

## Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals



A.O. Adeniyi

Department of Jurisprudence and International Law Ekiti State University, Ado-Ekiti

**ABSTRACT:** Laws have been used to address biodiversity concerns globally, with encouraging results in certain nations. While appropriate use of biodiversity ensures future generations' survival, biodiversity protection is essential for sustainable development. Nigeria's biodiversity is being lost as a result of intentional attacks on wildlife and the degradation of natural ecosystems. Nigeria is a signatory to several treaties that are important for biodiversity preservation, including the Convention on Biodiversity. The existence of these regulations has not stopped human activity, which has continued to threaten the remaining species and overtime caused the extinction of some. Poverty, economic development, incomplete or non-ratification by governments of international treaties and conventions on conservation issues, unclear laws on biodiversity by the government, pollution, climate change, invasion by alien species, and other factors are some of the main threats to Nigeria's biodiversity conservation. This research examines biodiversity, factors that contribute to loss of biodiversity, the difficulties it faces in Nigeria, and the steps the government is taking to implement the law to save it. The research was carried out using published materials online and in the library. With the goal of determining what policies should be developed to guarantee that legislation serves the objective of biodiversity protection, the opportunities and problems of the laws are examined. In this study, the revival of the traditional conservation system and good governance are advocated.

**KEYWORDS:** environment, biodiversity, protection, species, ecosystem, habitation

### 1.0 INTRODUCTION

A fundamental and necessary component of human existence on Earth is biodiversity. It is more crucial than ever to exploit biodiversity sustainably for the survival of future generations as well as for the benefit of the current one. Particularly in the tropics and subtropics, species abundance, diversity, and distribution are experiencing notable declines as a result of climate change, quick economic growth, overuse of natural resources, and potentially societal indifference to biological resource conservation.

The advantages that come from protecting biodiversity extend beyond national borders to include people all around the world. For this reason, this is a matter of great worldwide significance. In contrast to the industrialized world's nations, Nigeria and other least developed nations show relatively less concern about biodiversity. Because of its importance to people's socioeconomic well-being, biodiversity conservation cannot be overestimated. In addition to supplying goods like food, medicine, and industrial materials, biodiversity supports the ecosystem services necessary for life as we know it, including the provision of fresh water, soil preservation, and climate stability.<sup>1</sup>

The environment offers resources necessary for all socio-economic undertakings as well as a life support system. Human activity, both natural and man-made, continues to pose the greatest threat to both the environment and these numerous and finite natural resources.<sup>2</sup> Many Nigerians rely heavily on biodiversity for their existence and way of life. Aesthetic values, raw resources, food and medication supply, climate regulation, and other different ecosystem services are all provided by it.

Nigeria's biodiversity is currently being reduced as a result of the rapid loss of natural ecosystems in the nation. For instance, the Nile crocodile (*Crocodylus niloticus*), which was formerly found in the coastal waters of Nigeria up to Lake Chad, is rapidly going extinct as a result of habitat degradation and poaching for the reptiles' meat, eggs, and skin. The endangered species list also includes the Nigerian quillon (*Cercophilecus erythogaster*), yellow-backed duiker, forest Elephant, Chimpanzee, Leopard, and royal Python,

<sup>1</sup> S.V. Scott, *International Law in World Politics: An Introduction* (Lynne Rienner Publishers, 2010)

<sup>2</sup> B. C. Anwadike, 'Biodiversity Conservation in Nigeria: Perception, Challenges and Possible Remedies (2020) 8 (4) *Current Investigations in Agriculture and Current Research*.

# Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals

all of which are found in southern Nigeria.<sup>3</sup> Every year, industrialization, trade, agriculture, and rural residents' activities destroy a sizable portion of the forest resources, upsetting the natural equilibrium between living and non-living resources.<sup>4</sup>

Nigeria is endowed with 4,600 plant species, 707 of which are endemic.<sup>5</sup> Conservation of this unique biodiversity should be assured but is being presently jeopardized by deforestation of the remaining natural forest and the forested wetlands.<sup>6</sup> This research discusses biodiversity in Nigeria and the laws relevant to the protection of biodiversity, and in the process, the relevant provisions of the laws are examined. It also discusses protection of biodiversity as a catalyst to achieving sustainable development for the present and future generations. The challenges of the laws are discussed while suggestions are made on how to make the laws more effective in protecting biodiversity for sustainable use in Nigeria.

## 2.0 RESEARCH METHODOLOGY

Threatened plants and animals are elements of our natural heritage that are declining on a daily basis and on the verge of going into extinction. The issue of biodiversity is a serious issue as it is an impediment to the achievement of sustainable development all around the world and Nigeria, which is the focal point of discussion. The issue of loss of biodiversity is regarded as a global crisis and therefore falls within the ambit of International Environmental Law. International Environmental Law comprises of conventions, treaties, regional laws and national laws as regards the protection of the environment. Therefore, for in-depth contextual analysis, the study will be contingent on these laws and existing literatures in this area to examine the loss of biodiversity and its impact on the environment, which is an impediment to achieving sustainable development by year 2030. This methodological approach will assist policy-makers to understand the need for the protection of biodiversity and the environment at large.

## 3.0 UNDERSTANDING THE CONCEPT OF BIODIVERSITY

Biodiversity is a contraction of two words, biological and diversity. The United Nations Convention on Biological Diversity<sup>7</sup> defines "Biological diversity" to mean the variability among living organisms from all sources including *interalia*, terrestrial, marine and other aquatic ecosystem and the ecological complexity of which they are part, this includes diversity within species, between species and ecosystem.

Biodiversity relates to the diversity of ecosystems, species, and genetic traits within species, which exist in a particular area; wetland, non-forest, savannah grasslands, plant and animal diversity, and various primate sub-species, for example all characterize biodiversity.<sup>8</sup> The description of biodiversity by the learned is comprehensive and expository. It touches every element within the generic term. Biodiversity also refers to the variety of life and its processes. It includes the variety of living organisms the genetic difference among them, the communities and ecosystem in which they occur, and the ecological and evolutionary processes that keep them functioning, yet ever changing and adapting.<sup>9</sup>

In addition to the various species that exist today and their distinct evolutionary histories, biodiversity also refers to genetic variety both within and across species populations as well as the distribution of species over entire continents or seas as well as local habitats, ecosystems, and landscapes.<sup>10</sup> Biodiversity is the variety of life on earth, including plants, animals, microorganisms, and the ecosystems they form.<sup>11</sup>

## 4.0 SUSTAINABLE DEVELOPMENT AND PROTECTION OF BIODIVERSITY

Sustainable Development is a principle fundamental to the determination of the competing considerations. The Stockholm Environment Summit in 1972 marked the first significant turning point in recognizing the importance of the environment on a worldwide basis. The United Nations Environment program was established as a result of this summit, in addition to the acceptance

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<sup>3</sup> E. Greengrass, Chimpanzees are close to Extinction in Southwest Nigeria (2010) available on [www.researchgate.net](http://www.researchgate.net) accessed 7 January 2024

<sup>4</sup> I.T. Nathaniel. and A. Nathaniel, 'The Effects of Poverty in Conservation of Biodiversity: The Nigeria Experience' (2005) 1 (2) *Environmental and Planning Law Review* 58

<sup>5</sup> A. Omaka, *Nigerian Conservation Law and International Environmental Treaties* (2<sup>nd</sup> edn, Princeton and Associates Publishing Co. Ltd, 2018)

<sup>6</sup> *Ibid*

<sup>7</sup> Article 2, United Nations Convention on Biological Diversity

<sup>8</sup> M. T. Okorodudu-Fubara, *Law of Environmental Protection: Materials and text* (Caltop Publication Limited, 1998)

<sup>9</sup> R. F. Noss and A. Y. Carpenter, *Saving Nature's Legacy: Protecting and Restoring Biodiversity* (Island Press, 1994)

<sup>10</sup> National Research Council, *Perspectives on Biodiversity: Valuing its Role in an Everchanging World* (The National Academies Press, 1999)

<sup>11</sup> O. P. Oyekunle, Biodiversity in Nigeria: Challenges and Opportunities (2024) available on [www.thecable.ng](http://www.thecable.ng) accessed 7 January 2024

## Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals

of the policy declaration and action plan.<sup>12</sup> In a report titled “Our Common Future” the Brundtland Commission defined sustainable development for the first time as development that satisfies current demands without jeopardizing the capacity to satiate those of future generations.<sup>13</sup>

The sustainable use of the environment implies protection of the environment from both natural and anthropogenic assaults that can impede sustainable development. Sustainable development is the organizing principle for meeting human development goals while simultaneously sustaining the ability of natural systems to promote the natural resources and ecosystems services on which the economy and society depends.<sup>14</sup>

Many economic activities revolve around biodiversity, especially those that are connected to agriculture, forestry, fisheries and crops and other livestock. Almost half of all people on the planet directly depend on natural resources for their livelihood and many of the most vulnerable individuals rely only on biodiversity to meet their basic needs.<sup>15</sup> Both human wellbeing and sustainable development depend on biodiversity. It maintains human health, mitigates and increases resilience to climate change, and sustains the supply of food, fibre and water. It also creates jobs in a wide range of industries, including forestry, fisheries and agriculture. The 2030 agenda for sustainable development will not be realized in the absence of strong policies to protect biodiversity and make sustainable use of its component.

In order to preserve ecological equilibrium and natural cycles, biodiversity is crucial. These are the cornerstones of human prosperity, existence and the preservation of the natural world. It specifically refers to the variations among living things at various levels of biological organization, such as genes, species-specific genes, individual species and ecosystems.<sup>16</sup> Multiples values are associated with biodiversity, which is essential for food production and the preservation of the ecological underpinnings that support human livelihoods.

This involves considering how actions made now will affect the choices made by future generations.<sup>17</sup> One important component of the natural resource base is biodiversity, which influences the way development proceeds in conjunction with the technological and socioeconomic facets.

The development process that results will not be long-term sustainable if the current technological, socioeconomic and institutional processes undermine biodiversity and its functional components as a part of the natural base.<sup>18</sup> Literarily, biodiversity serves as the cornerstone of human civilization. Apart from its inherent worth, biodiversity offers products and services that support sustainable development in numerous significant ways, hence assisting in the reduction of poverty.<sup>19</sup> The preservation and sustainable use of the planet’s ecosystems and species are the primary objectives of sustainable development goal 15.

Biodiversity is essential to humanity’s existence and improved quality of life. However, because of ongoing urban growth, human activities like the overconsumption of natural resources are placing more and more strain on biodiversity.<sup>20</sup> The loss of biodiversity is not just an environmental issue, it is a pressing threat to the accomplishment of the sustainable development goals and calls for a proactive response from the development community. The loss of biodiversity undermines the benefits made in development in a number of ways, including decreased nutritional security, inadequate pollination and less robust and productive agricultural systems.

### 5.0 IMPORTANCE OF BIODIVERSITY

Many Nigerians rely heavily on biodiversity for their existence and way of life. Food, medicine, raw materials and aesthetic values are just a few of the many benefits it offers humankind.<sup>21</sup> Biodiversity is of strategic importance for meeting the food, health and other needs of the growing world population. Briefly put, biodiversity gives us access to fresh water, clean air, healthy soil and crop pollination. It also lessens the effects of natural hazards and aids in our battle against climate change and adaptation to it.

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<sup>12</sup> P. I. Mazza, ‘Concepts of Sustainable Development: A Literature Review and a Systematic Framework for Connecting the Role of Education with the Sustainable Development Goals (SDGs)’ (2021) 8 (8) *International Journal of Humanities, Social Sciences and Education* 106

<sup>13</sup> *Ibid*

<sup>14</sup> J. Mensah, ‘Sustainable Development: Meaning, History, Principles, Pillars and Implications for Human Action: Literature Review’ 2019 5 (1) available at [www.tandfonline.com](http://www.tandfonline.com) accessed 21 July 2024

<sup>15</sup> S.E. Sheikh, ‘Biodiversity and the Sustainable Development Goals’ in *United Nations Decade on Biodiversity*, UN Biodiversity Conference Proceedings (2018) available at [www.cbd.int](http://www.cbd.int) accessed 17 July 2024

<sup>16</sup> G. Matta, ‘Biodiversity and Sustainable Development: A Review’ (2011) 2 (1) *International Journal for Environmental Rehabilitation and Conservation* 72

<sup>17</sup> *Ibid*

<sup>18</sup> A. Kulkarni, ‘Biodiversity and Sustainable Development: A Critical Analysis’ (2012) 3 (4) *International Journal of Scientific and Engineering Research* 3

<sup>19</sup> *Ibid*

<sup>20</sup> A. Opoku, ‘Biodiversity and the Built Environment: Implications for the Sustainable Development Goals (SDGs)

<sup>21</sup> O. P. Oyekunle, ‘Biodiversity in Nigeria: Challenges and Opportunities’ (2024) available at [www.thecable.ng/biodiversity-in-nigeria](http://www.thecable.ng/biodiversity-in-nigeria) accessed 18 July 2024

## Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals

The preamble of the Convention to Regulate International Trade in Endangered Species of Flora and Fauna described the importance of biodiversity as aesthetic, scientific, cultural, recreations and economic. Biodiversity is of immense benefit not only to man in the present generation but also to the future generation in view of the valuable services derivable from it. Humanity can obtain food, fuel, clothing, medicinal supplies and a variety of other purposes from biodiversity. Microorganisms have long been employed in biotechnology, genetic engineering, fermentation, medication preservation, tissue culture, DNA research and a wide range of other applications.<sup>22</sup> Ecosystems are held together by biodiversity, which offers resilience and stability.

Ecological balance is ensured by the diversity of species present, since every organism plays a role in the proper operation of its environment. The functions of ecosystems, such as pollination, water purification and nutrient cycling are improved by biodiversity.<sup>23</sup> Beyond its importance for the environment, biodiversity is essential to maintaining human well-being. Food security is enhanced by biodiversity ecosystems because a diversity of organisms maintains robust and fruitful agricultural systems. Medicines that improve human health are manufactured from medicinal resources, which come from a variety of plant and animal species.<sup>24</sup>

The natural ecosystem provides the species of flora and fauna that traditional medicine practitioners need to care for and treat their patients. It is noteworthy to mention that traditional medicine has flourished in Nigeria where orthodox medicine has failed. This is because there are situations in which a patient's medical condition is not treatable due to scientific reasons; as a result, the patient's case is sent back to a traditional medical practitioner for treatment.<sup>25</sup> Furthermore, biodiversity improves recreational and cultural qualities, which raises the standard of living in communities all over the world. A healthy system requires biodiversity to provide oxygen, clean water and air, pollinate plants, handle wastewater and provide many other ecosystem services. For instance, plants use the process of photosynthesis to create oxygen. When an animal breathes in oxygen, it releases carbon dioxide, which the trees absorb. This creates a loop that illustrates how the species in the ecosystem are related to one another.<sup>26</sup>

Biodiversity is also important for pollution management. One of the key functions of biodiversity is pollution control. The air quality is improved as a result of the trees and other plants absorbing hazardous pollutants such nitrogen oxides, excessive carbon dioxide, ozone and particle matter.<sup>27</sup>

### 6.0 CAUSES OF LOSS OF BIODIVERSITY

The variety of all living creatures on earth has been alarmingly dropping in recent years, primarily as a result of human activities including pollution, land use changes and climate change.<sup>28</sup> Human activities like excessive hunting, bush burning, environmental contamination, deforestation, mineral and oil exploration etc have occasioned the loss of biodiversity especially in the developing countries like Nigeria. Some of the human factors are discussed briefly below:

- a) Hunting: large numbers of animals holding positions in a healthy web are going extinct due to hunting. The different species in the area suffer as a result of food scarcity or total food unavailability as opposed to the usual scenario. Hunting activities place a heavy load on animals causing a sharp decline in species and disrupting and inefficient ecosystems.<sup>29</sup> The impact of hunting on biodiversity is substantial. The taking of game animals, fish or other living things in excess of what can be replaced by surviving populations causes some species to become critically endangered and others to be reduced to extremely low numbers.<sup>30</sup> The persistence of a population may be impacted by changes in animal behavior, mobility and habitat use. It has been discovered that hunting and land usage together narrow the range of mammal species in tropical areas, with large-bodied species being most impacted.
- b) Habitat alteration: globally, habitat modification is the main factor contributing to biodiversity loss. In essence, habitat alteration refers to the change of land cover and aquatic habitats for human use. This includes not only the complete removal or alteration of existing habitats, but also their reduction and fragmentation, which lowers the complexity of ecosystems.

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<sup>22</sup> I.T. Nathaniel. and A, Nathaniel, 'The Effects of Poverty in Conservation of Biodiversity: The Nigeria Experience' (2005) (1) (2) *Environmental and Planning Law Review* 58

<sup>23</sup> A.S. Rathoure, 'Biodiversity and its Importance' (2024) 7 (1) *Biodiversity International Journal* 1

<sup>24</sup> *Ibid*

<sup>25</sup> Examples of this scenario are cases of Magun (Thunderbolt) in Yorubaland

<sup>26</sup> D.W. Teja, 'Biodiversity and its Importance', A Lecture Note on Environmental Education, SKR & SKR Government College for Women, Kadapa, Pp. 1-10 available at [www.skrgdcwakdp.edu.in/userfil](http://www.skrgdcwakdp.edu.in/userfil) accessed 18 July 2024

<sup>27</sup> *Ibid*

<sup>28</sup> S. Bratt, 'Biodiversity Loss: What is causing it and why is it a Concern?' (2021) available at [www.europal.europa.eu/topics/en/article](http://www.europal.europa.eu/topics/en/article) accessed 21 August 2024

<sup>29</sup> S. Santhoshini, 'Causes of Loss of Biodiversity' being a project submitted to Department of Biology, Vidyaa Vikas International School Gandarvakkottai 2024 available at [www.slideshare.net](http://www.slideshare.net) accessed 21 August 2024.

<sup>30</sup> G. Bandera, 'Causes of Biodiversity Loss and its Effect on the Environment' (2023) available at [www.fairplanet.org/story/causes-effects-biodiversity](http://www.fairplanet.org/story/causes-effects-biodiversity) accessed 22 August

## Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals

Significantly adding to the loss and fragmentation of terrestrial habitats are logging and the growth of tree plantations.<sup>31</sup> Humans have always altered their habitat. However, as human numbers and technological abilities increase, anthropogenic changes in ecosystems cause environmental degradation and species extinctions. In other words, the terrestrial and aquatic ecosystems that support human populations are susceptible to change as a result of human activities such as gathering and producing food, modifying the environment to accommodate human habitation and opening up trade routes with other societies in an attempt to increase wealth.<sup>32</sup>

- c) Land Contamination: the production of undesired byproducts by humans and their subsequent disposal lead to land pollution. In addition, it may occur when waste or toxic materials are gathered, deposited or dumped on the land in a way that endangers the health of people, animals, plants or vegetation, or the aesthetic value of the surrounding area or when any illegal act, omission or thing degrades the land's surface or makes it unusable.<sup>33</sup> For instance, introduction of various substances into the water in the course of fishing, swimming or diving leads to loss of aquatic lives. In addition, oil pollution arising production processes and from pipeline vandalisation has caused severe degradation of farmland and water bodies resulting in suffocation to death thereby leading to loss of biodiversity.<sup>34</sup> The oil producing companies has not abated flaring of gas in Nigeria and the effect of this on the ecosystem is the destruction of wildlife and plants.<sup>35</sup>
- d) Invasive species: non-native species introduced to new locations have the ability to outcompete native species for resources, prey on them, or spread diseases because ecosystems have evolved to ensure a relative stability of species populations.<sup>36</sup> Through channels like ships, fishing gear or unintentional discharges, they can enter a new habitat. It is worrisome that invasive species have the potential to harm the ecological services that we depend on for survival. Native plants and animals can become extinct due to invasive species, which can also decrease biodiversity, compete with native species for scarce resources and change habitats. In addition to having an adverse effect on human health, invasive species also frequently shorten stream channels and change the properties of the soil, which eventually damages native plant communities in the riparian zones.<sup>37</sup>
- e) Climate change: because of the changing ecosystems brought about by global warming and the ensuing changes in climatic patterns, it is becoming more difficult for species to carry out their natural tasks or adapt to new environments.<sup>38</sup> Certain plants find it more difficult to develop or survive when temperatures or rainfall patterns change and this has an impact on the species that depend on those plants. Degradation of the soil, affects the water supply, and adjustments in agricultural production can all result from biodiversity loss. There are indications that increasing temperatures are having an impact on biodiversity and that species already under threat from human activities are being stressed by altered rainfall patterns, harsh weather and ocean acidification.<sup>39</sup> Farmers could schedule the sowing times of their crops in accordance with the prevailing weather in previous decades when it was feasible to forecast the yearly weather pattern, including the start and finish of the monsoon rains, with some degree of precision. Currently, farmers are losing a great deal of money due to the weather patterns that are changing annually.<sup>40</sup> In a similar vein, it is no longer possible to estimate with absolute precision the amount of annual rainfall and the regions that receive both heavy and little rainfall.

### 7.0 EFFECTS OF LOSS OF BIODIVERSITY

The diverse ecosystem of the earth's biosphere is one of its most amazing features. However, during the past few decades, there has been a noticeable disruption and loss of this abundant biodiversity, both in terms of quantity and variety. Humans are more determined than ever to eradicate the genes, species and biological characteristics that make up biodiversity through their disruptive actions on the ecology of earth.

Wetlands, forests and grasslands have all been converted into farmlands and grazing areas, among other uses by humans under pressure from the need for agriculture to raise crops and animals. Moreover, the other side of the sword exacerbating the worldwide

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<sup>31</sup> P. Stedman-Edwards, 'Socioeconomic Root Causes of Biodiversity Loss: An Analytical Approach Paper for Case Studies' (1997) available at [www.awsassets.panda.org](http://www.awsassets.panda.org) accessed 21 August 2024

<sup>32</sup> J.P. Rafferty, 'Biodiversity Loss' (2024) available at [www.britannica.com/science/biodiversity](http://www.britannica.com/science/biodiversity) accessed 22 August 2024

<sup>33</sup> G. O. Amokaye, *Environmental Law and Practice in Nigeria* (1<sup>st</sup> Edn, University of Lagos Press, 2004)

<sup>34</sup> W. A. Adebayo, *Contemporary Issues in International Environmental Law* (1<sup>st</sup> ed, Ekiti State University Press, 2017)

<sup>35</sup> *Ibid*

<sup>36</sup> G. Bandera (n30)

<sup>37</sup> P. S. Rai and J. S. Singh, 'Invasive Alien Plant Species: Their Impact on Environment, Ecosystem Services and Human Health' (2020) available at [www.ncbi.nlm.nih.gov/articles/pmc](http://www.ncbi.nlm.nih.gov/articles/pmc) accessed 22 August 2024

<sup>38</sup> *Ibid*

<sup>39</sup> K. R. Shivana, 'Climate Change and its Impact on Biodiversity and Human Welfare' (2022) available at [www.ncbi.nlm.nih.gov/pmc/article](http://www.ncbi.nlm.nih.gov/pmc/article) accessed 22 August 2024

<sup>40</sup> *Ibid*

## **Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals**

loss of biodiversity is the growing global population, which has doubled to over 7 billion people since 1970.<sup>41</sup> The ability of ecosystems to function effectively and efficiently is threatened by biodiversity loss, undermining nature's capacity to maintain a healthy environment. This is especially crucial in light of the changing climate, as a decrease in biodiversity makes nature less adaptable to change.<sup>42</sup> Key development targets are seriously threatened by the current rate of biodiversity loss. A single species' extinction can have a domino effect on other species that are part of the same ecosystem, thereby reducing biodiversity and raising the possibility that several species may go extinct.<sup>43</sup>

In addition, loss of biodiversity is a risk to medicinal resources and food security. People have an innate desire to cultivate land for the mass production of inexpensive food, since food is a necessity for survival; it only seems fair to provide reasonably priced food for everyone. However, if unsustainable farming and agricultural methods persist, food security will suffer severely.<sup>44</sup>

Furthermore, the biological diversity of plants, animals and microorganisms has a significant positive impact on the fields of biology, medicine and health sciences. Deeper knowledge of earth's biodiversity leads to important discoveries in medicine and pharmacology. The identification of new therapies for numerous diseases and health issues may be hampered by biodiversity loss. Biodiversity contributes to the creation of energy, freshwater, medicines and pharmaceuticals, energy security, and food and nutrition security, all of which are essential for human and societal well-being. Additionally, it promotes economic and recreational opportunities that enhance people's general well-being. However, the risk of asthma, heart disease, cancer and many other ailments is increased by environmental dangers. Numerous infectious diseases, including cholera, meningitis, gastroenteritis, diarrhea and schistosomiasis are caused by contaminated water, inadequate sanitation and poor hygiene.<sup>45</sup> Conclusively, biodiversity loss means fewer foods productivity and also reduced national security. It leads to decreased access to traditional treatments and less resilient and productive agricultural produce.

### **8.0 LEGAL FRAMEWORK FOR THE PROTECTION OF BIODIVERSITY IN NIGERIA**

The numerous legislative frameworks are designed to conserve the biodiversity and prescription of punishment for environmental law infringement, conservation of natural resources, as well as protection and preservation of nature.

#### **8.1 National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007.**

The agency is saddled with the responsibility for 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 matter of enforcement of environmental standards, regulations, rules, laws, policies and guidelines<sup>46</sup>. The agency is mandated to enforce compliance with guidelines and legislation on sustainable management of the ecosystem, biodiversity conservation and the development of Nigeria natural resources<sup>47</sup>.

#### **8.2 The 1999 Constitution of the Federal Republic of Nigeria ( as amended)**

According to the Constitution, the state is responsible for preserving and enhancing Nigeria's water, air, land, forest and wildlife.<sup>48</sup> All governmental bodies, authorities and individuals with legislative, executive or judicial authority are required under the Constitution to adhere to national goals.<sup>49</sup> Conversely, the Constitution eliminates the court's jurisdiction over issues pertaining to the central goals and guiding principles of state policy found in Chapter Two of the Constitution.<sup>50</sup>

#### **8.3 The Endangered Species (Control of International Trade and Traffic) Act<sup>51</sup>**

The Act is intended to fulfill the requirements of various international treaties that Nigeria is a signatory to, including the conservation and management of Nigeria's wildlife and the protection of some of the country's endangered species that are in danger

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<sup>41</sup> O. Adebayo, 'Loss of Biodiversity: The Burgeoning Threat to Human Health' (2019) 17 (1) *Annals of Ibadan Postgraduate Medicine* available at [www.ncbi.nlm.nih.gov/pmc/article](http://www.ncbi.nlm.nih.gov/pmc/article) accessed 22 August 2024

<sup>42</sup> D. Roe, 'Biodiversity Loss' (2019) 3 (7) *The LANCET Planetary Health*

<sup>43</sup> G. Bandaro, 'Causes of Biodiversity Loss and its Effect on the Environment' (2023) available on [www.fairplanet.org/story/causes-effects-biodiversity-loss](http://www.fairplanet.org/story/causes-effects-biodiversity-loss) accessed 23 September 2024

<sup>44</sup> M. Moate, 'Concerning Effects of Biodiversity Loss' (2023) available at [www.earth.org/effects-of-biodiversity-loss](http://www.earth.org/effects-of-biodiversity-loss) accessed 23 September 2024

<sup>45</sup> M. Gudisan, 'Consequences of Biodiversity Loss' (2024) available at [www.scribd.com/presentation/673383870/consequences-of-biodiversity](http://www.scribd.com/presentation/673383870/consequences-of-biodiversity) accessed 23 September 2024

<sup>46</sup> S.2 of the Act. The Agency by the Act took over the duties of the Federal Environmental protection Agency (FEPA) which was the body formerly responsible for the protection of the environment in Nigeria. The FEPA Act cap FIO Laws of the Federation of Nigeria 2004 was repealed.

<sup>47</sup> Section 7 of the Act

<sup>48</sup> Section 20 of the Constitution

<sup>49</sup> Section 13 of the Constitution

<sup>50</sup> Section 6 (6) (c) of the Constitution

<sup>51</sup> Cap E9 Laws of the Federation of Nigeria 2004

## Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals

of becoming extinct due to over-exploitation. The first schedule prohibits hunting and trafficking of wild animals, while the second schedule regulates the import and export of species. The Act prohibits specifically the use of drugs, poisons, poisoned weapons, poisoned baits, the use of mechanically propelled vehicles for hunting; the use of fire, the use of fire arms capable of firing more than one round at each pull of the trigger, hunting or capture at night and the use of missiles containing detonators.<sup>52</sup>

### 8.4 Sea Fisheries Act

The Act is to control, regulate and protect sea fisheries in the territorial waters of Nigeria. According to the Act, using explosives or toxic or dangerous chemicals when fishing in Nigerian waters is prohibited.<sup>53</sup> The Act prohibits the operation or navigation of any motor fishing boat for the purpose of fishing or a reefer vessel for the purpose of discharging frozen fish within the territorial waters of Nigeria or its exclusive economic zone unless that boat or reefer has been duly registered and licensed.<sup>54</sup> The Act also gives the authority to take actions that will safeguard and conserve sea fish.<sup>55</sup>

### 8.5 National Policy on the Environment 2016

In order to ensure environmental protection and the conservation of natural resources for sustainable development, the National Policy on the Environment states its objectives. The main goal is the coordination of environmental preservation and the preservation of natural resources for sustainable development. Preservation of the genetic variety of both plants and animals and also determine and apply genetic diversity to increase livestock output and adaptability to changing environmental conditions. The aim of National Policy on the Environment is to reduce the negative effects that agricultural operations have on natural ecosystems and agro-ecosystems.<sup>56</sup> The achievement of sustainable development in Nigeria depends on the preservation and sustainable use of forest ecosystems and the resources they provide. In achieving this, the nation must periodically carry out an all-inclusive economic valuation of biodiversity across all sectors focusing on products and services that establish connections between biodiversity, the economy and the reduction of poverty.<sup>57</sup>

## 9.0 CONCLUSION AND RECOMMENDATIONS

Loss of biodiversity has always been a natural trend in the history of life on earth. Although periodic natural mass extinctions do occur at a steady pace, the current rate of extinction is concerning since it is happening much more quickly, it is worrisome because it is caused by human activity. The preservation of biodiversity affects all members of the race and not certain people living in a certain nation. Numerous issues, including reduced food security, disturbances in the food chain, climate change, loss of livelihood etc are the effects of loss of biodiversity. The welfare of humans should be improved via the utilisation of plants and animals. The main issue, though, is how to guarantee their sustainable use for future generations as well as for those who are alive today. This having been said, it is pertinent for humans to rethink and realize the effects of their activities on the environment. The habit of hunting of wildlife for food, the use of local herbs from wild plants and catching of fishes from the rivers are still prevalent in the rural areas. It is even pertinent to point out that at this century, the practice of setting bushes on fire preparatory for farming every year is still the order of the day. Proposed solutions like the habit of setting bush on fire should be brought to an end. Habitat protection is the key to protecting our rare, threatened and endangered species. The laws have failed to check the dangerous practices for lack of enforcement whereas the people still obey the customary injunction prohibiting the use of some habitats for farming, gaming or fishing. Governments should show more commitments to enforcement of the laws. It is also important that the government of Nigeria ratify international treaties and conventions on the protection and conservation of biodiversity. Enforcement of laws by agencies in charge of the protection of the environment should also be taken serious to curb the degradation of the environment and serve as deterrent to others who might want to degrade the environment in any form whatsoever.

## REFERENCES

- 1) Adebayo, O. 'Loss of Biodiversity: The Burgeoning Threat to Human Health' (2019) 17 (1) *Annals of Ibadan Postgraduate Medicine* available at [www.ncbi.nlm.nih.gov/pmc/article](http://www.ncbi.nlm.nih.gov/pmc/article) accessed 22 August 2024
- 2) Adebayo, W. A. *Contemporary Issues in International Environmental Law* (1<sup>st</sup> ed, Ekiti State University Press, 2017)
- 3) Amokaye, G. O. *Environmental Law and Practice in Nigeria* (1<sup>st</sup> Edn, University of Lagos Press, 2004)
- 4) Anwadike, B. C. 'Biodiversity Conservation in Nigeria: Perception, Challenges and Possible Remedies (2020) 8 (4) *Current Investigations in Agriculture and Current Research*.

<sup>52</sup> Section 5(6) Endangered Species (Control of International Trade and Traffic) Act

<sup>53</sup> *Ibid*, Section 10

<sup>54</sup> *Ibid*, Section 1

<sup>55</sup> *Ibid*, Section 14 (2)

<sup>56</sup> FAOLEX, 'National Policy on the Environment Revised 2016' (2024) available on [www.fao.org/faolex/result/details/en/c](http://www.fao.org/faolex/result/details/en/c) accessed 23rd September 2024

<sup>57</sup> *Ibid*

## Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals

- 5) Bandaro, G. 'Causes of Biodiversity Loss and its Effect on the Environment' (2023) available on [www.fairplanet.org/story/causes-effects-biodiversity-loss](http://www.fairplanet.org/story/causes-effects-biodiversity-loss) accessed 23 September 2024
- 6) Bandera, G. 'Causes of Biodiversity Loss and its Effect on the Environment' (2023) available at [www.fairplanet.org/story/causes-effects-biodiversity](http://www.fairplanet.org/story/causes-effects-biodiversity) accessed 22 August 2024
- 7) Bratt, S. 'Biodiversity Loss: What is causing it and why is it a Concern?' (2021) available at [www.europal.europa.eu/topics/en/article](http://www.europal.europa.eu/topics/en/article) accessed 21 August 2024
- 8) FAOLEX, 'National Policy on the Environment Revised 2016' (2024) available on [www.fao.org/faolex/result/details/en/c](http://www.fao.org/faolex/result/details/en/c) accessed 23rd September 2024
- 9) Greengrass, Chimpanzees are close to Extinction in Southwest Nigeria (2010) available on [www.researchgate.net](http://www.researchgate.net) accessed 7 January 2024
- 10) Gudisan, M. 'Consequences of Biodiversity Loss' (2024) available at [www.scribd.com/presentation/673383870/consequences-of-biodiversity](http://www.scribd.com/presentation/673383870/consequences-of-biodiversity) accessed 23 September 2024
- 11) Kulkarni, A. 'Biodiversity and Sustainable Development: A Critical Analysis' (2012) 3 (4) *International Journal of Scientific and Engineering Research* 3
- 12) Matta, G. 'Biodiversity and Sustainable Development: A Review' (2011) 2 (1) *International Journal for Environmental Rehabilitation and Conservation* 72
- 13) Mazza, P. I. 'Concepts of Sustainable Development: A Literature Review and a Systematic Framework for Connecting the Role of Education with the Sustainable Development Goals (SDGs)' (2021) 8 (8) *International Journal of Humanities, Social Sciences and Education* 106
- 14) Mensah, J. 'Sustainable Development: Meaning, History, Principles, Pillars and Implications for Human Action: Literature Review' 2019 5 (1) available at [www.tandfonline.com](http://www.tandfonline.com) accessed 21 July 2024
- 15) Moate, M. 'Concerning Effects of Biodiversity Loss' (2023) available at [www.earth.org/effects-of-biodiversity-loss](http://www.earth.org/effects-of-biodiversity-loss) accessed 23 September 2024
- 16) Nathaniel, I.T. & Nathaniel, A. 'The Effects of Poverty in Conservation of Biodiversity: The Nigeria Experience' (2005) 1 (2) *Environmental and Planning Law Review* 58
- 17) National Research Council, *Perspectives on Biodiversity: Valuing its Role in an Ever-changing World* (The National Academies Press, 1999)
- 18) Noss, R. F. & Carpenter, A. Y. *Saving Nature's Legacy: Protecting and Restoring Biodiversity* (Island Press, 1994)
- 19) Okorodudu-Fubara, M. T. *Law of Environmental Protection: Materials and text* (Caltop Publication Limited, 1998)
- 20) Omaka, A. *Nigerian Conservation Law and International Environmental Treaties* (2<sup>nd</sup> endn, Princeton and Associates Publishing Co. Ltd, 2018)
- 21) Opoku, A. 'Biodiversity and the Built Environment: Implications for the Sustainable Development Goals (SDGs)
- 22) Oyekunle, O. P. 'Biodiversity in Nigeria: Challenges and Opportunities' (2024) available at [www.thecable.ng/biodiversity-in-nigeria](http://www.thecable.ng/biodiversity-in-nigeria) accessed 18 July 2024
- 23) Rafferty, J.P. 'Biodiversity Loss' (2024) available at [www.britannica.com/science/biodiversity](http://www.britannica.com/science/biodiversity) accessed 22 August 2024
- 24) Rai, P. S & Singh, J. S 'Invasive Alien Plant Species: Their Impact on Environment, Ecosystem Services and Human Health' (2020) available at [www.ncbi.nlm.nih.gov/articles/pmc](http://www.ncbi.nlm.nih.gov/articles/pmc) accessed 22 August 2024
- 25) Rathoure, A. S. ' Biodiversity and its Importance' (2024) 7 (1) *Biodiversity International Journal* 1
- 26) Roe, D. 'Biodiversity Loss' (2019) 3 (7) *The LANCET Planetary Health*
- 27) Santhoshini, S. 'Causes of Loss of Biodiversity' being a project submitted to Department of Biology, Vidya Vikas International School Gandravakkottai 2024 available at [www.slideshare.net](http://www.slideshare.net) accessed 21 August 2024.
- 28) Scott, S.V. *International Law in World Politics: An Introduction* (.Lynee Rienner Publishers, 2010)
- 29) Sheikh, S.E. 'Biodiversity and the Sustainable Development Goals' in *United Nations Decade on Biodiversity*, UN Biodiversity Conference Proceedings (2018) available at [www.cbd.int](http://www.cbd.int) accessed 17 July 2024
- 30) Shivana, K. R 'Climate Change and its Impact on Biodiversity and Human Welfare' (2022) available at [www.ncbi.nlm.nih.gov/pmc/article](http://www.ncbi.nlm.nih.gov/pmc/article) accessed 22 August 2024
- 31) Stedman-Edwards, P. 'Socioeconomic Root Causes of Biodiversity Loss: An Analytical Approach Paper for Case Studies' (1997) available at [www.awsassets.panda.org](http://www.awsassets.panda.org) accessed 21 August 2024
- 32) Teja, D.W. 'Biodiversity and its Importance', A Lecture Note on Environmental Education, SKR & SKR Government College for Women, Kadapa, Pp. 1-10 available at [www.skrgcdwakdp.edu.in/userfil](http://www.skrgcdwakdp.edu.in/userfil) accessed 18 July 2024

### LEGISLATION

- 1) Article 2, United Nations Convention on Biological Diversity 2022
- 2) Section 1 Endangered Species (Control of International Trade and Traffic) Act



## Environmental Law and the Protection of Biodiversity in Nigeria: Militating Factor to Achieving Sustainable Development Goals

- 3) Section 10 Endangered Species (Control of International Trade and Traffic) Act
- 4) Section 13 of the Constitution of the Federal Republic of Nigeria 1999 as amended
- 5) Section 14 (2) Endangered Species (Control of International Trade and Traffic) Act
- 6) Section 2 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007
- 7) Section 20 of the Constitution of the Federal Republic of Nigeria 1999 as amended
- 8) Section 5(6) Endangered Species (Control of International Trade and Traffic) Act
- 9) Section 6 (6) (c) of the Constitution of the Federal Republic of Nigeria 1999 as amended
- 10) Section 7 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007
- 11) The Endangered Species (Control of International Trade and Traffic) Act, Cap E9 Laws of the Federation of Nigeria 2004



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