ADOPTING LAW AND POLICY AS TOOLS FOR ENVIRONMENTAL SECURITY IN THE NIGER DELTA AREA OF NIGERIA AND WORLD PEACE

BY

SYLVANUS ABILA, Ph.D, PROF.PROSPER AYAWEI

ABSRACT: Nigeria's present countrywide strategy on environment and environmental protection largely is instituted on goals. Firstly, safeguarding the quality of the environment for health and wellbeing; secondly, preserving and using the environment and natural resources for the advantage of current and future generations; thirdly, reinstating, upholding and enhancing the ecosystem and ecological processes indispensable for the functioning of the biosphere to preserve biological diversity and the principle of optimum sustainable yield in the use of natural resources; fourthly, stimulating public awareness of the link between development and environment and fifthly guaranteeing international co-operation with countries and international organisations in the fortification of the environment. This paper makes a case for the adoption of law and policy as tools for environmental security in the Niger Delta area of Nigeria, safe global business environment and world peace.

Key Words: Law, Policy, Tools, Environment, Niger Delta Area and World Peace

Introduction: A literal reading of this policy goals show that there is both a domestic and international dimension of Nigeria's existing current policy. The extent to which governments in Nigeria have achieved these policy goals especially in the Niger Delta Region of Nigeria is highly contestable given the environmental challenges especially high level of environmental degradation which is largely responsible for the crises raging in the Niger Delta.

Apart from policy, the Niger Delta environmental protection is supposedly guaranteed by laws. the state legislation and other laws on environmental protection in the region is determined. Inspite of the numerous laws and global concern governing the protection of the Nigerian environment generally and the Niger Delta in particular, it is to be examined the question what the environmental condition in the Niger Delta is degenerating per day.

5.1. The Constitution of the Federal Republic of Nigeria, 1999

By the provisions of section 1(3) of the 1999 Constitution of the Federal Republic of Nigeria, the Constitution is supreme and renders every lesser law conflicting with it void to the extent of theinconsistency. With particular regards to the provisions dealing with

1. See Ifeany, A: Environmental Impact Assessment As A Tool for Sustainable Development: The Nigerian Experience, Fubara M.T: Law of Environmental Protection: Materials and Text (1998), Caltop Publications Nig Ltd Ibadan, p.56, See Okonkwo T: The Law of Environmental Liability (1997), Afrique Environmental Development and Education (AEDE), Lagos p.209

environmental protection, the 1999 Constitution is credited to be the first constitution, in the history of Nigeria, to make provisions for the protection of the environment. This is irrespective of the fact that by the very tenor of the constitutional provisions, the said provisions are arguably not justiciable and therefore, unenforceable in a Court of law. However, it is instructive that under section 20 of the said Constitution, it is unequivocally provided that "the State shall protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria" while Section 16(2) expressly provides that: "the State shall direct its policy towards ensuring: the promotion of a planned and balanced economic development." In a similar vein, Section 17(2)(d) provides "In furtherance of the social order, exploitation of human or natural resources in any form whatsoever for reasons, other than the goal of the community shall be prevented."

It is submitted that although the above provisions are sound to the extent of signposting ideal of protecting the environment, the fact that the said provisions are lumped with other pious provisions which are enacted to be non-justiciable renders their biting powers impotent. This is more worrisome especially as the above provisions fall short of constitutional developments in South Africa, Ethiopia and other African countries where the right to a clean environment, for example, is now regarded as a fundamental human right and so made justiciable in those jurisdictions. This is however without prejudice to recent developments in Nigeria's judiciary where some courts have held that environmental rights under the constitution remain justiciable.

5.1.1. The Harmful Wastes (Special Criminal Provisions) Act

Another major statute which operates to protect the Nigerian environment generally and also purports to protect the Niger Delta Region, in particular, is Harmful Wastes (Special Criminal Provisions) Act Cap 165. This Act was promulgated in the year 1988 in swift response to the dumping of toxic substances by an Italian company acting in concert with Nigerian businessmen at Koko Town in Delta State in the Niger Delta region of Nigeria. It is on record that Nigeria's environmental protection policy and laws were barely existing and visibly prostrate until this deadly development. It was therefore the above development that jolted the Federal Government to promulgate the Harmful Wastes (Special Criminal Provisions) Act Cap 165 and also the Federal Environmental Protection Agency (FEPA) Decree No. 58 of 1988 (now Cap 131).

5.1.2. The Federal Environmental Protection Agency Act

The powers of FEPA (which until date constitutes the most far-reaching statute on environment protection in Nigeria) include the following:

Establish such procedures for industrial or agricultural activities in order to minimise damage to the environment from such activities.

Establish such environmental criteria, guidelines, specifications or standards for the protection of the nation's air and inter-state waters as may be necessary to protect the health and welfare of the population from environmental degradation. [2]FEPA also had responsibility for setting standards for water quality, noise control, effluent limitation, ozone protection, control of hazardous substances, etc.

It is important to note that the activities of the Federal Environmental Protection Agency (FEPA) are now transferred to the Federal Ministry of Environment upon the creation of the said ministry.

5.1.3. The Environmental Impact Assessment Act

Another very important statute conferred with powers to protect the Nigerian environment and especially the Niger Delta is the Environmental Impact Assessment Act of 1992. By its provisions, the Environmental Impact Assessment Act of 1992 is the current fundamental legislation in Nigeria that governs environmental impact assessment in respect of proposed projects in Nigeria. As stated above, the provisions of this Act enacts the principle 17 of Rio Declaration; "Environmental Impact assessment as a national instrument shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority." By the provisions of the said Act, it is now mandatory that the approval of the Agency be sought and obtained before any activity which may significantly affect the environment be sited in any part of Nigeria. Again, it is to be observed that as laudable as the provisions of this Act appear, there are grave doubts whether the letter of the law is applied in Nigeria especially in the Niger Delta Region where oil pipes and related oil facilities are cited with regard to existing environmental laws. This fact has being ably demonstrated in chapter 4 of this thesis dealing with the various stages of oil and gas extraction in Nigeria. Aside from the above, it is submitted that this law is still to a large extent weak to the extent that it has no powers to restore the rights of the oil bearing communities whose environments have been devastated by the indiscriminate siting of oil related projects which have adversely affected the ecology and

2. See Omotola, JA: Environmental Laws in Nigeria Including Compensation, (1990), Mayode Ajayi Enterprise, Lagos, p.207, Fubara M.T Op cit pp. 1 - 3

programmes before the citing of oil pipelines and other hazardous facilities, for example, in the Niger Delta region. However, for the purposes of our present discourse on the structure of the Environment Impact Assessment Act, it is conceded that the Act makes it mandatory that before final decisions are taken or approvals given for any activity that is likely to significantly affect the environment, the effect of such activity shall first be taken into account.

(a) Arrangement of the Environmental Impact Assessment Act

The environmental Impact Assessment Act is essentially divided into four parts.
Under Section 1 of the Environmental Protection Impact assessment Act, the following broad objectives and principles are stated. These include the:
Determination of environmental impacts of activities likely to negatively affect the environment;
Promotion of implementation mechanisms at the federal, state and local government levels;

To encourage exchange of data and information as well as consultations and notification of alerts across boundaries to other states, towns and villages [3]
Other general provisions.
The Mandatory provisions dealing with assessment are found under Sections 3 while sections 3,4 and deals with significant issues which must be identified and disclosed and sundry matters every environment assessment report should contain.
Sections 7 and 9(2), (3) and (4) makes provisions for sufficient consultation on proposed activity and provides that FEPA shall afford professionals, government agencies and other stakeholders the opportunity to make necessary input on the proposed project.
Sections 6, 8,9(1), 10,11(2) and 13 make detail provision on the approval procedure and

3. See generally Section 1 (a,b and c) of the Act

Irrigation, Land reclamation, Fisheries, Forestry, Housing, Industry, Infrastructure, Ports, Mining, Petroleum, Power generation and transmission, Quarries , Railways, Transportation, Resort and Recreational Development, Waste treatment and disposal and Water supply.
However, by section 36 of the National Environmental Standards and Regulation Enforcement Agency (Establishment) Act of 2007 (NESREA) "The Federal Environmental protection Agency Act is [now] repealed". It is submitted that the outright repeal of the FEPA Act by this later Act is not only retrogressive in effect but operates to undermine the laudable initiatives contained in the various provisions of the FEPA Act. This view is without prejudice, however, to the provisions of section 2 of the NESREA Act 2007 which now operates to confer on the National Environmental Standards and Regulations Enforcement Agency, the responsibility for:
the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources in general and environmental technology, including coordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws policies and guides.

Section 7 of the Act which creates awesome and far reaching functions for the said agency given it the powers to:
(a) *Enforce compliance with laws, guidelines, policies and standards on environmental matters; (b) coordinate and liaise with stakeholders, within and outside Nigeria, on matters of environmental standards, regulations and enforcement;*
(c) enforce compliance with the provisions of international agreements, protocols, conventions and treaties on the environment, including climate change, biodiversity, conservation, desertification, forestry, oil and gas, chemicals, hazardous wastes, ozone depletion, marine and wild life, pollution, sanitation and such other environmental agreements as may from time to time come into force;

(d) enforce compliance with policies, standards, legislation and guidelines on water quality, environmental health and sanitations, including pollution abatement;
(e) enforce compliance with guidelines and legislations on sustainable management of the ecosystem, biodiversity conservation and the development Nigeria's natural resources;
(f) enforce compliance with any legislation on sound chemical management, safe use of pesticides and disposal of spent packages thereof;
(g)enforce compliance with regulations on the importation, exportation, production, distribution, storage, sale, use, handling and disposal of hazardous chemicals and waste other than in the oil and gas sector;
(h) enforce through compliance monitoring, the environmental regulations and standards on noise, air, land, seas, oceans and other water bodies other than in the oil and gas sector;
(i) ensure that environmental projects funded by donor organisations and external support agencies adhered to regulations in environmental safety and protection;
(j) enforcement of environmental control measures through registration, licensing and permitting systems other than in the oil and gas sector;
(k) conduct environmental audit and establish data bank on regulatory and enforcement mechanisms of environmental standards other than in the oil and gas sector; (l) create public awareness and provide environmental education of sustainable environmental management, promote private sector compliance with environmental regulations other than in the oil and gas sector and publish general scientific or other data resulting from the performance of its functions;
(m) carryout such activities as are necessary or expedient for the performance of its functions.

The Agency is further empowered, amongst other things, under section 8 of the NESREA Act to submit to the Minister charged with the responsibility of environment proposals for the evolution and review of existing guidelines, regulations and standards on environment in the areas of atmospheric protection, air quality, ozone depleting substances, noise control, effluent limitations, water quality, waste management and environmental sanitation, erosion and flood control, coastal zone management, deforestation and bush burning, other forms of pollution and sanitation, and control of hazardous substances and removal control methods.

Laudable as the above and similar provisions are, it is submitted that this law holds out little or no hope for the peoples of the Niger Delta Region as it relates to their devastated Niger Delta environment as the said law is dotted with provisions outlawing its operation or applicability in the oil and gas sector. Notable examples of such provisions are found under sections 7(k), 8(k),(l),(m),(n) and (s) of the said Act.

It is necessary at this point to note, apart from the above Act, however that, there exists several other local legislation enacted ostensibly to protect the environment. These include: the Oil in Navigable Waters Act, Cap.337 Laws of the Federation of Nigeria,

1990, The Sea Fisheries Act, Cap.165 Laws of the Federation of Nigeria 1990, The Criminal Code Cap. 77, Laws of the Federation of Nigeria, 1990, the Petroleum Act, Cap.350, Laws of the Federation of Nigeria, 1990, The territorial Waters Act, Cap.4228, Laws of the Federation of Nigeria 102, Associated Gas Re-Injection Act, Cap.26, Laws of the Federation of Nigeria 1990.

Other laws purporting to protect land [4] in Nigeria and the environment generally include the Water Works Act of the colonial administration. [5]Others are the Public Health Act of 1917. [6]It is on record that between 1945 and 1996 over one hundred laws with relevance to the protection of land have been enacted or promulgated. [7]An example of an enactment which have also had far reaching impacts on land in Nigeria is the Land Use Act. As demonstrated above, this piece of legislation purports to divest the ownership of land from local communities and transfer the ownership to the Federal Government with the Governor of each state holding such lands in each state as a trustee on behalf of the people. [8]Other existing pieces of legislation include: the Wild Animals Preservation Law 1916; the Mosquitoes Destruction Law; and the Disease of Animals Law 1917.

In addition to the above said laws, there exist over one thousand customary laws in the Niger Delta, for example, which operated hitherto to protect the forests, wildlife and the soil of the region. [9]

The essential point to note from the above discussion however, is that the present state of laws governing environment in Nigeria are not found in any one single document but [10] are scattered in different pieces of legislation [11] and are scarcely enforced even in the face of daunting environmental challenges in the Niger Delta and other regions in Nigeria.

4. 'Land' here is used in the general sense. It therefore includes everything on it: forests, animals, trees, humankind, stones, minerals and more
5. See the Water Works Law 1915 cap 131 Laws of Rivers State. (Also applicable in BayelsaState)
6. This law prohibits the fouling of water and the 'vitiation' of the atmposphere"
7. Ajomo, M.A asserts that 'over 50 of such laws operate at the national level.' See an Examination of Federal Environmental Laws in Nigeria; in Ajomo and Adewale (ed), Environmental Laws and Sustainable Development.
8. The Agricultural Act. LFN 1990
9. Ike, O. and Oronto, D: Ibid
10. By this we mean "existing legal rules which have partial or total bearing on the environment of Nigeria. Such rules could spell out the use, protection, preservation or conservation of a thing or an entire ecosystem." Oronto D: An Overview of Environmental Protection Law in the Niger Delta, Dissertation submitted in partial fulfillment of an MA degree. DMU, Leicester, 1996
11. For more detailed discussion on sources of Nigerian Law see Niki T: Sources of Nigerian Law, Lagos, 1996.

5.2. Other Relevant International Environmental Protection Conventions and Treaties application in Nigeria

Also worthy of consideration is the African Charter on Human and Peoples Right (Ratification and Enforcement) Act Cap 10, Laws of the Federation of Nigeria, 2004. Article 24 which (as shown above) now forms part of Nigerian law and expressly provide that: "All Peoples shall have the right to a general satisfactory environment favourable to their development." It has been argued elsewhere in this thesis and affirmed at this point that this provision operates to confer a right to a generally satisfactory environment in Nigeria and entitles a citizen aggrieved to sue the state for the non-protection of his environment. In this respect, it is submitted that the African Charter aforesaid confers justiciable. rights on the people of the Niger Delta, to in appropriate cases sue the multinational oil companies and the Nigerian State for the regime of environmental degradation now foisted on the Niger Delta owing to oil mineral resources exploration and exploitation activities.

Furthermore, Nigeria is signatory to a myriad of international agreements/conventions and protocols which are currently in force in Nigeria. These include: the 1968 African Convention on Conservation of Nature and Natural Resources, the 1972 UN Conference on the Human Environment (Stockholm Declaration) which established the nexus between development and environmental, the 1976 Vancouver Conference on Human Settlements (Habitat 1), the 1985 Vienna Convention Protection of the Ozone Layer, the 1992 UN Conference on Environment and Development (Rio Summit) and its accompanying five set of documents (Agenda 21-an action plan for sustainable development in the 21st century, the Rio Declaration – Principles on healthy environment and equitable development, the Convention on Biodiversity, the Convention on climate change and the Statement of Forest Principles).

Others include: the 1993 Lugano Convention on Civil Liability for Damage resulting from activities dangerous to the Environment; the 1996 Instanbul Conference on Human Settlements construction and environment, drinking water. Etc.; the Kyoto Accord/Kyoto Protocol on global warning EFCs and the African Charter on Human and People's Rights.

Also worthy of note are: the International Convention for the Prevention of Pollution of the Sea by Oil 1954, (ii) Convention on Fishing and Conservation of Nature and Natural Resources of High Seas 1966, (iii) the African Convention on Conservation of Nature and natural Resources 1968, (iv) Convention for Corporation in the Protection and Development of Marine and Coastal Environment of the west and central African Region 1984 (v) the Basel Convention on the control of trans-boundary movements of hazardous Waters and their disposal 1992 (vi) the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979, the Convention on the Prevention of Marine Pollution by dumping wastes and other Prevention of Marine Pollution by dumping waste and other matters, 1975, the Vienna Convention on the Protection of the Ozone layer, 1985, the International Convention on Civil Liability for civil pollution damage, 1969, Convention on the continental Shelf 1958, Convention of the High Seas,

1958, the Bamako Convention on the ban of import into Africa and trans-boundary movement of hazardous waste within Africa and other several Conventions.
It would appear, from an examination of the above conventions, protocols and international bye-laws that there exist sufficient laws to protect every aspect of the Nigerian environment. This is why it has become worrisome that despite the array of law cited above the Niger Delta Region is currently enmeshed in an environmental degradation crises owing to long years of oil exploration and exploitation activities in the Niger Delta region. But before making final conclusion on this study, it is offered to examine the provisions of the Stockholm Declaration on Human Environment 1972 and the Rio Conference which have become authoritative source materials on environmental protection issues.

The central purport of the Stockholm Declaration on Human Environment 1972 Convention which seeks to protect the environment was initiated in the Stockholm declaration. Subsequently, there have been an upsurge of international instruments which now deal with the environment in specific and general terms. It is to be noted that the Stockholm Declaration was adopted of about 113 nations of the world excluding the USSR, Cuba and few other socialist states. [12]The most important principles of the declaration are as follows:

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits life of dignity and well-being and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.

12. Martin, D. and Robert M: Cases and Materials on International Law, 2nd Edition, blackstone Press Ltd, London 1995, p.521

The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved.

Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperiled by a combination of adverse factors Nature conservation including wildlife must therefore receive importance in planning for economic development.

The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind.

The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. The just struggle of the peoples of all countries against pollution should be supported.

States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.
Economic and social development is essential for ensuring a favourable living and working environment for man and for creating conditions on earth that are necessary for the improvement of the quality of life.
States have, in accordance with the Charter of the United Nations and the principle of International Law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control and not cause damage to the environment of other States or areas beyond the limits of national jurisdiction.
Without prejudice to such criteria as may be agreed upon by the International community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwarranted social cost for the developing countries.
It instructive to note that in the year 1992, the United Nations Conference on Environment and Development (UNCED) met in Rio de Janeiro (known as the Earth Summit or the Rio Conference) at the twentieth anniversary of the Stockholm Declaration and several documents were signed by members states of the Unites Nations. This documents included: conventions on climate change and on biological diversity; and Agenda 21, which is a 800-page document setting out actions needed to be taken; and the Rio Declaration, which spelt out applicable environmental principles. The documents called for affirmative action and reaffirmed the fact that protection of the environment required international co-operation.
One major achievement of the Rio Conference is the placement of environmental issues on the front-burner of the international discourse and the procurement of international legal obligation on their commitment to protecting the environment.
The environmental principles enunciated at the Rio Declaration include the following:
Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.
State have, in accordance with the Charter of the United Nations and the principles of International law, the sovereign right to exploit their own resources pursuant to their own environmental and development policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.
The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.
In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.
All states and all people shall co-operate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the

disparities in standards of living and better meet the needs of the majority of the people of the world.
The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries.
States shall co-operate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.
To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable demographic policies.
States should co-operate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge, and transfer of technologies, including new and innovative technologies.
Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making process. State shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.
States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular development countries.
Given the array of these and other international environmental conventions, it beats ones imagination that oil multinational companies, which are by the elementary principles of corporate law, international corporate citizens have not wholly applied corporate social responsibility principles known round the world to protect and preserve the degenerating and highly devastated Niger Delta environment in the course of the activities. It is in unveiling this and related issues that has necessitated a consideration of the following current environmental and related challenges in the Niger Delta Region.
5.3. The Challenge of Aqueous Pollution
It has been established earlier in the consideration of the various stages of oil and gas extraction that one inescapable consequence of oil mineral resources extraction, the world over is the negative environmental and social consequences on the oil-bearing

communities. In Nigeria today, one needs not lay any further emphasis on the fact that the oil-bearing communities in the Niger Delta have suffered untold hardship due to the impact of the activities of the multinational oil companies which have brought about pollution of water resources of oil into the water (which almost always also constitute the source of drinking water in those communities) leading to severe health problems (oftentimes occasioning avoidable deaths) in the region, amongst several other effects.
A large literature exists showing the recurrent incidences of oil spillage in the waters of the Niger Delta region and at different times offshore along the Atlantic coast. but whether the oil spillages occur onshore or offshore, there is no gainsaying the fact that the primary victims of such spillages are the oil bearing communities in the Niger Delta Region. A perusal of Nigerian Oil Spillage Profile shows that in the year 1978, there was recorded in the coastal zone, the GOCON's Escravos spill of about 300,000 barrels. Others include the SPDC's Forcados Terminal tank failure in 1978 which resulted to the spillage of about 580,000 barrels and Texaco Funiwa-5 blow out in 1980 of about 400,000 barrels. This particular oil spillage was reputed to have impacted in almost all the oil producing communities in the core Niger Delta states. In the year 1982, there was also the Abudu pipeline oil spill of an approximate 18,818 barrels of oil and the Idoho oil spill of about 40,000 barrels and of course the notorious spillage at Jesse, Delta State and the accompanying fire incidents that reportedly claimed the lives of over 1,000 persons who were roasted to death. [13]
Figures collated from the Department of Petroleum Resources (DPR), in the year 1976 show that a total number of 4647 incidents resulted in the spillage of an approximate 2,369,470 barrels of oil into the environment and that, of this quantity, an estimated 1,820,410.5 barrels (77%) were lost to the environment while a total of 549,060 barrels of oil which represent 23.17% of the total oil spilled into the environment were reportedly recovered. Aside the above, there are countless thousands of barrels of oil spilled into the environment owing to equipment failure, sabotage, corrosion and spillages which occur in the process of regular maintenance of equipments. See the table below showing oil spillage in Delta, Rivers and Bayelsa States between the years 1991 and 1996.

13. Nwilo, P.C and Badejo, O.T (2005): Oil Spill Problems and Management in the Niger Delta International Oil Spill Conference, Miami, Florida, U.S.A pp.1-10

Delta State

ALL COMPANIES			SHELL (WEST)	
YEAR	NO. OF SPILLS	QTY. SPILLED (BARRELS)	NO. OF SPILLS	QTY. SPILLED (BARRELS)
1991	78	950	50	705
1992	129	12,232	55	1,220
1993	116	909	58	617
1994	N/A	N/A	59	515
Total	323	14,091	222	3,057

Source: Industry and Energy Operations Division West Central African Department, "Defining an Environmental Development Strategy for the Niger Delta", May 25, 1995 volume 1 p. 95

Bayelsa and Rivers States

ALL COMPANIES SHELL (EAST				
YEAR	NO. OF SPILLS	QTY. SPILLED (BARRELS)	NO. OF SPILLS	QTY. SPILLED (BARRELS)
1991	98	5,103	86	4,214
1992	223	21,480	143	1,390
1993	232	8,101	248	3,251
1994	N/A	N/A	203	18,527
Total	553	34,684	680	27,382

Source: Industry and Energy Operations Division West Central African Department, "Defining an Environmental Development Strategy for the Niger Delta", May 25, 1995 volume 1 p. 95

Nigerian Oil Spillage Data, 1991 – 1996

YR.	NO. OF SPILLS	QTY. SPILLED (BARRELS)	QTY. RECVD (BARRELS)	NET LOSS TO ENVNMNT (BARRELS)	% LOSS TO ENVNMNT (BARRELS)
1991	258	108,367.01	2,785.96	105,581.96	97.43
1992	378	51,187.90	1,476.70	49,711.20	97.12
1993	453	8,105.32	2,937.08	5,168.24	63.76
1994	495	35,123.71	2,335.93	32,796.78	93.38
1995	417	63,677.17	3,110.02	60,567.15	95.12
1996	156	39,903.66	1,183.80	38,719.86	97.03
Total	2,159	306,364.77	13,829.49	292,544.28	95.49

Source: The Department of Petroleum Resources (Through NDES vol.1 adapted) p.249

Thousands of barrels of oil have been spilt into the environment through oil pipelines and tanks in the country. These spillagesare as a result of demonstrated lack of regular maintenance of the pipelines and storage tanks. Some of these facilities have been in use for decades without replacement. The Guardian newspaper of the 5th of August, 2008 reported that Nigeria has recorded a total number of 1260 oil spillages in two years. [14]

The paper reported amongst other things that:

National Oil Spill Detection and Response Agency (NOSDRA) disclosed that the body has certified 327 oil impacted sites since October 2006 when it was established. In 2006,

14. The Guardian, Lagos, Tuesday, July 5, 2008 p.1

the Minister said: 253 oil spill incidents were reported, while in 2007, 588 incidents were reported (and) in the first two quarters of 2008, 419 oil spills have been reported.
She continued: "the progressing trend of these sad incidents is indicative of the grave dangers ahead of us as a nation, first in terms of polluted environment and its tender poor health index as well as colossal loss of revenue, which is aptly required for economic and physical development. This scenario poses a host of challenges to us as a nation especially in terms of clean-up, remediation and rehabilitation.
She pointed out that the agency was engaged in the monitoring of clean-up of recent spills, a situation that is often recurring due to wanton vandalisation of oil facilities and theft of both crude and petroleum products across the country. Given the spate of crisis between oil companies and host communities on spill, she said "the agency has also commenced action on the development of a National Oil Spill Compensation Rates (NOSCR). These rates would become a guide for oil industry operators in arriving at acceptable and appropriate compensation to host and transit community[15]

An analysis of the above report clearly shows that almost all the spillages are occurring in the Niger Delta and that the fact of their occurrence is increasing agitations in the Niger Delta. Apart from the above, the report also shows that the trend of oil spillage is progressing in recent times showing also the grave impacts such spills have made and are already making on the environment. These impacts include all the consequences of living in a polluted environment especially as it relates to the health of the people, the loss of revenue which is now badly needed for the economic and physical development or sustainable development of the Niger Delta region and more especially, perhaps, the cost of clean-up, remediation and rehabilitation of the environment which Nigeria presently looks incapable of handling. This means that oil spillage into the creeks and the waters of the Niger Delta currently pose a great challenge to the overall attainment of sustainable development in the region.
This is because, as demonstrated earlier, when aqueous spillage occurs, immediate spreading of elements take place "the gaseous and liquid components evaporate. Some get dissolved in water and even oxidize, and yet some undergo bacterial changes and eventually sink to the bottom by gravitational action. The soil is then contaminated with a gross effect upon the terrestrial life." [16]This later effect is known to have been greatly responsible for the current poverty in the region as farms no longer produce their expected yields.

15. op cit p.2

that the potential impacts could not be immediately quantified but that:
The biological effects of such spill vary from lethal to sub-lethal effect on organisms. Marine biota especially the young ones are more susceptible to petroleum pollution. It

16. Akpofure, E.A. et al: The Adverse Effects of Crude Oil Spills in the Niger Delta. Urhobo Historical Society (2000) pp 1-10

has been asserted that all oil spill incidents are causes of deterioration of land and water quality in this area. Heavy crude are unbearable for both plants and animals, planktons, larvae and small marine organisms. Oil spillages have in these areas caused massive destruction to farmlands, sources of drinking water, mangrove forests and fishing grounds, and decimation of fish, crabs, molluses, Periwinkels and birds.[17]

Though several laws and policies have been developed over the years in Nigeria and internationally to manage oil spillagesgiven the increase in oil spillage incidences in Nigeria today, recently it is difficult to conclude that these laws have been working. Specific mention of recent legislation in this area is the Oil Pollution Act (OPA) of 1990. This said law provides general guides for oil spillage prevention, mitigation and liability. As stated above, while OPA was primarily targeted at reducing the number and quantity of oil spillages with an accompanying scheme to undertake clean-up of oil spillages and compensation of persons affected by oil spillages, it remains to be seen whether such impacts have been made at all in the Niger Delta.

In the same vein, OPA is yet to make any serious impact on the area of putting structures to respond adequately to manage the impacts of oil spillages whenever they occur in Nigeria. This view is also applicable in the area of the non-availability of structures to implementing prevention and similar measures and the development of contingency plans contemplated under the law.

As shown above, there is also in existence now the National Oil Spill Detection and Response Agency (NOSDRA) approved by the Federal Executive Council of Nigeria. At the level of contingency plans, it on record that there also exists the National Oil Spill Contingency Plan (NOSCP). These later two agencies are clearly consistent with the

17. Gabriel A.O.I, 2004: Women in the Niger Delta: Environmental Issues and Challenges in the Third Millennium, Calabar pp.1-20

3.4. The Challenge of Air Pollution and Gas Flaring

As a background to the study of gas flaring and air pollution as challenges to sustainable development in the Niger Delta region, it is proper to preface this segment with the clarification that natural gas which is a bye-product of oil extraction[18] holds the prospect of earning Nigeria billions of dollars. Ironically however, until recently, such gas being consistently flared by multinational oil companies partly because of the reported high-cost associated with harnessing same and the low penalty rate attracted to such flaring of gas in Nigeria.

Although Nigeria has over the years given several deadlines to multinational oil companies to stop flaring of gas in Nigeria, it appears not to have exhibited any will-power to enforce the said stop orders. Rather, the Nigerian nation keeps shifting the goalposts for the stoppage of gas flaring in Nigeria. On the 1st of January, 2008, there was a report that “Nigeria flares about 2.4 billion cubic metres (o.84trilliion cubic feet) of associated gas annually-the equivalent of 25% or 30% of the annual consumption of the

18. See Eaton, J.P: The Nigerian Tragedy, Environmental Regulation of Transnational Corporations, and the Human Right to a healthy Environment’, in : Boston University International Law Journal 15, 1997, pp.261-307

US and EU, respectively" [19]with an estimated annual loss of $2.5billion from gas flaring.[20]
Only on the 5th of August 2008, official government report showed that "Nigeria [currently] loses N5.8billion daily to gas flaring". The said report quoted one Senator Osita Izunaso, as saying that:
Nigeria is so blessed and so rich. Yet people are suffering, we are flaring gas and throwing it away as if it doesn't have meaning. We are losing approximately $15million a day on flaring. When we are giving these people license why didn't we insist that there must be no flaring? Other countries have done it.[21]

The later part of the above quoted portion shows that the multinational oil companies appear to be enjoying the backing of the government to continue gas flaring in Nigeria. On the 24th day of August, 2008, The Guardian newspaper quoted Nigeria's Minister of State for Energy and Gas, Emmanuel Odusina as saying that "the Federal Government does not yet have a definite date when gas flaring will be stopped in the Country." [22] The said Minister however regretted that "it was the same quantity of gas being flared away in Nigeria that Trinidad and Tobago, the largest exporter of methanol and the seventh largest supplier of liquefied natural gas to the United States, has exploited to develop its economy." [23] The Minister further revealed that Nigeria was losing "over 125 million cubic feet of gas yearly through flaring" [24]
The paradox of the entire scenario is that, several billions of naira are literarily being thrown into the dust-bin through gas flaring in a region that is literarily gasping for survival and sustainable development. Till date, reports show that the Federal Government of Nigerian is unable to provide the sum of N400billion which it owes the Niger Delta Development Commission which it has set up to develop the region. In the same vein, the same Federal is still groping for direction on exactly where to raise the necessary funds to execute an holistic master plan to develop the region.
But more important, there is sufficient evidence suggesting the fact that the Niger

19. The Guardian, January 1, 2008
20. Kiikpoye K.A. Op cit 272
21. Ibid
22. The Guardian, Lagos, Sunday, August 24, 2008, p.5

It is perhaps necessary to note at this juncture that, gas flaring has being going on in Nigeria since 1958 and has gone on unabated till date and has contributed significantly to the release of "greenhouse gases" into the atmosphere and not surprisingly to acid rain.[26] In the same vein, complaints are rife in the Niger Delta that 'gas flaring has destroyed their plant and wildlife.' [27]
And that a majority of the people of the Niger Delta 'have become half-deaf from the incessant din of the gas flare.' [28] A report has noted the hazardous effect of gas flaring:

23. Ibid
24. The Guardian, Lagos, Monday, August 25, 2008 p.27
25. Quoted in AugustineI. : Interogating a Crisis of Corporate Governance and the Interface with Conflict: The case of Multinational Oil Companies and the Conflicts in the Niger Delta, being a paper presented at the International Conference on the NigerianState, Oil Industry and the Niger Delta Delta Op cit p.102
26. Osibanjo, O: Industrial Pollution Management in Nigeria; in: Aina, E.O.A and Ededipe, N.O. (eds): Environmental Consciousness for Nigerian National Development, Lagos, 1992, p. 97

Gas flaring constitutes a veritable hazard. It causes acid rain which acidifies the lakes and streams and damages crops and vegetation. It reduces farm yields and harms human health, lives and livelihoods;
increases the risk of respirator illnesses, asthma and cancer and often causes chronic bronchitis, decreased lung function, blindness, impotency, miscarriages and premature deaths. Gas flares, burning 24 hours) are often situated near impoverished villages. The villagers have to live with the constant unnatural noise of the flare, and the area is covered in thick soot, making even rain water unsafe to drink.[29]

It is important to note, however, that, in the year 1969, the Nigerian Petroleum Act of 1969 was promulgated partly to curb the menace of gas flaring in Nigeria while Associated Gas Re-Injection Decree 99 of 1979 was specifically promulgated to compel multinational oil companies to re-inject all associated gas that would otherwise have been flared or pay penalty and indicated an end to gas flaring by January 1, 1984. This deadline was extended by the Federal Government by one year and thereafter, defaulting companies were directed to pay to the federal government a prescribed fine per 1000 standard cubic feet (scf) of gas flared. The fine was increased in 1990 and 1998. At present, the payable fine is N20 for every 1000 scf of gas flared. Although there appears to be some reduction of gas flaring to 45 percent only, multinational oil companies appear to prefer the payment of the said rates than terminate gas flaring in the region. [30] The more worrisome dimension however is that, the multinational oil companies appear not interested in participating in the process of re-injecting the flared gas or piping same for local consumption to the benefit of the oil bearing communities who are reeling under abject poverty. Accordingly, Nigeria is currently rated as the nation that flares the highest volume of gas in the world[31] ahead of Russia, Iran, Algeria, Venezuela, Indonesia and the United States of America. Nigerian gas flares emit as many greenhouse gases as 18 million cars, and release toxic substances in densely populated areas. Nigerian gas flaring

27. See Human Rights Watch/Africa, Nigeria (1995) p.8
28. See Ikein op cit 269 citing Rowell, 'Shell Shocked: the Environmental and Social Costs of Living with Shell in Nigeria' http://archieve.greenpeace.org/comms/ken/hell.html (last visited 26/01/05)
29. The Guardian, Lagos, December 14, page 14

30. Central Bank of Nigeria, Annual Report and Statement of Accounts for Year Ended December, 2007, p.10
31. Steve T: Politics of Oil and Underdevelopment in the Nigeria Delta Op cit p.213
32. The Guardian, Lagos, December 14, 2009, page 14, See also the Guardian, Lagos, Monday, December 21, 2009 p.42. See also the Guardian, Tuesday, December 22, 2009, p. 67. See further comments on the above issues below.

Data released by the World Bank [33]in the year 1995, for example, also showed that flaring of natural gas as percentage of gross production stood at 76% in 1991 in Nigeria. This meant, amongst other things that, from 1991 to 1998, gas flaring decreased only by 1 percentage point.

The most disturbing dimension of gas flaring in the Niger Delta is that gas flaring has disastrous environmental consequences. Acid rain in the Niger Delta Region is linked with gas flaring in the Niger Delta region. Researches have since discovered, for example, that:

Pollution caused by acid rain from gas glaring does not end and with sanitizing the water bodies, but it is now known that health risk is not averted by abstinence from meat and fishes killed by this pollutant but fishes and animals that escape instant death from pollution are known to have taken some of the toxic substance, which in turn get into human beings who eat them.

This will in turn cause infections such as bronchitis and employ coupled with other 'side effects in form of genetic mutations'. [34]At present, scientific studies have also shown the prevalence of acid in the entire Niger Delta region directly traceable to the effect of gas flaring which is associated with petroleum extraction activities in the Niger Delta Region. This acidity has been discovered to have effectively polluted streams, rivers and open well resources in the Niger Delta region where majority of the indigenes do not have access to portable drinking water. [35]According to Robinson, [36] for example:

Gas flaring has been the most constant environmental damage because in many places [in the Niger Delta] it has been going on 24 hours a day for over 35 years. There are hundreds of gas flares throughout the Niger Delta. It affects plant life, pollutes the surface water and as it burns, it changes to other gases which are not very safe. It also results in acid rain. With the pullout of Shell from Ogoniland, gas flaring has stopped in 4 of the five flow-stations. Where the gas flaring has stopped, people were able to see a difference in their vegetation; farm yields are better than before. The people

33. World Bank: 1995 Report on Defining an Environment Development Strategy for the Niger Delta, vol.II, Washington D.C: World Bank,
34. See Efe, S.I: and Mogborukor, J.O: Acid Rain in Niger Delta Region: Implication on Water Resources Quality and Crisis op cit p.226, Oden S (1976): "The Acidity problem – an outline of concepts of water, soil and air pollution pp.137-166, Olusi S.O: (1981) "Human health Hazards Associated with petroleum related pollution: in proceeding of the International Seminar on the petroleum industry of the Nigerian Environment. (Lagos NNPC), p.20
35. see Mogborukor J.O: Ibid
36. Robinson, D: Ogoni - The Struggle continues, Geneva 1996 p.28

possible that the close proximity of flare stacks/sites to human abodes accounts for its adverse impacts." [37]

Given the above, it is recommended that Nigeria take urgent steps to consciously ban gas flaring in the country because of its economic and environmental consequences in the Niger Delta region specifically and in the entire nation. As a temporary measure

however, it is recommended that portable drinking water be made available to the entire Niger Delta region within the shortest possible time while proactive medical attention is deployed to the Niger Delta to arrest the health hazards unleashed in the region by the effects of gas flaring.

5.5. The 2009 Draft Bill on Gas Flaring

Under the 2009 draft bill on gas flaring presently before the Nigerian Senate, any company found flaring gas after the deadline stipulated for the stopping of gas flaring will be subjected to a fine not less than twice the international market price of the gas flared. In addition the Minister incharge of Petroleum Resources is authorized to shut down any wells producing flared gas. Nigeria's Ministry of Petroleum Resources through its Department of Petroleum Resources, also suggested an amended version of the said bill to include the imposition of fines on defaulting companies after 2010 at the rate of $3.50 per 1000 standard cubic feet (scf) for temporary flaring and $1million for same quantity in the event of continued flaring; emergency flaring due to equipment failure to be fined $500, 000 for the same volume if the breakdown was not reported within 24 hours. [37b]

The bill further stipulated that oil companies must provide reports showing quantity of gas flared, reserve, location and composition within 90 days. In addition, all operators are required to submit their plans on how they intend to utilize the flared gas to the Minister of Petroleum for approval on or before the flare-out date of December, 2010.

Multinational oil companies operating in Nigeria had signaled their intention to abide by these provisions provided they took effect in 2012 but this position appears to have been watered down by a statement accredited to Nigeria's Minister of State (Odein

37b. See Thisday, Lagos, Monday, December 21, 2009 p. 19

flare-out date of December 31, 2010.[38] But curiously, at Copenhagen, Nigeria's Foreign Minister promised the world community that the Federal Government of Nigeria was committed to ending gas flaring within the time frame stipulated in earlier protocols. In the same vein, Rilwanu Lukman, Nigeria's substantive Minister of Petroleum Resources also promised the world community in Copenhagen that Nigeria sees the efforts to cut down on gas flaring as a national obligation to check the health and the economic hazards resulting from gas flaring.[38b] A similar position was taken by Nigeria's Minister of Environment (John Odey) in the same forum.[38c] The above signals a clear display of lack of coordination of policy initiatives at it affects gas flaring at the highest level of government in Nigeria. It however, submitted that Nigeria, as a nation, takes immediate proactive legislative initiatives to end gas flaring and its associated consequences including the unbridled emission of greenhouse gases and its concomitant global warming effects.

5.6. The Challenge of the Niger Delta Ecology and '*Hostile'* Terrain to the Development of the Region

5.6.1The Ecology of the Niger Delta and its Resources

The Niger Delta Region of Nigeria is known around the world as the most expansive lowland, aquatic and forest ecosystem in West Africa with a high concentrations of biodiversity.[39]It is made up of complex streams, creeks and swamps formed from the River Niger from where it divides to six tidal channels before emptying itself to the Atlantic ocean. The Delta flood plain is known to consist of accumulated sediments deposited by the Benue and Niger rivers. Ike Okonta and Oronto Douglas[40]have graphically described the four major ecological zones in the Niger Delta Region as follows:

Coastal stand barrier islands, mainly along the delta coastline. This ecozone has four sub-ecozones and is characterized by ridge-top tropical forest, trough freshwater swamp forest, brackish-water swamp forest and sand beaches.[41]

West African Lowland Equatorial Monsoon. This ecozone is marked mainly by high and low water table, vast stretches of flood plan and riverine swamp.

West African Freshwater Alluvial Equatorial Monsoon. This is levee forest area and is also marked by palm swamp and seasonal swamp. There are white-water and black-water floodplain, lakes and rivers. The freshwater swamp forests of the Delta cover an area of 11,700km, clearly the most extensive in west and central Africa. The forests are seasonally flooded, and while it is difficult for farmers to cultivate in this area, it has nevertheless been subjected to some logging, leading to gradual degradation.

West African Brackish-Water Alluvial Equatorial Monson. This ecozone is dominated by mangroves. It is also the area of transition between mangroves and freshwater alluvial equatorial monsoon. The Nigeria's mangrove forests are the largest in Africa, and over

39. The World Bank, Defining an Environmental Development Strategy for the Niger Delta, 1995
40. Op cit p.83
41. Nick, A.J et al: The Era Handbook to the Niger Delta (Environmental Right Action, 1998), pp 1-20

5 degrees North of the Equator, stretching into the Gulf of Guinea with the Bight of Benin in the west and the Bight of Biafra in the East. Climatically, the region is known as the Tropical Hot Monsoon. Rainforest in the Region is known to be high during the rainy season of July to September have averaging an annual of 3000-4500mm. Seasonal flooding and erosion are recurrent in the region especially during the rainy season. The region is known to be swampy between the periods of December and January. Average monthly temperatures hover between 24 and 27 degrees Centigrade.

Given the peculiar nature of the ecology and terrain of the Niger Delta Region, there presently exists the challenge of infrastructural development in the Region. It has been rightly asserted that one major implication of the peculiar terrain of the core Niger Delta is that, in practical terms that it costs a builder of infrastructure in the Niger Delta ten times more than the cost the same structure for example in the Northern part of Nigeria.

This is because the builder in the Niger Delta will "first of all spend more time, effort and money to build a solid ground on construction of substructures to prepare a formidable foundation is five times larger than what stands above the ground." [42]
In Bayelsa for example, this author discovered in the process of this research that almost every parcel of land on which a building stands in Yenagoa, the state capital, is reclaimed. It has rightly been asserted by soil experts and structural engineers that the process of sand filling to build infrastructure in places like Yenagoa goes far beyond just the reclamation of marshy piece of land. Strengthening the salvaged land to a natural level and raising it well above the sea so that it continues to remain a dry land all year round, is even more challenging. [43]
Apart from the physical difficulties of developing infrastructures on the core Niger Delta Region, the recurrent rains, flooding and erosion makes it nearly impossible to develop critical infrastructure in the Region. This author also discovered in process of this research in Bayelsa State for example, that only multinational oil companies could muster the necessary financial ability to build the necessary infrastructure for their projects in the Region.
5.6.2. The United Nations Framework Convention on Climate Change (UNFCCC COP 15) 2009: On the 19th of December, 2009, the two week Copenhagen Conference organized by the United Nations came to an end without a legally binding agreement among the nations of the world. The world body however, succeeded only in noting "a U.S. brokered treaty" without formally approving same. The failure of the world body to agree on legally binding treaty on the emission of greenhouse gases and climate change generally, it is submitted, marked a major step backward on the efforts to urgently tackle

42. See the Guardian, Thursday, November, 19, 2009, p.82
43. Ibid

existing challenges have been discussed. In the process of analyzing the issues in this chapter, the law and policy of environmental protection in Niger Delta region including applicable international environment protection conventions and treaties have been examined. Also examined are the challenges of aqueous pollution, air pollution and gas flaring and the recent draft bill on gas flaring. It has been demonstrated from the issues raised in this chapter that a lot still needs to be done in the area of application and enforcement of the various legislations and international treaties/conventions in the Niger Delta Region in particular and Nigeria as a whole. Thus, it has been shown the effects of environmental challenges on the development of the Region. They constitute impediments to the development of the Region. Other developmental challenges are the subject of discussion in the two subsequent chapters.

REFERENCES

44. See Luke Onyekakeyah: "Implications of a No Accord at Copenhagen" The Guardian, Tuesday,

•C. Michael Hogan, "Niger River", in M. McGinley (ed.), *Encyclopedia of Earth*, Washington, DC: National Council for Science and Environment, 2013.
••CRS Report for Congress, Nigeria: Current Issues. Updated 30 January 2008.
••Ian Taylor, "China's environmental footprint in Africa", *China Dialogue*, 2 February 2007.
••"Nigeria militants warn of oil war", BBC News, 14 September 2008.
••*Isumonah, V. Adelfemi (2013). "Armed Society in the Niger Delta". Armed Forces & Society. **39** (2): 331–358. doi:10.1177/0095327x12446925.*
••*Pearson, Scott R. (1970). Petroleum and the Nigerian Economy. Stanford: Stanford University Press. p. 13. ISBN 0-8047-0749-9.*
••*Nigeria: Petroleum Pollution and Poverty in the Niger Delta*. United Kingdom: Amnesty International Publications International Secretariat, 2009, p. 10.
••*"Nigeria's First National Communication Under the United Nations Framework Convention on Climate Change"(PDF). UNFCC. Nov 2003. Retrieved 24 January 2009.*
••Global Gas Flaring reduction, The World Bank, "Estimated Flared Volumes from Satellite Data, 2006-2010."
••*"Gas Flaring in Nigeria"(PDF). Friends of the Earth. October 2004. Retrieved 24 January 2009.*
••John Vidal, "Nigeria's agony dwarfs the Gulf oil spill. The US and Europe ignore it", *The Observer*, 30 May 2010.
•http://www.theguardian.com/global-development/2016/jun/02/niger-delta-oil-spill-clean-up-launched-ogoniland-communities-1bn