AN APPRAISAL OF THE EVOLUTION OF ENVIRONMENTAL LEGISLATION IN NIGERIA

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This Article discusses the evolution of environmental legislation in Nigeria. Like many developing countries, Nigeria has struggled to maintain a balance between its economic development and the sustainability of its environmental resources. This dichotomy is reflected by severe environmental problems including crude oil devastation of the Niger Delta's marine environment and contaminated groundwater in Lagos, its largest megacity. The slow emergence of legal structures for protecting environmental resources indicates the national preoccupation with economic advancement, and has led to the sad neglect of the environment. This Article argues that although there is now more awareness about the importance of safeguarding environmental resources, the progress made is still paltry. This minor progress is highlighted by extensive and continuing pollution of important environmental resources. The Article concludes with a recommendation to strengthen laws and institutions for environmental enrichment and sustainable development.

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I. HISTORY OF ENVIRONMENTAL REGULATION IN NIGERIA

Environmental regulation in Nigeria did not start as a systematic effort to provide a progressively inclusive framework for managing its natural resources. For a considerable number of years after the country's independence in 1960, the nation was preoccupied with providing basic social amenities and advancing national economic development.[1] Environmental concerns were not a priority. On the contrary, they were rather regarded as luxurious or esoteric preoccupations that posed a threat to advancing industrialization.[2] As a consequence, Nigeria's environmental resources were sadly neglected.

Since the 1960s, Nigeria has been participating with other African nations in environment-focused meetings concerning important environmental issues, including the protection of the marine and coastal environment, the conservation of natural resources, and the management of trans-boundary hazardous wastes within Africa. While these environment-focused meetings have produced admirable goals, in practice they have done little to actually address environmental problems.[3] In spite of these regional efforts, Nigeria and many other African nations still experience serious and diverse environmental problems, which one scholar describes as

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1. This experience is not unique to Nigeria, however, as some economically advanced countries such as the United States share similarities in the evolution of their environmental regulatory systems. Both the United States and Nigeria experienced crises that necessitated the establishment of their respective environmental protection agencies. The United States had a long history of air, water, and land pollution before it awakened to the seriousness of its environmental pollution problem by establishing the Environmental Protection Agency in 1970. Phil Wisman, *EPA History (1970-1985)*, U.S. ENVTL. PROT. AGENCY, http://www.epa.gov/aboutepa/epa-history-1970-1985 (last visited Apr. 8, 2016).

2. Adegoke Adegoroye, *The Challenges of Environmental Enforcement in Africa: The Nigerian Experience*, *in* 1 THIRD INTERNATIONAL CONFERENCE ON ENVIRONMENTAL ENFORCEMENT: CONFERENCE PROCEEDINGS 43, 43 (Jo Gerardu & Cheryl Wasserman eds., 1994).

3. Nigeria's historical apathy towards environmental protection is comparable to that of other developing African countries which experienced severe and diverse environmental problems, but lacked significant environmental legislation for a long time. Ironically, as mentioned, African nations have since the 1960s acknowledged the importance of the environment to life by meeting continually and issuing statements intended for further action by nation-states. *See, e.g.*, African Convention on the Conservation of Nature and Natural Resources pmbl., Sept. 15, 1968, 1001 U.N.T.S. 3; Convention for Co-Operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, Mar. 23, 1981, 20 I.L.M. 729; Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, June 21, 1985, http://www.unep.org/NairobiConvention/docs/English_Nairobi_Convention_Text.pdf; and Bamako Convention on the Ban of the Import to Africa and the Control of Trans boundary Movement and Management of Hazardous Wastes Within Africa art. 4 § 2(a), Jan. 30 1991, 2101 U.N.T.S. 242.

"staggering."[4] Ultimately, an environmental crisis that occurred in southern Nigeria in the 1980s compelled Nigeria to start viewing environmental matters more seriously and begin to enact environmental regulations.[5]

A study of the trajectory of Nigeria's environmental legislation reveals a growth pattern that this Article classifies into four distinct stages. The first stage is the Colonial Period (1900–1956). This stage is known for its dearth of environmental legislation, except for brief provisions in public health legislation and in torts and nuisance law. The second stage is the Petroleum-Focused Environmental Legislation Period (1957–early-1970s). This stage followed the discovery of crude oil, the commercialization of that discovery, and sector-specific legislation that reflected a national preoccupation. The third stage is the Rudimentary and Perfunctory Legislation Period (1970s–pre-1987 crisis). The final stage is the Contemporary Period (post-1987–present). This stage has seen the start of serious legislation and is characterized by increased environmental awareness and sophistication. The regulatory scheme is by no means perfect, and much work has yet to be done, but it is a step in the right direction.

A. The Colonial Period (1900–1956)

Nigeria was a British colony beginning in 1861 when the British annexed Lagos. By 1900, the entire country was colonized, and would remain occupied until Nigeria's independence in 1960.[6] During this period, the British concentrated on trading activities. Historical accounts indicate that early European settlers found Lagos to be particularly convenient for trade because of its strategic location on the only permanent break on the eastern West African coastline; in particular, the Lagos Island's frontage was ideal for piers and wharves that received ships.[7]

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4. William L. Andreen, *Environmental Law and International Assistance: The Challenge of Strengthening Environmental Law in the Developing World*, 25 COLUM. J. ENVTL. L. 17, 18 (2000).

5. *See infra* text accompanying notes 66–68 (describing the crisis that triggered environmental legislation).

6. TOYIN FALOLA, A HISTORY OF NIGERIA 93 (Frank W. Thackeray & John E. Findling eds., 1999). Nigeria derived a system of laws as her colonial heritage from the British. These are known as the Received English Law, and are classified as the English Common Law and Doctrines of Equity, as well as the English Statutes of General Application which were in force in England on January 1, 1900. The High Court laws of the various states contain provisions that directly import these English laws into the Nigerian legal system, with some limitations in the case of the former Western Region. Many of the English statutes have been replaced by local laws, a situation foreseen by the conditional wording of the receiving laws that makes them subject to local legislations.

7. Akin L. Mabogunje, *The Evolution and Analysis of the Retail Structure of Lagos, Nigeria*, 40 ECON. GEOGRAPHY 304, 305 (1964).

During this time, there seemed to be an overall disinterest in, or lack of awareness about, environmental issues. The colonial administrators who were involved in national governance between 1861 and 1960 did not pursue or prioritize environmental protection. Rather, they were preoccupied with their political and economic interests. A major motivation driving colonialism was the desire to secure access to the natural resources of the colonies.[8] Since the exploitations focused on the colonialists rather than the welfare of the local inhabitants, there was little attention paid to the environmental costs that the activities imposed.[9] Colonial administrators convened environmental meetings that were ostensibly aimed at natural resource protection, but were in fact meant to promote trade and enhance the economic growth of their countries.[10] Colonial regions functioned primarily to supply imperial powers with raw materials and cheap labor. Therefore, the structures of imperial and colonial power, which dominated the world in the 19th and early 20th centuries, made little provision for either economic or social advancement of the developing world.[11] In summarizing the colonial rulers' commercial preoccupation of Nigeria, Nnadozie conjectures that any laws that might have restricted economic activities in the form of environmental requirements would have been considered counter-productive.[12] Thus, there were no laws directed at either protecting the environment or the natives from the polluting effects of the government's economic activities.[13]

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8. Rebecca Bratspies, *Do We Need a Human Right to a Healthy Environment?*, 13 SANTA CLARA J. INT'L L. 31, 46 (2015).

9. *Id.*

10. J. Manyitabot Takang, *From Algiers to Maputo: The Role of the African Convention on the Conservation of Nature and Natural Resources in the Harmonization of Conservation Policy in Africa*, 17 J. INT'L WILDLIFE L. & POL'Y 165, 167 (2014). Thus, for instance, the Parties to the Convention on the Preservation of Wild Animals, Birds and Fish in Africa were Germany, France, Spain, Great Britain, Portugal, and Italy. A main objective was to ensure a seamless supply of wildlife resources for ivory traders, trophy hunters, and skin dealers. The Convention classified animals as either "useful to man," "harmful," or "harmless." Consequently, the welfare of the local inhabitants was subjugated to the overriding economic interests of these countries. Convention on the Preservation of Wild Animals, Birds and Fish in Africa, May 19, 1900, 188 Consol. T.S. 418.

11. Jonathan M. Harris, *Basic Principles of Sustainable Development* 1 (Glob. Dev. & Env't Inst., Tufts Univ., Working Paper No. 00-04, 2000), http://www.ase.tufts.edu/gdae/publications/working_papers/Sustainable%20Development.PDF.

12. K.C. Nnadozie, Pollution Control in Nigeria: The Legal Framework (Apr. 1994) (unpublished manuscript) (on file with author) (paper presented at a Workshop at Lagos Sheraton Hotel).

13. Providing even basic environmental facilities for "natives" sometimes proved difficult. Gandy records that in the Lagos colony in the early 1900s, provision of good potable water to residents was sometimes resisted because of the perceived high infrastructural cost involved. Limited investment in water infrastructure meant that only 10% of residents in metropolitan Lagos were directly connected to the municipal water system, and the rest of the city had to rely on wells and creeks. Apart from that, the

During this period, local legislation and public health laws had only a minimal bearing on the environment. These include the Criminal Code Law of 1916 and the Public Health Act of 1917.[14] The 1916 Criminal Code, which is still in force, briefly addresses some aspects of public health violations.[15] The law prohibits the selling of noxious food or drink and the adulteration or poisoning of any article of food or drink meant for sale.[16] It also criminalizes the carrying of dead animals into slaughter houses, and the corrupting or fouling of water from any source that makes it unfit for use.[17] Other provisions prohibit the burying of corpses in houses, premises, or within a hundred yards of such structures, or in any open space situated within a township.[18] Furthermore, the vitiation of atmosphere in any place that makes it noxious to the health of persons in the neighborhood, or the carrying out of any act likely to spread infectious diseases, are also prohibited.[19] Finally, the use of white (yellow) phosphorus in the manufacture of matches is disallowed.[20] These provisions are focused on public health, not environmental issues, and can hardly be regarded as serious environmental legislation.[21]

In the absence of specific environmental laws, remedies for environmental violations were sought within the English common law torts

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colonial administrators did not address overcrowding and disease. Matthew Gandy, *Planning, Anti-planning and the Infrastructure Crisis Facing Metropolitan Lagos*, 43 URB. STUD. 371, 375–78 (2006).

14. The Public Health Act is no longer in force, but the Criminal Code remains a valid federal law. A 1914 Mineral Oils Ordinance written "to regulate the right to search for mine and work minerals", indicates that early efforts were ongoing to locate crude oil at that time. Aoy Raji & T.S. Abejide, *The British Mining & Oil Regulations in Colonial Nigeria C. 1914-1960s: An Assessment*, 2 SING. J. BUS. ECON. & MGMT. STUD. 62, 74 (2014) (quoting Patrick D. Okonmah, *Right to A Clean Environment: The Case for the People of Oil-Producing Communities in the Nigerian Delta*, 41 J. AFR. L. 43, 44 (1997)). The later Minerals Ordinance of 1916 was concerned with ownership of oil, as was the supervening Minerals Act of 1945. Other laws made during this period were: Quarantine Act (1926); Hides and Skins Act (1942); the Forest Ordinance (1937); and the Water Works Act (1915). John Lekan Oyefara, *Good Governance and Environmental Sustainability in Lagos State, Nigeria: Can the State Achieve Goal Seven of Millennium Development Goals (MDGS)?*, 9 EUROPEAN SCI. J. 41, 48 (2013) (citing S.I. Ibaba, *Environmental Protection Laws and Sustainable Development in the Niger Delta*, 2 AFRICANA 56 (2010) (collecting citations)).

15. Criminal Code Act (1916) Cap. (C38), ch. 23. The Criminal Code has remained the federal criminal law that applies in all of Nigeria, except Northern Nigeria, where the Penal Code applies.

16. *Id.* § 243.

17. *Id.* §§ 244–245.

18. *Id.*

19. *Id.* § 247.

20. *Id.* § 248(b).

21. All efforts to retrieve a copy of the defunct 1917 Public Health Act for analysis did not yield results in spite of a rigorous search of the compendium of national environmental laws and published legislative reviews.

of negligence, strict liability, public nuisance, and trespass.[22] Typically claimants relied on negligence and strict liability to redress personal injury resulting from environmental pollution, while resorting to actions in trespass and nuisance to redress environmental harm to property interests.[23] To illustrate, the renowned 1868 English case *Rylands v. Fletcher* established the doctrine of *strict liability*, a no-fault liability where responsibility is imposed for damage caused by a defendant's actions regardless of intent.[24] This principle has provided an important precedent in subsequent Nigerian cases, including *Umudje v. Shell British Petroleum*. Here, the plaintiffs successfully relied on the strict liability doctrine to hold the defendants liable for their crude oil waste that escaped onto the plaintiff's land, polluting their ponds, and killing their fish.[25] Similarly, the 1932 English case *Donoghue v. Stevenson* provided a major precedent in *negligence* that is premised on a duty of care.[26] This case has been adopted as a binding precedent in subsequent Nigerian cases.[27]

These common law principles were not designed for environmental cases however, and do not address any particular natural resources or the intricacies thereof. Likewise, other laws made at the time were not meant for natural resource protection. Any environmental protection in the enactments seems entirely accidental. This "accidental" nature of environmental legislation was the status quo until the discovery of petroleum in later years.[28]

B. Petroleum-Focused Environmental Legislation Period (1956–early 1970s)

In 1956, Nigeria discovered petroleum (crude oil) in commercial quantities within the Niger Delta region of Nigeria at Oloibiri. The country's

22. OLANREWAJU FAGBOHUN, MOURNFUL REMEDIES, ENDLESS CONFLICTS, AND INCONSISTENCIES IN NIGERIA'S QUEST FOR ENVIRONMENTAL GOVERNANCE: RETHINKING THE LEGAL POSSIBILITIES FOR SUSTAINABILITY 45, 59 (2012).

23. *Id.* at 59 n.84.

24. Rylands v. Fletcher [1868] LRE & I. App. 330 (HL) 340 (appeal taken from Exchequer Chamber) (UK).

25. M. Umudje & Anor v. Shell-BP Petroleum Dev. of Nigeria Ltd. [1975] NSCC (Nigeria). Being a 1975 case, it falls outside the time frame in this classification; however, it demonstrates the direction of thinking at this time. The case is being used as an illustration due to the unavailability of reported cases for this specific time.

26. Donoghue v. Stevenson [1932] AC 562 (HL) 564 (appeal taken from Scot.) (UK).

27. Osemobor v. Niger Biscuit [1973] 7 CCHCJ 71 (Nigeria); *see also* Nigerian Bottling Co. Ltd. v. Ngonadi [1985] 28 NIPJD, http://nlipw.com/nigerian-bottling-company-ltd-v-constance-obi-ngonadi/ (using precedent from *Donoghue* in its decision).

28. A rigorous search of the compendium of federal laws for any laws that had a bearing on environmental resources at that time did not yield any other environmental laws.

economy, which had previously been based on agriculture, switched its focus to petroleum exploration. The discovery resulted in a national fixation on petroleum exploitation as oil exports became the major source of foreign exchange earnings.[29] This period was characterized by a pervasive national engagement with "the newly industrializing" economy, and with the new wealth that the foreign exchange earnings translated into.[30] Consequently, a slew of petroleum-focused environmental enactments followed.[31] Legislators seemed to believe, erroneously, that only the petroleum sector required close environmental monitoring. Thus, the laws at this time focused on the many facets of petroleum exploration activities and aimed at reducing the pollution that resulted from them.[32] Naturally, this created a very limited "sectorial" legislative framework centered solely on "economically important natural resources."[33]

However, in 1964, a law was created to regulate agricultural imports in an effort to control the spread of plant diseases and pests.[34] Among other provisions, the law required that an authorized officer destroy any imported sand, seeds, soil, containers, and straw suspected to be infected with any disease or pest. This officer may also direct that they should not be imported until treated to a satisfactory standard.[35] Apart from this law and the petroleum enactments, the few remaining laws bearing on the environment were peripheral, disunited, and extremely varied in subject matter.[36] These

29. GBADEBO OLUSEGUN ODULARU, CRUDE OIL AND THE NIGERIAN ECONOMIC PERFORMANCE 1 (2008), http://ogbus.ru/eng/authors/Odularo/Odularo_1.pdf.

30. S. Gozie Ogbodo, *Environmental Protection in Nigeria: Two Decades After the Koko Incident*, 15 ANN. SURV. INT'L & COMP. L. 1, 1 (2010).

31. They include: Oil Pipelines Act (1990) Cap. (338) (later complemented by Oil and Gas Pipelines Regulations No. 14 (1995) S.I.); Oil in Navigable Waters Act (1968) Cap. (337), § 3(3); Petroleum Act (1969) Cap. (P10); Nigerian Mining Corporation Act (1972) Cap. (317); Hydrocarbon Oil Refineries Act (1965) Cap. (H5); Exclusive Economic Zone Act (1978) Cap. (116), § 2; Territorial Waters Act (1967) Cap. (T5).

32. Olusegun A. Ogunba, *EIA Systems in Nigeria: Evolution, Current Practice and Shortcomings*, 24 ENVTL. IMPACT ASSESSMENT REV. 643, 647 (2004); *see also* A.O. Isichei, Environmental Impact Assessment and Environmental Evaluation Reports (Mar. 27, 2000) (unpublished paper presented at Workshop of the Nigerian Corrosion Association) (stating that EISs were aimed at reducing petroleum pollution).

33. Adegoroye, *supra* note 2, at 43.

34. Agricultural (Control of Importation) Act (1964) Cap. (A13).

35. *Id.* § 6.

36. Obinna Okafor, Environmental Laws and Factors Affecting them in Nigeria: Case Study of Gas Flaring Laws in Niger Delta 14 (Sept. 2011) (unpublished MSc thesis, Wageningen University) (on file with the Environmental Policy Group, Wageningen University).

laws covered such disparate subjects as sanitation, national parks, domestic personal hygiene, and wild animals.[37]

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

Although environmental legislation commenced after the discovery of petroleum, public awareness of the areas of the environment that required development remained limited. Neither the general public nor the government understood technical issues like effluent limitations, pollution abatement, and the overall modalities for the sustainable development of Nigeria's environmental resources. Most laws that were not petroleum-related had only a minor bearing on the environment.[38] In other words, they were accidental or incidental environmental legislation. These fragmented enactments provided, at best, rudimentary environmental regulations. Notable amongst these was the Factories Act.[39]

The 1987 Factories Act (which is still a valid law) was made primarily to provide for the registration of factories, and for the safety of workers exposed to occupational hazards. Its provisions cover: cleanliness, overcrowding, ventilation, lighting, drainage of floors, and sanitary conveniences. Other provisions relate to staff welfare, first aid, and the supply of drinking water. Penalties are also provided in case of breach of these provisions.[40]

The Act requires that sanitary conveniences must be available for workers of both sexes, and an inspector is designated to report any default or pollution of the water supply to the local government council for remediation.[41] More specifically, the Act states that "an adequate supply of drinking water shall be provided and maintained at suitable points conveniently accessible to all persons employed."[42] The water must be contained in suitable vessels, labeled by a written notice, and renewed daily.

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37. Ogbodo, *supra* note 30, at 2–3. Ogolla notes that sector-specific environmental legislation was common to African nations that had inherited this legacy from colonial administrators. Since the concern of colonial administrators was for extraction and allocation, laws were equally devoted to licensing and rights rather than management. They did not address the unpleasant environmental effects of resource exploitation. Bondi D. Ogolla, *Environmental Law in Africa: Status and Trends*, 23 INT'L BUS. LAW 412, 412 (1995).

38. *See, e.g.*, Bees (Import Control and Management) Act (1970) Cap. (B6) (regulating the control of and spread of disease among bees).

39. Factories Act (1987) Cap. (F1).

40. *Id.* §§ 7–12, 40, 43.

41. *Id.* §§ 12–13.

42. *Id.* § 40.

All steps should be taken to preserve the water and its vessels from contamination. Moreover, the Act requires separate locations for drinking water and water that is meant for washing up. Interestingly, however, the Act permits the Director of Factories to exempt any factory from the duty to provide and maintain suitable facilities for washing where an adequate supply of water is lacking.[43] Evidently, the law was concerned more with staff welfare than with environmental security.

Despite the overall flimsy environmental regulations at this time, a few important environmental laws were established during this period. These laws include: the 1978 Land Use Act; the 1979 Energy Commission of Nigeria Act; the 1985 Endangered Species (Control of International Trade and Traffic) Act; the Sea Fisheries Act (later repealed by Sea Fisheries Decree 1992); and the 1986 River Basins Development Authorities Act. Due to their importance, they are briefly reviewed below.

The Land Use Act of 1978, promulgated as a Decree during a military administration, is a major subsisting law that radically altered the system of landholding across the country. Before British colonial rule began, the country operated multiple land tenure systems based on diverse customary laws. In southern Nigeria, families acquired land under various systems of customary land ownership, either by inheritance, conveyance, gift, outright purchase, or long possession.[44] Landowners were only required to obtain the consent of the government when rights were being conveyed to aliens.[45] In the absence of a proper registration system, abuse was rampant, and the practice of multiple sales of the same land to different buyers was especially notorious.[46] With British colonization and the enactment of the Native Lands Acquisition Proclamation in 1900, land interests in Southern Nigeria were legally vested in citizens in freehold. In northern Nigeria, on the other hand, the land tenure system differed due to agreements reached with colonial rulers. This system effectively granted only the right of occupancy to the northern land holders under the Land and Native Rights Ordinance, and later the Land Tenure law.[47]

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43. *Id.* §§ 40–41.

44. Bolaji Oseni, *Summary of the Land Use Act Decree No. 6 of 1978 in Nigeria*, ENV'T NIGERIA, (Nov. 2012, 4:48 AM), http://nigeriaenvironment.blogspot.com/2012/11/summary-of-land-use-act-decree-no-6-of.html.

45. *Id.*

46. *Id.*

47. AKIN L. MABOGUNJE, LAND REFORM IN NIGERIA: PROGRESS, PROBLEMS AND PROSPECTS 2–3, http://siteresources.worldbank.org/EXTARD/Resources/336681-1236436879081/5893311-1271205116054/mabogunje.pdf; Victor C. Uchendu, *State, Land and Society in Nigeria: A Critical Assessment of Land Use Decree No. 6 of 1978*, 6 J. AFR. STUD. 62 (1979). Interestingly, Park has argued

Thus, a dual system of land holding operated in the country. This dissatisfied legal scholars who clamored for a revision in the interest of uniformity, and for an explicit statement on a consistent land use policy across the country.[48] This dissatisfaction culminated in the enactment of the Land Use Act in 1978. The Land Use Act vests all land in the respective state governments to be held in trust for the use and common benefit of all Nigerians.[49] An important provision in the law is the ownership of all improvements on the land by holders of rights of occupancy, including the groundwater flowing beneath their land.[50]

In 1979, the Energy Commission of Nigeria Act established the Energy Commission to strategically plan and coordinate national policies and to systematically develop the various energy resources in all of their ramifications in Nigeria.[51] The Commission's membership includes ministers from the following departments: Mines, Power and Steel, Petroleum Resources, Agriculture, and Water Resources and Rural Energy, amongst others.[52]

In 1986, the River Basins Development Authorities Act established 11 River Basin Development Authorities across Nigeria to undertake comprehensive development of surface and groundwater resources. These Authorities focused particularly on providing irrigation infrastructure and the

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that the introduction of English law by colonialists did not cancel "customary land tenure, but rather made it possible for dealings in land to cause English titles to arise." A. E. W. Park, *A Dual System of Land Tenure: The Experience of Southern Nigeria,* 9 J. AFR. L. 1, 10 (1965).

48. T.O. Elias wrote that there was " . . . a great need for the early introduction of uniform legislation about land rights throughout Nigeria." H.A. Oluwasanmi also expressed the view that due to the change in the country's economy, the old land tenure system had become too slow and ineffective to bring about the changes needed in agricultural practices. *See* T.O. ELIAS, THE NIGERIAN LEGAL SYSTEM 329 (1963) (noting the ineffective old land tenure systems); *see also* H.A. Oluwasanmi, *Land Tenure and Agricultural Improvement in Tropical Africa,* 39 J. FARM ECON. 731, 735 (1957) (explaining that the old land tenure system was a slow, ineffective, and inadequate vehicle for affecting fundamental changes).

49. Land Use Act (1978) Cap. (202), § 1. Though intended to usher in land reform, the Act has created many problems of interpretation and application. Attempts to amend it are extremely difficult because the Act is incorporated into the Nigerian Constitution, and thus any amendment requires a constitutional amendment. Difficulties with the Act prompted the Federal Government to set up a Presidential Technical Committee in April 2009 to make proposals for the reform of the Land Use Act: MABOGUNJE, *supra* note 47, at 11.

50. Land Use Act §§ 15(a), 51(1). The Water Resources Act (1993) complements this provision. In section three, it authorizes every holder of a right of occupancy to use groundwater within his/her premises, without charge for domestic purposes, to water livestock, and for personal irrigation purposes: Water Resources Act (1993) Cap. (W2), § 3. The Water Resources Act is discussed in detail later as part of the framework for managing groundwater in Lagos.

51. Energy Commission of Nigeria Act (1979), Cap. (E10), §§ 1, 5.

52. *Id.* § 2.

control of floods and erosion.[53] Each Authority is required to supply water to all users and to identify all water resource requirements within the Authority's area of operation.[54] The Sea Fisheries Act, which was later replaced by the 1992 Sea Fisheries Decree, provides for the regulation and protection of Nigeria's sea fisheries and the licensing of motor fishing boats.[55] In 1985, the Endangered Species (Control of International Trade and Traffic) Act was enacted for the purpose of prohibiting the hunting of, or trade in, wild animals, and to regulate, via permits and certificates, the export and import of specified animals.[56]

Despite this paltry profile of environmental enactments, Nigeria participated in both regional and international conferences aimed at improving environmental governance. These meetings aired and analyzed critical issues of multi-national dimensions, and proposed definitive steps for member countries to follow. As mentioned earlier, Nigeria participated in four meetings between 1968 and 1991, which resulted in important agreements regarding the protection of the marine and coastal environment, the conservation of natural resources, and the management of trans-boundary hazardous wastes within Africa.[57]

In 1972, Nigeria began to participate in conferences organized by the United Nations, starting with the United Nations Stockholm Conference on the Human Environment. Following this Conference, Nigeria created a federal ministry charged solely with responsibility for the environment and

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53. River Basins Development Authorities Act (1986) Cap. (R9), § 12. An earlier River Basins Development Authorities Act had been enacted in 1979, but was repealed by this Act. It is interesting to note that this Act was synchronized with the Land Use Act by actual reference, i.e., all of the River Basin Authorities' powers to acquire land for their purposes are limited by the Land Use Act's requirement of the Governor's consent within their respective areas of operation. A similar limitation is placed on every person in the country within the new ownership structure stipulated by the Land Use Act. This demonstrates the primacy of the Land Use Act.

54. *Id.* § 4.

55. Sea Fisheries Act (1992) Cap. (404), § 1, *repealed by* Sea Fisheries Decree No. (71) (1992).

56. Endangered Species (Control of International Trade and Traffic) Act (1985) Cap. (E9), §§ 1–2. Other laws made at this time with some bearing on the environment are: Associated Gas Re-Injection Act (1979) Cap. (A25); Animal Diseases Control Act (1988) Cap. (A17); Bees (Import Control and Management) Act (1970), § 1(1); Civil Aviation Act (1965) Cap. (51), later *repealed by* Civil Aviation Act No. 6 of 2006; Pest Control of Produce (Special Powers) Act (1968) Cap. (P9); Agricultural (Control of Importation) Act (1964) Cap. (A13); Explosives Act (1967) Cap. (117), § 1(2)(a); Live Fish (Control of Importation) Act (1962) Cap. (L14); Quarries Act (1990) Cap. (385), *repealed by* Mineral and Mining Act (2004) Cap. (M12); Food and Drugs Act (1976) Cap. (F32); Standards Organisation of Nigeria Act (1970) Cap. (412), § 14); National Water Resources Institute Act (1985) Cap. (N83); Nigerian Atomic Energy Commission Act (1976) Cap. (N91); Exclusive Economic Zone Act (1978) Cap. (116), *amended by* Exclusive Economic Zone (Amendment) Decree No. (42) (1998).

57. *See supra* note 3 (discussing various meetings and conventions undertaken by African states).

related issues. Professor Egunjobi concludes that this step indicated a higher level of environmental awareness.[58] Subsequently, the Third National Development Plan (1975–1980) attempted to reverse the previous environmental apathy by incorporating a deliberate policy to enhance the quality of life for all citizens as development progressed.[59] In 1975, Nigeria created an Urban Development and Environment Division within its Federal Ministry of Economic Development. Nigeria stipulated in its Fourth National Development Plan (1981–1986) that feasibility and viability studies for all projects, both public and private, should be accompanied by environmental impact assessments.[60] However, modalities to achieve the Plan's objective—heightening environmental consciousness—were not detailed and no formal legislation complemented it at the time.

In 1982, Nigeria hosted the Inter-Parliamentary Union Spring Meeting. At this meeting, a Committee on Education, Culture and Environment adopted a draft resolution on the "State of the World Environment Ten Years after the UN Conference on the Human Environment."[61] Additionally, Nigeria hosted a number of national workshops and conferences focused on environmental issues. For instance, in 1983, the Nigerian Institute of Social and Economic Research (NISER) organized a national conference with the theme "Development and the Environment." At this conference, 29 papers were presented and published on environmental issues. Also, in 1985, the Department of Geography and Regional Planning of the University of Benin collaborated with the Federal Ministry of Works and Housing to organize a national seminar with the theme "Environmental Issues and Management in Nigerian Development." At this seminar, 35 papers were published on environmental topics.[62]

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58. L. Egunjobi, *Issues in Environmental Management for Sustainable Development*, 13 ENVIRONMENTALIST 33 (1993).

59. *Id.* at 36–37 (citing Federal Republic of Nigeria, Third National Development Plan: 1975–1980 (Lagos, Nigeria)).

60. *See* T. Agbola, *A Review of Environmental Components in Nigeria's National Development Plans*, *in* ENVIRONMENTAL ISSUES AND MANAGEMENT IN NIGERIAN DEVELOPMENT 47, 54 (P.O. Sada & F.O. Odermerho eds., 1988) (describing how the Fourth National Development Plan "alert[ed] the nation of the advent of secondary environmental problems resulting from the increasing industrialization of the nation. The environmental management system of the plan incorporates environmental assessment . . .").

61. Olusegun A. Ogunba, *supra* note 32, at 648.

62. P.O. Sada & F.O. Odemerho, *Environmental Management and Development: Introduction of the Main Issues*, *in* ENVIRONMENTAL ISSUES AND MANAGEMENT IN NIGERIAN DEVELOPMENT, *supra* note 60, at 1.

D. The Contemporary Period (Post-1987 Koko Crisis Until the Present)

In August 1987, an environmental catastrophe ignited and energized efforts to pass meaningful environmental legislation. An Italian company imported several tons of toxic industrial waste and deposited it in Koko, Delta State, within Southern Nigeria.[63] The waste leaked into the surrounding environment and resulted in the endangerment of some residents of that community.[64] The egregious nature of the incident forced the Federal Government to react by enacting the Harmful Waste (Special Criminal Provisions, etc.) Act.[65] The Act criminalizes activities involving the sale, purchase, transportation, importation, deposit, or storage of harmful waste, either singly or in conjunction with others on Nigeria's soil, air, or sea.[66] Harmful waste is defined as injurious, poisonous, noxious, or toxic substances, particularly nuclear waste that emits any radioactive substances.[67]

In the same year, the governing Federal Military Government promulgated the Federal Environmental Protection Agency (FEPA) Act. This Act established a Federal Environmental Protection Agency with broad powers to manage and protect environmental resources and to develop environmental research technology.[68] The Act also empowered states within the Federation to set up their respective state environmental protection agencies, primarily to maintain good environmental quality in relation to pollutants within the states' control.[69] Based on the Act's authorization, states established their respective environmental protection agencies, such as the Lagos State Environmental Protection Agency (LASEPA). Three important subsidiary regulations made under this Act directly stipulated standards for: (1) the discharge of harmful effluents from industries, (2) the management of

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63. *See* James Brooke, *Waste Dumpers Turning to West Africa*, N.Y. TIMES (July 17, 1988), http://www.nytimes.com/1988/07/17/world/waste-dumpers-turning-to-west-africa.html?pagewanted=all&pagewanted=print (discussing various incidences of western companies dumping toxic waste in a number of West African countries).

64. *Id.*

65. Harmful Waste (Special Criminal Provisions, etc.) Act (1988) Cap. (C49), § 1(1).

66. *Id.* §§ 1–2.

67. *Id.* § 15.

68. Federal Environmental Protection Agency Act (1987) Cap. (F10), §§ 1, 5, *repealed by* National Environmental Standards and Regulations Enforcement Agency (Establishment) Act No. (25) (2007).

69. *Id.* § 25. Later in 1989, a Natural Resources Conservation Act 1989 was enacted to complement this law, but was repealed by Federal Environmental Protection (Amendment) Decree No. (59) (1992) §§ 1, 11. In 1999, the Agency's functions were taken over by the Federal Ministry of the Environment.

solid and hazardous wastes, and (3) pollution abatement in industries and facilities generating wastes.[70]

The FEPA Act authorized the Agency to prescribe national guidelines, criteria, and standards for water quality, air quality and atmospheric protection, noise levels, gaseous emissions and effluent limits; to monitor and control hazardous substances; and to supervise and enforce compliance. It also gave the Agency broad enforcement powers, even without warrants, to enter premises, inspect and seize property, and arrest offenders who obstruct the enforcement officers in the discharge of their duties.[71]

In 1989, the Federal Environmental Protection Agency formulated the current National Policy on the Environment. Egunjobi describes the Policy as "perhaps the most positive achievement Nigeria has ever recorded in the area of environmental management."[72] The Policy's overarching objective is sustainable development based on proper management of the environment in order to meet the needs of present and future generations.[73] It aims to secure for all Nigerians a quality of environment adequate for their health and well-being; to "raise public awareness and promote understanding of the . . . essential linkages between environment and development"; and to "encourag[e] individual and community participation in environmental" protection and improvement efforts.[74]

In 1999, the Federal Ministry of the Environment took over the functions of the Federal Environmental Protection Agency. Since then, the scope of

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70. They were: National Environmental Protection (Effluent Limitation) Regulations (1991), §§ 3–4; National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations No. 15 (1991) § I.; National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations No. 9 (1991) § I. A fourth regulation, the National Environmental Health Practice Regulations, was promulgated under the authority of § 40 of FEPA. It was mainly intended to control the incidence of communicable diseases through environmental health intervention and to regulate public and private sector collaboration in order to achieve adequate sanitation, public health, and safety. National Environmental Health Practice Regulations, § I. No. 21 (2007).

71. According to experts, a number of peculiar socio-political factors hampered FEPA's efforts: inadequate waste disposal facilities within industrial estates; inadequate funding for FEPA; powerful political groups that countered FEPA's efforts; a negative public perception of FEPA; and political instability. Thus, it performed suboptimally in spite of its impressive staff list of academics and its spirited efforts to make a positive impact. Consequently, groundwater pollution from untreated industrial sewage continued. In 1999, the Federal Ministry of the Environment took over FEPA's functions but was also not effective enough owing to bureaucracy and a dearth of regulations and standards. Adegoroye, *supra* note 2, at 44, 47–50, 53; Adesola O. Adeyemo, Assessing Environmental Protection and Management Systems in West Africa: A Case Study of Nigeria i, 21, 23 (2008) (unpublished M.S. thesis, Southern Illinois University at Carbondale).

72. Egunjobi, *supra* note 58, at 37.

73. *Id*.

74. OVERVIEW OF THE NATIONAL POLICY ON THE ENVIRONMENT 5, 26, 67 (Ælex Legal Practitioners & Arbitrators, 1999).

environmental legislation has become progressively more sophisticated and demonstrates an increasing awareness of the importance of environmental resources.

The FEPA Act and its regulations, as well as the Harmful Waste Act, were a good development in view of the relatively obscure environmental regulation at this time—even though both were reactive. Some argue that they place Nigeria on "equal" footing with some developed countries' environmental protection laws, however, this is an overstatement.[75]

It is remarkable that in spite of the various enactments, and especially of FEPA's regulations that aimed to control industrial emissions to minimize environmental pollution, arbitrary discharge of wastewater has been a pervasive practice amongst industrialists. During this period, LASEPA lamented a paltry 20% industry compliance with effluent limitation standards, resulting in Lagos State's groundwater suffering considerable and escalating pollution, as will be discussed later.[76]

In 1993, legislators wrote the major federal law on water management, the Water Resources Act.[77] The Act provides the main framework for water resources management. Its purpose is to promote the optimum planning, development, and use of Nigeria's water resources.[78] The law provides, with qualifications, that for the purpose of water planning and development the right to the use and control of all surface and groundwater, and of any watercourse affecting more than one state, is vested in the federal government.[79]

Several other environmental and public health laws have since been enacted. These include: the National Agency for Food and Drugs Administration and Control Act, which has had two amendments and 39 subsidiary regulations; and the Merchant Shipping Act, which has 60

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75. Adegoroye, *supra* note 2, at 43.

76. LAGOS STATE GOV'T, FINAL DRAFT REPORT OF LAGOS STATE EFFLUENT LIMITATION STANDARDS AND GUIDELINES (1999).

77. Water Resources Act (1993) Cap. (W2).

78. *Id*.

79. The Act authorizes the conjunctive management of ground and surface water, but this does not appear to be taking place, as groundwater is not integrated into the national water resources development plan. A fuller discussion of this and related issues affecting groundwater may be found in the following Articles by the author: Adebola Ogunba, *A Legal Perspective of Sustainable Groundwater Use in Nigeria*, 3 INT'L J. SOC. & MGMT. SCI. 26 (2011); Adebola Ogunba, *Threats to Groundwater: Lessons from Canada and Selected Jurisdictions*, 30 J. ENERGY & NAT. RESOURCES L. 159, 173 (2012). *See also* H.O. Nwankwoala, *An Integrated Approach to Sustainable Groundwater Development and Management in Nigeria*, 3 J. GEOLOGY & MINING RES. 123, 126 (2011) (discussing a number of impediments to groundwater management in Nigeria).

subsidiary legislations.[80] The volume of regulations underscores their importance within the national agenda.

In 1992, the Environmental Impact Assessment (EIA) Act was passed.[81] For the first time, the country could claim to have a generally applicable law that mandates prior appraisals of likely environmental impacts of intended projects.[82] The law requires that projects belonging to both the public and private sectors must undergo an initial early appraisal in case of resulting harm to the environment.[83]

Finally, in July 2007, the National Assembly repealed the FEPA Act, and enacted the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act. The Act creates a new federal agency, the National Environmental Standards and Regulations Enforcement Agency (NESREA), which replaced the Federal Environmental Protection Agency.[84] NESREA is the major federal environmental legislation in Nigeria, and has been described as "a new dawn in environmental compliance and enforcement" because of its efforts to address and safeguard all aspects of the environment.[85]

II. OVERVIEW OF NESREA AND ITS REGULATIONS

NESREA has 24 subsidiary regulations under its authority compared with the meager four regulations promulgated under the former FEPA Act. As mentioned earlier, three of the FEPA Act regulations were exclusively

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80. National Agency for Food and Drugs Administration and Control Decree No. 15 (1993) and 38 subsidiary legislations; Inland Fisheries Decree No. 108 (2004); Nuclear Safety and Radiation Protection Decree No. 19 (2004) Cap. (N142); Nigerian Meteorological Agency (Establishment) Act (2003) Cap. (N152); Nigerian Urban and Regional Planning Decree No. (88) (1992); Merchant Shipping Act (2007) Cap. (M11), (LFN) plus 60 subsidiary legislations; Consumer Protection Council Act (1992) Cap. (C25).

81. Environmental Impact Assessment Act (1992) Cap. (E12).

82. *Id.*

83. Prior to the EIA Act, projects had to undergo appraisals under two separate laws: the Petroleum Act and the Urban and Regional Planning Act. With the writing of the Environmental Impact Assessment Act, scholars have criticized the simultaneous use of three independent and unrelated EIA systems, complaining of a lack of coordination between them and of unnecessary replication in efforts, preparations, and substantial costs in time and money. They argue that there are considerable overlaps between them, as well as multiple authorities designated for the EIA approval process, leaving permit seekers with no option but to seek approval from all three agencies. However, they do acknowledge that the proactive provisions under the EIA Act are preferable to those under the Petroleum Act, which is largely reactive: Olusegun A. Ogunba, *supra* note 32, at 648.

84. Muhammed Tawfiq Ladan, *Review of NESREA Act 2007 and Regulations 2009-2011: A New Dawn in Environmental Compliance and Enforcement in Nigeria*, 8 LAW ENV'T & DEV. J. 116, 119, 121 (2012).

85. *Id.* at 116.

concerned with industrial waste discharges and wastewater emissions. On the other hand, NESREA regulations attempt to address all environmental resources. Their coverage includes: conservation and wise use of wetlands and resources; protection of water catchment areas; minimization of pollution from mining; ozone layer protection; soil erosion and flood control; desertification control and drought mitigation; protection of endangered species in international trade; coastal and marine protection; control of vehicular emissions; surface and groundwater quality control; and sanitation and waste control. In addition, some of the regulations directly address effluent and waste discharges from specific industries, including textiles, steel and metals, industrial plastic and rubber, minerals manufacture, electronics, chemicals and pharmaceuticals, and textiles and footwear.[86] The NESREA regulations are laudable, although their effectiveness is doubtful.

In appraising the profile of environmental laws, it is helpful to refer to specific natural resources. In this regard, groundwater in Lagos and the marine environment in the Niger Delta bear special mention on account of their importance.

A. Groundwater in Lagos

Groundwater is a particularly important natural environmental resource in Nigeria. This is especially true in Lagos, Nigeria's largest megacity, where an unreliable water supply plagues the residents and compels them to seek a more permanent water supply: groundwater.[87] Unfortunately, this resource is encountering profound and escalating pollution, in spite of the NESREA regulations and other environmental laws. To date, Lagos does not have a single law dedicated to managing its groundwater.[88] Rather, it has a number of environmental laws made by its legislature that provide, at best, a cursory and fragmented framework to which problems of vagueness, legal pluralism,

86. *Id.* at 134–37.

87. A.A. Adepelumi et al., *Delineation of Saltwater Intrusion into the Freshwater Aquifer of Lekki Peninsular, Lagos, Nigeria*, 56 ENVTL. GEOLOGY 927, 928 (2009).

88. The legal framework for managing environmental resources in any one state is made up of federal and state laws, based on constitutional authorizations. On one hand, the Constitution provides that the federal legislature may make laws to protect and improve the environment and safeguard the water, land and air, forest, and wildlife. Based on this authority, it enacted the NESREA Establishment Act. On the other hand, the Constitution empowers state legislatures to make laws for the peace, order, and good governance of their respective states on any matter not on the exclusive (federal) legislative list. These collective provisions set the tone for the dual system of environmental enactments: CONSTITUTION OF THE FEDERAL REPUBLIC OF NIGERIA (1999), §§ 4, 20.

gaps in legislation, and non-compliance attend.[89] Apparently the combination of environmental laws, especially NESREA and its relevant regulations, have not been as effective as desired. In consequence, the resource has continued to be polluted, which occurs predominantly from the manufacturing sector's processes.[90]

B. Environmental Consequences of Petroleum Exploration in the Niger Delta

Petroleum is the major foreign exchange earner of the Nigerian government. Since 1956, petroleum exploration activities have caused very severe consequences that have required a steady stream of laws and subsidiary regulations that strive to address these consequences. In the earlier years of oil exploration and into the 1990s, oil spillages were reported to have been of such great magnitude as to adversely affect local agricultural and fishing activities. Between 1976 and 1988, two thousand reports of spillages, causing an estimated loss of two million barrels of oil, were recorded nationwide.[91] In 1999, in response to concerted efforts to compensate

89. Its environmental laws are: the Lagos State Water Sector; Lagos State Environmental Protection Agency Law (1996) Cap. (L23); Environmental Sanitation Law (2000) Cap. (E5); Environmental Pollution Control Law (1989) Cap. (E7); and the Lagos State Waste Management Authority Law No. (5) (2007) 40:27 S.O.G., A55. The absence of a single law that exclusively addresses groundwater necessitates a search through many laws on water and waste in order to discover the managerial provisions that affect groundwater. A Law to Provide for the Lagos State Water Sector, Lagos Water Corporation and for Connected Matters No. (14) (2004), http://lagoswastewater.org/wp-content/uploads/Water-Sector-Law-2004.pdf.

90. *See, e.g.*, K. Olayinka, & B.I. Alo, *Studies on Industrial Pollution in Nigeria: The Effect of Textile Effluents on the Quality of Groundwater in Some Parts of Lagos*, 3 NIGERIAN J. HEALTH & BIOMEDICAL SCI. 44 (2004) (discussing the effects of the textile industry on water pollution); O. Adeyemi, O.B. Oloyede & A.T. Oladiji, *Physicochemical and Microbial Characteristics of Leachate-Contaminated Groundwater*, 2 ASIAN J. BIOCHEMISTRY 343, 347 (2007); A.O. Eruola et al., *Assessment of Effect of Sewage Intrusion from Septic Tanks into the Consumable Hand Dug Wells in Lagos State, Nigeria*, 13 GLOBAL J. SCI. FRONTIER RES. 1, 5 (2013) (discussing the effects of pollution on groundwater).

91. MARGARET T. OKORODUDU-FUBARA, THE LAW OF ENVIRONMENTAL PROTECTION 815 (1988). Notable oil spills over the years include: FUNIWA-5 Texaco Oil Well Blowout (1980, 37 million litres); Qua Iboe Spill (1998, 40,000 barrels of oil); Bodo Oil Spill (2009, 100,000 barrels of oil). The spills are widespread, affecting more communities, and occurring with alarming regularity. Ordinioha & Brisibe report that 240,000 barrels of crude oil are spilled yearly with severely adverse effects on water and crops. The spills and resulting devastation portray a vivid picture of a region suffering from poverty and excruciating hardship, instead of transforming into a "gigantic economic reservoir of national and international importance." UNITED NATIONS DEVELOPMENT PROGRAMME, NIGER DELTA HUMAN DEVELOPMENT REPORT 9 (2006). Preye K. Inokoba & David L. Imbua, *Vexation and Militancy in the Niger Delta: The Way Forward,* 29 J. HUM. ECOLOGY 101, 105 (2010); B. Ordinioha & S. Brisibe, *The Human Health Implications of Oil Spills in the Niger Delta Nigeria: An Interpretation of Published Studies*, 54 NIGERIAN MED. J. 10 (2013).

affected communities, the Niger-Delta Development Commission Act established the Niger Delta Commission to tackle ecological problems that arose from the exploration of oil minerals within the Niger Delta.[92]

The Niger Delta formerly had a reputation as a leader in swamp rice cultivation and was famous for its mangrove swamps, which supported commercially important species of fish and shellfish.[93] Unfortunately, oil pollution is a chronic and long-standing issue for the region, which has undercut that enviable status. Groundwater, a major source of potable water supply for residents of the Niger Delta, also suffers from considerable oil pollution.[94] This is regrettable, because groundwater polluted by oil spills cannot always be completely cleaned up. Therefore, experts advise that pollution prevention is much safer and wiser.[95]

Considering that petroleum exploration provides the country with its main source of foreign exchange earnings, the region's environmental devastation and impoverishment—which exact a serious toll on the lives of the residents—is startling and sad. Many scholars have written about this perennial and thorny problem, and have sought a resolution. For instance, Yemi Osinbajo and Olukonyisola Ajayi wrote that the Ogoni people, who occupy a significant part of the affected areas, suffer some of the worst cases of ecological devastation, because their agricultural and aquatic environments are virtually destroyed.[96]

Repeated intervention efforts, mentioned earlier, to ameliorate both the pollution and the devastation arising from this pollution do not appear to have achieved much. More importantly, laws enacted have had limited effect. NESREA Act does not apply to the petroleum exploration sector. In fact, the Act specifically ousts the Agency's power in its provision that the Agency

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92. Niger-Delta Development Commission Act (2000) Cap. (N86). Indeed there has been a history of governmental interventions beginning in 1961 with the establishment of the Niger Delta Development Board (NDDB). Subsequently, the Niger Delta Basin Development Authority was set up in 1976. Again, the Oil Mineral Producing Areas Development Commission (OMPADEC) was inaugurated in 1992, but all of these efforts have not resolved the chronic and disturbing problems. J.P. Eaton, *The Nigerian Tragedy, Environmental Regulation of Transnational Corporations, and the Human Right to A Healthy Environment*, 15 B.U. INT'L L.J. 261, 287–89 (1997).

93. S.O. Aghalino & B. Eyinla, *Oil Exploitation and Marine Pollution: Evidence from Niger Delta, Nigeria*, 28 J. HUM. ECOLOGY 177, 179 (2009).

94. Gordon T. Amangabara & John D. Njoku, *Assessing Groundwater Vulnerability to the Activities of Artisanal Refining in Bolo and Environs, Ogu/Bolo Local Government Area of Rivers State; Nigeria,* 2 BRITISH J. ENV'T & CLIMATE CHANGE 28, 30 (2012).

95. Aghalino & Eyinla, *supra* note 93; Ana R.E.E. Godson, Mynepalli K.C. Sridhar & Michael C. Asuzu, *Environmental Risk Factors and Hospital-Based Cancers in Two Nigerian Cities*, 2 J. PUB. HEALTH & EPIDEMIOLOGY 216, 218 (2010).

96. Yemi Osinbajo & Olukonyisola Ajayi, *Human Rights and Economic Development in Developing Countries*, 28 INT'L L. 727, 740 (1994).

shall " . . . enforce compliance with legislation . . . other than in the oil and gas sector."[97] Nevertheless, a good number of laws aim to minimize and remediate pollution. For instance, the Petroleum Act, the Petroleum (Drilling and Production) Regulations, and the Oil Pipelines Act require oil exploration licensees to prevent pollution and to remediate damage done in the course of their petroleum exploration activities—although provisions of the Petroleum Act are largely reactive.[98] The persistence of the pollution problem over many decades, and the apparent ineffectiveness of existing laws, raises a question about the role of law and institutions in the sustainability of this and other important natural resources.

III. THE ROLE OF LAW AND INSTITUTIONS IN SUSTAINABLE DEVELOPMENT

Good governance of environmental resources is essential to sustainable development.[99] In this regard, legislation is crucial because it is an intrinsic and indispensable aspect of governance. Law is an extremely powerful tool that may be employed to streamline and redirect important national activities. In its generic sense, governance comprises laws and standards. However, in the context of any particular nation, the implications of governance may be more involved. It may require factoring in various different elements into a suitable regulatory or governance framework, depending on its peculiar socio-economic circumstances. A competent governing framework would have to address the intersection of all these relevant factors. Consistent with this, experts have remarked that environmental resources require wise governance.[100] The United Nations acknowledges that each country faces specific challenges to achieve sustainable development, and so each government has to adopt the particular approach and tools in accordance with its peculiar national circumstances and priorities that make sustainable

97. Ladan, *supra* note 84, at 123–24.

98. Oil Pipelines Act (1990) Cap. (338).

99. U.N. Conference on Sustainable Development, *The Future We Want*, para. 10, U.N. Doc. A/RES/66/288 (2012). *See also* Morita et al., *Rule of Law, Good Governance and Sustainable Development*, *in* 1 SEVENTH INTERNATIONAL CONFERENCE ON ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT: CONFERENCE PROCEEDINGS 15, 15 (Jo Gerardu et al. eds., 2005) (emphasizing that good governance is crucial for sustainable development).

100. *Ministerial Declaration of The Hague on Water Security in the 21st Century*, WORLD WATER COUNCIL (Mar. 22, 2000), http://www.worldwatercouncil.org/fileadmin/world_water_council/documents/world_water_forum_2/The_Hague_Declaration.pdf.

development possible. To accomplish this objective, this approach encourages sharing experiences between countries.[101]

Nigeria must now establish effective legal and regulatory frameworks that enhance its national capacities to respond to the challenges of sustainable development. The laws and regulations must be suited to Nigeria's specific conditions as critical instruments for transforming environmental and developmental policies into action. The laws should be properly integrated, not piecemeal, and be supported by adequate institutional machinery, authority for enforcement, and timely adjustments.[102]

CONCLUSION

The trajectory of environmental regulation in Nigeria began slowly and later became reactive. Today, Nigeria's environmental regulations are gradually becoming firmer, with institutions being put in place for environmental management and monitoring. It is gratifying that environmental legislation in Nigeria has progressed in the right direction—from a state of virtual non-existence to its present state of environmental laws and institutions, with centralization of environmental management in environmental protection agencies.[103] But this progression does not suffice when natural resources, such as groundwater in Lagos, suffer severe environmental degradation. Neither will true advancement be made when ecological devastation continues to occur in the Niger Delta. It is indeed regrettable that serious environmental deterioration continues in the form of marine and groundwater pollution, in spite of national and state environmental policies, NESREA and its numerous regulations, and other environmental laws. Securing these vital resources requires strong governance at national and local levels, which is also required for sustainable development. Strengthening environmental laws must incorporate measures for safeguarding the quality of resources to prevent their deterioration; monitoring and restoration of polluted or damaged resources; and enforcement, including penalties for non-compliance. These multifaceted measures would comply with international agreements about the best options for safeguarding important natural resources. In this regard, Nigeria can draw valuable lessons from other governmental bodies, such as the European Union, that have successfully managed vital environmental resources,

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101. United Nations Conference on Sustainable Development*, The Future We Want*, paras. 32, 64 U.N. Doc. A/CONF.216/L.1 (June 20–22, 2012).

102. U.N. Conference on Environment and Development, *Agenda 21*, para. 8.13, U.N. Doc. A/CONF.151/26 (Vol. 1), (June 3–14, 1992).

103. Ogolla, *supra* note 37, at 414.

thereby implementing the counsel of the United Nations in the interest of sustainable development.