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AFRICA AND THE ENVIRONMENT*

CHRIS N. OKEKE**

I. INTRODUCTION

International environmental law is increasingly forming the basis of cooperation in the international community. Indeed, in recent times, no single movement has so transformed human concerns as the crusade to protect and preserve the planet's environment.¹ It has been pointed out that in 1972, international environmental law was only in its formative stage with just less than three dozen multilateral agreements.² Since then there has been significant progress in the development of international environmental law. The African nations form an important part of the world community and

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1. See R.S. Pathak, *International Trade and Environmental Development: A View From India*, 1 IND. J. GLOBAL LEGAL STUD. 325 (1994).

2. See EDITH BROWN WEISS ET. AL., *INTERNATIONAL ENVIRONMENTAL LAW: BASIC INSTRUMENTS AND REFERENCES* ix (1992). According to the learned authors, there were nearly nine hundred international legal instruments that were either primarily directed to international environmental issues or contained important provisions on them within the time period reported.

possess certain unique characteristics,³ and have an important role to play in this effort. Most of Africa's countries are affected by oil and crisis.⁴ Africa has a comprehensive continental political structure,⁵ as well as regional and continental, economic,⁶ and military structures.⁷

Generally, the 1990s have been regarded as the decade of development. This statement may be true of some developing countries, but by no means all of them. It appears true of Asia, whose future in the twenty-first century seems assured. The South American continent, which is rich in resources, has shown signs of its developmental potential in recent years and could rise to greatness during the next century, provided it solves its perennial social inequalities and creates its own singular place in the world. Unfortunately, nobody at present would dare to predict the future of Africa in the twenty-first century.

Since the mid-1980s, Africa has become peripheral to the world's foci of interest. This creeping marginalization of the continent was spotted seven years ago by the former Head of State of the Federal Republic of Nigeria in the following terms:

3. These include the highest number of least developed countries (L.D.C.). Twenty of 30 least developed countries are African states, namely: Benin, Botswana, Burundi, Cape Verde, Central African Republic, Chad, Comoros, Ethiopia, Gambia, Guinea, Lesotho, Malawi, Mali, Niger, Rwanda, Somalia, Sudan, Uganda, United Republic of Tanzania, and Upper Volta.

4. Twenty-seven of 45 of these African countries are: Benin, Burundi, Cape Verde, Central African Republic, Chad, Egypt, Ethiopia, Gambia, Ghana, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Madagascar, Mali, Mauritania, Mozambique, Niger, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Uganda, United Republic of Cameroon, United Republic of Tanzania, and Upper Volta.

5. In the form of the Organization for African Unity [hereinafter O.A.U.].

6. Economic Community of West African States Treaty [hereinafter ECOWAS], May 28, 1975, Benin - Burk.-Faso - Cape Verde - Côte d'Ivoire - Gam. - Ghana - Guinea - Guinea Bissau - Liber. - Mali - Mauritania - Niger - Nig. - Sen. - Sierra Leone - Togo, *THE POLITICAL ECONOMY OF FOREIGN POLICY IN ECOWAS* (Timothy M. Shaw & Julius Emeke Okolo, eds., 1994); Treaty Establishing The Common Market for Eastern and Southern Africa, Nov. 5, 1993, 33 I.L.M. 1067 (*entered into force* Jan. 1, 1994); Organization of African Unity Member States Treaty Establishing The African Economic Community, June 3, 1991, 30 I.L.M. 1241 [hereinafter O.A.U. Treaty].

7. The ECOMOG is a military force made up of about 7,500 troops from six member nations that constituted it for peacekeeping in the war-torn country of Liberia. The six member nations of ECOMOG are: Gambia, Ghana, Guinea, Mali, Nigeria, and Sierra Leone.

The concerns and role of Africa are no longer of much relevance to the world at large. Last year (1988) Henry Kissinger and Cyrus Vance published an article which focused on the objectives of American foreign policy on the eve of the twenty-first century. All regions of the world were discussed except Africa. Mikhail Gorbachev, in his book "Perestroika," has precious little to say about Africa. Research and discussions about the ominous threats resulting from the ozone layer depletion and global warming trends deal with all continents - except Africa. Africa has become peripheral to the rest of the world on global issues.⁸

Three years later, an erudite African scientist pointed out the major specific areas of interest where the marginalization of Africa was most prominent, namely: technology-dominated national development strategies, competitive export trade behind highly protected markets, globalized financial and economic services regulated by a closed club of industrialized countries, and a military-geopolitical power system that threatens to become unipolar.⁹

While it may be correct to classify all African countries as underdeveloped, there nevertheless exist differences in their levels of development as well as the philosophical paths and goals they have chosen as targets for their development efforts. These have a direct bearing on the significance and value which the various African governments and societies attach to the key questions of environment and the development of international environmental law. It is therefore important to assess what contributions, if any, African nations have made in the development of the environment generally and international environmental law in particular, and explore where we are headed. Africa provides for the international lawyer a genuine field in which to study the international law of devel-

8. Olusegun Obasanjo, *Africa: Leadership For Tomorrow's Continent* (The Hunger Project Paper 1989).

9. T.R. Odhiambo, *The Responsibilities Of A Scientist In The Developing World*, SCIENCE & TECHNOLOGY IN THE DEVELOPING WORLD: LIBERATION OR INDEPENDENCE? (Thomas Gieryn & Hollis R. Johnson eds., 1992).

opment with due consideration for relevant national and regional legal developments.

The point of departure for this paper is the conviction that the major questions and problems, so often dismissed as "problems of the Third World" of which Africa occupies a central place, must be the starting point for the building of a system of international law, and indeed, are the bases upon which the discipline can come to terms with itself in the context of present-day realities. Thus, this attempt to examine environmental law from the point of view of decolonization and development will be deliberately restricted to the African area. This necessitates the placing of Africa very close to the center of attention and certainly much closer than it has been in the past. The duty of protecting the environment falls on the state, which must properly direct societal life in a manner that ensures that the natural basis of life is preserved for present and future generations. The individual has an important role to play in the effort though by no means close to that expected of the state. The concept of African state as used herein refers to the African state as it is currently configured and not as it ought to be or might have been.

Our discussion therefore necessarily starts with an examination of the place which the environment and its development occupy within African tradition. In other words, we will explore the importance which African tradition and practice accord the environment, for it is our firm belief that a good understanding of how the subject is assessed and viewed in a traditional African setting will shed light generally on the African attitude towards the development of the environment and international environmental law in the international sphere.

Furthermore, we need to emphasize the fact that African nations appear to be conscious of the consequences of subscribing to modern international law (a law in whose development prior to decolonization, none of them, with the exception of countries like Ethiopia and Liberia, were involved), when they now participate in the process of formulating international environmental law. A situation where a few select nations, on the basis of their superior military and economic power and

supremacy, virtually dictate and reign over the affairs of the majority is no longer either realistic or practicable.

In this paper, it will be argued that the environment has a special place of pride and recognition in African tradition. Besides, African nations are committedly rising to their responsibilities in vigorously addressing environmental issues by enacting relevant national legislation, adopting policies, and engaging in continental and international meetings dealing with environmental problems. The results of their efforts in implementing the regulations and conventions to which they are parties may, sometimes for reasons beyond their control, be below expectations. In that connection, one must also keep in mind the enormity of the environmental problems they face.

In support of the assertion of progress made above, a discussion of the nature and characteristics of environmental legislation enacted in some of the nations will be undertaken in order to show the trend in this matter. Unfortunately, time and space will not allow a more detailed discussion of environmental legislation in all the countries in Africa. An examination of their efforts at regional and international levels is needed.

While we fully support the international moves directed toward obligating states to protect the environment, we do so with the necessary caveat that such steps would have to allow for economic development of the nations of Africa, Asia, and Latin America. This is to meet the requirement of equity and to solve the problems of poverty-based environmental degradation. The article will conclude with some observations on the prospects for international environmental law development in Africa in the light of the situation prevailing in the continent and the world as a whole.

II. ENVIRONMENTAL TRADITION

Recognition of the importance of the environment and respect for environmental values lie deep in Africa's past. Africa's approach to environmental considerations can be traced back to its ancient past. The tradition has always been that people are free to live in harmony with nature, and al-

though authorized to use natural resources, they enjoy no divine power of control and dominion over nature and its elements. In practical life, tradition also dictated conservation of natural resources and their use on a sustainable basis.

The traditional knowledge base of the African peoples in such diverse fields as environmental conservation, crop production and soil management, animal production and rangeland productivity, forestry conservation and agro-forestry management, and household seed technology and seedbank conservation was of very high order and continues to surprise the uninformed modern agronomist breeder. The African farmer, for instance, employed an agrarian technology of shifting cultivation, which permitted the regeneration of forests and the restoration of soil fertility.

Africa's recognition of the importance of the environment and its significance in the continent's international trade dates back to medieval times. At that time, African goods were already being marketed in regions within and outside the continent in far away places like India, China, and South Asia.¹⁰ Sea routes carried both African merchandise and African travellers to the Persian Gulf, the Euphrates, India, and China.¹¹ In every-day life, tradition also called for conservation of natural resources and their use on a sustainable basis. However, the second half of this century has witnessed an alarming explosion in the population of Africa.¹² The question of overpopulation in the continent vis-à-vis the need for family planning has raised much controversy in recent times among Afri-

10. During this period the best iron used in all parts of India, sold at a good price, most superior in quality, and most malleable, came from South-East Africa. The large regions of old Africa were thus involved in the recovery and expansion of the carrying-trade in medieval times.

11. In 1331, the Moroccan scholar Ibn Batua visited India and China. These early market-centers and their later rise to wealth and influence form a continuous aspect of development after about AD 800. For a detailed examination of the medieval expansion of African trade of the era, see BASIL DAVIDSON, *AFRICA IN HISTORY* 71-81 (1991).

12. According to John Stackhouse, the population of Sub-Saharan Africa, which is now 500 million people, has doubled since 1965 and will double again by 2012 if current trends continue. For a detailed discussion of his examination of the crises fueling Africa's spiral of soaring population, see John Stackhouse, *Intractable Nexus Crises Fuel Africa's Spiral: Soaring Population, Failing Environment Lead Continent to Disaster*, MILWAUKEE J. SENTINEL, Jan. 21, 1996, at 24-25.

can politicians.¹³ This issue has come into direct conflict with African tradition that does not entertain any form of regulation of human procreation. About 55% of Africa's people live below the poverty line. About 80% of the continent's population depends on agriculture for survival and one in three people do not have a secure food supply. Inevitably, heavy pressure has been placed on natural resources. It is certainly necessary to support voluntary family planning throughout the continent. It is promising that most of the leaders of the African nations, particularly Moslems, have come out strongly in favor of family planning activities. Presidents Diouf of Senegal and Kountche of Niger, both Moslems, have supported these measures. Both emphasize the obligation of families to plan for only as many children as they can support.¹⁴ Therefore, eradication of poverty and control of population growth have to constitute an integral part of a strategy of protecting the environment. The eradication of poverty and the control of population growth are closely related.¹⁵

Apart from the population problem, there are other problems which confront the African people. The most important staple crops - sorghum, millet, banana, plantain, cassava, leafy vegetables, yams, cocoyams, and sweet potato - are marginalized in terms of scientific research and technological development. Other problems include the dominance of drought, desertification, and increasing lack of fresh water. Arid and desert conditions occupy 42% of Africa's landmass; semi-arid ecologies take up another 22%, both altogether occupying some 19.4 million square km. out of a total landmass of

13. Fortunately, Africans all across the continent have finally seen the need to promote family planning for a variety of reasons - but not quite fast enough.

14. See Mark Edelman, *The Legal Faces of the Hunger Problem V: The Right to Food: U.S. Legislation Addressing The Hunger Problem: The Proposed African Famine Recovery and Development Fund Act*, 30 How. L.J. 355, 358, 362 (1987). Edelman is the Assistant Administrator for Africa at the Agency for International Development. His article was a contribution to the 1986 Symposium on World Food Day and Law Conference.

15. One already sees in Central and West Africa and increasingly in East and Southern Africa a degree of environmental degradation which is absolutely alarming. It is taking place essentially because of a tremendous increase in both human and animal populations. Therefore, increased farm productivity and increases in farm family income have to be linked to environmental rehabilitation and arresting of environmental decline.

30.25 million sq. km.. Multinational river basins cover some 13.3 million sq. km. (or some 44% of the total landmass); lakes occupy a further 195.000 sq. km. and swamps 260.000 sq. km.. Africa is already the world's most fresh water-poor continent. Admittedly, Africa is not alone in this unplanned exploitation of the earth's fresh water resources. The continent experiences a pronounced dry season each year, often merging into several consecutive seasons of drought. Furthermore, Africa is subject to very high potential evaporation from exposed water surfaces and transpiration by plants, of the order of 1,200 to 2,800 mm. in contrast to a mere 350 mm. or less in Northern Europe. Most rainfall occurs in storms, which permits only a small proportion to enter the rivers as surface run-off. Finally, infiltration of water into deep sub-soil water storage basins, the so-called aquifers, is relatively slow in most of Africa.

By tradition and practice informed by common sense, African village chiefs as a rule once reserved common land for future needs. This is no longer the case. The environmental pressure has been compounded by the arrival of cattle herds which invariably settle on the reserved common land. These herds¹⁶ can be seen roaming the landscape in search of fodder. At the same time, the continent is losing an estimated 7.25 million acres a year of forest cover for the reason that half of its farmland is affected by soil erosion and degradation.¹⁷ Development organizations now agree that if Africa is to avoid calamity, its agricultural needs, environmental pressures, and rapidly growing population must be dealt with as one problem. Otherwise, much of the continent may be headed for disaster in the next century.

III. ENVIRONMENTAL LAW AND POLICY IN AFRICA

Even though the role of development has taken a high profile in the African economy, it is undeniable that African

16. Owned by city-dwellers, some of them military officers and senior bureaucrats who hire young men to graze their livestock in the countryside.

17. According to the International Fund for Agriculture Development, Africa loses about 15% of its potential agriculture income each year to soil degradation, amounting to more than the value of food imported by the entire continent. It is projected that if the spiral continues for another 25 years, Africa's annual food gap will reach 87 million tons - almost nine times the current level.

nations have been in the process of developing a strong structure of legislative measures and policy initiatives,¹⁸ with the goal of safeguarding the environment. Their efforts in this area are evident in the regional,¹⁹ continental,²⁰ international,²¹ and domestic²² spheres.

A. ENVIRONMENTAL REGULATION

The following paragraphs describe some of the environmental legislative acts/measures²³ taken in certain African nations.

18. It is neither possible nor desirable in this paper to discuss the legislative measures and policies relating to environmental law of all the African nations. Instead, the paper undertakes a general survey of the trend across the continent and discusses in greater detail environment-related measures that have been taken in a few randomly-selected countries.

19. Both the Economic Community Of West African States Treaty, and the Common Market For Eastern and Southern Africa Treaty have some provisions dealing with the environment.

20. *See supra* note 6, at O.A.U. Treaty, arts. 58-60.

21. *See generally* the discussion on Implementation of Environmental Treaties, *infra* Parts IV.A.-V.

22. Apart from the promulgation of specific legislative measures which go by different nomenclature (*e.g.* act, decree, regulations, ordinances, law, edict, order, statute, etc.), dealing with environmental development which is increasingly noticeable in the law books of most African nations, presently the constitutions of a number of them have been amended to specially cover the issue of the environment. The relevant provisions are usually inserted in the Directive Principles of State Policy part of their constitutions in which the State is obligated to endeavor to protect and improve the environment and to safeguard the forests and wild life of the country. In some of the constitutions under the part on Fundamental Duties, a duty is imposed on every citizen to protect and improve the natural environment, including forests, lakes, rivers, and wild life, and above all, to have compassion for living creatures. *See, e.g.*, REP. OF ANGOLA CONST. OF NOV. 10 1975, art. 11; Law No. 1/91 (providing for the Constitution of the Republic of Guinea Bissau) (revised provisions of the 1984 Constitution) (Boletim Official Supplement No. 18, May 9, 1991); REP. OF EQUATORIAL GUINEA CONST. OF MAY, 1982, title VI, ch. II, art. 60; REP. OF NAMIBIA CONST. art. 95(1); REP. OF SUDAN CONST. OF JUNE 30, 1991, 4th constitutional decree.

23. National environmental legislation of African countries referred to herein covers up to August, 1995. At the time of the writing of this article, no amendments (or rescinding) of these laws were indicated.

1. Nigeria²⁴

a. Federal Environmental Protection Agency Decree²⁵

24. A discussion of Nigerian environmental law and policy is of great, current world-wide interest following the execution of writer and environmentalist Ken Saro-Wiwa and eight others and its aftermath, and must, for obvious reasons, be undertaken in this discourse. It is however, beyond the scope of this article to explore at length the historical, legal, economic, and political dimensions of the country's environmental crisis.

What is not in doubt is that the Nigerian case demonstrates clearly the undeniable fact that the survival of Africa is seriously threatened by corrupt, unbridled militaries; corrupt and inept political elites; ethnic rivalries and conflicts; refugee flows; and above all, economic misery. It is a matter for regret that successive Nigerian governments (military and civilian alike) since Nigeria's political independence in 1960, have utterly failed, even in the face of an existing environmental legal framework, to adequately deal with the nation's environmental problems. This must be condemned in the strongest of terms. Propaganda and politics aside, even official statistics suggest that every year the delta region of the country is polluted by 2.3 billion cubic meters of oil from some 300 separate spills, almost in one day. This shows that the true figure may be ten times higher. Income in the area is below the national average, while health is substantially worse than in the rest of south-east Nigeria. Although oil provides more than 90% of Nigeria's foreign exchange, nearly three quarters of the people of the Delta live in rural communities characterized by lack of development, stagnant agricultural productivity, negligible opportunities in urban areas, rapid population growth, and tenuous property rights. For nearly four decades, Shell has been pumping oil in Nigeria's delta region, to its own enormous profit, and to the benefit of Western countries that have been its customers. Out of the 900,000 barrels of crude oil produced daily, the company takes for itself 257,000 barrels. The operations are strategically important to the company, which lacks enough reserves of high quality crude to meet the requirements of its refineries and gasoline stations. Unfortunately, a great proportion of the country's foreign exchange, which constitute a steady stream of revenues for Nigeria, has often been siphoned into the pockets of corrupt officials.

Needless to say, our admonition will doubtlessly be viewed without sympathy by a host of interested parties: elites who control the international state and financial systems and states elsewhere. But nowhere is opposition bound to be steeper than within the Nigerian state itself and the ruling cliques who benefit from the state at the expense of the poor people.

25. No. 58 (Dec. 30, 1988) [hereinafter No. 58]. The government proclaimed another Federal Environmental Agency (Amendment) Decree in 1992. However, it did not affect significantly the substance of the 1988 law save for the addition of 2 new administrative provisions. For example, a Governing Council of the Agency was created under this Decree and substituted for the existing section 2 of the principal act. Furthermore, the Secretary to Government of the Federation serves as the Chairman of the Agency while Ministers (charged with the responsibility for Agriculture, Water Resources and Rural Development, Finance, Health and Human Services, Industries and Technology, Petroleum and Mineral Resources, Works and Housing, Transport and Communication, Education, and Youth Development) were members. Two other members from the private sector who have distinguished themselves in environmental matters are also involved. The Agency is an integral part of the Presidency.

The Federal Environmental Protection Agency Decree (hereinafter Decree) represents Nigeria's most comprehensive national enactment on matters of environment since independence. Before its enactment, there existed what we may describe as a number of isolated pieces of legislation on aspects of the environment by individual regions²⁶ and states of the Federation.²⁷ In 1989, the Environmental Protection Agency (hereinafter Agency) published a National Policy on the Environment.

Under the Decree, the Agency has responsibility for the protection and development of the environment in general and for environmental technology, including initiation of policy in relation to research and technology.²⁸ The Agency also has other duties, namely, to:

1. Advise the Federal Military Government on national environmental policies and priorities and on scientific and technological activities affecting the environment;²⁹

2. Prepare periodic master plans for the development of environmental science and technology and advise the Federal Military Government on the financial requirements for the implementation of such plans;³⁰

3. Promote cooperation in environmental science and technology with similar bodies in other countries and with

26. Before the Nigerian Civil War broke out in May, 1967, the Federal Republic of Nigeria had an administrative arrangement comprised of four regions, namely, the Northern, the Eastern, the Western, and the Mid-western region, each with a Governor as the Chief Executive Officer of the State.

27. With the outbreak of the war, the Federal Government under then-General Yakubu Gowon, split the country into six disproportionate states in order, principally, to break the solidarity support of the minority ethnic groups (of the former Eastern region of Nigeria) for the Biafran effort to establish a separate sovereign and independent state out of the Federal Republic of Nigeria. Subsequent military administrations of Nigeria after the overthrow of Gowon created more states. Thus, the number increased from six at the end of the war in 1970, to 9, 19, 30, and now 36, excluding Abuja, the new Federal Capital territory.

28. No. 58. at art. 4.

29. *Id.* at art. 4(a).

30. *Id.* at art. 4(b).

international bodies connected with the protection of the environment;³¹

4. Cooperate with Federal and State Ministries, Local Government Councils, statutory bodies, and research agencies on matters and facilities relating to environmental protection;³² and

5. To carry out such other activities as are necessary or expedient for the full discharge of the functions of the Agency under this Decree.³³

This law empowers the Agency on behalf of the Federal Government of Nigeria to take all necessary measures for protecting and improving the quality of the environment, and preventing, controlling, and abating environmental pollution. It provides quite a wide latitude of powers necessary for the satisfactory implementation of the agency's functions. The measures available to the Agency include the following: making grants to suitable authorities and bodies with similar functions for demonstration and for such other purposes as may be determined appropriate to further the purposes and provisions of the Decree; collecting and making available, through publications and other appropriate means and in cooperation with public or private organizations, basic scientific data and other information pertaining to pollution and environmental protection matters; entering into contracts with public or private organizations and individuals for the purpose of executing and fulfilling its functions and responsibilities pursuant to this Decree; establishing, encouraging, and promoting training programs for its staff and other appropriate individuals from public or private organizations; entering into agreements with public or private organizations and individuals to develop, utilize, coordinate, and share environmental monitoring programs, research results, basic data on chemical, physical, and biological effects of various activities on the environment, and other environmentally-related activities as appropriate; establishing advisory bodies composed of administrative, technical,

31. *Id.* at art. 4(c).

32. *Id.* at art. 4(d).

33. *Id.* at art. 4(e).

or other experts in such environmental areas as the Agency may consider useful and appropriate to assist it in carrying out the purposes and provisions of the Decree; establishing such procedures for industrial or agricultural activities in order to minimize damage to the environment from such activities; maintaining a program of technical assistance to bodies (public or private) concerning implementation of environmental criteria, guidelines, regulations, and standards, and monitoring enforcement of the regulations and standards thereof; and developing and promoting such processes, methods, devices, and materials as may be useful or incidental in carrying out the purposes and provisions of the Decree.³⁴

Part two of the Decree prescribes national environmental standards in respect of water,³⁵ air quality and atmospheric protection,³⁶ hazardous substances,³⁷ etc.. It is prohibited to discharge in harmful quantities any hazardous substance into the air or upon the land and the waters of Nigeria or at the adjoining shorelines. Stiff punishment is prescribed for any person who discharges such harmful substances and shall on conviction be liable for a fine not exceeding 100,000 naira or be subject to imprisonment for a term not exceeding 10 years, or both. Where such an offense is committed by a corporate body, it shall on conviction be liable for a fine not exceeding 500,000 naira and an additional fine of 1,000 naira for every day the offense continues.³⁸ Provision is made under the law for the

34. *Id.* at art. 5(a-j).

35. In this regard, the Agency shall make recommendations to the Minister for the purpose of establishing water quality standards for the interstate waters of Nigeria to protect the public health or welfare and enhance the quality of water.

36. No. 58 at art. 17. The Agency shall establish more criteria, guidelines, specifications, and standards to protect and enhance the quality of Nigeria's air resources so as to promote the public health or welfare and normal development and productive capacity of the nation's human, animal, and plant life, including, in particular: minimum essential air quality standards for human, animal, and plant health; the control of concentration of substances in the air which separately or in combination are likely to result in damage or deterioration of property or of human, animal, or plant health; and the most appropriate means to prevent and combat various forms of atmospheric pollution.

37. Hazardous substance as defined in the law includes any substance designated as such by the Minister by order published in the GAZETTE.

38. Notwithstanding the provisions of the Decree on the matter of hazardous substances, the provisions of the Harmful Waste (Special Criminal Provisions, Etc.) Decree 1988 shall apply in respect to any hazardous substance constituting harmful waste as defined in section 15 thereof.

establishment of state and local government environmental protection bodies. In this regard it is the Minister who is enjoined to encourage States and Local Government Councils to set up their own Environmental Protection Bodies for the purpose of maintaining high environmental quality in the areas of related pollutants under their control.³⁹

The Agency under the law has enforcement powers⁴⁰ whereby any authorized officer may, without a warrant, examine and take copies of, any license, permit, certificate, or other document required; and require to be produced and examine any appliance, device, or other item used in relation to environmental protection. An authorized officer, where he has reasonable grounds for believing that an offense has been committed under the law or any regulations made thereunder, may: without a warrant, enter and search any land, building, vehicle, tent, vessel, floating craft, or any inland water or other structure whatsoever, in which he has reason to believe that an offense violative of the Decree has been committed; perform tests and take samples of any substances relating to the offense which are found on the premises searched; cause to be arrested any person whom he has reason to believe has committed such offense; and seize any item or substance which he has reason to believe has been used in the commission of such offense or in respect of which the offense has been committed.⁴¹ Any willful obstruction of an authorized officer or failure to comply with any lawful enquiry or requirements made by an authorized officer in accordance with the Decree constitutes an offense which is punishable by a fine not to exceed 500,000 naira or by imprisonment for term not to exceed 10 years or both such fine and imprisonment.⁴² No suit shall lie against the Agency⁴³ or any employee of the Agency in any

39. Environmental Protection Bodies have been set up in all the States of the Federation further to this requirement. Furthermore, it has become obligatory since the commencement of the Decree, to observe the last Saturday of every month as an environmental sanitation day during which public and private organizations as well as individuals are expected to actively participate. It occurs between seven to ten o'clock in the morning during which time activity not connected with the exercise is unauthorized and subject to stiff fines or imprisonment or both.

40. Part IV of Decree No. 58 provides for enforcement powers.

41. *Id.* at art. 26.

42. *Id.* at art. 27.

43. The Agency is a corporate body with perpetual succession and a common

court unless it is commenced within twelve months after the act, neglect, or default complained of or, in the case of a continuance of damage or injury, within twelve months next after the ceasing thereof. No suit shall be commenced against the Agency before the expiration of a period of one month after written notice of intention to commence the suit shall have been served upon the Agency by the intending plaintiff or his agent.⁴⁴ Any person who contravenes any provisions of this Decree or any regulations thereunder commits an offense and shall on conviction, where no specific penalty is prescribed therefore, be liable for a fine not to exceed 20,000 naira or subject to either imprisonment for a term not to exceed 2 years or to both such fine and imprisonment.

b. Other relevant environmental legislation

The Federal Government further passed four other very important pieces of legislation on the environment between 1991 and 1992. These are:

1. The National Environmental Protection (Regulation) (Pollution Abatement in Industries and Facilities Generating Waste) 1991.⁴⁵ The purpose of the legislation is essentially to check air pollution from industrial plants. The emission of air pollutants from an industrial plant must not exceed the standards provided by the law;

2. The National Environmental Protection (Regulation) (Effluent Limitation) 1991;⁴⁶

3. The National Environmental Protection (Regulation) (Management of Solid and Hazardous Wastes) 1991;⁴⁷ and

4. Environmental Impact Assessment Decree 1992.⁴⁸

seal, and may sue and be sued in its corporate name.

44. The intending plaintiff or his agent in his notice shall clearly and explicitly state the cause of action, the particulars of the claim, the name and place of abode of the intending plaintiff, and the relief which he claims.

45. Regulations No. S.I. 9 (Aug. 15, 1991).

46. Regulations No. S.I. 8 (Aug. 15, 1991).

47. Regulations No. S.I. 15 (1991).

48. Decree No. 86 (Dec. 10, 1992).

All of the above mentioned legislation was passed in response to the decisions made at the 1972 Stockholm Conference.

c. Other initiatives

Policy initiatives and action plans have been put into operation addressing a host of other environmental issues. The cleaning of rivers⁴⁹ and other water bodies, urban housing, land use,⁵⁰ recycling of wastes, and numerous other activities have been undertaken for the purpose of sustaining or improving environmental health and integrity. Various states have legislation on forestry,⁵¹ wild life,⁵² etc..

2. Republic of South Africa

The South African official government policy document on National Environmental Management, like that of Nigeria, is based on the principle of sustainable development.⁵³ Even during the protracted struggle of the people against apartheid, issues of pollution and other environmental problems have been targeted as priorities in the overall development plan of the country.⁵⁴ The government policy on the matter of environment is that a golden mean between dynamic development and the vital demands of environmental conservation should constantly be sought. The aim is, therefore, that man and nature should constantly exist in productive harmony to satisfy

49. The River Basin Development Authorities Decree (1986).

50. Land Use Act (1978).

51. See The Forestry Rules (Northern Region Native Authority, 1995); Eastern Region Forest Law (1955); The Forestry Regulations (Eastern Region, 1956); The Forestry Ordinance (with amendments) (Northern Region, 1960); The Forestry (Amendment) Edicts (Western State, 1969, 1973); and The Forestry Regulations (on fees and royalties), No. OD. S.N.L.S. (Ondo State, Oct. 1980). This legislation on forestry is to ensure that diversion of forest land for non-forest use is subjected to the strictest governmental scrutiny.

52. The Wild Animals Preservation Law, Cap. 105 (Laws of the Federation of Nigeria). This law lays down strategy and action programs for wild life conservation.

53. See Government's Environmental "White Paper" (South Africa Sept., 1993) reprinted in 16 INT'L. ENV'T'L. REP. 743 (Current Report October 6, 1993).

54. See Government's Environmental "White Paper," 17 INT'L. ENV'T'L. REP. 479 (Current Report June 1, 1994).

the social, economic, and other expectations of present and future generations.

According to the Government, the only condition under which development would have higher priority than the environment is where national survival is at stake, and only where no alternative sources are available can conservation be subordinated, on acceptable conditions, to development.⁵⁵

a. Environmental legislation

Some of the most significant legislation on environmental management include the following: Environmental Conservation Act No. 73, 1989 (*as amended by Act No. 79 of 1992*); Prevention of Pollution from Ships Act No. 2, 1986 (*as amended in 1992*); Dumping at Sea Control Act No. 73, 1980; and Fishery Act No. 12, 1988 (*as amended by Act No. 57 of 1992*). There are numerous other regulations covering wild life, national parks, plant improvement, protection of sea birds and seals, etc.. Already, the existing Environment Conservation Act has been amended to allow the Minister of Environment Affairs to make regulations without first consulting other government departments.⁵⁶ Further, to meet its international responsibilities, the government in June, 1993, signed the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity, which is yet to be ratified.

55. *Id.* Although the government policy on national environmental policies is in line with international standards set by other countries, it met with serious criticisms initially from the majority black population, because of its unilateral conception, having been drafted before the democratic government of Nelson Mandela was inaugurated. The African National Congress viewed the issue of pollution and other environmental problems as a priority in its development plans for Johannesburg. The Congress focused specifically on air pollution, water pollution, soil erosion, and the provision of clean household water. It felt this way because pollution in South Africa is an economic as well as a political concern and any policies in regard to it have to express a consensus of all parties involved.

56. Nelson Mandela's government environmental plan has targeted air pollution above the mainly black ghettos in industrial centers as a "special" concern. Respiratory illnesses among black children are seven times greater than among white children. The area contains about 70% of the country's gold mines and heavy industry, and about 10 million people live in the region's suburbs and segregated black townships. Mandela's \$25 billion reconstruction and development program would provide a vehicle for dealing with air pollution and other environmental crises.

3. Tunisia

Tunisia, like Nigeria and the Republic of South Africa, has not only developed an impressive body of environmental laws and policies over the past two decades, but also devotes a substantial part of its national development plan budget to environmental control programs.⁵⁷ Much of this amount will be used to clean up pollution created by industry, especially the phosphate-based industries of the Gulf of Gabes in the south. As an arid country on the coast of Northern Africa, Tunisia spends money on sea fortifications against inundation, measures to fight marine pollution, and on recycling used waters from drainage and sewage systems.

The fight against industrial pollution is considered paramount in Tunisia where a pollution crisis in the Gulf of Gabes in the late 1980s and the eventual closure of one of the heaviest polluters - an industrial oil plant - prompted the promulgation of major environmental legislation.⁵⁸ Another noteworthy stride in Tunisia's environmental program was the establishment in October, 1991, of a Ministry of Environment, which coordinates the work of all the country's environment-related ministries and agencies. And for the first time, the national development plan has a chapter devoted to environmental protection.⁵⁹

a. Environmental legislation

The following major environmental legislation is in force in Tunisia: Law No. 92-122 of Dec. 29, 1992 (establishing a Special Fund for combating pollution); Decree No. 33-2061 of Oct. 11, 1993 (creating the National Commission for Sustainable

57. In 1992, Tunisia allocated \$600 million to these programs in its eighth national development plan, which runs from 1992 to 1996.

58. National Agency for Protection of the Environment Law 88-91 (August 2, 1988). Art. 1 specifies that the Agency is a public body with financial autonomy under the Prime Minister.

59. With the support of the government, the Tunisian Institute of Applied Technologies in April, 1992, proposed to the United Nations Conference on Environment and Development that one or more countries of the South volunteer to serve as pilot projects aimed at applying the concepts of "sustainable development" in terms of practical economics and politics.

Development (of advisory nature)); Law No. 92-115 of Nov. 30, 1992 (amending Law No. 88-91 of 2 August 1988 establishing a National Environmental Protection Agency); Decree No. 91-362 of March, 1991 (relating to environmental impact assessment); Decree No. 79-768 of September, 1979 (regulating conditions governing discharge of effluents into the public sewerage system); etc.. In addition, the country is party to numerous international conventions⁶⁰ on the environment.

4. Kenya

Kenya ranks among the foremost countries in Africa that have been fairly successful in their efforts to protect the environment. Kenya's Green Belt Movement offers a good example of a successful local initiative in the protection of the environment.⁶¹ Activities like National Tree Planting Day are taken seriously in Kenya, as are communal efforts to arrest soil erosion. A specific example of environmental policy enforcement is Kenya's policy of outlawing the felling of trees without prior notification to the authorities. Some laudable efforts have been undertaken under the aegis of non-governmental organizations (NGOs). The most remarkable of these is the Nairobi-based Non-Governmental Environmental Organization (ANEN).⁶² The organization has achieved success both in its concrete projects to halt environmental degradation and in its efforts to increase community awareness in the immediate vicinity of the projects.

Kenya, like the countries already discussed, has passed many important legislative measures on environmental control and management. These include: Land Control Act No. 34 of Dec. 12, 1967 [Cap. 302] as revised in 1989; The Wildlife Act

60. Tunisia ratified the Pan-African Bamako Convention which provides stricter interdiction against transporting dangerous and toxic substances across national borders so that Africa does not become a dumping ground. The country has yet to ratify the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal.

61. The brainchild of Kenya's first female professor, Wangari Maathai, the movement started as a modest experiment in tree-planting on small plots in Kenya's densely-populated Central Province.

62. ANEN serves as an umbrella organization, coordinating activities of the NGOs of individual countries and channeling funds to support environmental activities of these groups.

(Conservation and Management) (Amendment Act) No. 16 of Dec. 6, 1989; Act No. 2, 1972 (Territorial Waters Act); The Factories (Amendment) Act No. 1 of May, 1990; etc..

Most, if not all the countries of Africa, have enacted legislation similar to that of Nigeria, the Republic of South Africa, Tunisia, and Kenya. They are certainly making progress on this important issue. However, the levels of success in individual nations vary, based on a number of factors, in particular: the level of financial resources available, the political will to invest significant funds in environmental development and management in the face of many other competing national needs, lack of adequate institutional arrangements, and finally, the ability to adapt to new technologies.

Unfortunately, implementation of environmental laws and policies has been less than satisfactory with respect to capital and, in some instances, commitment from specific states. The time has come for African nations to take their future into their hands and not allow their economies to be micro-managed by their international donor community. It is also incumbent on the donor community to listen more to Africa and seek partnerships as between equals.

IV. REGIONAL AND CONTINENTAL COOPERATION

In their determination to come to grips with their continent's unique and most urgent environmental problems, the African nations have often acted at a rare level of cooperation in trying to harmonize their efforts in this regard. The positive spirit with which most African governments have reacted to calls to protect the environment is very heartening indeed. In the mid-80s, the majority of African countries met for the first time in a Conference to address the question of environmental policy in the continent.⁶³

63. The Cairo Meeting on environmental policy in Africa [hereinafter The Cairo Meeting], attended by forty-one countries, was held in 1985. Following the conclusions of this conference, most governments started to prepare national papers, legislation, and policies on their environments.

The Cairo Conference (hereinafter Conference) produced status reports on seas, desert and arid lands, river and lake basins, and forests. The meeting also resulted in the Cairo Program of Action and the establishment of the African Ministerial Council on the Environment which had its third follow-up meeting in Nairobi in 1989.⁶⁴

The African Ministerial Council on the Environment scored a number of inspiring successes such as the development and adoption of the African Common Perspectives on Biological Diversity and the significant inputs made by the Conference to the process leading to the Regional Annex and resolution on urgent action for Africa with respect to desertification control. Perhaps the most significant decision was to formalize the institutionalization of the Conference as an intergovernmental organization, with its own legislative framework, constitution, and related rules and regulations, which will certainly cover financial contributions.⁶⁵

A. IMPLEMENTATION OF ENVIRONMENTAL TREATIES

At the meeting of Africa's environmental Ministers held March 6-8, 1995, the call was made to African governments to ratify environmental conventions and prepare national infrastructures for their implementation. Time was spent analyzing the factors that have limited the region's effective participation in implementing eight major environmental treaties. These factors included: complex procedures for obtaining funding; lack of firm commitments for new and additional resources; limits on the terms and conditions of technology transfer; an inadequate technical base to deal with implementation demands of the conventions; and inadequate capacities to cope

64. The main achievement of the meeting was sharing information and preparing documents.

65. The session outlined five main areas of orientation that would form the focus of activities in the next two years. These comprise the sensitization and organization of workshops, seminars, and conventions within the available financial resources; support for the drawing up of national environmental plans of action and national Agenda 21 plans; the integration of the environmental impact assessment in development projects; capacity building, environmental education, and public awareness; and the strengthening of subregional cooperation in environmental management.

with the technical, scientific, and managerial demands of the conventions.

In deciding which environmental treaties should be ratified, an analysis of the objective, global importance, and relevance of each agreement is required. The central issue is whether the conventions can be used as instruments of national, subregional, and regional development in Africa. The convention in question must: be of apparent importance to Africa's common environment and sustainable development efforts, have the potential to make sustainable conservation and management of the natural resources base easier, be able to address local issues in the area of sustainable development, and be of use in contributing to Africa's environmental security, especially in terms of soil, water, air, and industrialization.⁶⁶ The eight treaties examined were:

1. The 1985 Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region;
2. The 1994 Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora;
3. The 1982 United Nations Convention on the Law of the Sea;
4. The 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa;
5. The 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal;
6. The 1992 United Nations Framework Convention on Climate Change;

66. Proceedings of The Cairo Meeting, *supra*, note 63.

7. The 1992 United Nations Framework Convention on Biological Diversity; and

8. The 1994 International Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa.⁶⁷

V. THE BASEL⁶⁸ AND BAMAKO⁶⁹ CONVENTIONS ON HAZARDOUS WASTE

In this segment, we will briefly outline and examine the basic grounds on which the African nations felt unable to support the Basel Convention and proceeded to conclude the Bamako Convention. The intention here is not to undertake a detailed comparison of the two treaties.⁷⁰ However, because of the initial strong reservations expressed by the African countries on the limited scope of the Basel Convention, as a result of which they resolved as a body not to sign it, the need arises at least briefly to highlight and evaluate areas of the African concern on the treaty and the measures the countries have taken reasonably to protect their interests on the important

67. *Report of the African Subregional Ministerial Meeting on Environmental Conventions*, U.N. Environment Program, 1995.

68. United Nations Environment Programme Conference of Plenipotentiaries on the Global Convention on the Control of Trans-boundary Movement Of Hazardous Wastes: Final Act and Text of the Basel Convention, *opened for signature* Mar. 22, 1989, 4 U.N. Doc. UNEP/IG.80/3, 28 I.L.M. 649 (1989), *entered into force* May 5, 1992 [hereinafter Basel Convention]. By late 1992, the Convention had been signed by 53 countries. Nigeria was one of the few, if not the only African country, to ratify the treaty in 1992.

69. Organization of African Unity: Bamako Convention on the Ban of Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa, *opened for signature*, Jan. 30, 1991, 30 I.L.M. 773 (1991) [hereinafter Bamako Convention]. The Bamako Convention has been signed by Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Egypt, Guinea Bissau, Côte D'Ivoire, Lesetho, Libya, Mali, Niger, Senegal, Somalia, Togo, and Uganda.

70. For a detailed comparative analysis of the Basel and Bamako Conventions on Hazardous Waste, and criticisms of the Basel Convention, see C. Sheaper and H. Russell, *Comparative Analysis of the Basel And Bamako Conventions on Hazardous Waste*, 23.141 (1993); Charles E. Di Leva, *Trends in International Environmental Law: A Field With Increasing Influence*, 21 ENVTL. L. REP. (News and Analysis) (Envtl. L. Inst.) 10076 (1991); John Ntambirweki, *The Developing Countries In The Evolution of An International Environmental Law*, 14 HASTINGS INT'L & COMP. L. REV. 905 (1991).

issue of import of hazardous wastes into Africa and the control of trans-boundary movements of such wastes.

It is a well established fact that the industrialized countries of the world produce about ninety percent of all hazardous waste.⁷¹ In 1984 alone, about 325 million to 375 million tons of hazardous waste were produced, of which only 5 million tons were produced by newly industrialized and developing countries.⁷² Before the Bamako Convention was concluded, it was becoming common knowledge that, for general economic or direct personal monetary rewards, African governments and individual government officials would conclude agreements allowing the importation, processing, and disposal of various toxic wastes generated abroad in land and sea areas within their jurisdictions.⁷³ The African States were exposing themselves to the risks involved without developing the necessary local competence to manage them.⁷⁴

Subsequently, the Organization of African Unity (hereinafter OAU) adopted the Bamako Convention which creates a total ban on the importation of all hazardous wastes into Africa and limits the transfer of hazardous wastes within Africa. The Bamako Convention admits of no reservations to the obli-

71. World Commission on Environment and Development, *Our Common Future* 226 (1987) [hereinafter World Commission].

72. *Id.*

73. See Sylvia F. Liu, *The Koko Incident: Developing International Norms for the Transboundary Movement of Hazardous Waste*, 8 J. NAT. RESOURCES & ENVTL. L. 121 (1992-94); R.J. Rochon, *Remarks*, 74 PROC. AM. SOC. INT'L L. 234, 238-239 (1980); A.K. Vir, *Toxic Trade with Africa*, 23 ENVTL. SCI. & TECH. 23-25 (1989); C.M. PETER, HUMAN RIGHTS IN AFRICA: A COMPARATIVE STUDY OF THE AFRICAN AND HUMAN AND PEOPLE'S RIGHTS CHARTER AND THE NEW TANZANIAN BILL OF RIGHTS 68-69 (1990); *Toxic Terrorism*, WEST AFRICA, June 20, 1988, at 1108; *Nigeria: Koko's Radioactive Waste*, WEST AFRICA, Aug. 1, 1988, at 1388; and *Dateline Nigeria: Detentions Over Toxic Waste Dump*, WEST AFRICA, Nov. 28, 1988, at 2261.

In the early part of the crisis in Somalia, certain Somalians in collaboration with foreigners, sought to dump millions of dollars' worth of toxic materials in the country for private monetary gains. The amount of money offered to leaders and top government officials in these countries for permission to import wastes into their countries is sometimes said to be many times the individual country's gross national product, or even its total foreign debt. See D. M. Dzidzornu, *Marine Pollution Control in the West and Central African Region*, 20 QUEEN'S L.J. 439 (1995).

74. For a summary of the plight of developing States in this regard, see International Law Commission, *Report Of The Work Of Its Thirty-Ninth Session*, U.N. G.A.O.R., 42d Sess., Supp. No. 10, UN Doc. A/42/10 (1987) at 101, para. 151.

gations it sets out. It imposes a duty on states to take legal, administrative, and other measures to prohibit the import of any hazardous wastes whatsoever into their territories. Furthermore, they must not allow any such wastes to be dumped within land territory or marine areas within their jurisdictions.⁷⁵ Internally, they are to ensure that hazardous waste generation is minimized and managed with the best facilities. The Convention makes it clear that specific national and multinational economic policies on the continent can no longer be silent on their environmental aspects or simply use blanket provisions to ignore them.

The OAU was concerned that the Basel Convention did not adequately address the issue of the trans-boundary movement of hazardous wastes faced by developing countries, given the fact that the Convention failed to include a total ban on the trans-boundary movement of hazardous waste. The Bamako Convention's operative paragraphs declared that the dumping of nuclear and industrial wastes in Africa is "a crime against Africa and African people," condemned all transnational cooperations and enterprises involved in such activities, and demanded that they clean up the areas that have already been contaminated. The Convention prohibits the importation of hazardous wastes generated in non-African states. The Convention also enjoined all African states to put an end to agreements permitting such dumping and requested an information campaign regarding the danger of nuclear and industrial wastes. With regard to African-generated wastes, they are governed by provisions similar to those of the Basel Convention. Each party must adopt a "preventive, precautionary approach" to pollution problems. This means that states which are parties to the Convention are to cooperate in regard to the "precautionary approach" by ensuring clean production rather than relying on the assimilative capacity of the environment. The Bamako Convention also requests international cooperation through the International Atomic Energy Agency (IAEA), the United Nations Environment Program (UNEP), and the OAU.⁷⁶

75. Bamako Convention, arts. 4(1), (2); cf. Basel Convention, arts. 4(4), 9(1).

76. The Organization of African Unity, a coalition of African nations, adopted the Bamako Convention on the Ban of the Import of all Forms of Hazardous Wastes into Africa and the Control of Trans-boundary Movements of Such Wastes

A number of countries have tried to enforce anti-transfer policies by adopting criminal sanctions. For example, countries party to ECOWAS (Economic Community of West African States Treaty) agreed to enact criminal laws against facilitating the import of hazardous waste into their countries. They requested industrialized nations to strengthen and tighten their export controls as a way of supporting their measure. Nigeria, for example, not only arrested people allegedly involved in waste-import schemes into the Delta region of Koko, but also threatened to execute anyone, including foreigners, convicted of dumping foreign waste in the country.⁷⁷ A number of waste-ridden countries consider this to be a turning point in their diplomatic negotiations concerning garbage. For example, months after fifty-four people were arrested in Nigeria in connection with illegal shipments of wastes, the Italian Prime Minister proposed a decree to the Italian Parliament that would permit export of wastes if the Italian government and the receiving country both consent to the shipment.⁷⁸ The Ivory Coast has adopted a law that imposes prison terms of up to twenty years and fines of up to 1.6 million dollars for individuals who import toxic or nuclear waste into the country.⁷⁹ Several other African countries have prosecuted people, including government officials, involved in waste schemes. Guinea arrested at least thirteen people after the Khian Sea incident.⁸⁰ In spite of the differences in the two Conventions discussed above on the question of control of hazardous wastes, we submit that both Conventions represent positive steps in this direction. Consequently, the Bamako Convention, which is newer, will complement the Basel Convention in the global effort to deal with hazardous wastes.⁸¹

Generated in Africa on January 29, 1991. See 30 I.L.M. 773 (1991).

77. See generally Barbara Huntoon, *Emerging Controls on Transfers of Hazardous Waste to Developing Countries*, 21 LAW & POL'Y INT'L BUS. 247 (1989).

78. The dumping of wastes into Nigeria was allegedly spearheaded by Italian nationals. The Nigerian Ambassador was withdrawn from Rome immediately after the scandal hit the papers. See Kotch, *Nigeria Says Radioactive Waste Dumped, Threatens Executions*, REUTERS NEWS REPORTS, June 13, 1988, at item 296; Greenpeace, PRESS CLIPS, *International Waste Trade* (June 1988) (available through Greenpeace, Washington, D.C.) (collecting hundreds of reports, worldwide, on both hazardous and non-hazardous violations).

79. James Brook, *Waste Dumpers Turning to West Africa*, N.Y. TIMES, July 17, 1988 at A10.

80. See Huntoon, *supra* note 77.

81. See *infra* Appendix A for data on the export of hazardous waste to specific

VI. PROSPECTS FOR INTERNATIONAL ENVIRONMENTAL LAW DEVELOPMENT IN AFRICA

From the discussions already undertaken, it becomes clear that African nations are poised to tackle the environmental problems facing the continent. This posture has been demonstrated by their individual national efforts in enacting relevant environmental regulations and formulating appropriate policies. Most of the states are parties to numerous international conventions and treaties on the environment. One major problem remains, however, which is the capacity to enforce the laws effectively, given the dual constraints of finance and technical know-how.

The period following the Rio Conference (UN Conference on Environment and Development 1992) is remarkable for the symposia and deliberations on trade and the environment which have been held in the developing countries of Africa, Asia, and the Caribbean to appraise the Conference's import and assess its achievement. African nations are signatories to the international documents finalized at Rio, and are strong supporters of the Rio process. However, dominant African opinion is that the outcome of the Rio Conference will depend on the broad vision and good faith which the developed countries give to it. Armed with superior technology, economic advantage, and financial power, the developed countries are, in reality, the prime factors in the implementation of the Rio promises.

African official opinion accepts that developing countries can benefit from greater trading opportunities as they will result in a more efficient allocation and use of resources, thereby enabling African nations to take more effective measures for the preservation and protection of the environment.⁸² Industrialized countries therefore need to help developing nations to ensure that mechanisms regulating ecologically-safe economic development are in place. Commodity prices should be amended to take into consideration the environmental cost of grain

regions and countries in Africa.

82. *Report of the United Nations Conference on Environment and Development*, 31 I.L.M. 814 (Rio De Janeiro, 1992).

production and to facilitate the chances of grain reaching the North's markets. This should be done by removing various forms of tariffs and all barriers that hinder the efforts of developing nations to boost exports of competitive goods.

VII. CONCLUSION

One lesson that may be learned from experience is the need to avoid all forms of mutual recrimination in an effort to promote and protect the environment. For balanced, constructive study of ways to improve existing measures for the management and protection of the environment, we have to try harder to learn and clearly demonstrate understanding and tolerance of the different values, experiences, concepts, and dimensions of environmental development in different nations.

If this introductory paper has served to widen the horizon and dimensions of environmental development in Africa, or indeed, broadened the mind and outlook of its readers, its objective will have been more than fulfilled.

APPENDIX A

ILLUSTRATIONS OF EXPORT OF HAZARDOUS WASTE TO AFRICA

Source: Mainly from publications in the following news magazines:

- O. Ayadike, *Toxic Terrorism*, WEST AFRICA, June 20, 1988, at 1109-09, 1144.
- P. Smith & A. George, *The Dumping Grounds South*, WEST AFRICA, Aug. 1988, at 38.
- H. Schissel, *The Deadly Trade: Toxic Waste Dumping in Africa*, AFRICA REP., Sept./Oct. 1988, at 47.

TABLE 1
EXPORT OF HAZARDOUS WASTE TO AFRICA: THE WEST AFRICAN SUBREGION^a

Countries Receiving Waste	Source of Waste	Agents Involved	Kinds of Waste	Quantity Involved, Metric Tons	Remuneration, U.S. Dollars
Guinea-Bissau	U.S.A.	N/A	Pharmaceutical	0.5 million/year for 10 years	\$600 million
		Bis Import-Export	N/A	1-3 million/year for 5 years	\$40 per ton
Benin	Europe, U.S.A.	Gibraltar-registered SESCO, Ltd.	Non-nuclear industrial waste	1-5 million/year for 10 years	\$2.50 per ton plus \$0.50 for development projects
	France	French Government	High level radioactive waste	Undisclosed	30 years of special economic support
Guinea	U.S.A.	Bulk Handling Inc.	Incinerated ash	85,000	\$50 per ton
Nigeria	Italy	Ecomar Services of Livorno	PCBs, asbestos, dioxin	3,000	\$100 per month to a landowner
Sierra Leone	U.S.A.	Nedlog Technology Group, Inc.	Unspecified	N/A	\$25 million; deal cancelled
	Europe	European consortium	Household waste	N/A	\$15 per ton
Liberia	Britain	British businessman	N/A	N/A	Deal being investigated; three other proposals rejected
Cape Verde	U.S.A., Europe, Australia	Firm based in London	Industrial and domestic waste	50,000/week	\$65 million (\$10 per ton); deal turned down
	U.S.A., Europe, Australia	N/A	Domestic waste	2,500,000/year for 5 years	\$125 million, contract rejected

^a Source: Solid Waste, OECD Environmental Data, at 167 (1989).

TABLE 2
EXPORT OF HAZARDOUS WASTE TO AFRICA: THE CENTRAL AFRICAN REGION^a

Countries Receiving Waste	Source of Waste	Agents Involved	Kinds of Waste	Quantity Involved, Metric Tons	Remuneration, U.S. Dollars
Congo	West Germany	Bauwerk	Toxic waste	1 million	\$84 million; deal scuttled
	U.S.A.	New Jersey-based company	Solvents, pesticides	1 million	\$4 million; deal cancelled
Equatorial Guinea	Europe	Unspecified British company	Industrial-pharmaceutical toxic waste	5 million over 10 years	Down payment of \$1.6 million
	N/A	British company	Assorted waste	Up to 10 million	N/A
Gabon	U.S.A.	Denison Mining Corp.	Uranium mining nuclear waste	N/A	N/A

TABLE 3
EXPORT OF HAZARDOUS WASTE TO AFRICA: THE NORTH-EASTERN REGION^a

Countries Receiving Waste	Source of Waste	Agents Involved	Kinds of Waste	Quantity Involved, Metric Tons	Remuneration, U.S. Dollars
Sudan	West Germany, Austria, Sweden	Government officials	High-level nuclear waste	N/A	\$4 billion; agreement cancelled
Egypt	Austria, West Germany	N/A	Industrial waste	N/A	Deal cancelled
Djibouti	Italy	Intercontrat Jelly Wax	Toxic waste (cyanide and dioxin)	2,100	Deal aborted

TABLE 4
EXPORT OF HAZARDOUS WASTE TO AFRICA: THE SOUTHERN AFRICA REGION^a

Countries Receiving Waste	Source of Waste	Agents Involved	Kinds of Waste	Quantity Involved, Metric Tons	Remuneration, U.S. Dollars
South Africa	U.S.A.	N/A	Mercury-laced sludge	120 drums/year	N/A
Zimbabwe	U.S.A.	Colbert Brothers	Hazardous armed forces waste	275 drums	N/A
Angola	N/A	Swiss arms dealer	Industrial waste	5 million	\$2 million plus construction of a new city, port and airfield

^a Source: Solid Waste, OECD Environmental Data, at 167 (1989).

TABLE 5
PRODUCTION AND MOVEMENT OF HAZARDOUS AND SPECIAL WASTE,
SELECTED COUNTRIES, MID-1980S^a

COUNTRY	YEAR	HAZARDOUS AND SPECIAL WASTE PRODUCED, THOUSANDS OF METRIC TONS	IMPORTS		EXPORTS	
			THOUSANDS OF METRIC TONS	%	THOUSANDS OF METRIC TONS	%
Canada ^a	1980	3,290	120.0	3.6	40.0	1.2
United States ^a	1985	265,000	40.0	0.1	0.1	—
Australia ^a	1980	300	—	0.7	0.7	0.2
New Zealand	1982	30 to 60	—	—	—	—
Denmark	1985	125	—	20.0	20.0	16.0
Finland	1985	124	250.0	—	2.8	2.3
France	1987	2,000	50 - 100	12.5	25.0	1.3
Germany	1985	5,000	—	1.0 - 2.0	700.0	14.0
Ireland	1984	20	—	—	20.0	100.0
Luxembourg	1985	4	—	—	4.0	100.0
Netherlands	1986	1,500	—	—	155.0	10.3
Norway	1980	120	—	—	0.4	0.3
Sweden	1980	500	—	—	15.0	3.0
Switzerland	1987	120	—	—	68.0	56.7
United Kingdom ^d	1986	3,900	83.0	2.1	—	—

^a Source: Solid Waste, OECD Environmental Data, at 167 (1989).

^b Imports and exports refer to 1987.

^c Imports and exports refer to 1985.

^d England and Wales only, year ending March 31, 1987; excluding mine and quarry waste.

