 1992 the Federal government came up with the Environmental Impact Assessment Act. This Act emphasizes mitigative precautions against exposure to harm caused by environmental degradation.

The third major global event that emphasized environmental issues was in 1997 when the Kyoto Protocol and the United Nations Framework Convention on Climate Change (UNFCCC) were adopted so that industrial activities that add to high greenhouse gas emissions and depletion of the ozone layer be reversed (The Global Climate Change Regime, 2013). This agreement stems from a clear understanding of global warming.

Some chapters of the 1999 constitution of the Federal Republic of Nigeria such as section 20 contain information that is geared towards the protection of the environment and the preservation of natural resources. The Federal government despite its earlier laws and decrees further strengthened its mandate of ensuring environmental sustainability in Nigeria by establishing the Federal Ministry of Environment in 1999 (see Table 1). It produced a number of environmental guidelines and standards for control of pollution in a bid to protect and preserve the environment.

In 2007, FEPA Decree No. 58 was repealed and replaced with an Act that established the National Environmental Standards and Regulations Enforcement Agency (NESREA). NESREA is currently the supreme reference authority in environmental matters in Nigeria with the duty of enforcing environmental standards, regulations, laws, rules, policies and guidelines and the execution of environmental management programmes. According to Ogbodo (2009) the agency has powers to prohibit processes and use of equipment or technology that sabotage environmental quality, to establish mobile courts to prosecute offenders and the power to institute public investigation. At the state level the enactment of legislation for the protection of the environment has led to the establishment of various State Environment Protection Agencies across the country.

TABLE 1: ENVIRONMENTAL ACTS/LAWS IN NIGERIA

1988	Decree No. 42 of 1988: Harmful Wastes (Special Criminal Provision, etc.) Act
1988	Decree No. 56 of 1988: Federal Environmental Protection Agency (FEPA)
1989	National Policy on Environment
1992	Environmental Impact Assessment (EIA) Act
1992	Federal Environmental Protection Agency Decree (Amendment) Decree No. 59 of 1992
1990	The Petroleum Act (CAP 350 LEN, 1990)
1990	Mineral Act (CAP 226 LEN, 1990).
1999	Establishment of Federal Ministry of Environment.

Source: Adeyemo, A. M. (2008).

RECOMMENDATIONS

Despite the establishment of environmental agencies and departments at various levels of government and the existence of the national policies on the environment, the environmental problem confronting Nigerians seems to be increasing. This is because sufficient precautions have not been taken to balance development objectives against the need to maintain desirable environmental quality. More effort is still required. Existing laws need to be amended to reflect today's realities such as rapid technological advancement, and the removal of oil subsidy. Technical know-how and the resources for the enforcement of existing laws should be provided. Gas infrastructure should be developed in order for a realistic gas flare-out date to be fixed and the 2021 Petroleum Industry Act (PIA) which allows for gas flaring should be revised. The importation of non-environmentally friendly products should be banned. Environmental education and public awareness campaigns need to be intensified in order to impart sensitivity to people and bring about lifestyle changes for the benefit of the environment.

Being a signatory to the Paris Agreement made at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties which entered into force in 2016 and having made a commitment to work towards "Net Zero emissions", it is important for Nigeria to meet the target. Section 20 of 1999 Nigerian Constitution on environmental protection should be invoked whenever necessary and conscientiously enforced. The tempo of engagement with NGOs, religious organisations, civil society organisations, grassroots movements and other stakeholders in environmental actions such as massive tree planting and monthly sanitation exercises should be increased. Everyone needs to make inputs in protecting the planet by taking on environmentally friendly activities and being an environmental protection agent.

CONCLUSION

The paper has discussed the concepts of environment, environmental sustainability and environmental policy as well as the drivers of environmental problems and the existing national environmental policies in Nigeria. It outlined new approaches that need to be adopted for the full attainment of environmental sustainability in the country. It is clear that rethinking existing economic, social, political and technological decisions and approaches that induce harmful practices and appraising the current policies will steer Nigeria towards environmental sustainability.

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