

AN APPRAISAL OF THE LEGAL FRAMEWORK FOR BIODIVERSITY PROTECTION IN NIGERIA

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Abstract

This paper focuses on the appraisal of the legal framework for biodiversity protection in Nigeria, in light of challenges and possible solutions for its protection. This became imperative given the enormous economic and social importance of protecting biodiversity in Nigeria and worldwide. The study adopted a doctrinal approach to evaluate various legal frameworks connected thereto. Having analyzed various legal frameworks dealing with the protection of biodiversity, the challenges, possible solutions, and remedies it was discovered that, it is not how excellent and available the legal frameworks are or seem to be, but the political power of the government of the day towards the implementation process of such laws, conventions and treaties in line with the current changes of the society. Some major threats to biodiversity conservation in Nigeria include poverty, economic development, incomplete or non-implementation, and non-ratification of some international treaties and conventions on conservation issues, ambiguous governmental laws on biodiversity, climate change, pollution, and invasion by alien species. Possible remedies include concerted efforts to implement and ratify treaties and conventions on biodiversity, and educating the populace to forgo cultural practices that are inimical to the conservation of biological resources. The essence of this paper is to highlight and sensitise citizens on the importance of biodiversity protection in Nigeria.

Keywords: Biodiversity Protection, Legal Framework, Environmental Law & Environmental Policy

1. Introduction

Biodiversity is one of the terms in the field of ecological and environmental sciences that does not have a particularly unique meaning. Chadwick concurs that there is no agreed definition of the word. Owing to this, the word ‘biodiversity’, according to Science for Environment Policy (2015), is assigned different meanings in line with the context of its usage in ecosystem assessments and ecological services.¹ Many conservationists and biological scientists normally adopt a working definition to suit their interests and the idea regarding the word they want to propagate. For instance, this paper has adopted a simple working definition of biodiversity. In this view, biodiversity refers to the different species of flora (plants) and fauna (animals) in different kinds of habitats.²

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¹ United Nations Environmental Program (2002) *Africa Environment out Look Past, Present and Future Perspective*, Earth Print Ltd, England.

² Federal Government of Nigeria. 2015. Nigeria Fifth Biodiversity Report. Federal Ministry of Environment, Abuja.

2.1 The Concept of Biodiversity

The concept of biodiversity (synonymous with biological diversity) has been known to man ever since he began to minutely observe the living beings around him.³ The term biological diversity was used by Robert E. Jenkins and Thomas Lovejoy in 1980. The word biodiversity itself may have been coined by W. G. Rosen in 1985. The term biodiversity was used as the title for a symposium organized by the National Research Council in Washington in 1986. At about that time, as people became more aware of the extinction crisis, biodiversity emerged as a significant issue. It was given concrete expression in the World Resources Institute (WRI), World Bank (WB), International Union of Nature and Natural Resources (IUCN), and World-Wide Fund for Nature (WWF) publications concerned with the conservation of the world's biological diversity.⁴ However, biodiversity did not become a familiar term to the general public until the United Nations Conference on Environment and Development (UNCED) was held at Rio de Janeiro (Brazil) in 1992. The Conference laid immense stress on the biological diversity of our planet and the need to preserve it for posterity. It defined the biodiversity: 'Biodiversity means the variability among living organisms from all sources, including, inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.' This is the single legally accepted definition of biodiversity adopted by the UN Convention on Biological Diversity⁵.

The most straightforward definition of biodiversity is the variation of life at all levels of biological organization. Broadly speaking, the term biodiversity includes genetic diversity, species diversity, ecosystem diversity, and habitat diversity.⁶

2.2 Genetic diversity. Genetic diversity refers to the variation of genes among the population and the individuals of the same species. There are about 1.7 million known species of living forms on the Earth. Each one stores an immense amount of genetic information.⁷ The amount of genetic variation is the basis of the evolution of new life forms. It has a key role in the maintenance of biodiversity at the species level.⁸

2.3 Species diversity. It refers to the variety of species within a region. An estimated 1.7 million species have been described to date. Species are the primary focus of evolutionary mechanisms, and therefore the origin and evolution of species are principal agents in the maintenance of global biodiversity.⁹

2.4 Ecosystem diversity. In an ecosystem, there may exist different landforms, each of which supports different but specific vegetation. Ecosystem diversity is difficult to assess quantitatively

³ P Balvanera and others. (2001). Conserving Biodiversity and Ecosystem Services. *Science*.

⁴ Ibid.

⁵ M Gadgil, and others (1993). Indigenous knowledge for biodiversity conservation. *Ambio Vol 22 No. 2-3*.

⁶ Ibid.

⁷ B Pandey and others (2010). *Sustainable Management and Conservation of Biodiversity*. ISBN: 978-93-80428-01-7.

⁸ V Shankar and others (1995). *Conservation of biodiversity on tropical rangelands of India*. Proc. National Symposium on Agriculture and Environment, pp. 32 - 34.

⁹ Ibid.

since the boundaries of the communities, which constitute the various sub-ecosystems, are elusive. Ecosystem diversity can be best understood if one studies the communities in various ecological niches within the given ecosystem; each ecosystem is associated with defined species complexes.¹⁰

2.5 Habitat diversity. It involves more than just the kind of communities and species- it depends on the spatial arrangement of habitats across a large area and on the fluxes of energy, nutrients, disturbances, and organisms across the area¹¹.

Ecological use three different terms for various practical measures of biodiversity:

- a. **Alpha diversity.** It refers to diversity within a particular area, community, or ecosystem, and is measured by counting the number of taxa within the ecosystem.
- b. **Beta diversity.** It refers to species diversity between ecosystems and is measured by comparing the number of taxa that are unique to each of the ecosystems.
- c. **Gamma diversity.** It is a measure of overall diversity for different ecosystems within a region¹².

Species diversity in natural habitats is high in warm areas and decreases with increasing latitude and altitude. On land, diversity is higher in areas of higher rainfall and lower in drier areas.¹³

3.1 The Legal Framework of Biodiversity Protection in Nigeria

3.1.1 Biodiversity-Related Conventions

Nigeria and the international communities are Parties to several important biodiversity-related international and regional conventions. These conventions require support and commitment at all levels of governance if they are to be fully implemented and if their shared goals of conserving and sustainably utilizing diversity are to be met.¹⁴ In pursuit of these goals, the conventions have employed various mechanisms, including complementary approaches and operational tools.¹⁵ e.g., programmes, work, trade permits and certificates, multilateral systems for access and benefit-sharing, etc. However, such mechanisms are not thoroughly described herein, as this is only intended to provide an appraisal of the legal framework for biodiversity. There are six major international conventions with a focus on biodiversity issues these are Convention on Biological Diversity; Convention on International Trade in Endangered Species in Wild Fauna and Flora; the Convention on the Conservation of Migratory Species of Wild Animals; The International Treaty on Plant Genetic Resources for Food and Agriculture; Convention on Wetlands of International Importance, especially as Waterfowl Habitat and The Convention Concerning the Protection of the World Cultural and Natural Heritage.¹⁶

In addition to these six conventions, the United Nations Framework Convention on Climate Change (UNFCCC) and its related Kyoto Protocol (KP) also bear strong relevance to

¹⁰ K C Agrawal. (2009). *Biodiversity: Concept, Conservation and Management*. ISBN: 81-8915305-6.

¹¹ A Anderson and David (2010). *Environmental economics and Natural resource Management*. ISBN13: 978-0-415-77904-3.

¹² Ibid.

¹³ V K Ahluwalia and others. (2008). *Environmental Science*. ISBN-13: 978-1-42007-069-9.

¹⁴ S S Ajayi, *Principles for the management of protected areas in wildlife conservation in Africa: A scientific approach*. (Academic Press, 2019) 250.

¹⁵ T I Borokini, *A systematic Compilation of Endemic flora in Nigeria for Conservation Management* (2014) Journal of *Threatened Taxa* 6(11): 6406–6426.

¹⁶ Ibid.

biodiversity owing to the mutual dependency that exists between biodiversity and the climate system. Moreover, climate change mitigation and adaptation measures such as afforestation and the construction of coastal defenses can have profound implications for biodiversity. As such, the UNFCCC and KP are also summarized in this paper¹⁷.

3.1.2 Convention on Biological Diversity 1994

This Convention, after its adoption at the Rio Earth Summit in 1992 and entering into force one year later, the Convention on Biological Diversity (CBD) aims to ensure the following:

1. Conservation of biodiversity;
2. Sustainable use of its components; and
3. Fair and equitable sharing of benefits arising from genetic resources¹⁸.

The agreement covers all ecosystems, species, and genetic resources and acknowledges that the conservation of biodiversity is very important to humankind. The precautionary principle is evoked in the Convention, as is the notion that the conservation of biodiversity will confer strong environmental and socio-economic benefits.¹⁹

The Convention covers issues such as access to genetic resources and traditional knowledge; equitable benefit-sharing; access to and transfer of biotechnology; technical and scientific cooperation; environmental impact assessment; education and public awareness-raising; provisioning of financial resources; and national reporting.

To implement the Convention, most Parties have established National Biodiversity Strategies and Action Plans (NBSAPs), sometimes bolstered by the contributions of local authorities in the form of Local Biodiversity Action Plans (LBAPs).

In 2000, the CBD was augmented by the Cartagena Protocol on Biosafety, which seeks to protect biodiversity from the potential risks posed by genetically modified organisms resulting from modern biotechnology.

3.1.3 Convention on International Trade in Endangered Species of Wild Fauna and Flora 1975

By affording varying degrees of protection to over 33,000 animal and plant species, this Convention, commonly known as CITES, aims to ensure that trade in species does not threaten their survival. The Convention is compatible with the General Agreement on Tariffs and Trade (GATT), with the GATT Secretariat having played an active role in its development. The Convention entered into force in 1975, and since then, only one species, namely, the Spix's Macaw, has been driven to extinction in the wild by the trade in it²⁰.

¹⁷ UNFCCC 2001 accessed on 12 September, 2022 at <http://www.cbd.int/blg>)

¹⁸ CBD 1994 accessed on 5 December 2021 at <http://www.cbd.int>

¹⁹ Ibid.

²⁰ CITES 1975 accessed on 10 December 2024 at; <http://www.cites.org>.

CITES is legally binding on its Parties and works by subjecting international trade in specimens to heightened control measures. The import and export of species that are listed in the CITES appendices must be authorised through a strict permitting system overseen by a designated Management Authority²¹.

3.1.4 Convention on the Conservation of Migratory Species of Wild Animals 1979

The agreement, also known as the CMS or Bonn Convention, was reached under the auspices of the United Nations Environment Programme in 1979 in Bonn, before entering into force in 1983. The CMS aims to protect migratory species, whether terrestrial, marine, or avian, throughout their entire ranges. Tran's boundary and endangered migratory species are a particular focus of the Convention. Appendix I of the Convention lists endangered migratory species that must be protected by the Parties through the removal of obstacles to their migration, the restoration of degraded migratory stopovers and pathways, and the alleviation of other adverse pressures.²²

Appendix II lists migratory species that require international cooperation amongst the Range States to ensure their continued survival. Parties cooperate to conserve such species and their habitats by establishing multilateral agreements for conservation and management. Several such agreements, both formal and informal, have been forged under the aegis of the CMS, including the EUROBATs (concerning populations of European bats).²³

In effect, CITES seeks to prevent the unsustainable use of biodiversity, as opposed to the CBD, which seeks to promote the sustainable use of biodiversity.²⁴

3.1.5 International Treaty on Plant Genetic Resources for Food and Agriculture 2002

This agreement, also known as the International Seed Treaty, aims to ensure the conservation and sustainable use of plant genetic resources for food and agriculture, as well as the fair and equitable sharing of benefits that arise out of their use.²⁵ Developed under the aegis of the United Nations Food and Agriculture Organization (FAO), the Treaty was opened for signature in 2002 and entered into force just two years later.²⁶ The Treaty complements and builds upon certain provisions of the CBD regarding sustainable agriculture and food security. The Treaty establishes a multilateral system of access and benefit-sharing which covers around 64 crops and forages. Farmers are affirmed certain rights under the Treaty, including free access to genetic resources, unrestricted by intellectual property rights; participation in certain policy discussions and decision making; and to use, save, sell, and exchange seeds, subject to their national laws.²⁷

²¹ Ibid.

²² CMS 1979 accessed on 10 October 2024 at; <http://www.cms.int>

²³ Ibid.

²⁴ Ibid.

²⁵ ITPGRFA 2002 accessed on 15 December 2024 at; <http://www.planttreaty.org>

²⁶ FAO 2002 accessed on 25 December 2022 at; <http://app.iucn.org>

²⁷ Ibid

3.1.6 Convention on Wetlands of International Importance, Especially as Waterfowl Habitat, 1975

This agreement, popularly known as the Ramsar Convention, was adopted in the Iranian city of Ramsar in 1971, before entering into force in 1975. Countries and NGOs negotiated the Convention in the 1960s as a prompt reaction to the alarming rates of wetland degradation and loss that were having resounding impacts on populations of migratory water birds²⁸.

The Convention's vision is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world." The Convention employs a very wide definition of wetlands that encompasses lakes, rivers, swamps, marshes, wet grasslands and peat lands, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, and human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans. It recognizes wetlands as exceptionally important ecosystems rich in biodiversity and essential for the well-being of humans. The Convention comprises three pillars of activity: Designation of wetlands of international importance; Promotion of the wise use of all wetlands in the territory of each country; and International cooperation with other countries to further the wise use of wetlands and their resources.²⁹:

The wise use of wetlands is defined as "the maintenance of their ecological character, achieved through the implementation of ecosystem approaches within the context of sustainable development."³⁰.

3.1.7 Convention Concerning the Protection of the World Cultural and Natural Heritage 1975

This agreement, commonly known as the World Heritage Convention (WHC), seeks to identify and conserve sites throughout the world that are of outstanding universal value. The WHC deems that such sites should be preserved for all humanity and aims to ensure their protection through international cooperation. The WHC was adopted in 1972 and entered into force in 1975³¹.

The Convention established a World Heritage List which now includes hundreds of properties that are considered to be significant components of the world's cultural and natural heritage. Parties to the Convention must conserve listed sites within their territory and also take measures to protect their national heritage. Additionally, Parties are urged to integrate their natural and cultural heritage into regional planning programmes, set up staff and services at listed sites, conduct scientific and technical conservation research, and promote the role of the heritage in the life of the community³².

²⁸ CWII 1975 accessed on 23 December 2021 at; www.ramsar.org

²⁹ Ibid.

³⁰ Ibid.

³¹ WHC 1975 accessed on 11 September 2021 at; <http://whc.unesco.org>.

³² Ibid.

3.1.8 United Nations Framework Convention on Climate Change 1994

In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted and opened for signature. It entered into force in 1994 and, since then, has become one of the world's most universally supported multilateral environmental agreements.³³

The Convention's ultimate objective is "to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, ensure that food production is not threatened, and enable economic development to proceed sustainably."³⁴

Parties to the convention must compile an inventory of their greenhouse gas emissions and report on their actions in implementing the Convention. These reports, called national communications, are used to monitor global progress in achieving the Convention's ultimate objective. Parties must also establish national programmes comprising climate change mitigation measures, as well as provisions for developing and transferring environmentally beneficial technologies, sustainably managing carbon sinks, preparing to adapt to climate change, climate change research, climate observation, data exchange, and the promotion of awareness relating to climate change.³⁵

In addition to these general commitments, the UNFCCC divides countries into three main categories with different commitments. Parties comprise mostly industrialized countries that were members of the Organization for Economic Co-operation and Development (OECD), as well as some countries with economies in transition (EIT Parties). Parties must reduce their greenhouse gas emissions to 1990 levels by 2000 and are subject to stringent reporting requirements. EIT Parties are allowed more freedom in implementing their commitments, for example, in choosing a base year other than 1990³⁶.

Under the UNFCCC, special funds have been created to respond to the needs of the most vulnerable countries, e.g., the Special Climate Change Fund and the Least Developed Countries Fund.³⁷

3.1.9 Kyoto Protocol to the UNFCCC

In 1997, the Kyoto Protocol was adopted by Parties to the UNFCCC in Kyoto, Japan. Detailed rules for the implementation of the Protocol were adopted at the 7th Conference of the Parties in Marrakesh, 2001, and are called the "Marrakesh Accords." It entered into force in February 2005 after being ratified by the 55th State, including Annex I Parties responsible for 55% of this group's carbon dioxide emissions in 1990³⁸.

³³ UNFCCC 1994 accessed on 20 September 2024 at; <http://unfccc.int>.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Ibid.

³⁷ UNFCCC 1994. (n.21).

³⁸ UNFCCC 2005 accessed on 30 December 2021 at; http://unfccc.int/Kyoto_protocol/items.

The Protocol sets binding emissions targets for industrialized countries and the European community for reducing greenhouse gas emissions by an average of 5% below 1990 levels over the five years, 2008-2012³⁹. Whilst the UNFCCC encourages industrialized countries to reduce their emissions, the Protocol commits them to do so. The Protocol states that industrialized countries are primarily responsible for the current high levels of atmospheric greenhouse gas concentrations and thus invokes the principle of “common but differentiated responsibilities” to assign commitments to different groups of countries.

Under the UNFCCC, countries must meet their targets through national measures. However, the Kyoto Protocol created novel market-based mechanisms to grant countries some flexibility in meeting their targets by utilizing the lowest-cost solutions. These mechanisms are Emissions trading, Clean development mechanism and Joint implementation.⁴⁰

3.2 Constitution of the Federal Republic of Nigeria 1999 as (Amended)

The Constitution of the Federal Republic of Nigeria 1999, as amended, provides for environmental matters in Section 20 as one of the fundamental objectives and directive principles of state policy. This was the first time environmental issue is captured in the Constitution, besides, the Constitution also places the subject matter on the exclusive legislative list under item 60(a) which empowers the National Assembly to make laws for establishment and regulation authorities for the Federation or any part thereof to promote and enforce the observance of the Fundamental Objectives and Directive Principles of State.⁴¹ The issue of the protection of the environment came for the first time to be given Constitutional recognition under the 1999 Constitution of Nigeria. It is of common knowledge that the previous constitutions of Nigeria, viz. the 1979 Constitution, the Republican Constitution of 1963, the Independence Constitution of 1960, the Lyttleton Constitution of 1954, the Macpherson Constitution 1951, the Richard Constitution of 1946, and the Clifford Constitution of 1922, never provided for the environment in any form, either as a fundamental right or a directive principle.⁴²

One of the significant outcomes of Nigeria’s participation in the United Nations Conference on Environment and Development (UNCED) was the signing of the Convention. Nigeria thus assumes obligations under the provisions of the treaty by customary international law. The Nigerian constitution makes fundamental provisions for environmental protection and identifies important components of the environment. Section 20 of the Constitution of the Federal Republic of Nigeria contains the country’s environmental objectives that are meant, “protect and improve the environment and safeguard the water, air, land, forest and wildlife”.

In recognition of the need to protect her environment and bio resources, Nigeria has put in place several legislations including the National Environmental Standards Regulations and Enforcement Agency (Establishment) Act 2007 (NESREAA) and the 33 Regulations made by

³⁹ Ibid.

⁴⁰ Ibid. (n.26).

⁴¹ Ibid s60(a).

⁴² J Clancy and M Feenstra, *How to Engender Environmental Policy: 147 Environmental Protection Master Plan* FRN (2006) 1-20.

the Minister of Environment under section 34 of the Act This statute was created under the 1999 Constitution of the Federal Republic of Nigeria (section 20) and repealed the Federal Environmental Protection Act 1988. The NESREA, the major federal body responsible for protecting Nigeria's environment, is responsible for enforcing all environmental laws, regulations, guidelines, and standards. This includes enforcing environmental conventions, treaties, and protocols to which Nigeria is a signatory⁴³.

Environmental Impact Assessment Act (Cap E12 LFN 2004). This law sets out the general principles, procedures, and methods of environmental impact assessment in various sectors.

Harmful Waste (Special Criminal Provisions etc) Act (Cap H1 LFN 2004. This law prohibits the carrying, depositing, and dumping of harmful waste on land and in territorial waters.

Endangered Species (Control of International Trade and Traffic) Act (Cap E9 LFN 2004). This provides for the conservation and management of wildlife and the protection of endangered species, as required under certain international treaties⁴⁴.

National Oil Spill, Detection and Response Agency Act 2006 (NOSDRA). The objective of this law is to put in place machinery for the coordination and implementation of the National Oil Spill Contingency plan for Nigeria to ensure a safe, timely, effective, and appropriate response to major or disastrous oil pollution.

National Park Services Act (Cap N65 LFN 2004). This makes provision for the conservation and protection of natural resources and plants in national parks.

Nigerian Minerals and Mining Act 2007. This repealed the Minerals and Mining Act No. 34 of 1999 and re-enacted the Nigerian Minerals and Mining Act 2007 to regulate the exploration of solid minerals, among other purposes.

Water Resources Act (Cap W2 LFN 2004). This aims at promoting the optimum development, use, and protection of water resources.

Hydrocarbon Oil Refineries Act: The Act is concerned with the licensing and control of refining activities⁴⁵.

Associated Gas Re-injection Act: This law deals with gas flaring activities by oil and gas companies. Prohibits, without lawful permission, any oil and gas company from flaring gas in Nigeria and stipulates the penalty for breach of permit conditions.

Nuclear Safety and Radiation Protection Act: The Act regulates the use of radioactive substances and equipment emitting and generating ionizing radiation. In particular, it enables the making of regulations for protecting the environment from the harmful effects of ionizing radiation.

⁴³ SS Ajayi, *Principles for the management of protected areas in wildlife conservation in Africa: A scientific approach*. Academic Press, (2019) 250.

⁴⁴ Ibid.

⁴⁵ Sustainable Use of Biodiversity, available at:< <https://www.environment.gov.za>>accessed on 13March, 2021 65-75.

Oil in Navigable Waters Act: This is concerned with the discharge of oil from ships. It prohibits the discharge of oil from ships into territorial waters or shorelines

Also, put in place National regulatory bodies, which include:

- a. National Environmental Standards and Regulations Enforcement Agency (NESREA).
- b. National Oil Spill Detection and Response Agency.
- c. Federal Ministry of Environment.
- d. Directorate of Petroleum Resources (DPR).
- e. Nigerian Nuclear Regulatory Authority.
- f. Federal Ministry of Water Resources
- g. National Oil Spill Detection and Response Agency (NOSDRA)
- h. National Biosafety Management Agency
- i. Department of Climate Change

Each of the 36 states has its environmental protection bodies.⁴⁶

3.3. National Environmental Standard and Regulations Enforcement Agency Establishment Act 2007.

The incorporation of Environmental Objectives into Chapter II of the 1999 Constitution, as amended, made the Federal Government put in place a very comprehensive Act that will regulate and enforce environmental matters in Nigeria. In 2007, the National Assembly enacted the NESREA Act (Act No. 25 of 2007). This Act established a body known as the National Environmental Standards and Regulations Enforcement Agency (NESREA). The said Agency is a body corporate with perpetual succession and has a common seal. It can sue and be sued in its name.⁴⁷ Section 2 of the Act provided the objectives for the establishment of the Agency to include; the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's Natural resources in general and environmental technology, including coordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines⁴⁸.

The Agency was given wide powers and functions under Part II of the Act. The Agency has the following functions.

- (a) Enforce compliance with laws, guidelines, policies, and standards on environmental matters.
- (b) coordinate and liaise with stakeholders, within and outside Nigeria, on matters of environmental standards, regulations, and enforcement;
- (c) enforce compliance with the provisions of international agreements, protocols, conventions, and treaties on the environment, including climate change, biodiversity, conservation, desertification, forestry, oil and gas, chemicals, hazardous wastes, ozone depletion, marine and wildlife, pollution, sanitation, and such other environmental agreements as may from time to time come into force;
- (d) enforce compliance with policies, standard legislation, and guidelines on water quality, environmental health, and sanitation, including pollution abatement;

⁴⁶ Clancy, and M Feenstra, How to Engender Environmental Policy: 147 (Environmental Protection Master Plan FRN: 2006) 1-20.

⁴⁷ National Environmental Standards and Regulations Enforcement Agency Act, 2007. s. I.

⁴⁸ Ibid.

- (e) enforce compliance with guidelines and biodiversity on sustainable management of the ecosystem, biodiversity conservation, and the development of Nigeria's natural resources;
- (f) enforce compliance with any legislation on sound chemical management, safe use of pesticides, and disposal of spent packages thereof;
- (g) 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;
- (h) 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;
- (i) ensure the environmental project funded by donor organizations and external support agencies adhered to regulations in environmental safety and protection;
- (j) enforce environment control measures through registration, licensing, and permitting systems other than in the oil and gas sector, etc.

The promulgation of the National Environmental Standards Regulation and Enforcement Agency (Establishment) Act 2007 was a sincere, pragmatic, and serious effort towards tackling the issue of environmental protection, biodiversity preservation, and development. It has also repositioned the Agency created thereunder.⁴⁹

3.4 National Oil Spill, Detection and Response Agency Act 2006.

National Oil Spill, Detection and Response Agency Act 2006 (NOSDRA). The objective of this law is to put in place machinery for the coordination and implementation of the National Oil Spill Contingency Plan for Nigeria to ensure a safe, timely, effective, and appropriate response to major or disastrous oil pollution.

This Act establishes the National Oil Spill Detection and Response Agency as the coordinating and monitoring body on the implementation of Federal Government policies on the National Oil Spill Contingency Plan. There is also an establishment for the Agency, a Governing Board to be known as the National Oil Spill Response Governing Board. The Agency shall be a body corporate and shall, among other things: (a) be responsible for surveillance and ensure compliance with all existing environmental legislation.⁵⁰

The National Oil Spill Detection and Response Agency Act 2005 imposes statutory regulations on waste produced from oil production and exploration. It advises on the negative environmental impacts and correct procedures and methods to use in this industry.

Section 5 of the Act provides that the objectives of the Agency shall be to monitor, regulate Tier one and two oil spills the Agency. As well as coordinate, implement, and review the National Oil Spill Contingency Plan for Nigeria (in this Act referred to as "the Plan).

3.5 National Park Services Act (Cap N65 LFN 2004)

National Park Services Act (Cap N65 LFN 2004). This makes provision for the conservation and protection of natural resources and plants in national parks. This Act provides for the establishment of the National Park Service and the management of national parks⁵¹.

⁴⁹ C.A. Omarka, *Environmental Regulation in Nigeria* 45 (Lions Unique Concepts, Lagos, Nigeria, 2010)

⁵⁰ National Oil Spill, Detection and Response Agency Act 2006 (NOSDRA).

⁵¹ National Park Services Act Cap N65 LFN 2004.

Divided into 7 Parts: Establishment of the National Park Service of Nigeria and its Governing Board, (I); Objectives, functions and powers (II); Staff of Service (III); Establishment, Management, etc. of National Parks (IV); Management principles, etc. of National Parks (V); Offences and penalties (VI); Miscellaneous (VII).

The Service is established under section 1 as a body corporate. It shall pursue the objectives set out in section 6 and carry out the functions set out in section 7, including the management and conservation of wild fauna and flora in national parks. There shall be appointed a Conservator-General of the National Parks Service under section 9. The Service shall establish and maintain a Fund under section 12. National parks may be established by the Head of State under section 18. The procedure for establishment set out in section 19 includes the drafting of an environmental impact assessment report. For each park, a National Parks Management Committee shall be established under section 21, and a Director appointed by the Service (sect. 24). The Committee shall prepare a management plan for each national park (sect. 27), and the Service shall develop a system plan which shall include the objectives of the network of National Parks. Part VI lays down restrictions on hunting, fishing, etc., in National Parks.⁵² (sect. 30).

3.6 Environmental Impact Assessment Act 1992

Environmental Impact Assessment Act (Cap E12 LFN 2004). This law sets out the general principles, procedures, and methods of environmental impact assessment in various sectors, for proper protection and utilization of the environment and preservation of biodiversity in Nigeria⁵³.

Section 1 of the Act sets out the objectives of any environmental impact assessment as follows;

- (a) to establish, before a decision is taken by any person, authority, corporate body or unincorporated body, including the Government of the Federation, State or local government intending undertake or authorize the undertaking of any activity, those matters that may likely or to a significant extent affect the environment or have an environmental effect on those activities and which shall first be taken into account;
- (b) to promote the implementation of appropriate policy in all Federal lands (However, acquired) States and local government areas, consistent with all laws and decision-making processes through which the goal and objective in paragraph (a) of this section may be realised;
- (c) to encourage the development of procedures for information exchange, Notification and consultation between organs and persons when proposed activities are likely to have significant environmental effects on the boundary or trans-State or on the environment of bordering towns and villages⁵⁴.

Section 2. Also provided for restrictions on a public or private project without prior consideration of the environmental impact

(1) The public or private sector of the economy shall not unauthorized embark on or authorize projects or activities without prior consideration, at an early stage, of their environmental effects.

⁵² Ibid.

⁵³ Environmental Impact Assessment Act, Cap E12 LFN, 2004.

⁵⁴ Ibid s 1.

(2) Where the extent, nature, or location of a proposed project or activity is such that it is likely to significantly affect the environment, its environmental impact assessment shall be undertaken by the provisions of this Act.

(3) The criterion and procedure under this Act shall be used to determine whether an activity is likely to significantly affect the environment and is therefore subject to an environmental impact assessment

(4) All agencies and institutions (whether public or private), except if exempted under this Act, shall, before embarking on the proposed project, apply in writing to the Agency, so that subject activities can be quickly and surely identified and an environmental assessment applied as the activities are being planned⁵⁵.

Section 3. Provided for the Identification and significance of environmental issues

(1) In identifying the environmental impact assessment process under this Act, the relevant significant environmental issues shall be identified and studied before commencing or embarking on any project or activity convened by the provisions of this Act or covered by the Agency, or likely to have a serious environmental impact on the Nigerian environment.

(2) Where appropriate, all efforts shall be made to identify all environmental issues at an early stage in the process⁵⁶.

3.7 Endangered Species (Control of International Trade and Traffic) Act (Cap E9 LFN 2004)

Endangered Species (Control of International Trade and Traffic). This provides for the conservation and management of Nigeria's wildlife and the protection of some of its endangered species in danger of extinction as a result of over-exploitation, as required under certain international treaties to which Nigeria is a signatory.⁵⁷ Section 1 provides the Prohibition of hunting or trading in wild animals:

From the commencement of this Act, no person shall hunt, capture, trade in, or otherwise deal with an animal species specified in the Second Schedule to this Act (being animals which, though not necessarily now threatened with extinction, may become so threatened unless trade in respect of such species is controlled) except where he has a license issued under this Act.⁵⁸

Section 2 of the Act provides for the Regulation of the export and import of species specified in the Second Schedule.

(1) No person shall trade in any animal specified in the Second Schedule to this Act except where he complies with the following provisions, that is to say-

- (a) He has obtained an export permit granted by the Minister.
- (b) The Minister is satisfied that such an export will not be detrimental to the survival of that Specimen;
- (c) The Minister is satisfied that the species is to be exported alive, and it will be so Prepared and transported to minimize the risk of injury, damage to health, cruel treatment, or death of the animal, etc.

⁵⁵ Ibid s 2.

⁵⁶ Ibid s 3.

⁵⁷ Endangered Species (Control of International Trade and Traffic) Act Cap E9 LFN, 2004.

⁵⁸ Ibid s 1.

- (2) No person shall import any species specified in the said Second Schedule except where he has first obtained an import permit or a re-export certificate for that purpose.
- (3) No import permit shall be issued under this section unless the Minister is satisfied that-
 - (a) The import shall be for a purpose that is not detrimental to the survival of The specimen;
 - (b) the specimen is not to be used for a primarily commercial purpose; and
 - (c) The proposed recipient of a living specimen is suitably equipped to house and care for it.
- (4) No re-export certificate shall be granted in respect of any specimen specified in the Second Schedule to this Act unless the minister is satisfied that-
 - (a) The specimen was imported by the provisions of this Act.
 - (b) any living specimen shall be so prepared and shipped to minimize the risk of Injury, damage to health, cruel treatment, or death thereto; and
 - (c) An import permit has been obtained for any such living specimen.
- (5) No certificate for the removal from any waters of any specimen in the Second Schedule to this Act shall be issued unless the Minister is satisfied that⁵⁹ -

Section 5 of the act provides for Penalties, forfeitures, and others.

(1) Any person who, in contravention of the provisions of this Act, trades in, or has or otherwise deals with a specimen specified in the First and Second Schedules of this Act shall be guilty of an offence and liable on conviction-

- (a) In respect of any specimen under the First Schedule to this Act, a fine ~~N1,000~~ for an offence and a second and subsequent offence to imprisonment for one year without the option of a fine; and⁶⁰

Section 6 provides for the proper record-keeping of all the assessments

The Minister shall cause to be maintained records of trade in any specimen in the First and Second Schedules to this Act, and such records shall include-

- (a) the names and addresses of exporters and importers thereof;
- (b) the number and types of permits and certificates granted;
- (c) the countries with which such trade occurred and the number, quantities, and types of specimens concerned; and
- (d) Where applicable, the size and sex of the specimens in question⁶¹.

Section 7 gives Power to the minister to make regulations

The Minister may make regulations for all or any of the following purposes-

- (a) prohibiting or regulating the importation or exportation of any live specimen specified in the Second Schedule to this Act or any trophy thereof; and
- (b) Regulating the application for the issue, form, conditions, or period of validity of certificates required by this Act; permits
- (c) Providing for the issue of duplicate certificates in the case of loss, destruction, or defacing of an original permit or certificate; or
- (d) prohibiting or regulating the species and number of live animals that may be exported in any specified period;
- (e) providing for payment and collection of any fees prescribed under this Act;

⁵⁹ Ibid s 2.

⁶⁰ Ibid s 5.

⁶¹ Ibid s 6.

- (f) providing for the termination, revocation, and licenses of licenses and Permits issued under this Act, which
- (g) Authorising the payment of g, grants, bonuses, or rewards out of public revenue encouragement of wildlife conservation⁶²

4.1 Some Major Challenges to Biodiversity Protection in Nigeria

There are many governmental agencies in charge of environmental matters that work at cross purposes to the extent that statutory delineation is not adhered to. Such an attitude may stem from the corruption of some officials in agencies. Furthermore, those charged with the responsibilities do not function properly, probably because of obvious administrative bottlenecks and connivance between the operators and those flouting the order.

The Conservation projects are seriously threatened by economic development that needs the areas for exploitation, mining, exploration, road expansion, and highway networks. Others are a lack of conservation project sustainability, inadequate finances to fund projects, poverty among the local communities, etc.⁶³.

4.1.1 Over-Exploitation of Biological Resources

This results when individuals of a particular species are taken at a higher rate than can be sustained by the natural reproductive capacity of the population being harvested⁶⁴. This can be through hunting, fishing, trade, food gathering, etc. Overexploitation remains a serious threat to many species, such as marine fish and invertebrates, trees, and animals hunted for meat.⁶⁵ The grazing pressure on most of the high-altitude grasslands of the state, both from migrant and local communities, is the extensive extraction of medicinal herbs in these areas, resulting in their overexploitation. Most industrial fisheries are either fully or overexploited, while destructive fishing techniques harm estuaries and wetlands. Although the true extent of exploitation is poorly known, it is clear that rates of off-take are extremely high in tropical forests.⁶⁶ The trade-in of wild plants and animals and their derivatives is poorly documented but is estimated at nearly \$160 billion annually. It ranges from live animals for the food and pet trade to ornamental plants and timber. Because the trade in wild animals and plants crosses national borders, the effort to regulate it requires international cooperation to safeguard certain species from overexploitation.

4.1.2 Pollution

Over the past five decades, inorganic and organic pollutants have emerged as one of the most important factors of biodiversity loss in terrestrial, aquatic, and marine, as well as freshwater ecosystems.⁶⁷ Thermal pollution is another threat to biodiversity. The potential consequences of organic pollutants in a freshwater ecosystem include eutrophication of freshwater bodies, hypoxia in coastal marine ecosystems, nitrous oxide emissions contributing to global climate change, and air pollution by number in urban areas. The occurrence of such problems varies widely in different regions. Species in habitats are their desire poorly documentary and estimated to be worth nearly \$160 billion annually. It ranges from live animals for the food and pet trade to

⁶² Ibid s. 7.

⁶³ Gasu M, Fadare O, Oiawale O (2005) Environment: Problems, challenges and remedies.

⁶⁴ K C Agrawal, (2009). *Biodiversity: Concept, Conservation and Management*. ISBN: 81-8915305-6.

⁶⁵ Ibid.

⁶⁶ V K Ahluwalia and S Malhotra, (2008). *Environmental Science*. ISBN-13: 978-1-42007-069-9.

⁶⁷ A Anderson, David (2010). *Environmental economics and Natural resource Management*. ISBN13: 978-0-415-77904-3.

ornamental plants and timber. Because the trade in wild animals and plants crosses national borders, the effort to regulate it requires international cooperation to safeguard certain species from overexploitation.⁶⁸

4.1.3 Species invasions

This can be intentional or accidental. Species introduced into an ecosystem will cause changes in the ecosystem.⁶⁹ Introduced species are organisms arising in areas/ habitats in which they were previously not native. Such introduced species are usually referred to as biological pollutants. Some of the ecological impacts of the invasion include hybridisation, competition, disruption of original ecosystems, plant pathogenic influences, disease transmission, disruption of food webs, and, in some situations, extinction. Species may be introduced intentionally for ornamental concerns, agriculture, hunting, and sporting activities, technology biotechnology for scientific research and trade.⁷⁰

4.1.4 Climatic changes

This is of great concern, especially when global CO₂ increases in the atmosphere, resulting in global warming. Most species originate within a very narrow physiological limit; hence, nature has a range of tolerance maintained for ecosystem stability. Changes may be gradual or abrupt, such that if the limit is exceeded, the upper or lower, the species suffers extinction.⁷¹

Recent changes in climate, such as warmer temperatures in certain regions, have already had significant impacts on biodiversity and the ecosystem. They have affected species distributions, population sizes, and the timing of reproduction or migration events, as well as the frequency of pest and disease outbreaks. Projected changes in climate by 2050 could lead to the extinction of many species living in certain limited geographical regions. By the end of the century, climate change and its impacts may become the main direct driver of overall biodiversity loss.⁷²

4.1.5 Population

From 1950 to 2024, the world population increased from 2.5 billion to 7 billion and is forecast to reach a plateau of more than 9 billion during the 21st century (Population Reference Bureau). As the human population is increasing, there exists an insatiable demand for raw materials, which is bound to cause changes in biodiversity. The human population has more impact on biodiversity than any other single factor. According to Dumont (2012), until the middle of the 21st century, worldwide losses of pristine biodiversity will largely depend on the worldwide human birth rate. It is therefore vital to control the human population, which will result in biodiversity conservation.⁷³

⁶⁸ Ibid.

⁶⁹ A Anderson, David (2010). *Environmental economics and Natural resource Management*. ISBN13: 978-0-415-77904-3.

⁷⁰ K Akpabio (2016) “Keynote Address” Biodiversity Conservation and Challenges of Climate Change Workshop held at the University of Uyo, Nigeria.

⁷¹ B D Joshi and others. (2008). *Biodiversity and Environment Management*. ISBN-13: 9788131304402.

⁷² B N Pandey and others (2010). *Sustainable Management and Conservation of Biodiversity*. ISBN: 978-93-80428-01-7.

⁷³ Ibid.

4.1.6 Policy and Legislation Constraints

The environment and, by implication, biodiversity, lag behind other sectors in policy and legislative reforms.⁷⁴ The underpinning value elements of biodiversity as a life support system for millions of Nigerians are yet to receive recognition and serious consideration in national policy and legislative action. The existing laws relating to biodiversity are obsolete, except for the new laws establishing the National Environmental Standards and Regulations Enforcement Agency (NESREA), Climate Change, the new law establishing the National Biosafety Management Agency (NBMA), and possibly the Grazing Commission. The process of the policy review on biodiversity-related issues is very slow and gives little or no consideration in major policy and strategic national discourse.⁷⁵ Biodiversity issues have been relegated to the background and have only been the concern of conservationists, scientists, and environmentalists, despite their significant contribution to the livelihood and commerce of rural and peri-urban communities.⁷⁶

International conventions and treaties are entered into and signed by the Federal Government of Nigeria, but implementation has been slow, with huge backlogs of annual contributions to the respective trust funds of these conventions. Low budgetary allocations to implement decisions of the various conferences and meetings of the Parties to these conventions and agreements, coupled with low capacity, have resulted in poor implementation. Poor legislative enforcement has been and still is a glaring setback for biodiversity conservation in Nigeria. The National Parks that are the repository of much of Nigeria's biodiversity have faced serious threats of poaching in recent years, losing not only wildlife but also Rangers to poachers. Everywhere in Nigeria, biodiversity-related laws are broken openly in the face of low public awareness of biodiversity and a lack of capacity for law enforcement agents to deal with issues of concern. Poor law enforcement on biodiversity has occasionally caused embarrassment for the Government and people of Nigeria.

Implementing the domestic enforcement of laws is as important as emphasizing international conventions. Nigeria's Biodiversity laws, if well enforced, can assist the action of Nigeria in the its national obligations to the international treaties signed.

Poor institutional cohesion, the low capacity of States to manage varied biodiversity-related portfolios, and the lack of commitment to and investments in the Departments responsible for biodiversity matters characterise the biodiversity conservation policy of most states of Nigeria. Wildlife conservation Departments/Units have either been marginalised or are inactive in many States. In most states biodiversity-related legislation, such as the wildlife and forestry laws, is obsolete, non-implementation and blue, and ignored (or not regarded) by the customary, sharia, and other courts.

As a major element of best practice, Nigeria should set up a National Committee on Biodiversity. This Committee should have an inter-ministerial composition and cut across gender, civil society,

⁷⁴ Ibid.

⁷⁵ M Gadgil and others (1993). *Indigenous knowledge for biodiversity conservation*. *Ambio* Vol 22 No. 2-3.

⁷⁶ K Akpabio (2016) "Keynote Address" Biodiversity Conservation and Challenges of Climate Change Workshop held at the University of Uyo, Nigeria.

resource user groups, and the private sector. The institutional weakness associated with the values attached and the emphasis placed on biodiversity conservation will receive much more articulate attention as a major focus of the National Biodiversity Committee.

Some institutions are created to manage biological resources. However, the institutions and policies fail to internalize the values of biodiversity within the decision-making process of their Nations and individuals. Such institutions and policies in place should have a holistic approach towards biodiversity conservation rather than partial conservation.

5. 1 Possible Solutions for Biodiversity Protection in Nigeria

- a. Community Participation in Biodiversity Conservation. It is being recognized that no legal provisions can be effective unless local communities are involved in planning, management, and monitoring conservation programs. There are several initiatives to do this, both by the government as well as non-governmental organizations. For example, the Joint Forest Management philosophy stresses the involvement of village communities in regenerating and protecting degraded forest land in the vicinity of villages. Successful conservation strategies will have to have the confidence and participation of the local communities
- b. The Government should ratify the remaining conventions and treaties in biodiversity conservation.
- c. The government should provide sufficient trained manpower and basic information on Biodiversity Conservation Practices
- d. The government should address the underlying causes of biodiversity loss by mainstreaming biodiversity across the country and society in general.
- e. The government should implement the Millennium Development Goal, emphasizing that poverty reduction will reverse the degradation of the environment, water, and sanitation across the country.
- f. The government should reduce the direct pressures on biodiversity and the sustainable use of biodiversity.

The government should improve the status of biodiversity by safeguarding ecosystems, species, and genetic diversity, and Poverty reduction through the application of modern agricultural practices such as tanga farming, alley cropping, agro-pastoral, improved fish farming, and possible wildlife domestication.

6. Conclusion

Despite a plethora of policies and laws that address issues of conservation of nature's resources, biodiversity continues to face a series of threats in Nigeria. The status of biodiversity conservation and utilisation patterns in Nigeria⁷⁷. Poverty, population growth, climate change, invasive alien species, and habitat fragmentation were identified as core factors depleting biodiversity in Nigeria. Although no reliable record yet exists for assessing the rate of biodiversity loss in Nigeria, substantial evidence shows that biodiversity is being lost at a disturbing rate⁷⁸. The IUCN Red List assessment reports that 141 native animals and 168 native

⁷⁷K Akpabio, *Keynote Address Biodiversity Conservation and Challenges of Climate Change* (2016) Workshop held at the University of Uyo, Nigeria.

⁷⁸ Ibid.

plant species of Nigeria are currently classified into different threat categories. With these assessments being carried out on the global level, such a global assessment might be biased based on the various identified peculiar threats faced by different species in their local environment.

Rapid population growth, overexploitation of resources, poverty, weak institutional and legal framework. These problems need to be seriously addressed by integrating environmental and developmental objectives, mental education, and the transformation of its citizenry on the importance of biodiversity protection. The essence of this is to balance economic development and the environment since the former is the major threat to biodiversity conservation. Ratification of international conventions and treaties and establishment of regional action plans need to be supported with human and financial resources, not just to comply with obligations, but to implement activities and projects at the national and sub-national levels. The list assessment reports that 141 native animals and 168 native plant species of Nigeria are currently classified into different threat categories. With these assessments being carried out on the global level, such a global assessment might be biased based on the various identified peculiar threats faced by different species in their local environment.

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