A COMPARATIVE STUDY OF SOUTH AFRICAN AND NIGERIAN LEGISLATION RELATING TO CONTROL OF GAS EMISSION

By

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In accordance with the postgraduate assessment guide and the University Research Ethics Policy, I hereby declare that the above-mentioned thesis is my own work and that it has not previously been submitted for assessment to another University or for another qualification. I further declare that i have complied with the provisions of the University's Plagiarism Policy.

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DEDICATION

TO

JOKE, JETHRO, JEFFERY, JEMIMAH OKE-SAMUEL

&

MY PARENTS –

SAMUEL SUNDAY OKE (Blessed memory)

BEATRICE YEMIJU OKE-SAMUEL

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ABSTRACT

This research investigates the environmental legislation of South Africa and Nigeria as tools for control of gas emission within the context of the universal morality of environmental protection. The study highlights the other side of industrial activities - the devastating effect on health, community and the natural environment of the release of noxious gases from oil production activities. The gas emission situation in South Durban- South Africa and Niger Delta, Nigeria provide a common basis for the study. The study examined relevant legislation for control of gas emissions in the two countries. This involves identification and review of International and regional agreements, soft laws, constitutions and domestic legislation considered applicable to control of gas emission and air quality management in the two countries.

The over reliance of the two countries on production of primary energy sources like coal and petrol chemicals and other fossils is revealed among others as major sources of gas emission in the two countries.

Theoretically, there exist frameworks for emission control in the two countries. While both countries are signatories to relevant treaties and conventions on environment and emission control, there are fundamental differences in the nature and approach of the two countries to gas emission control and environmental law making in general. Environmental protection in South Africa is rooted in the universally acclaimed principle of sustainable development. The Constitution of South Africa not only provide for environmental rights but gives clear mandates to the parliament to legislate towards pollution prevention, conservation promotion and sustainable development. These principles underlie the South African emission control. On the other hand, the absence of a constitutional provision on sustainable development and right to environment in the Nigerian constitution limits emission control to the application of sector based legislation, in this case, oil industry legislations. These statutes predate the 1999 constitution of the country and therefore lack the necessary constitutional impetus regarded as essential for effective emission and environmental control.

While it may be too early to assess the performance of the South African framework which together with the international components consists of post 1996 legislation, the researcher found the South Africa framework clear, direct and ascertainable. In the case of Nigeria applicable statutes are mostly not direct and there is a deliberate exclusion of the application of the provisions of the new National Environmental Standard Enforcement Agency (NESRA) ACT which established a semi- independent environmental body to emission and environmental problems in the oil industry.

This development is a setback in emission control and environmental management in the country. At present, applicable oil industry statutes do not promote contemporary principles of environmental protection like sustainable development and environmental rights content.

The Study found that despite available international and domestic frameworks, gas emission remains a major challenge in the two countries. Appropriate recommendations are made towards addressing the identified barricades. These include capacity building and a strong political will to drive the new regime in South Africa. In Nigeria, to make legislation a veritable tool for emission control demands urgent law review among other measures.

KEY WORDS – Gas emission, Air quality, Legislation, Oil production, Niger –Delta, South Durban.

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ABBREVIATIONS

ACHPR – African Charter on Human and Peoples Rights

ADR- Alternative Dispute Resolution

AEL- Atmospheric Emission Licence

APPA - Atmospheric Pollution Prevention Act

AQA - Air Quality Act`

AQMP – Air Quality Management Plans

BAT – Best Available Technology

BATNEEC – Best Available Technology Not Entailing Excessive Cost

BPEO – Best Practicable Environmental Option

CDM – Clean Development Mechanism

COP – Conference of the Parties

DEAT- Department of Environment and Tourism

DNA – Designated National Authority.

DPR - Department of Petroleum Resources

EER – Environmental Evaluation Reports

EIA – Environmental Impact Assessment

EMP – Environmental Management Plan

ENABAT – Economically Viable Application of Best Available Technology

ELI –Environmental Law Institute

ERA – Environmental Rights Action

FEPA – Federal Environmental Protection Agency

FOSAD – Forum of South Africa Director Generals

GGFR – Global Gas Faring Reduction

GHG - Green House Gas.

GN – Government Notice

HRIA – Human Rights impact Assessment

INECE – International Network for Environmental Compliance and Enforcement

IPIECA – International Petroleum Industry Environmental Conservation Association.

LDAR – Leak Detection and Repair

LDCs – Least Developed Nations

LFN – Laws of the Federation of Nigeria

MACT – Maximum Achievable Control Technology

MDG - Millennium Development Goal

MEC - Member of Executive Council (a provincial minister in South Africa)

NEMA – National Environmental Management Act

NESREA- National Environmental Standards Regulation and Enforcement Agency

NNPC – Nigeria National Petroleum Corporation

OECD - Organisation for Economic Cooperation and Development.

OECD - Organisation of European Countries and Development

OECD = Organization for Economic Cooperation and Development

OPEC – Organisation of Petroleum Exporting Countries.

PAJA – Promotion of Administrative Justice Act

SAAQIS - South African Air Quality Information System

SAPIA – South African Petroleum Industry Association

SDCEA- South Durban Community Environmental Alliance

Stell LR – Stellenbosch Law Review.

UNEP – United Nations Environment Programme

UNFCCC – United Nations Framework Convention on Climate Change

LIST OF CONVENTIONS AND INTERNATIONAL INSTRUMENTS

- Agenda 21 Adopted by more than 178 Governments at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3 to 14 June 1992
- Convention on Biological Diversity
- Declaration of the United Nations Conference on the Human Environment
- International Covenant for Civil and Political Rights
- International Covenant for Economic, Social and Cultural Rights, 1966
- Johannesburg Principles on the Role of Law and Sustainable Development 2002
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- Environmental Information Regulation 2004 (UK)
- National Environmental Policy Act (NEPA) (US)
- National Trails Act of 1968 (US)
- Public Health Act, 1875 (UK)
- Wild and Scenic Rivers Act 1968 (US)
- Wilderness Act of 1965 (US)

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- Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996
- M. C. Mehta v Union of India and others AIR 1988 Supreme Court 1037
- Ms Shehla Zia and others v WAPDA Human Rights Case No: 15-K of 1992
- Sturges v. Crownshield 17 US 122 at 202
- Subash Kumar v State of Bihar AIR 1991 SC 420

Chapter 1

1.0 General Introduction

1.1 Background and Rationale for Study

Environmental pollution is a major threat to human existence. Disasters related to industrial activities in parts of the world[1] have resulted in local and international actions against environmental degradation. The recent oil spillage in the Gulf of Mexico is estimated at about 185 million gallons of oil[2] while British Petroleum, the responsible oil company, had by October 2010 spent about 10 billion US dollars on cleanup operations and earmarked about 20 billion US dollars for the expected compensation in damages[3].

In particular, the effects of air pollution are claimed to be greater in the developing world compared to the developed world[4]. In order to keep the average temperature increase below two degrees Celsius, the developed world is expected to keep its emissions below 24-40% 1990 levels by 2020, and 85-90% below 1990 levels by 2050. The developing nations on the other hand have obligations to move away from business as usual practice by 2020 towards achieving substantial reductions by 2050[5].

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[1]For instance in Bhopal village in India on 3, December 1984, toxic gas leaked from a chemical plant killing at least 8,000 and injuring 200,000 in one night, according to a BBC documentary "Bhopal" (Podcast) (12/3/2009) over 10000 people still suffer the impact of the toxic contamination 25 years after. In the United States in 1977, pesticides and industrial chemicals buried underground for 20 years earlier around the love canal, Niagara Falls, NewYork resulted in serious threat to the health of local residents. On July 10, 1976 an explosion occurred in a TCP (2,4,5-trichlorophenol) reactor in the ICMESA chemical company in Meda, Italy. A toxic cloud escaped into the atmosphere containing high concentrations of TCDD, immediately killing many animals. Seveso, a neighbouring municipality was highly impacted.On April 26, 1986 tests were conducted in nuclear reactor 4 of the Chernobyl nuclear power plant in Ukraine in the ensuing accident fire and explosion instantly killed 31 people.

[2]Richard M. R, New B P Spill Analysis Reveals that 185 Million Gallons of Oil Have leaked. Tree -hugger 10 September, 2010. Available at http://www.treehugger.com/files/2010/09/margin-of-error-bp-oil-spill-bigger-than-exxon-valdez-spill.php#.Accessed, 24 March, 2011

[3]Kollewe J, BP Oil Spill Cost hits $10bn. The Guardian, 20 September, 2010. http://www.guardian.co.uk/environment/2010/sep/20/bp-oil-spill-deepwater-horizon-costs-10bn. Accessed 24 March 2011.

[4] Matooane M, John J, Oosthuizen R etal Vulnerability of South African Communities to Air Pollution at 8th World Congress on Environmental Health; 22-27 February 2004, Durban, South Africa citing Romieu I & Henandez-Avil M. 2002 Air pollution and Health in Developing countries: a review of epidemiological evidence. In McGranahan G & Murray F (eds), *Air Pollution and Health in Developing Countries*, Earthscan: London. 49-62. According to the authors this is due to differences in the levels of exposure and co-exposure to a mixture of pollutants, the population structure, nutritional status, lifestyle and socioeconomic status.

[5] Yawitch Joanne. *Leadership (Green edition)* June 2010, 45

While concerted efforts are going on to combat air emission or pollution, no meaningful solution has been achieved[6]. It is reported that about 70 million tons of carbon dioxide are released[7] into the atmosphere regularly. Gas emission from the Niger Delta region of Nigeria alone, particularly from flared associated gas[8] from some 250 oil wells is estimated at 2.5 billion cubic feet per day[9]. This source alone is reported to be responsible for more greenhouse gas emission than all of sub-Saharan Africa combined and a major cause of carcinogenic benzene, lung irritants NOx, SOx, H2S, and ozone.[10] According to the OPEC figures of 2001, Nigeria has the negative record of being the world number one gas flaring nation.[11]

Apart from the global implications of large scale gas emissionas a major source of climate change, people near places of industrial activities such as oil producing centers often bear the risk or burden of diseases related to atmospheric emissions and poor air qualities.[12] For instance, in the Niger Delta of Nigeria and oil refinery areas of South Durban in South Africa, diseases and harsh economic realities[13] that are associated with poor air qualities make life difficult for the victims. As far back as 1980s the area has become known as "Cancer valley", "the toxic capital of Africa". According to Desmond D'sa, the leader of South Durban Community Environmental Association "more than 100smokestacks belched out over 50mKg of sulphur dioxide each year…, leukemia is 24 times normal there… in every block you have around 50% of people who have respiratory

[6] The Hazards of Air Pollution, in Lois P Penman(Ed), *Environmental Ethics: Readings in theory and applications*, (1994) Jones and Bartlett 346.

[7] Al Gore, *An Inconvenient Truth: A Global Warning* (DVD),Paramount pictures 2007.

[8] Associated gas is gas produced as a byproduct in oil production fields, while non associated gas refers to hydro carbon reservoirs that contain only gas and no oil.

[9] World Bank Energy Section Management Assistance Programme, Nigeria Strategic Gas Plan, Report 279/04, February 2004, p 30. However, unconfirmed report in the Guardian newspapers of Wednesday, August 17, 2011 places the amount of gas flare in Nigeria at 1.4 billion cubic feet per day.

[10] *Ibid* at 57

[11] See Osuoka A and Roderick. `*Gas flaring in Nigeria: a human rights environmental and economic monstrosity*', (Environmental Rights Action/Friends of the Earth Nigeriaand the Climate Justice Programme, June 2005), which placed the figure at 16-8cm/y? This is a major contribution to the global greenhouse gas crisis.

[12] According to the World Bank, human exposure to particulate mattercauses the following increased rates of adverse health effects: • 6.72 premature deaths per year for each increase of 1 ug/m3 for each 100,000 persons; • 1,690 respiratory illnesses per year for each increase of 1 ug/m3 for each 100,000 children; and • 32,600 asthma attacks per year for each increase of 1 ug/m3 for each 100,000 asthma sufferers. seeWorld Bank (1997) "Vehicular Air Pollution: Experiences from Seven Latin American Urban Centers," World Bank Technical Paper No. 373 at 34.

[13] The situation in Niger Delta of Nigeria has been attributed to the profit maximization drive and brute and unrestrained exercise of power by the transnational corporations, according to the World Rainforest Movement (http://www.wrm.org.uy/bulletin/136/Nigeria.html), it is cheaper to simply burn the gas of despite the damaging impacts, similarly the transnational corporations have the leverage to impose their commercial interest over the health, livelihoods and human rights of local communities thus showing disregard to the people despite the existence of laws that technically outlaw gas flaring.

problem"[14]. The Niger Delta according to the UNDP suffers from "administrative neglect, crumbling social infrastructure and services, high unemployment, social deprivation, abject poverty, filth and squalor, and endemic conflict[15]"

South Africa is reported to make up more than 40% of the African carbon emissions with only 6% of the African population.[16] Its "per capita emissions are among the highest in the world"[17]. Energy related carbon emission in South Africa in 1999 was estimated at 99.4 million metric tons.[18] The effects of air pollution are felt in different parts of the country. In particular, concerns have been raised about health in communities such as Merebank, South Durban. In 1989, "over 50 volatile organic chemicals were discovered to be circulating in Island View, a petrol chemical facility at Durban Port" and 20% of this was detectable from the garden of a resident".[19]

Equally important, "pollutants like Benzene, Vinyl chloride and methylene chloride, carbon disulphide, z-butanone, toluene, ethylbenzene and xylenes have been found to be in the air in areas around the refineries, while the xylene level measured under a normal operating condition at Engen in South Durban was found to be four times higher than that found during upset conditions at United States refineries".[20]

Residents who breathe health hazard gases emitted from such industries suffer from asthma and leukemia. In Sasolburg, for instance, "residents suffer high levels of child mortality and respiratory illnesses and workers suffering from such diseases are retrenched and sent home to die."[21]Health experts describe the rate of infection as amongst the highest in the world.[22] In Durban "children at a school situated next to a refinery

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[14] John Vidal South Africa's 'Cancer Alley' Residents Face New Threat from Port Development, The Guardian.com, Monday 28 April 2014 accessed 07-07-2014 at http://www.theguardian.com/global-development/2014/apr/28/south-africa-cancer-alley-port-development.

[15] Amnesty International Report: Petroleum, Pollution and Poverty in the Niger Delta 2009 9 citing UNDP, Niger Delta Human Development Report, 2006

[16] Joanne Yawitch, deputy director-general of Environmental Quality and Protection, South Africa Department of Water and Environmental Affairs. *Leadership(Green edition (305))* June 2010 45.

[17] Mark Butler and David Hallowes (eds),*Ground Zero in the Carbon Economy: People on the Petrochemical fence line* (groundwork, 2002) 2

[18]Ibid

[19] above note 16 at 6

[20]Ibid

[21] Testimony of Ike Ramatesela a local councilor at Environmental Justice Forum: Speak Out! hosted by groundWork, the South African Exchange Programme on Environmental Justice, and international Possibilities Unlimited, August 25, 2001. In Mark Butler and David Hallowes (eds) *Ground Zero in the Carbon Economy: People on the Petro Chemical fence line* 9

[22] Legal Resources Centre, report on Environmental Justice Project (2003-2005) 5

suffered between 30%-40% more respiratory problems than children living more than 10km away".[23]

Despite the consequences of the presence of these noxious chemicals in the atmosphere in South Africa and Nigeria, the two countries appear not to have built the expected capacity building in air quality governance..

The Nigerian government has set several deadlines[24] for phasing out gas flaring. The last deadline was 2008: However, the political will necessary to stop the process appears to be missing. Each agency of government in Nigeria has given a different deadline but nothing concrete has been done. Recently, the members of the House of Representatives of Nigeria adopted a report stating December 31, 2012 as the target date for the achievement of the zero gas flaring in the country.[25] Critical observers have seen this apparent inaction or neglect on the part of the Nigerian government as an obvious

> ***"Lack of political will to enact or implement needed legislation and reform or abrogate existing bad legislations because of vested, personal, clique and class interests that have been elevated over and above the interests of the people".***[26]

On its own part, South Africa has hinged its commitment to global greenhouse gas reduction to a pro-poor adaptation agenda. Its position is in line with the belief that the poorest particularly from African continent have contributed "least to greenhouse gas concentrations in the atmosphere". In the build up towards United Nations Climate Change Conference that took place in Copenhagen in December 2009, the South African government betrayed its pretence to a commitment to a clean atmosphere. It declared unequivocally that it would not be agreeing to any emission target to be set at the conference.[27] South Africa's position is in line with its historic reliance on coal.[28] Both

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[23]Oil refineries, your health and the environment – what you need to know (Ground Work) available at http://www.groundwork.org.za/oil_refineries.htm. (accessed 9/3/2010)

[24]The targeted dates being 1969,1979,1984 and December 2008.

[25] See Next newspaper of Friday, April 16, 2010. The bill mainly seeks to amend two sections of the Associated Gas Re-Injection Act, No 99 of 1979 and Cap A25 Laws of the Federation of Nigeria,2004, namely sections 3 (1) and (2) and a substitution of 3 (2) (b) of the principal Act. The committee recommended that Section 3 (1) of the principal Act which had January 1, 1984, but which later moved to December 31, 2008 as deadline date, is now amended by substituting it with December 31, 2012. The committee further recommended that Section 3 (2) of the principal Act is amended by substituting the expression "permitting the company to continue to flare gas in the particular field or fields if the company pays the sum of $5.00/1000 scf of gas flared.

[26] Observation of a two-day National Consultation on the Environment organized by Environmental Right Action and The Nigerian Federal Ministry of Environment with the theme: The Nigerian Environment and the Rule of Law.13 December 2008.

[27] See the statement of Themba Maseko, the Government spokesman: SA To Reject Gas Emission TARGET Tuesday 15, September, 2009. http.www.simplygreen.co.za/local-stories/biz-and-community/sa-to-reject-gas-

South Africa and Nigeria are governed by constitutions with a Bill of Rights provisions. Both include fundamental human rights[29], in the case of South Africa, there is a clear provision for environment rights.[30]

However, the South African Constitution is more direct and explicit.[31] It specifically provides for the right to a healthy living environment. In contrast, the Nigerian Constitution merely deals with fundamental human rights in general[32] as entrenched in chapter four of the Constitution. It does not stipulate that the right to a healthy living environment is a fundamental justiciable right.

The Bill of Rights in the South African Constitution has broadened access to fundamental rights protection in that the constitution has done away with the narrow common law approach. The common law approach gives standing to the applicant only if the applicant is directly and personally affected by the violation or threat to a Bill of Rights interest. By contrast the South African constitution makes provision even for a litigant to approach the court on behalf of a group, association or class[33].

The damage caused by air pollution results in great financial and economic cost to a country. For example, the American Lung Association estimated that air pollution costs the United States economy $40 billion annually in health care and lost productivity.[34] Globally, 'the world war' against green house gas induced climate change – a product of air pollution is on and the end seems not to be in sight.

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emission.targets.html. According to the spokesman South African economy still require a lot of energy and the only viable point in time is through the use of coal –powered stations.

[28] Yawitch, Joanne. Pied Piper of South Africa: Cutting through Red Tape to Help with Green (Heyns Fanie (Wr)). *Leadership (Green edition)* June 2010 p 44

[29] In the case of Nigeria, there is no express provision on environmental rights, but the Court in the case of *Jonah Gbemire (For himself and as representing Iwherekan Community in Delta State, Nigeria) v Shell Petroleum Development Company Ltd & 2 others*. Suit No: FHC/B/Cs/53/05 held that the fundamental Rights to life include the right to environment.

[30] sections 24 of Constitution of the Republic of South Africa, provides

> *Everyone has the right*
> *(a) to an environment that is not harmful to their health or wellbeing; and*
> *(b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that*
> *(i) prevent pollution and ecological degradation;*
> *(ii) promote conservation; and*
> *(iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development..*

[31] This can be attributed to the sweeping changes and legal reforms that followed the collapse of apartheid and its subsequent replacement with a democratic government.

[32] See Chapter 4 of the Constitution of the Federal Republic of Nigeria 1999

[33] See sections 24(b), and 38 of the Constitution of the Republic of South Africa 1996.

[34] Hilary French, The Hazards of Air Pollution in Lois P Pojman (ed) *Environmental Ethics, Readings in theory and Applications* Jones &Bartlett 1994 346.

While different methods have been proposed to reduce gas emissions in the developing world, legislative provisions among other tools like enforcement and implementation remains the main driver of these approaches[35]. In light of the challenges highlighted above, this study is a worthwhile step in the search for answers to the problem of gas emission.

Gas emission is an environmental subject of varied dimensions and different sources. In the interest of effectiveness and to achieve focus, this investigation will be limited to legislative control of gas emission in the two major sites, that is, the oil industry in the Niger Delta region in Nigeria and oil refineries located in the Durban area in South Africa. The two regions provide a common reference point for investigating effective strategies for coping with the impacts of environmental damage and providing frameworks for promoting environmental protective measures in the two countries mentioned.

In the context of the South African experience, Currie observes that despite the existence of clearly drafted provisions on environmental protection, South Africa is nevertheless still short of effective regulatory frameworks for promoting environmental rights protection.[36] The result of a lack of effective regulatory mechanisms according to him is evidenced by factors such as:

- inadequate and weak enforcement of environmental laws
- lack of effective administration of environmental quality control
- absence of clear policy direction by the government
- few incentives to support sustainable anti – pollution industrial practices
- Absence of effective penalties to deter polluters.[37]

[35] These proposals or methods are found in the relevant international treaties, national legislation and other forms of instruments like guidelines , standards regulations etc.

[36] Iain Currie et al, The Bill of Rights Handbook, (JUTA, 2005) p 521. See also Louis. J. Kotze. A critical Survey of Domestic Constitutional Provisions relating to Environmental Protection in South Africa. 14 Tilburg L Rev. 298 2007 – 2008. Heinonline (http://heinonline.org.) Tue Feb 23 08:46:18 2010 where the writer declared 'that South Africa currently has a comprehensive set of substantial and procedural constitutional provisions and a progressive corpus of environmental legislation that may be invoked to further sustainable environmental protection'.

[37] Ibid

These issues are raised and discussed subsequently in the present work.

Although no major catastrophe has been recorded in South Africa so far,[38] the same cannot be said about Nigeria. In the latter jurisdiction gas emissions have made the Niger Delta a dangerous place to live. Large scale emissions in locations in the region have been known to produce negative results such as diseases,[39] loss of livelihood, and ultimately violent and aggressive agitations for environmental actions to protect people and human rights.

The relationship between environment and human rights has been summarized as follows

> ***"The protection of the environment is likewise a vital part of contemporary human rights doctrine, for it is a sine qua non for numerous human rights such as the right to health and the right to life itself. It is scarcely necessary to elaborate on this, as damage to the environment can impair and undermine all the human rights spoken of in the Universal Declaration of Human rights and other human rights instruments.[40]"***

The United Nations Development Programme in its human development report[41] has underlined "'the need for shifting human rights thinking from a focus on civil and political rights to a broader concern with all rights". The programme was an effort to give as much attention to economic, social and cultural rights. As a result, the drive for poverty eradication as a development goal should move to poverty eradication, and should be seen as social justice, thus fulfilling the rights and accountabilities of all actors.

From the foregoing, it could be seen, that in line with global trends, the human rights instruments may be engaged to checkmate excessive release of gaseous pollutants into the environment. This aspect will equally be examined under the laws of the two countries.

[38]But evidence of consistent incidents of gas emission and pollution related incidents exists.

[39] See plaintiffs' statement of claim in Jonah Gbemre(For himself and as representing Iwherekan Community in Delta State, Nigeria) v Shell Petroleum DevelopmentCompany Ltd & 2 Ors**.** Suit no: FHC/B/CS/53/05.

[40] Judge Weermantry in Gabcikovo-Nagymaros Case (Hungary-Slovakia), ICJ, Judgment of Sept. 25, 1997

[41] 2000:13

1.2 Statement of the Problem

Despite available legislation and regulatory mechanisms in both South Africa and Nigeria, gas emissions continue to pose a threat not only to the environment but also to the health and economy of both countries. If the legislation and regulatory frameworks already in place in the two countries were adequate, the question needs to be asked why emissions continue to pose a threat particularly to communities exposed to atmospheric pollution in South Durban, South Africa and Niger Delta of Nigeria.

Research Questions

The study attempts to answer the following research questions:

What are the sources, present state, and impact of gas emission in Nigeria and South Africa?

1.2.1 What legal frameworks are in place for the control of emissions in the two countries?

1.2.2 What is the scope of the legal frame works in Nigeria and South Africa respectively, as instruments for environmental protection

1.2.3 For the individual and groups, to what extent can these provisions be relied upon as safeguards from the risk posed by gas emissions?

1.2.4 Despite the environmental, health and economic implications of gas emission, the question can be asked why the source of gas emission is not effectively controlled in both South Africa and Nigeria particularly in oil and gas operations.

1.3 Aims of the Study

The aim of the study is on the one hand to answer the question whether the existing legislative provisions and regulatory frameworks in South Africa and Nigeria can be effective in mitigating the impact of gas emission particularly from oil and gas operations in South Durban, South Africa and Niger Delta in Nigeria respectively. On the other hand, the investigation hopes to find solutions: despite some legislative interventions, how the two countries can further develop effective frameworks and yardsticks to effectively lessen the effect of gas emission in the future.

Additionally, an attempt is made to compare the relevant legislations and constitutional principles that are relevant to control of gas emission in Nigeria and South Africa. The focus of the study is whether the approach from either country to gas emission control can inspire change in their respective jurisprudence. In particular, the clear provision on environmental right which has led to the enactment of a number of new legislations on environmental protection and emission control in South Africa is novel. The explanation for this can be found in the fact that while the Nigerian Constitution does not have any direct provisions on environmental rights and the right to have the environment protected, South Africa's Constitution has clear provisions on these principles and has caused parliament to enact new environmental and specific air quality laws which are more recent than Nigeria's versions.

1.4 Rationale of the Study

South Africa and Nigeria are emerging economies in the world but leading nations in sub Sahara Africa. The two countries are inhabited by greater numbers of Africans.[42] It is therefore imperative that environment and health issues are given attention in the face of the hazardous nature of gas emissions which pose serious threats to human health, well being and the environment. The premise of the study is that available standards in the two countries will act as a bench mark for other members of the African Union. As emerging economies, emphasis is placed on industrialisation which in turn increases demand on energy development. The two economies rely heavily on energy production, which together with other anthropogenic sources like industrial processes have been identified as major sources of gas emission and air pollution.[43] While Nigeria produces oil for the world market and domestic consumption in the Niger Delta, South Africa's consumption of energy is at an all time high with serious refinery and petrochemical activities going on in the South Durban basin which is the entry point for oil importation. Equally, the two countries have just emerged from undemocratic systems of apartheid in the case of South Africa and military rule in the case of Nigeria and have both enacted new constitutions.[44]

[42] A total population of about two hundred and twenty million people living in the two countries.
[43]See Vallero Daniel, *Fundamentals of Air Pollution* (Academic 2008, fourth ed.) 315.
[44]South Africa in 1996 and Nigeria in 1999

There is the need therefore, to determine the extent of their provisions on access to environmental justice.

While it is admitted that many comparative works have been done in respect of the two countries,[45] it is doubtful if any has been done in terms of comparing the legislations of the two countries with regard to the control of gas emission from oil operations. Specifically the following are the main reasons for the study:

1.4.1 The expectation that the results will influence a review of available statutes and constitutional provisions towards effective control of gas emission from industrial activities in the two countries.

1.4.2 The findings obtained from the study will contribute to the development of a strategy for effective legal control of gas emission.

1.4.3 In addition to possible application to improve the practical conditions of life of communities directly affected by emission generating industries, the research will be of interest to academics, legal practitioners, policy makers and climate change campaigners.

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[45]For instance The United Nations Environment Programme UNEP and University of South Africa did a report in 2007 titled *Banking on Value: A New Approach to Credit Risk in Africa* (UNEP 2007 Report/UNISA), other recent work include Berger Guy "*Media Legislation in Africa: A Comparative Legal survey* (UNESCO) 2007; Montesh researched on "*A critical Analysis of Crime investigative system within the South Africa Criminal Justice System : A Comparative Study"*, (submitted for the award of PhD at the University of South Africa in) 2007; Saunder Cheryl, *Legislative, Executive and Judicial Institutions : A synthesis.* (International Association for Centre for Federation Studies) available online at http://www.federalism.ch/files/categories/IntensivkursII/Comparativeg3.pdf accessed on 20 February, 2011: *Military and Nation Building* : Nkomo, Pax D , *Comparative study of the Nigerian and South African Military as instrument of National Integration*. (Masters' thesis, submitted to Naval Postgraduate Monterey the Naval Postgraduate School Monterey California) available online at http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA368156 (accessed 16/01/2012); Calenzo Gaetano. *Labour Movement in Democratisation : Comparing South Africa and Nigeria*, presentation at the 5th CEU Graduate Conference in Social Sciences."Old Challenges in a New Era" Development and Participation, (Budapest 19 – 21, 2009), available online at http://unina2.academia.edu/GaetanoCalenzo/Papers/152140/Labour_Movements_in_Democratization._Comparing_South_Africa_and_Nigeria (Accessed, 12-01- 2012).

1.4.4 In general the study will contribute to the growing body of environmental jurisprudence.

1.5 Hypotheses

To bring clarity and a critical hermeneutic element to the investigation, the hypotheses given below should be understood against the critical teachings of the Neo-Marxist scholar Jurgen Habermas. Before spelling out the hypotheses, it might be gainful to isolate the main points in his critical theory.

In his critical social theory, Habermas questions the repressive monopolistic society of the present technological period. He ascribes the problems and conflicts which have arisen during our technological civilization to the partnership of public administration and the economy. He sees this partnership as a conspiracy that tends to serve the demands of maximizing profit and power rather than furthering the general public good. In response to the affiliation of the public sector and industry he raises a concern that in the industrialized societies the most disadvantaged victims are the poor and marginalized sections of the population.

To bring about real justice and true emancipation in society, Habermas advocates the following emancipatory steps:

- Public debate of all issues affecting the freedom and autonomy of the subject in society;
- For Habermas full and active participation of the public, means that the public must be informed[46];
- Habermas teaches that systemic tendencies that tend to systematically distort information and undermine true communication need be discouraged.
- Habermas holds that law can play a role in social and constitutional reform[47]of society.

[46] Jabermas, T, *Between Facts and Norms: Contributions to a DISCOURSE Theory of Law and Democracy. T*rans. W Rehq Cambridge, Mass: MIT Press 1996 (1992.53)

[47] Habermas J in D Johnson et al Jurisprudence- A South African Perspective, Lexis nexis, Durban, (2005) 233.

In the light of the above programmatic steps as exemplified in the critical social theory of Habermas, the four (4) hypotheses are considered below:

1. **Hypothesis One**

   Efficient international frameworks exist to control emission

2. **Hypothesis Two**

   Efficient national frameworks and policies exist in Nigeria to control emission

3. **Hypothesis Three**

   Efficient national frameworks and policies exist in SA to control emission

4. **Hypothesis Four**

   The frameworks are applied effectively in each country

1.6 Research Methodology

A research methodology describes how a researcher goes about a study in a practical way to attain the set objective.[48] In this research the comparative legal research methodology is used. This is based on the use of both primary and secondary sources of information

This study compares the relevant legislations for control of gas emission in South Africa and Nigeria. It is acknowledged that comparative legal studies 'involve drawing explicit comparisons of aspects of two or more legal systems.[49]' This involves identifying the similarities and differences in the nature of gas emission and legal framework for the control of emissions in the two countries. Gabor identifies the need to communicate to a domestic audience as an important reason for a comparative legal study. On the other hand, Gordley,[50] in justifying comparative legal research, holds the view that the "law of a country cannot be studied in isolation". He contends that "to understand law, even as it is with that country one must look beyond its borders". He argues that many legal problems are conceptually the same wherever they arise", in that…"jurists confront the same problems[51]. He submits that "a transnational approach to problem solving is clearest when

[48] Terre Blanche Martin, Durrheim Kevin, Histories of the present : Social Science research in context in Terre Blanche, Durheim & Desmond (eds) *Research in Practice: Applied Methods for The Social Sciences* (2007) 6.
[49]Gabor A Francis. Guide to Legal Reserach and Writing From the Transnational Perspective (Vandaplas, 2008) 26.
[50]Gordley James, *Comparative Legal Research: Its function in the Development of Harmonised law*. The American Journal of Comparative law. Vol. 43, No 4, Autumn, 1995 560.
[51]Ibid560.

jurists of different nations are not only confronting the same problem but their codes or case law gives them the same guidance or lack of guidance." [52]

Primarily, the work is based on the traditional legal research methodology. It is mostly library and desktop based. This entails the reading, interpretation and analysis of available literatures of fundamental theories, instruments, reports and working papers, articles, primary data like the Constitution of the Republic of South Africa 1996, Constitution of the Federal Republic of Nigeria 1999, Legislation, enactments, case laws from the two countries, the United Nations, African Union regional instruments, other forms of international agreements, treaties and conventions, documents and reports etc that are relevant to the topic. Equally, materials like journal articles, law texts, documents and reports by government agencies, organizations, the Civil Society, Non Governmental Organisations and secondary sources are examined as additional sources of information in the analysis. This information is readily available in the library and the internet

The researcher benefited from the assistance provided by three activist movements namely (1) Groundwork, South Africa (2) South Durban Community Environmental Alliance (SDCEA), (3) Environmental Right Action/Friend of the Earth Nigeria (ERA). In the case of ERA, their officials accompanied the researcher to the communities that were affected by gas emissions. SDCEA and Groundwork gave useful contacts and in some cases linked the researcher with other agencies and government officials. Direct face to face engagement was adopted in the interactions throughout. Information obtained from the interactions formed part of the basis of the recommendations and conclusions in the work. This aspect introduced a qualitative aspect to the research.

The ethical aspect of the interaction processes was secured in the following order: Self introduction; information about the object and purpose of the research which is purely academic and the possibility of the information being used to aid reform and guiding appropriate solutions to the problem of emission; assurance of confidentiality of volunteered information and the option of remaining anonymous.

In the course of the work, the researcher collected many documents, reports and other relevant material at government offices and NGOs, which were found useful in the work.

[52] Ibid 562.

1.6.1 Ethical Issues

While the study involved interactions with people through face to face discussions these do not raise serious ethical issues as these exchanges were informal and the affected people were informed and assured of the confidentiality of the information given. The ethical clearance for this purpose was duly obtained from the University of Zululand Research Ethics Committee in compliance with the basics of ethics in research.

1.7. Preliminary Literature Review

Generally, emission control revolves around securing air quality. This presupposes an atmospheric environment that is free from pollution.

Different writers have contributed to the debate on the impact of air quality, environment and legislation as separate but related subjects. Both Von Blottniz *etal*[53] and Akimoto[54] are united on the devastating impact of air pollutants on human health, the physical and natural environment. Most studies confirm the health impact of air pollutants on humans. Between 2002 and 2012, different reports of the World Health Organisation consistently attribute at least 2 million deaths to air pollution every year[55].

Most writings on the subject of emission and air pollution in Nigeria, South Africa and in general tend to be concerned with the following themes.

Firstly, the recurrent report of air pollution as a feature of the general degradation of environment in Africa in general and the two countries in particular.

Secondly, there has been a continuing recognition of the environmental justice dimension to the emission problem in the two countries. This identifies human suffering as a result of the destructive impacts of emission of poisonous and hazardous gases from industrial activities, particularly from the operations of the multinational corporations.

The third theme is on flawed regulatory system[56] and calls for effective control of the different sources of gas emission in particular and the general degradation of the environment in both Nigeria and South Africa.

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[53]Von Blottnitz, H., C. Fedorsky, and W. Bray, "Air Quality" in Strydom, H. A., and N. D. King, (eds) Environmental Management in South Africa (JUTA, 2009).

[54] Hajim Akimoto, State of the Planet , 5 December 2003 v03 302 Science . 1 accessed at www.sciencemag.org

[55] WHO Ambient (outdoor) Air Quality and Health Fact Sheet N°313 Updated March 2014 (accessed 05 June 2014) at http://www.who.int/mediacentre/factsheets/fs313/en/.

[56] See Nigeria: Petroleum, Pollution and Poverty in the Niger Delta Amnesty International, 2009 54, see also Corporate Accountability in South Africa, Groundwork Report 2002

The fourth theme is premised on the adequacy of existing legal framework in the two countries as tools for control of gas emission.

Limited studies have focused on the problem of control of gas emission and environmental degradation in the two countries. Different factors like the state of the economy, social and political factors influence state policies. These factors often reduce the capacity and freedom of the states to devise and implement appropriate measures that suit their conditions and capacities to run effective environmental control regimes.

While Nnimmo Bassey[57] in general terms identifies extraction of natural resources in Africa as a huge burden on the economy and environment of the continent, the destructive activities of the oil, gas and other extractive industries in general are identified by him as major culprits in the environmental crisis facing African nations. Writing from the Nigerian perspective, both Okorodudu Fubara[58] and Fagbohun's[59] work expose the inadequacies of existing legal framework for emission control in Nigeria. In the same vein most reports and writings[60] on situation of the environment in the Niger Delta identify air pollution, particularly, emission from gas flaring and other oil and gas related operations in the region as a major source of pollution in Nigeria

Within the context of Environmental justice, the Groundwork report "Corporate Accountability in South Africa"[61] focused on air pollution from activities of the Petrochemical industries in South Durban. The report identifies failure to regulate industrial pollution in South Africa as a factor in South Africa's high emission profile[62]. The report clearly documented the impact of gas emission from the petrochemical industries on the right to life, dignity and the socio economic rights of the local people and the environment in South Durban.

In Toxic Futures: "South Africa in the crisis of Energy, Environment and Capital[63]" Hallowes advanced the environmental justice position in the Groundwork report above. His work documents existing realities in terms of the impact of industrialization through emission of particulates, greenhouse gases and other gaseous substances on the people and

[57] Bassey Nnimmo To Cook a Continent: Destructive Extraction and the Climate Crisis in Africa Pambukza 2012
[58] Okorodudu–Fubara, M. T., Law of Environmental Protection: Materials and Text (Ibadan: Caltop Publication, 1998) 387 – 398.
[59] Olarenwanju F. The Law of Oil Pollution and Environmental Restoration: A Comparative Review (Odade Publishers, 2010).
[60] For instance Amnesty International Report
[61]Corporate Accountability in South Africa, Groundwork Report 2002.
[62]Above at 64.
[63] Hallowes, D., Toxic Futures: South Africa in the crisis of Energy, Environment and Capital (University of KwaZulu-Natal Press, 2011

environment in South Africa. The link between poverty, unsustainable development and degradation in South Africa is established in the work. This further acknowledges climate change realities in terms of increase water stress, shortfalls in agriculture and food production in the country.

One suggested solution to the problem of gas emission in Nigeria and South Africa is for government to effectively regulate and control the oil industry[64]. Such calls however have not critically examined the legislative framework in the two countries, the level of their compliance and adaptation to international framework on air quality on a comparative basis

Very few studies have focused on the problem of emission from legislative perspectives, however most are general texts on environmental protection[65], yet none has done this on a comprehensive comparative perspective between Nigeria and South Africa. The creative nature of legislation endears it as a first choice among the different tools of environmental protection.

The present study is, therefore, different from other studies done before it because it applied comparative approach to the use of legislation as a tool for control of gas emission and environmental degradation in general in Nigeria and South Africa. In the two countries environmental governance is driven mainly by administrative machineries of the state which in turn rely mostly on economic and legislative tools for control. The study explores the legal systems of the two countries to determine roles of other stakeholders or role players in environmental governance to strengthen monitoring and regulation of gas emission.

1.8 Justification for Comparing Nigeria and South Africa

As noted above, gas emission is a serious environmental problem in Nigeria and South Africa, particularly in the oil producing sites in Niger Delta and South Durban. An exercise to find a solution to this common problem by either country will provide both countries an insight into why one approach is succeeding or failing in the other and assist

[64]See Amnesty International and Ground work : Corporate Accountability in South Africa above

[65] See generally, Okorodudu–Fubara, M. T., Law of Environmental Protection: Materials and Text (Ibadan: Caltop Publication, 1998) 387 – 398, Olarenwanju F. The Law of Oil Pollution and Environmental Restoration: A Comparative Review (Odade Publishers, 2010). Von Blottnitz, H., C. Fedorsky, and W. Bray, "Air Quality" in Strydom, H. A., and N. D. King, (eds) Environmental Management in South Africa (JUTA, 2009). Glasewski, J., Environmental Law in South Africa (Lexis Nexis, 2013). Hallowes, D., Toxic Futures: South Africa in the crisis of Energy, Environment and Capital (University of KwaZulu-Natal Press, 2011). Kidd, M., Environmental law (JUTA, 2011

in developing a common strategy. There exist different similarities and differences between Nigeria and South Africa as regards the application of legislations addressing the problem of gas emission. Both countries have had a common experience of struggle against colonialism and subsequent self emancipation from domination before realising true democratic societies.[66]

The development of new constitutions after the different undemocratic regimes took place around same time, South Africa first in 1996 and Nigeria later in 1999.

The constitutions of the two countries embrace remarkably similar Bill of Rights provisions. For instance both constitutions are presaged by preambles which give priority to the issue of the welfare of the people. In addition in both countries constitutions give preeminence to the issue of the supremacy of the constitution. Yet on another level the similarities wear thin. The South African Constitution pays attention to the right to a healthy environment[67] and to socio-economic rights such as the right to food, health care and shelter[68]. These rights are not explicitly articulated in the Nigerian Constitution. Such differences should make a comparison of their respective gas emission legislations a worthwhile academic exercise.

In the two countries, the courts have made significant findings on similar provisions which should enrich the jurisprudence of the two countries particularly where similar situations exist. The exercise would lead to a "common point of departure" which according to Reitz[69] is inherent in a process of comparison. Reitz contends that it is

> ***"either one legal system has the same legal rule or legal institution as another, or it has different rules or institutions which perform the same function or it provides different results for a particular problem or it does not seem to address that problem at all"[70].***

[66] South Africa between before 1994 had to contend with an undemocratic Apartheid political system which thrived on non state intentional violation of Human and people's rights. Despite attaining independence since 1960, Nigeria was for about 30 years under different undemocratic military regimes until 1999.

[67] Section 24 of the Constitution of the Republic of South Africa 1996

[68] Section 26 and 27 Constitution of the Republic of South Africa 199 respectively

[69] Reitz John C, How to Do Comparative Law.46 AM. J. COMP. LAW 617 (1998) in Gabor Francis A (ed) *Guide to Legal Research and Writing from the Transnational Perspective* (Vandeplas, 2008) 32.

[70] Reitz ibid

1.8.0 Definition of Terms

In the environmental protection field, most terms or concepts are elusive of definition and comprehension, an attempt is made here to discuss the terms and give appropriate definitions by some writers.

1.8.1 Environment

In discussing environment, Nel and Kotze[71] is of the view that environment as a term may be defined from two perspectives: the green perspective and the brown perspective. The green perspective according to them addresses issues like "the biotic (living) and abiotic (non living) elements of the earth and their interactions; recycling of matter by means of biochemical cycles within a closed system in line with law of conservation; of matter; movements of energy through ecosystems; environmental degradation; protection of species and ecosystems, vulnerable habitats and biodiversity; eradication of alien invasive species and maintenance of ecosystem services".

The greens' core belief is that at the heart of the world's problems of pollution, resource depletion and environmental deterioration are domineering and exploitative attitudes to nature[72]. The Greens' values about nature in general are stated by Pepper [73]as follows:

1. That humans are part of nature
2. That human must respect and protect nature for itself, regardless of its value to them and live in harmony with it.
3. That human must obey the laws of nature (e.g. the law of carrying capacity, which means that there is a limit to the number of people that the earth can support).

From the brown perspective, the environment is viewed as inseparable from social developments. This perspective places emphasis on issues like urban pollution, sanitation, water, electricity and waste removal. According to Nel *et al*[74] "the brown perspective posits that human beings are an integral and indivisible part of the earth system and that social issues (brown capital) may not be separated from the environment".

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[71] Nel J G and L. J Koetz Environmental Management: An Introduction in H A Strydom and N D King (eds) *Environmental Management in South Africa*(JUTA, 2009) 2

[72] David Pepper *Modern Environmentalism: An Introduction* (Routledge, 1996)10.

[73]Ibid

[74]*Op cit* relying on Reagen *An Ecological Basis for Integrated Environmental Management* (2006) 819 – 833: and *Barrow Developing the Environment – Problems and Management* (1995) 22

Jacklyn Cock[75] while acknowledging the above divide identifies another perspective which she called 'red-green-brown'. This perspective identifies environment from the urban and rural environmental activism to struggles for social justice. Jacklyn's position is informed by the activities of organizations like Environmental Justice Network Forum, Earthlife Africa, SDCEA, Groundwork and others. This group has taken environmental protection beyond the traditional conservation approach to issues that affect the rights of the people as protected under the Constitution of the Republic of South Africa, and the collective interest of the society particularly the vulnerable.

The inexactness of definition of the term environment is emphasised by Rabie.[76] He explains that:

> ***"There is no general agreement on exactly what the concept of 'environment' encompasses. Curiously enough, its meaning is often simply taken for granted and many commentators and even official publications discuss environmental problems without attempting to define 'environment'. It is obvious, nevertheless, that any meaningful classification and discussion of environmental problems as well as any advocacy of the cause of environmental conservation, presuppose clarity over the pivotal concept of environment"***

This work aligns with this view to the extent that there are myriads of issues that have been identified or claimed to be environmental issues, with proponents promoting issues that touch them most as environmental. For instance issues like aids, ivory Park, presence of sewage and human waste in water, illegal dumping, waste, land restitution, mining, industrial agriculture, genetic engineering, animal rights, intellectual property, nuclear energy, military activity, corporate accountability, asbestos related illnesses, soil erosion, loss of biodiversity, poaching, overpopulation, drought, air pollution and climate change. Access to clean water, energy, limited access to electricity, deforestation, lack of basic services like sewage and sanitation, restitution of land, access to the sustainable use of wildlife, eco-tourism and many other have been identified as environmental issues.[77]

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[75]Jacklyn Cock, Connecting the Red, Brown and Green: The environmental justice movement in South Africa : A case study for the UKZN project entitled: Globalisation, Marginalisation and New Social Movements in post-Apartheid South Africa (2004).http://www.ukzn.ac.za/ccs/.(accessed 06/01/2010)

[76] Rabie 'Nature and Scope of Environmental Law' in Fuggle & Rabie (eds) *Environmental Management in South Africa* (1992) 83 cited in H A Strydom and ND King (eds.) Environmental Management in South Africa JUTA (2009).

[77] Jacklyn Cock, aboveat note 58.

In Nigeria, the following have been identified[78] as environmental issues;

- Flooding, soil and gully erosion cutting across urban and rural areas.
- Population pressure and continuous exploration of marginal lands aggravating the process of drought and desertification particularly in the Northern part of the country.
- Industrial pollution, municipal waste generation and urban delay.
- Deforestation, uncontrolled logging and destruction of biodiversity, loss of wild life plant species and carbon dioxide emission.
- Oil Pollution resulting from spillage and gas flaring.
- Coastal and marine erosion, and land subsistence in coastal and riverine states.
- Inappropriate agricultural practices resulting in the destruction of vast agricultural land.

One is therefore persuaded to share the view expressed by Hallowes[79] that 'Environmentalism is a perspective on everything, the relation between people and resources, production and consumption…'

Alice Kaswan has an environmental justice perspective in view when she writes that environment refers to attributes of the physical environment that affect any aspect of a community's wellbeing[80].

This is more or less narrow and restrictive. Robert Bullard defines environment in broad terms as "...places where people live, work, and play.[81]

On its part, the International Court of Justice states that the environment is not 'an abstraction but represents the living space, the quality of life and the very health of human beings including generations unborn.'[82] This definition makes provision for the consideration of intergenerational equity; a bedrock of the principle of sustainable development.

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[78] Shonekan E.A.O.(former Nigeria Head of Interim Government), *Environmental Policy Performance: A Sustainable Development Agenda for Nigeria*. Paper delivered at the memorial lecture Lekki conservation centre Lagos Nigeria.(2005) 3

[79] Above note 30.

[80] Alice Kaswan,*Environmental Justice: Bridging the Gap between Environmental Laws and "Justice*" http://ssrn.com/abstract=1012388229.

[81] Robert D Bullard, Environmental Justice for All *in Unequal Protection* 11 (Robert D. Bullard, ed.1994) cited in Alice Kaswan article ibid.

[82] Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996, .241-242 par. .29.

In line with the latter definition particularly on the effect of the state of environment on well being, environment is defined by another school of thought[83] as "the complex of physical, chemical, and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival".

Environment is crucial to human and species survival as the unlimited human wants are met through the limited resources in the environment; the environment being the source of the energy and materials which humans transform into goods and services to meet human needs.[84]

All the views above have a common ground: the importance of environment as a support for life. It is therefore expected that apart from averting the health hazards that are associated with degradation of the environment, environmental protection is essential to securing the means of survival of humans and their neighbours: that is other occupants of the environment.

The use of land in undesirable ways and its physical and socioeconomic consequences therefore has impacts on the environment and will definitely make environment an issue. [85]

The National Environmental Management Act,[86] states that:

> Environment means the surroundings within which humans exist and that are made up of:
>
> (i) The land, water and atmosphere of the earth;
>
> (ii) Micro-organisms, plant and animal life;
>
> (iii) Any part or combination of (i) and (ii) and the interrelationships among and between them; and
>
> (iv) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being;"

[83]Environment (2010).Encyclopædia Britannica.*Ultimate Reference Suite.* Chicago: Encyclopædia Britannica.
[84] Justice Thornton & Silas Beckwith: Environmental Law (2004) Thornton sweet and Maxwell 2nd edition 1
[85] See Kaswan above at note 63.
[86]No. 107 of 1998 (NEMA) (South Africa) see section 1(1) (xi)

Hon Justice Niki Tobi of the Supreme Court of Nigeria in *Attorney – General of Lagos State v Attorney – General of the Federation & 35 Ors*[87] defines environment as

> ***"...the totality of physical, economic, cultural, aesthetic and social circumstances and factors which surround and affect the desirability and value of property and which also affect the quality of people's lives: The surrounding conditions, influences or forces which influence or modify"***

The National Environmental Standard Regulation Enforcement Agency Act (NESREA)[88] of Nigeria defines Environment as "including water, air, land and all plants and human beings or animals living therein and the inter- relationships which exist among these or any of them.

Both the statutory definition and the judicial interpretation above from Nigeria tend to see environment from a holistic angle - that is the linkage and dependence between humans and the surroundings.

1.8.2 Environmental Protection

Environmental protection may result from actions that are aimed at preventing or mitigating degradations caused to an environment, or actions that are intended to protect the collective interests based in the environment.

Boyles[89] writing from the economic angle defines environmental protection as measures that aim to redress environmental market failures associated with public goods and externalities.

Dixon and Robert[90] opines that protection of the environment includes the reduction, control and elimination of existing causes of damage to the environment; the prevention of additional forms of damage; and the preservation and rational use of the environment.[91]

While it is conceded that individuals are the usual victims of environmental problems, the social nature of the problem makes it essential for protection to be a goal for public goods. Some of these problems like health hazards, famine, displacement and migration, restiveness, insecurity and poverty among others, can produce negative tendencies where they occur. A duty is imposed on government, as the coordinating

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[87] (2003) 7 *Monthly judgments of the Supreme Court of Nigeria* (MJSC) 1 at 156
[88] National Environmental Sanitation Act (NESREA),2007
[89] Boyce J K, *Oxford Review of Economic Policy*, Vol 20, No1 (2004) 106, downloaded on Tuesday May 25, 2010.
[90] Dixon, M. and Robert, M, *Cases and Materials on International Environmental Law*, 2nd edn (1995) 521
[91]Cited in Okon. E. The Environmental Perspective in the 1999 Nigerian Constitution. *Envtl. Law Rev*. 256 2003.

institution in governance, to drive measures for environmental protection for different reasons, but in particular because the victims of environmental degradation may be vulnerable, or not in a position to challenge the act or defend their rights.

By the same token, some consequences of degradation do not manifest immediately. Victims of environmental degradations are often ignorant of the consequences, for example 'to link health problems to pollution, and to track pollution to its source'.[92]

Environmental protection requires an 'integrated approach employing a variety of instruments for influencing conduct and reducing burdens on the environment, ranging from public participation to the use of sanctions. Regulatory environment administrative law still remains at the heart of state instruments for the protection of the environment'.[93]

The important point here, however, is that these instruments have to be backed up by the state's normative power in line with principle 11 of the Rio Declarations[94] which state that "States shall enact effective environmental legislation".

Picolotti *et al*[95] identified the following as necessitating environmental protection;

a. ***'The need to provide access to justice for the victims of environmental degradation and to prevent the consequences of degradation.***
b. ***The need to promote protective legal actions given the destruction or the imminent destruction of the environment that surrounds the individual'.***

Accordingly, where effective legislation is in place,' the individual aware of the veritable force that he/she possesses finds him/herself compelled and motivated to take actions.'[96]

Other popular instruments for environmental protection are fiscal policies, environmental education and awareness campaigns.

Despite the canonisation of environmental protection under different statutes in modern societies, little has been achieved, "as this has been based more on activities, rhetoric and goodwill rather than enforceability".[97]

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[92]Abovenote 35 at page 114.s

[93]Conclusions of the Seminar on the Policy of Criminal Law in the Protection of Nature and the Environment in a European Perspective, held at Lauchhammer, Germany, from 25 to 29 April 1992. Accessed on 10 May 2010 (United Nations Resolutions on Environmental Protection Through Criminal Law)

[94] United Nations Conference on Human Environment, Rio de Janeiro 1992.

[95] Romlina Picolotti and sofia Bordenave, *The Enforcement of Environmental law from a Human Rights Perspective* available online at www.cedha.org.ar. (accessed 01/05/ 2010).

[96]Ibid.

[97]Ibid.

While it is acknowledged that there is a drift towards private sector driven economy, the duty of government at any level to protect the lives of the citizens and secure the environment cannot be over emphasised. This obligation of the government is according to Epstein[98], dictated by the principles of justice that protects liberty and property and demands government action for the protection of the environment against actions of some individuals.

Since some environmental problems are not limited to countries borders, common principles are being developed by nation states to address environmental problems at domestic and international level. Some of these are fundamental human rights; Inter-Generational Equity; Conservation and Impact assessment. All have been identified as underlying environmental protection.[99] These and many others shall be examined in the forthcoming sections of the work.

1.8.3 Air Quality

Clean air is essential to human health and well being, while air pollution remains a serious threat to human health and existence across the world.[100]

Protection of public health is a primary factor in control of air quality; where there is no adequate management of release of substances into the air medium, there is bound to be exposure of the environment and its inhabitants to the dangers that are associated with air pollution. It is however important to note that the damaging impact of pollution of the air medium and poor air quality goes beyond human health. It includes destruction of the ecological systems, infrastructures and even harvests.

Von Blottnitz et al[101] identifies the sources of the destructive impacts of air pollutants as inhalation and deposition, smog formation and visibility reduction, acidic

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[98] Epstein R.A. *ThePrinciples of Environmental Protection: The Case of Superfund*. Cato Journal, Vol 2, No 1 (Spring, 1982) 9.

[99]Our Common Future, Annexe 1: Summary of Proposed Legal Principles for Environmental Protection and Sustainable Development Adopted by the World Commission on Environment and Development Experts Group on Environmental Law.

[100] According to a WHO assessment of the burden of diseases due to air pollution, more than 2 million premature deaths each year can be attributed to the effects of urban outdoor air pollution (caused by the burning of solid fuels). More than half of this disease burden is borne out by the populations of developing countries. See World health report, 2002, Reducing Risks Promoting Healthy Life. Geneva. World Health Organisation., 2002.

[101]Air Quality in H. A, Strydom & N D King (eds) Fuggle & Rabie's *Environmental Management in South Africa*(2ed) JUTA) 2009, 580.

deposition, eutrophication of water bodies, ozone depletion, and changes in the global climate.

Air pollution levels may be higher in the vicinity of specific sources of air pollution, such as roads, power plants and large stationary sources, and so protection of populations living in such situations may require special measures to bring the pollution levels to below the guideline values.[102]

Findings have revealed that air pollution impact on air quality is not limited to a particular location on earth. According to Akimoto[103] people in less developed countries as well as residents of industrialized and rapidly growing developing countries could suffer from air pollution generated elsewhere. Akimoto's position was based on images recorded by instruments launched as far back as 1981 on the space shuttle Columbia(1). The said image was said to reveal that industrial air pollution fossil fuel combustion could affect regional and global air quality.

Global air quality is impacted by pollutants whose atmospheric lifetimes are long enough for them to be transported to another continent.[104] Some of these pollutants are tropospheric ozone, a potent greenhouse gas that also is toxic to humans, animals and plants. This pollutant's lifetime of between 1 to 2 weeks in summer and 1-2 months in winter enables it to be transportable to another continent[105]. The impact of global ozone pollution is evident in East Asia where it is said to be high enough to jeopardize agricultural and natural ecosystems there.[106]

The future increase in emission release from Africa and other developing countries as a result of economic growth is expected to compound the delicate global air quality. This situation calls for an integrated approach to local, regional and global air quality issues.

Efforts by governments in different parts of the world to ensure air pollution free environments have led to the enactment of clean air laws and other air quality legislations.[107] These include the imposition of different minimum safety standards in

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[102] WHO Air Quality Guidelines for particulate matter, ozone, Nitrogen dioxide and sulfure dioxide, *Global update 2005*.

[103] Hajim Akimoto, *State of the Planet, 5 December 2003 v03 302* Science.1. www.sciencemag.org.

[104] Ibid.

[105] G. Brasseur, J J Orlando, G S Tyndall (eds), *Atmospheric Chemistry and Global Change* (Oxford Univ. Press, Oxford 1999.) 89.

[106] P. Pochanart et al, *Atmos. Environs. 36,4235* (2002).

[107] See for instance the Clean Air acts of Canada (first passed in 1970, now replaced by the Canadian environmental Protection Act in the year 2000), The United Kingdom Clean Air Act 1952 and1968, The Unted States Clean Air Act

order to ensure compliance, and to reduce the impacts of different activities on air quality. These legislations have in turn helped to improve human health and increase life span in some parts of the world. For example the introduction of the US Clean Air Act[108] has been credited with tremendous reduction of Air pollution and providing air quality and health benefits today.

In a 2011 report the United States Environmental Protection Agency reported that the Act prevented "160,000, cases of premature mortality; 130,000 heart attacks; 13 million lost work days and 2.4 million asthma diseases.[109] The report projects that by 2020, the Act will prevent "230,000 cases of premature mortality, 200,000 heart attacks; 17 million lost work days, 2.4 million asthma attacks."

In South Africa, the imperative of section 24 of the Constitution and other statutes like the National Environmental Management: Air Quality Act[110] is to promote the improvement of air quality and environmental protection. The objective of the latter according to the Department of Environmental Affairs and Tourism,[111] is to focus on emission limits.

Air quality standards still feature as an important component of national risk management and environmental policies.[112] Despite its importance in the management of public health, National standards vary according to the approach adopted for balancing health risks, technological feasibility, economic considerations and various political and social factors, which in turn will depend, on among other things, the level of development and national capability in air quality management.[113]However, despite this perceived success, the air medium has transformed from being a support for living into a channel of trouble for humanity.

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legislations began with the Air Pollution Control Act of 1955, followed by the Clean Air Act of 1963, the Air Quality Act of 1967, The Clean Air Act Extension of 1970, and Clean Air Act Amendments in 1977 and 1990.

[108]First enacted as the Clean Air Act in 1963, re-enacted 1970,amended 1970, amended in 1977 and later in 190 as The Clean Air Amendment Act 1990.

[109]Iwanowicz Peter**,** Cutting EPA's Budget and Dirty Air,*American Lung Association: State of the Air 2013*. Accessed online on 18March 2013 at ww.lung.org/healthy-air/outdoor/defending-the-clean-air-act/syndicated-blogs/clean-air-act-works-epa-has-resources.html. See also, US Environmental Protection Agency, Office of Air and Radiation, Regulatory Impact Analysis for the Proposed Federal Transport Rule Docket ID No. EPA-HQ-OAR-2009-0491, June 20101.

[110]NEM:AQA, Act 39 of 2004.

[111] Zunckel Mark, Diab Roseanne and Scott Gregory, *An Introduction to Air Quality Management Publication Series A: Book 5*.Compiled by Mark Zunckel, Roseanne Diab2 and Gregory Scott at 1.

[112] WHO Guidelines for Particulate matter, Ozone, Nitrogen dioxide and Sulfur dioxide: *Global Update 2005*6.

[113]Ibidat 7.

For instance the air pollution situation in Omoku in the Niger Delta area is described as

"gradual death of a people without a war being waged where no gun is shot and no knife is drawn"[114]

South African communities, particularly the area in review are faced with the problem of air pollution. The most common air pollutants being sulphure dioxide (SO2), oxides of nitrogen (NOx), particulate matter (PM),, lead (Pb), Ozone (O3), carbon monoxide (CO)[115]and volatile organic compounds(VOCs) including acrylonitrile and benzene.[116] The main sources of these are burning of coal, oil and gas operations, power generation and moving vehicles.

This enquiry is particular about the emissions that are associated with oil and gas operations in Southern Durban in South Africa and the Niger Delta region of Nigeria. The South Durban choice is informed among other things by findings by experts[117] that air pollution in South Durban Industrial Basin exceeded the prescribed standard under the South African national air quality guidelines and recommended guidelines by the World Health Organisation.[118]

For effective management of air, ambient air quality standards have been put in place across the world. For instance the South African Department of Environment and Tourism has set Ambient Air Quality Standards[119] for Common Air Pollutants like, sulphur dioxide (SO2), nitrogen dioxide (NO2), carbon monoxide (CO), particulate matter (PM10), ozone (O3), lead (Pb) and benzene (C6H6).

The defunct Federal Environmental Protection Agency in Nigeria equally set standard for the following pollutants, Particulate, Sulphure oxide (sulphure dioxide) Non – methane Hydro carbon, Carbon monoxide, Nitrogen oxides (nitrogen dioxides), and photo chemical oxidant.[120] The Nigerian National Air Quality Standard is further reinforced with

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[114]Ibanga Isine, Quoting Dr Lucky Elenia, see Gas flaring: Hundreds of Omoku people may go blind, *The Punch Newspaper* 30th July, 2009.

[115]Annegar H J et al. 1996b. Residential air pollution. In G. Held, B.J. Gore, A.D. Surridge, G.R. Tosen, C.R Turner & R.D. Walmsley (Eds). Air Pollution and its Impacts on the South African Highveld. Cleveland: Environmental Scientific Association. P 47-57. Cited inMatooane etal above.

[116]Ecoserv.Environmental health risk assessment of gaseous emissions from the Cutler Complex. Report prepared for the Durban Metropolitan Unicity Municipality, *Report No. EIE/01/DMUM 01 REV 1.9*. cited in Matooane above at note 45.

[117] For example Matooaane, Diab and others,*above*, note 45 at2.

[118]Ibid.

[119]Made in terms of Section 9 of the National Environmental Management: Air Quality Act 2004 Act No 39 of 2004).

[120]Table 3.4 1991 FEPA Guidelines.

the Tolerance Limits for Ambient Air Pollutants.[121]Air quality standards, policies and laws are influenced by the local circumstances and international guidelines given by international bodies like the World Health Organisation. The World Health Organisation's guidelines are based on an extensive body of scientific evidence relating to air pollution and the possible consequences. The flexible and non-mandatory natures of the guidelines make it expedient that governments commit to strong legislation at the domestic level.

Elsewhere in the United States, criteria airpollutants identified as Ozone3, volatile organic compounds (VOCs), particulate matters (PM10), lead (Pb), sulphur dioxide (SO2), carbon monoxide (CO), and nitrogen dioxide (NO2) are regulated under the 1970 Clean Air Act by the United States Environmental Protection Agency which has the power to set limits on air pollution in any part of the country. The states are however, at liberty to introduce stringent limitations not below the standard set by the United States Environmental Protection Agency to regulate the pollutants.

1.8.4 Gas Emission

While this work is focused on gas emission from petroleum operations by multinational corporations in the two countries in issue, it is important to emphasize that emission is not limited to this particular channel or source. Gas emission can be an outcome of decisions taken or not taken by individuals orcorporate, states, national, regional and international organizations.[122]

Emission is the proverbial burden which runs with the benefits of industrialization and growth in technology. It is a major source of air pollution in the environment. In general terms, emissions are particles and gases which are discharged into the air as by-products of a process by man or nature.

The National Environmental Management Act: Air Quality Act[123] of South Africa defines emission as any "emission or entrainment process emanating from a point, non-

[121]See Table 3.5 1991 FEPA Guidelines.
[122] See Osofsky. H.M citing the report of the Inter governmental Panel on Climate Change (IPCC) 2007: The physical Science Basis of Climate Change in Climate Change Legislation in Context, 102 NW.U.L REV COLLOQUAY 245 (2008).
[123] Section 1, National Environment Management: Air Quality Act, No. 39 of 2004.

point or mobile source that result in air pollution". This position of the South African legislature confirms the consensus on the diverse nature of sources of emission.

A point source is defined under the NESREA Act of Nigeria as:[124]

> ***"any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduct, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft from which pollutants are or may be discharged"***

Either gas or particulate matters or both may be emitted from industrial facilities or other sources as emission. Hills identify the criteria pollutants as Carbon Monoxide (CO), Ozone (O_3), Sulfur dioxide (SO_2), Nitrogen Oxide (NO_x), Lead (Pb), Particulates (PM). These may be released through the combustion of fossil fuels and their subsequent release.[125] While particulate matter is solid with no particular composition, Hill[126] contends that it "may contain one or different numbers of pollutants like metal dusts, biological matters etc. Gas emission on the other hand is the gaseous component of air pollutants that are released into the atmospheric environment from different activities and sources.

As discussed in the first section of this chapter, this study is based on oil and gas operations in the two countries. The emission of different substances by operators in the oil and gas sectors into the atmosphere through different activities[127] continues to generate concerns because of the effects. Some effects are not only harmful or damaging to the atmosphere but to living organisms on the earth's surface, particularly in the immediate environment. Different activities are known to have deleterious impacts on the atmosphere as a result of the increase in demand and use of different forms of energy. In particular the atmosphere is impacted or polluted through the release of particulate and gaseous substances; according to the WHO[128] this has been increased by the rise in the use

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[124] Section 37, National Environmental Standards and Regulations Enforcement Agency(Establishment) Act no 25, 2007.

[125]Hill Marquita K. *Understanding Environmental Pollution* (Cambridge, 2nd edition, 2004) 109

[126]Hill ibid

[127]The following activities are identified by Hill as having tendency to determine design and operating practices; frequency of maintenance and inspection activities; type, age, and quality of equipment; type of hydrocarbons being produced or handled and their composition; operating conditions; throughputs; pumping or compression requirements; metering requirements; treatment and processing requirements; frequency and duration of process upsets; sweet, sour or odourised service; population density near the facility; off-shore or on-shore operation; distance to market or the next downstream segment of the industry; market value of waste hydrocarbons applicable environmental and conservation regulations, and pricing/economic incentives (e.g., if the cost of lost gas is passed on to the customer there is no incentive for gas companies to reduce methane losses

[128] Elsom, Derek. M *Atmospheric Pollution: A Global Problem* (2nd Edition) Blackwell, 1992 4 citing WHO 1972.

of petroleum products. The presence of these substances generates different challenges and problems for humans at different levels of governance. Globally the challenge of the green house effect of fossil fuels has been catastrophic. This is made manifest in the topical issue of global warming and climate change and the search for alternative sources of energy. In Nigeria and South Africa, gas emission as an impact of oil production on human health and the environment is discussed.

Vast numbers of people across the world, particularly in the locations for case study for this research in Nigeria and South Africa inhale injurious and poisonous gases as a result of petroleum production activities, other industrial activities, development of infrastructures and transportation. In their work on pollution from oil extraction in which they linked gas emission to the proliferation of technologies in crude oil extraction activities, Grec and Maior[129] identify gas emission as belonging to the "category of permanent risk sources of pollution in the environment".

Despite the concerted efforts at controlling some of these activities emissions have become a burden to humanity. At the local or national level it constitutes a huge threat to human health and environment while the campaign for clean energy and climate change are aimed at controlling and coping with the consequences of emissions and other air pollutants from various locations on the global atmosphere.

The campaign against emission at the global and local level is dictated by the different types of gas emission, and the impact on the particular environment.

While Greenhouse gases engage the attention of the international community as it has become a global menace, air quality emission affects the immediate local environment though both may originate from the same location or sources. Matooane *et al.*'s treatise[130] on air pollution in South Africa provides an insight into the devastating effect of air pollutants on communities, particularly the susceptibility and vulnerabilities of different categories of the populace to different types of pollutants. The work identifies air pollution as one of the factors responsible for the prevalence of chronic respiratory diseases which are reported to be high among people of low socio-economic status.

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[129]Grec Aurica, Corneliu Maior, Earth Oil Extraction –Major Environmental Pollution Sources.*Environmental Engineering and Management Journal*. (November /December 2008. Vol 7, No 6) at 763-764.accessed online on 26 May 2012. At http://omicron.ch.tuiasi.ro/EEMJ/pdfs/vol7/no6/24_Aurica%20Grec.pdf.

[130]Matooane. M, John. J, Oosthuizen. R, and Binedell. M. Vulnerability of South African Communities to Air Pollution. Proceedings at the 8th World Congress on Environmental Health.22-27 February 2004, Durban, South Africa. Citing Rios *et al.* 1993.Susceptibility to environmental pollutants among minorities. *Toxicology and Industrial Health;* 9 (5): 797 – 820.

Southern Durban and Niger Delta areas are populated by low income earners and peasant farmers (in the case of Niger Delta).

Low income has been associated with different health complications including elevated blood pressure[131]and death as a result of cardiovascular disease and other stress related conditions[132]. Cardiovascular conditions are also reported to be related to exposure to air pollutants such as Co and cadmium.[133]

The Kyoto protocol[134] to the United Nations Climate Change Convention identifies the following: Carbon dioxide (C02), Methane (CH4), Nitrous oxide (N20), Hydro fluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur hexafluoride (SF6) as green house gases. These are released into the atmospheric environment and ultimately to the global environment through sources like energy, industrial process solvent and other product use, agriculture and waste.

Drastic reduction in emission is important forhumans in order to improve air quality and to combat climate change

In South Africa, the dearth of reliable information on emission has been identified as a major challenge to its control. According to ground work,[135] this lack of information has been used both by industry and the regulator to dismiss the concerns of communities. However, one may quickly point out here that the situation is not better in the case of Nigeria where regulatory agencies do not have independent means of establishing emission release into the environment.

1.8.5 Air Pollution in General

Air pollution is a challenge that is faced at all levels of the society; from indoor at a small family level to the outer society of local community; national or regional level and at global level[136]. The impact of air pollutants ranges from release of small or insignificant components of pollutants to a blanket impact on the planet.[137]

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[131]Ibid, citing Mathews *et al.2002.* Socio-economic Trajectories and Incident Hypertension in a Bi-racial Cohort of Young adults.Hypertension. 39:772. *and* McDonough. *et al.* Income dynamics and adult mortality in the United States,1972 through 1989. *American Journal of Public Health:* 87:1476-1483.

[132] Rios *et al.1993.*Susceptibility to environmental pollutants among minorities. *Toxicology and industrial Health;* 9 (5): 797 – 820 *cited in* Matooanne above

[133]WHO. Air Quality guidelines, (1999). WHO: Geneva.

[134] See Annexe A, Kyoto Protocol to the United Nations Convention on Climate Change.

[135]Corporate accountability, The Ground work report (2002) 32.

[136]Daniel Vallero, *Fundamentals of Air Pollution*(2008)77.

[I] for example release of green house gasesibid.

According to Vallero, local scale air pollution is usually characterized by one or several large emitters or a large number of relatively small emitters.[138] Large sources like power plants refineries or industrial sources that emit high above the ground through stacks can also cause local problems, particularly under unstable meteorological condition that cause portions of the plant to reach the ground in high concentration.[139] South Durban and Niger Delta provide typical examples here.

In urban areas, contributions of air pollutants from many sources combine to produce high concentration of pollution. This is in addition to the released pollutants from direct individual sources.

Regionally, Vallero identifies[140] the following as air pollution problems; blend of urban oxidant problems at the regional scale, since major cities are in close proximity to one another; release of slow reacting primary air pollutants that undergo reaction and transformations during lengthy transport times in the air; and reduced visibility, which may be an outcome of specific plumes or by the regional levels of particulate matters that produce various intensities of haze or smog. Air pollution at continental scale spreads impact across nations, particularly on neighbouring nations and is actually at the root of the global climate change concerns.

1.8.6 Emission Control

Emission control refers to the development and introduction of measures, strategies or activities by governments towards the goal of eliminating, reducing, regulating or outright elimination of release of poisonous gases into the atmosphere.

There are different emission control measures the most popular being: (a) controlling pollutants at the end of the pipe that is after formation`[141] (b) purifying the gas before the release into the environment.[142] These strategies and others can be introduced towards attaining this goal, through the use of different tools like legislation, economic instruments like taxation. This however indicates that controlling emission or any form of pollutants rests on the availability of an appropriate legislative framework, which gives legitimacy to

[138]Ibid.
[139]Ibid.
[140]Ibidat 80
[141]Ibid
[142]Ibid

the control process. According to McGranachan and Murray[143] legislations provide the "basis for policies in the decision making process of setting air quality standards at the municipal, regional, national or supranational level".

The above position of McGranachan explains the role of the different legal instruments at the different levels of the society and the inalienable position of law as an instrument of social engineering. Since every government or human activities must be authorized in law, legislation provides this authority through which the different emission control measures and techniques may be justified. Consequently, issues like siting of facilities, land use, technology and other means of production (which are important in emission and pollution control in general) are regulated towards limiting or eliminating potential release of toxic or dangerous gases and substance into the environment.

In addition to legislation and other forms of regulations, Neefjes[144] identifies market based instruments like taxation, subsidies public campaigns etc. However, it is important to note that different factors like international agreements and the social, political and economic situation of a society[145] determine the extent that a country or the society may go in emission control. This position is discussed further, particularly in chapter six of the study.

Early emission control activities can be noticed between 1940s and 1950s when open burning in garbage dumps, smoke from factories and emissions from oil refineries became targets of regulation in Los Angeles in the United States.[146] This move was influenced by the London disaster of December 1952 in which about 4000 deaths were recorded as a result of smog[147]. The Los Angeles control initiative was further tightened through "control of substances like petroleum based solvents containing hydro carbons, landfills emitting toxic gases, power plants emitting nitrogen oxides and others between 1950s and 1960s".[148]

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[143]McGranahan Gordon, Murray Frank (eds). *Air Pollution& Health in Rapidly Developing Countries* (Earthscan, 2003) 77
[144]Neefjes Koos, *Environments and Livelihoods: Strategies for Sustainability* (Oxfam, 2000) 161.
[145]McGranaham above, note 125.
[146]Early *Smog Control Efforts.The Southland's War on Smog: Fifty Years of Progress Toward Clean Air* .May (1997) available. http://www.aqmd.gov/news1/Archives/History/marchcov.html#Early Smog Control Efforts(accessed 10-07-2011).
[147]Ibid.
[148]Ibid

The World Health Organisation (WHO) guidelines on air quality which has been adopted by numerous countries across the world provide directives on designing policies or legislation on control of emission and other primary air pollutants.

To control emission in the petroleum industry, IPIECA recommends management of refinery emission through focusing on "meeting local and national standards".[149] The organisation particularly emphasised the development of air quality standards which are "expressed as concentration limit value for specific averaging periods or as the number of times a limit value is exceeded". The advantage in this recommendation according to the organisation is that by its nature, air quality standard "protects human population from adverse impacts of pollution from all sources".[150] This approach by the IPIECA is in line with the position of the World Health Organisation.

The use of ambient air monitoring and modelling is further recommended by the organisation for a better understanding of the impacts of emission from the oil industry.[151] This approach may involve use of local meteorology, details of emission release that is stack height, temperature, and quality.

1.8.7 Legislation

In the context of this work, legislation refers to primary products of the process of law making exercise by the parliament or accredited law making bodies, particularly in Nigeria and South Africa. In the present context, legislation also includes treaties, international agreements; subsidiary or secondary instruments like regulations, guidelines and policies within the ambit of environmental protection and sometimes under general regulations.

Legislation is "the characteristic lawmaking instrument of modern societies"[152], this, according to Allen,[153] denotes a "relationship between the individual and the state". Legislation here refers to a body of law which includes International conventions or treaties and protocols, the constitution,[154] national legislations including subsidiary

[149]IPIECA, Refinery Air Emissions Management:Guidance Document for the Oil and Gas Industry - Operations Good Practice. (revised edition, 2012) 3.
[150]Ibid.
[151]Ibid.
[152] Allen C.K. *Law in the Making* (Claredon Press 1964 seventh edition) 606.
[153]Ibid.
[154]The Constitution of the Republic of South Africa 1996.

legislations, guidance and other forms of subsidiary legislations emanating from the national parliament[155] and, or, the provincial legislature,[156] and, or municipal council,[157] and administrative rules and guidance[158] in the Republic of South Africa on environmental protection. In Nigeria the term refers to enactments by the National Assembly,[159] the State Houses of Assembly,[160] bye laws by local governments (where applicable) and subsidiary or delegated legislations.[161]

Evidence and reports of the dangers and consequences of a degraded environment abound. These reports provide a basis for full measures against pollution. It is argued that legislation provides this means through which effective control can be institutionalised to regulate the nature and level of tolerance of impacts of activities of man on the environment. Legislative measures have been effectively applied in tackling the menace of emission and air pollution in general. The need for control of air pollution and emissions of smoke and smog began after John Evelyn submitted his essay titled "Fumifugrum" to the king, Charles II in the 17th Century.[162] UK began enactment of legislation on control of smoke and other air pollutants from 1863 when the Alkali directorate, reported to be the "first world national pollution control agency "was established under the Alkali Act of 1863. The Alkali Act and subsequent environment related legislations provided basis for the evolution and growth of UK's legislation, though the initial Acts were according to Thorton and Beckwith,[163] not made in the sense of environmental protection but "adhoc reactions to unsanitary living conditions of an industrialising state".[164] However, UK's air quality legislations and environmental protection have come of age, and are among the most comprehensive legislations around the world. The body of environmental law in the United Kingdom is now characterized by features like: "increased dependence on

[155]Section 44 of the Constitution of the Republic of South Africa vests this authority in the National Assembly and the National Council of Provinces.
[156]See section 104 of the Constitution of the Republic of South Africa 1996.
[157]Section 156.
[158]These refer to different administrative rules and guidance issued by the different government departments and competent authorities.
[159]Section 4 of the Constitution of the Federal Republic of Nigeria 1999.
[160]Section 4 (6) and (7) Constitution of the Federal Republic of Nigeria 1999ibid.
[161]Rules made by administrative bodies in Nigeria.
[162]Fumifugrum MMXI . *Environmental Protection* UK 2011 accessed on 18 June 2012 at www.environmental-protection.org.uk. The original text was sent to king Charles II. In the tes the author decried the smog in the city of London and its effect on the health of the people and the environment. He also made suggestions on how to address the problem.
[163]Thorton Justine, Beckwith Silas, *Environmental Law* (Thomson, Sweet&Maxwell, 2nd Edition, 2004) 9
[164]Ibid.

environmental science, centralization, a holistic approach and increased participation"[165] While one may identify pockets of legislations in the past; these were never with the goal of environmental protection, but to regulate sanitation or some acts of nuisance. There is however direct legislation now on air quality management and pollution control.

Effective legislations on gas emission, beyond addressing control of the immediate hazards and its consequences will be a great contribution to the global campaign for control of green house gases and air quality gas emissions hazardous to human health and responsible for the negative impacts of global climate change.

Legislative authority in Nigeria is vested in the National Assembly[166] and the 36 State Assemblies.[167] By these provisions and others both the National and State Assemblies are empowered under the constitution to legislate on marked areas of environmental protection. The local government on the other hand derives their power on control of environmental problems under the local government laws of the states to make law on specific matters like sanitation.

Similarly, South Africa's legislative power is vested in the National Parliament and the provincial parliaments. The provincial power of law making on environment is however subject to certain condition outlined under section 148 of the constitution. Legislative competence includes issues bothering on security, economic unity and the approval of such legislation by the National Council of Provinces.[168]

Legislation has proven to be a means of advancing a just society that values life and conserves nature. The United States is an example of the impact that legislation can make on cleaning the environment and preserving nature. After the first earth day in the United States,[169] a new wave of environmentalism was commenced and backed with active presence of government through aggressive enactment of different legislations like the Clean Air Act, Clean Water Act, Safe Drinking Water Act, Food Safety law etc. The US set forth new and tough standards through legislation for toxic waste disposal, protecting

[165]Ibidat 148
[166] See Section 4 of the Constitution of the Federal Republic of Nigeria 1999.
[167]See also section 4, particularly at (6) and (7)
[168] See Section 146 of the Constitution of the Republic of South Africa 1996.
[169] The earth day was first marked in the United States in April, 1970

community after community[170] and some years later Carol Browner, the Administrator of the US Environmental Protection Agency, declared[171] that:

> ***"…we have made real progress. I think that it is fair to say that today real people in real communities are reaping real everyday benefits. Tens of millions of Americans today are breathing cleaner air. We were able to achieve, in the last four years, the single largest reduction in toxic air pollution in the history of this country".***

Through legislation, the public acting through its representatives is involved in development of an appropriate legal framework to address societal needs and in decision making. The advantage of this is that home grown laws are made aside from crystallised legal principles that are often inadequate or not suitable to address unique and peculiar local situation or issues. This creative nature of legislation is indeed an asset to environmental protection, in the words of Barnard[172] 'contemporary environmental legislation supports creative planning …encourages creative thinking to the extent that the principles themselves have become key drivers'.

Writing in this wise, Bernard[173] decried the National Environmental Management Act[174] of the Republic of South Africa as an underutilised resource, because of its potency to reverse "…legacy pollution and degradation; prevent future degradation; and establishing something of value or setting in motion a process that reverses the degradation caused in the past, while creating new resources".

In discussing environmental legislation towards control of gas emission or any form of pollution, the following instruments; constitution, laws or legislations; regulations; permits and licenses; guidance and policies are important channels for legal mandates and requirements for a clean and sustainable environment.[175] Legislation is further explored in chapter 5 and chapter 6 of the study as an instrument of environmental protection and by implication emission control in the two countries.

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[170]Carol M. Browner. Environmental Regulatory Reform. *Pace Environmental Law Review*, Volume 15, Issue 11 997, 2.

[171]Ibidat3

[172] Barnard C.E, Key Drivers in Environmental Legislation toward Good Governance. *Water Policy*, 9 Supplement 2 (2007) 31 – 50.

[173] *Ibid* at 34

[174]No. 107 of 1998 (NEMA)

[175]International Network of Environmental Compliance and Enforcement, *Principles of Environmental Compliance and Enforcement Handbook* (INECE, 2009) 4

1.8.8 Niger Delta.

The Niger Delta has been one of the most debated issues both within and outside Nigeria. Different inquiries and studies[176] have been commissioned and carried out on the environmental situations and the struggle for control of resources derivable from the region by the indigenes of the area.

The area referred to as Niger Delta consists of nine of the thirty six states in the Nigerian federation. The states are Akwa ibom, Abia, Bayelsa, Cross River, Delta, Edo, Imo Ondo and Rivers States. The region covers a total area of about 75000 square kilometers and 185 local government areas.[177]Despite its rough terrain as 'a flat, low-lying swampy basin with a network of meandering rivers and creeks',[178] the area is home to vast oil and gas deposits, good agricultural land, extensive forests and excellent fisheries.[179] As home to the third largest mangrove forest in the world and largest in Africa (9,730kms) a greater part of this is located in the Niger Delta, this is estimated at between 5400 km2 and 6000km2.[180]

As the oil producing region in Nigeria, the area serves as the nerve centre of Nigeria's economy. Nigeria's oil production is placed at 2 billion gallons of oil a day; this is valued at about $40 billion a year.[181] In 2011, the country exported 141,127,875.53 barrels of oil.[182]

As the world's eighth largest producer of petroleum,[183] over 80 percent of the revenue of the Federal Government of Nigeria is generated from oil revenue. This revenue represents 90 percent of its foreign exchange earnings.[184]

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[176]See for instance Michael .L. Ross. Nigeria's Oil Sector and the Poor – Prepared for the UK Department for *International development "Nigeria " Drivers of Change* . May 23, 2003

[177]UNDP, *Niger Delta Human Development Report*. (UNDP, 2006) 19

[178]Ibid at 25

[179]Ibid.

[180] See generally, Defining an Environmental Development Strategy for the Niger Delta. *World Bank Report 1995*, 9 Vol 2,May 25, 1995. Adegbehin and L. C Nwaigbo.*Mangrove Resources in Nigeria: Use and Management Prospects. Notes and Resources.* 26 (2) 13 – 21.see also Sayer , Jeffery S, Caroline S Haarloe and N. Mark Collins, *The Conservation Atlas of Tropical Forests: Africa* – New York : Simon and Schuster.1992.

[181]Watts. M Crisis in Nigeria: Oil Curse, *Counterpunch* 2 January, 2007. www.counterpunch.org/watts0102207.html.

[182]See NNPC 2011 Draft Statistical Bulletin available online and accessed on 29 July, 2012 at http://www.nnpcgroup.com/Portals/0/Monthly%20Performance/2011%20ASB%201st%20edition.pdf

[183]See US EIA (United States Energy Information Administration 2007) in Falola, T and Genova. *The Politics of the Global oil Industry*: *An Introduction.* New York: Preager/Greenwood cited in Global Health Watch 2at 174.

[184] See T.A Imobighe Conflict in Niger Delta: A Unique Case or a 'Model 'for Future Conflicts in Other Oil-Producing Countries? In Rudolf Traub-Merz/Douglas Yates *Oil Policy in the Gulf of Guinea: Security & Conflict, Economic Growth, Social Development* (Friedrich Ebert Stiftung, 2004) p 101. See also Watts .M. Righteous Oil? Human Rights, the Oil Complex and Social Responsibility.Annual *Review of Environment and Resources (2005)*, 30:374-407.

Different major multinational oil companies like Agip, Mobil, Texaco, Chevron, TotalElfina, Shell and others in partnership[185] with the Nigerian government(represented by Nigerian National Petroleum Corporation) operate in the region producing crude oil and other allied oil products for the international market.

The exploitation of Petroleum in the Delta has led to severe agitations by people in the area against government and the oil companies: protesting the severe environmental degradation of the area[186] which is a fallout of years of neglect, inadequate regulation and mismanagement of the environment, absence of basic infrastructures and a high prevalence of poverty in the region.[187]

Apart from agitation for participation in the management of the natural resources in the area, the unrest in the Niger Delta is connected with the erosion of the traditional occupations of the local people like fishing, and farming which have been hampered by pollution of the environment through oil spillages and intense gas flaring.

According to Tunde Agboola et al,[188]the neglect has 'resulted in environmental injustice '…this has made local people to believe that the state has failed to protect their lives and property from environmental pollution costs of which are being unfairly imposed on them'.

The agitation which originally started peacefully has been hijacked by militant youths and sometimes criminals who have made the area volatile and dangerous to live in, particularly for the elites and officials of the oil companies who in recent times have been targets for killing, kidnapping[189] and extortion for huge amounts of money as ransom.As a result of the unrest, the government of Nigeria was compelled to announce an amnesty programme[190] which commenced on August 6, 2009 with a sixty day period for the militants to hand over their arms in return for a presidential amnesty, unconditional pardon and reintegration programme. This was after a prolonged negotiation with the militants.

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[185] Different contractual relationships exist between the Nigerian government and the oil companies for the exploitation of crude oil.

[186] Some of the oil related environmental problems identified in the area include canalization, oil spills, gas leaks and flares , deforestation,

[187] Over 70 percent of the people of Niger Delta live below the poverty line. See Global Health Watch 174.

[188]Tunde Agboola and Moruf Alabi. Political Economy of Petroleum Resources Development, Environmental Injustice and Selective Victimization: A case study of the Niger Delta Region of Nigeria. In Julian Agyeman, Robert Doyle Bullard, Bob Evans, Just Sustain abilities: *Development in an Unequal World* (269)

[189] In 2008 alone 300 hostages were taken; and about 1000 are estimated to have been killed in violence related to the Niger Delta militants. See IPS news.net www://ipsnews.net/news.asp?idnews=48029 downloaded on 1 July 2010.

[190]Ibid

The amnesty according to the government[191] 'is part of a holistic programme of building peace, delivering social services, providing basic infrastructure and sustainable development in the Niger Delta'.

Gas emission in the oil industry in Niger Delta can be traced to two major oil operations – oil extraction, and refinery operations. Crude oil extraction takes place in the rural and offshore areas.Oil extraction is usually accompanied by natural gas called associated gas. For effective extraction, oil must be separated from this "unwanted gas" and the cheapest means of disposing this has been to set the associated natural gas on fire. According to Emoyaw et al[192] much of the natural gas extracted in oil wells in the Niger delta is immediately flared into the environment at the rate that approximates 70 million/m3 per day.

This process, known as gas flaring - a major source of gas emission is the practice of oil multinational companies in the region and this has been a subject of criticism and condemnation: because of its negative impact on the environment and the monumental waste of natural resources that accompanies it.

Gas emission from this source includes 'a mix of smoke which contains particulate matters, sulfur dioxide, nitrogen dioxide and carcinogenic substances like benz[a], pyrene and dioxins and unburned fuel components like benzene, toluene xylene and hydrogen sulfide'[193].

The hazardous nature of these gases on human health has been analysed, according to the United States Environmental Protection Agency:[194]

> ***"It has been clearly established and accepted that exposure to benzene and its metabolites causes acute nonlymphocyctic leukemia and a variety of other blood disorders in humans".***

[191] Dr Timiebi Koripamo-Agary, member of the Presidential Amnesty Implementation Committee. IPs news.net. www://ipsnews.net/news.asp?idnews=48029. Downloaded,01 July, 2010

[192] Emoyaw, OO, et al The oil and Gas Industry and Niger Delta: Implication for the Environment. *J .Appl. Sci. Environ . Manage*. September 2008. 30 www.bioline.org.br/ja.Accessed, 01 July, 2010. See also Wikipedia 2007, http://en.wikipedia.org/wiki/environmentalissuesinnigeria/nigerdelta. Moffat.D; Linden O. "Perception and Reality Assessing Priorities for Sustainable development in the Niger Delta".*Journal of the Human Environment 24 No 7-8 327-538.*

[193] See Gas Flaring in Nigeria: A Human Rights, Environment and Economic Monstrosity, Environmental Action/Friend of the Earth/Climate Justice. June 2005 at 24.

[194] Carcinogenic Effects of Benzene: An Update .http://www.epa.gov/NCEA/pdfs/benzene.pdf. cited ibid p.

Related impacts of emission on the environment in the Niger Delta include defoliation of vegetation, killing of fish and corrosion of buildings by acid rain which is directly linked with the oil industry.[195] These impacts have direct and indirect consequences on lives and the immediate environment.

As the number one gas flaring nation, emission from this source is about 46 percent of Africa's total and an estimated 19.79 percent of the total global figure. Economically an estimated $15 million value of natural gas is flared everyday in the Niger delta.[196]

The refineries[197] in Niger Delta are located in settlements that are close to major towns of Warri and Port Harcourt. The Warri refinery in particular is located in the Ekpan community that is inhabited by farmers and artisans.

The Niger Delta situation raises serious questions of neglect, environmental imperialism, coupled with breaches of both domestic and international laws as well as fundamental rights violations.

1.8.9 The South Durban Industrial Basin

The South Durban Industrial Basin is a conglomeration of settlements comprising Bluff, Clairwood, Jacobs, Wentworth, Merebank, Isipingo, Umlanzi and Umboginitwini with a population of about 250,000,[198] located in the Southern part of Durban city.

As one of South Africa's highly industrialized areas, it is equally the gateway for importation of crude oil and exportation of refined petroleum products. In addition to housing two major refineries in South Africa, over 1000 chemical storage containers[199] and about 180 other industries are located in the area.[200] The area which covers an area of about 60 square kilometers [201]'is shadowed by two high lying ridges[202] in the southern part of Durban'.

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[195] Nnimmo Bassey. The Oil Industry and Human Rights in the Niger Delta.*Testimony before United States Senate Judiciary Subcommittee on Human Rights and the Law 24 September 2008* 5

[196]Ibid

[197] There are three oil refineries in the Niger Delta located in Port Harcourt I, Port Harcourt II and Warri , while the other refinery in Nigeria is located in Kaduna in the northern part of the country. Petrol chemical industries are also located in Warri and Eleme in the Niger Delta and Kaduna,

[198]SDCEA-DN Location Project, 2003.*South African country Report: Fourteenth Session of the United Nations Commission on Sustainable Development.* September 2005. Department of Environment and Tourism.

[199]*Environmental Justice Project, 2003-2005 Report*, Legal Resources Centre. 8

[200]Ibid

[201] See Peter Lund –Thomsen, *Corporate Accountability in South Africa: The Role of Community Mobilizing in Environmental Governance*620 citing Nicola Acutt, Voluntary Environmental Initiatives*: Case Studies in the South Durban Petrochemical Industry, South Africa;* paper presented at Oikes PhD Summer Academy 2002,

[202] Wiley .D. Root C, Peak S. Contesting the Urban Industrial Environment in South Durban in a Period of Democratisation and Globalisation in (D)Urban Vortex: South African City in Transition, Freud B. Padayache V

South Durban communities are noted for environmental activism which dates back to the apartheid era. This has been attributed to the discriminatory policies of the apartheid regime[203] in the physical planning of the catchment area which located industries in the area in the midst of the communities.[204] This in turn strained relations between the oil companies and local communities[205] as a result of the environmental burden and the attendant hazards which the presence of the industries particularly the refineries impose on the local people.

Like the Vaal triangle, the area around Rustenburg in the Northwest and Sasolburg, South Durban is identified as one of the hot spots[206] of air pollution in South Africa.

According to the Legal Resources Centre,[207] 'these residents who live in proximity with the oil refineries are forced to breathe in a cocktail of toxic and health damaging chemical emissions from industry, suffer asthma and leukemia rates which health professionals have described as amongst the highest in the world'.

For several reasons, South Durban makes an interesting area of study for this work. for instance different studies[208] have been carried out on the area. In particular studies have been carried on the impact of gas emission on the population and the resistance by the organized residents through effective environmental activism. These activities backed with technical and legal supports from organizations like Legal Resource Center and Groundwork among others have produced reports of reduction in the emission level in the basin.[209]

(eds) University of Natal Press; Pietermaritzburg 223 – 256. Cited in Dianne Scott et al, Something in the Air: Civic Sciences and Contentious Environmental Politics in post Apartheid South Africa *Geo forum 40 (2009) 373 – 382*.

[203]*South African People and Environment in the Global Market: Ground Zero in the Carbon Economy: People on the Petrochemical Fence Line*. Ground work. South Africa. (2002).

[204] See also the testimony of Desmond D'Sa of South Durban Community Environmental Alliance, Environmental Justice Forum: speak out' hosted by Ground work, the South African Exchange Programme on Environmental Justice and International Possibilities Unlimited, August 25, 2001. ibid.

[205] See Peter Lund –Thomsen, *Corporate Accountability in South Africa: The Role of Community Mobilizing in Environmental Governance* p 620 citing Nicola Acutt, Voluntary Environmental Initiatives: Case Studies in the South Durban Petrochemical Industry, South Africa; paper presented at Oikes PhD Summer Academy 2002, 'Sustainability , Corporations and Institutional Arrangement' St Gallen Switzerland.

[206]Legal Resources Centre, *Environmental Justice Project,2003-2005 Report*. 8

[207]Aboveat p 9

[208] For instance air monitoring was carried out by Ground work and US based Communities for Better Environment (CBE), which showed the presence of multiple pollutants- on the official US list of hazardous air pollutants, some of which were revealed for the first time in South Africa. See Ground work op cit at p6

[209]Environmental Justice Project, above at 16.

Equally, the city of Durban is reputed for its environmental monitoring capacity which is ranked top in South Africa. This has been attributed[210] to the work of South Durban Community Environmental Alliance which has created much awareness about the Durban basin.

One cannot but agree with Scott et al[211] that South Durban presents the best case scenario for environmental management in South Africa, as most of the reforms initiated by government in environmental management and governance in South Africa were inspired by the Durban situation.

1.8.10 Oil and Gas Operation

Oil production refers to any activity that relates to any of the different stages of production of petroleum products from crude oil which is one of the fossils. Operations in the industry are generally classified into upstream and downstream activities. These cover activities like exploration, production, terminal operations, hydrocarbon processing plants, oil and gas transportation and marketing.[212]

Upstream operation in the industry entails exploration and production. It is the sector that deals with the search for and production of petroleum in its crude and unrefined form. This operation includes drilling of wells for underground or underwater search for deposits of oil and gas and ultimate transfer to the refinery. Refinery operation is the processing of crude products into finished products or hydro carbons. Oil production in Niger Delta in Nigeria entails all the different stages in the industry, while production in South Durban, South Africa commences from importation of crude oil and refinery operations. Downstream operations cover distribution of the finished products from the refinery to the ultimate consumers.

[210] Dianne Scott, Clive Barnett, Something in the Air: Civic Science and Contentious Environmental Politics in Post – apartheid South Africa. *Geoforum 40 (2009) 373 -382,* www.elsevier.com/locategeoforum377.
[211]Ibid
[212]Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (2002) Part 1 Paragraph 3.

1.9 Limitation to the Study

Some limitations have been imposed on the study either deliberately or in the course of the study. The focus of the work is on the legislations relating to control of gas emission in the two countries. While references are made to some related subjects, this study is limited to the key issues of legislation and gas emission in Nigeria and South Africa, rather than widening the scope. Topical issues like legislation, oil production and environmental protection which are relevant are touched upon instead of deep legal and contextual analysis.

In order to provide a common basis for comparison, control of gas emission in the two locations of Niger Delta area in Nigeria and South Durban in South Africa respectively are adopted for case study. This is informed by the nature of gas emission, as an environmental problem: Gas emission is released into the environment through diverse sources. There is therefore a need to focus the research on a (this) source which is common as major emission sources in the respective countries and equally of concern to the global community on the problem of global greenhouse gas emission. This is adopted instead of a general study of the subject of the petroleum industry in the two countries, as doing so would make the work unnecessarily clumsy and unmanageable for adequate analysis of the main issues.

Another limitation is that there is a dearth of policies and literature on the subject of legislations on gas emission control in Nigeria, whereas in South Africa is no scarcity of materials on the subject matter. The available sources range from information from government departments, professionals, academic literature and the civil society to a dedicated website on the South African Air Quality Information System which has narrowed down the issue of emission from oil industry and other operations.

In terms of field study the research faced limitations of poor or no response at all from the oil corporations in the two countries. The corporations all referred the researcher to their websites and annual reports where they claimed their official positions are stated. The available information on the websites of the corporations gave insight to the positions and initiative of the corporations in respect of the object of control of gas emission from their individual operations. Needless to add the insights and perspectives gleaned from such websites would be too subjective from a reliability and objectivity requirement.

1.10 Structure of the Thesis.

As can be seen already Chapter one has already covered the background and rationale of the study; statement of the problems, aims of the study, research methodology and limitations of the study.

The rest of the thesis is organized along the remainder of the following chapters.

Chapter 2 of the workis a discussion of emission problems in Nigeria and South Africa. In particular the chapter provides insight into gas emission problems in the oil producing areas of Niger Delta in Nigeria and South Durban in South Africa.

Chapter 3 deals with philosophical views about environmental protection. It identifies a universal morality to protect the environment. This is established through a look at environmental protection throughtraditional, cultural and environmental movements across cultures and civilizations over time. The philosophical writings of Jurgen Habermas on communicative action, the public sphere in particular are discussed in the chapter to justify actions and campaigns of the different movements on environment. The philosophical exposition provides a backdrop against which the issues in the thesis are viewed.Emergence of environmental movements in different periods in both South Africa and Nigeria is also examined.

Chapter 4 discusses initiatives and instruments on environmental control measures at the international and regional levels of governance aimed at securing global atmospheric environment. In particular, the emergence and growth of international consensus on environmental protection, climate change and the threat of gas emissions from fossil fuel operations came under review here. The chapter seeks to attain two goals: first to describe the initiatives of the United Nations and other bodies on sustainability of the environment and control of air quality, secondly, to outline the relevant international instruments that South Africa and Nigeria are parties to. The most significant instruments in respect of the topic are examined, while the less relevant ones are merely mentioned. The latter part of the chapter examines the interconnection between human rights instruments and environment and the relevance of the instrument for environmental sustainability and emission control.

Chapter 5outlines and examine the legal frameworks for control of gas emission in Nigeria.The Nigerian perspective is examined through the role of the Constitution of the Federal Republic of Nigeria 1999, where chapter 4 of the constitution contains the Bill of

rights and the other legal frameworks and policies considered relevant for control of emission. The first part of chapter 5 provides the background for the discussion of both countries' legal framework.

In Chapter 6 the pattern in chapter 5 is adopted in analyzing the legal framework for emission control in South Africa. Thechapter outlines and describes the respective legislation of Nigeria and South Africa on gas emission control and air quality management and also gives the current state of the laws on the topic. While it is not practicable to discuss all the legislation on emission control and air quality management in the two countries, effort is made to discuss the most relevant to the topic here.

Chapter 7dwells onthe analysis of emission situations and application of the international and individual nation's legal frameworks towards the control of emission in the two countries. This analysis and subsequent findings prepare the reader for the conclusions and proposals for reform of legislation in the two countries.

The concluding chapter 8 presents the findings and recommendations of the study by way of a contribution to the advancement of air quality jurisprudence in the two countries.

CHAPTER 2

2.0 GAS EMISSION IN NIGERIA AND SOUTH AFRICA

2.1 Introduction

Emission in the environment includes gas and particles that are introduced into the atmosphere through different sources. Gas emission from fossil oil, oil and gas in particular poses a local and global environmental problem. An analysis is done of emission situations in Nigeria and South Africa, i.e. incidents, nature, sources, impacts of gas emission and the challenge that these pose to environmental justice in the two jurisdictions.

2.2 The Challenge of Emission Control

In this study control of gas emission refers to measures or the processes of discouraging, preventing and remedying or mitigating the impact of the discharge of gas into the environment. Control of gas emission through legislation therefore, refers to the process of actively applying the relevant legislative instruments and frameworks to control gas emission in order to prevent adverse health and environmental conditions. This further includes protection for the atmosphere and securing the wellbeing of humans and the environment in general.

In the respective countries,[1] the process of emission control involves the following steps:

(1) Meeting the international commitments of the two countries on emission control.

(2) Attaining each country's individual constitutional aspirations towards securing the wellbeing of their citizens and people within their borders.

(3) Securing and guaranteeing the rights of the individuals and people as enshrined in the different international and national Bills of Rights.

(4) Promoting the enforcement of both primary and subsidiary legislation, policies and voluntary initiatives considered relevant to emission control. Here different

[1] Though each country has its unique challenges, the points raised here are therefore amongst the peculiar and different political, economic and social policies and decisions that are taken on a daily basis by the respective countries.

technical details like nature and type of technologies, location of facilities, mode of production, and level of tolerance of substances are considered.

(5) Ensuring sustainability in the respective industrial activities that generate gas emission and other pollutants.

The above measures, however, place the two countries under the pressure and the challenge of looking beyond economic gain towards complying with measures designed to promote environmental sustainability and the welfare of the people likely to be affected by the industrial activity.[2]

The effect of the measures suggested above is viewed through the two countries' national efforts to control gas emission. It is made manifest in the content, application and the success of the existing national legislation, international agreements, regulations and policies on environment, air quality and gas emission control. They provide essential tools to achieve emission control, environmental protection and sustainability in general.

The significance of the situation in Niger Delta and South Durban for this study should be understood from the peculiarities of the two locations. They are significant first because as locations of industrial activities and petrochemical operations, they are considered crucial to the national economies of the two countries.

Second, because both have sparked similar environmental protest groups and struggles for environmental justice by community members against industrial and oil related pollution.

Third, they are significant in the global environment. Nigeria and South Africa are major contributors to the 400 million tonnes of greenhouse gas emission every year across the world.[3] These emissions are generated by different activities. In South

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[2] The Brundtland commission: Report of the World Commission on Environment and Development: Our Common Future. UN Documents; Gathering a body of Global Agreements. Available at http://www.un-documents.net/wced-ocf.htm. Accessed on 10- 05- 2012.

[3] Global Gas Flaring Reduction Initiative, accessed online on 13 June 2011 at http://www.sustainableenergyforall.org/actions-commitments/high-impact-opportunities/item/28-global-gas-flaring-reduction. South Africa is acknowledged officially by the government of South Africa as "a relatively significant contributor to global climate change with significant GHG emission levels from its energy – intense, fossil –fuel powered economy". See The Government of the South Africa's National Climate Change Response Policy (October 2011) 8 General notice 757 of 2011. South Africa's high profile GHG emission can be attributed to the massive production of liquid oil from Coal in other locations like Secunda and Heghvield sin addition to refinery and other petrol chemical operations in South Durban. Also, different reports point at the massive release of greenhouse gases from the Niger delta region.

Africa, for instance, the electricity, transport and metal industrial sectors are identified as major sources of emission in the country.[4] In Nigeria, on the other hand, different sources of emission have been identified. The emission from Niger Delta has placed a huge burden on the local people and the environment, and as a result it is expected that stringent measures will be made to control emission from energy operations to ensure that the environment is secured from toxic substances.

Fourth, different measures have been suggested or applied towards addressing the problems of air pollution in the areas, particularly in South Durban. The writer is of the view that a solution in one country may be applied in addressing similar situation in the other.

In summary, the factors above provide a basis for the selection of the two locations as a case study for the purpose of analysis of the operation and enforcement of the legislation of the two countries on control of gas emission. The two locations in Niger Delta in Nigeria and South Durban in South Africa are important locations for major industrial activities. South Durban is home to about 300 heavy industries[5] and two major oil refineries which refine petroleum products. Likewise, production of oil and other petrochemicals is carried out in different locations in the Niger Delta region in Nigeria. Thus, gas emission from oil production is a common element in the two locations.

The implications of the impact of the release of the different types of emission from oil and gas operations on the global environment and the local people in the two areas are highlighted and discussed. Issues like environmental justice and violations of the rights of the local people are also raised. What follows is a critical application of the laws of the two countries to the solution of these issues. In particular the research attempts to answer the following issues: the issue of sources, of the state and impact of gas emission, whether there are available legal frameworks, the scope of the constitution and the environmental legislation of the two countries to address the problem of emission, the extent to which the people in the two countries can rely on

[4] Government of South Africa, *Reducing Greenhouse gas emission: The Carbon Tax option* (National Treasury Department, December 2010). Available online at http://www.treasury.gov.za/public%20comments/Discussion%20Paper%20Carbon%20Taxes%2081210.pdf

[5] *Flaring at oil refineries in South Durban and Denmark: SDCEA-DN Local Action Project 2004-2005*: Output 1 (SDCEA) 15

these provisions to safeguard their health, rights and address the risks posed by gas emission, and the level of success of the legislations in the respective countries.

Emission control through legislation, like other environmental issues, involves the application of different internationally agreed norms and principles on the one hand, and national legislation and policies, on the other. National and international standards guide nation states to fulfill their obligations towards the sustainability of the global and local environments, and, thus, ultimately protect their citizens from the diverse problems associated with the pollution of the air medium and the atmosphere.

2.3 Oil Industry and Gas Emission in the Niger Delta

Nigeria boasts oil deposits which were 'at a recoverable reserve of 34 billion barrels'[6] by 2003, while 'over 900 million barrels of crude oil of recoverable reserves have been identified.'[7] Despite the large deposits, with a total of 606 oil wells operational in the Niger Delta area at present, the search for more oil fields is carried on daily in Nigeria with an additional '28 exploratory oil wells'[8] already drilled outside the traditional oil producing area of Niger Delta such as the Chad basin, Anambra and Benue area. The prospect of oil discovery in the northern part of the country in particular is known to be high as the 'sedimentary basin spreads from the southern part upward north along the bank of river Benue up till Chad basin.'[9] The intensity of this search for more oil field discovery in the northern part of the country has been bolstered by the discovery of oil in Chad Republic,[10] Nigeria's neighbour in the northern part. Additionally, Nigeria's rich natural gas deposit is estimated at 159

[6] Nigeria National Petroleum Corporation: Development of Nigeria's Oil Industry. Accessed online at http://www.nnpcgroup.com/NNPCBusiness/BusinessInformation/OilGasinNigeria/DevelopmentoftheIndustry.aspx., on 18 July, 2011.

[7] Nigeria National Petroleum Corporation. Development of Nigeria Oil Industry http://www.nnpcgroup.com/NNPCBusiness/BusinessInformation/OilGasinNigeria/DevelopmentoftheIndustry.aspx visited last on 27, June 2011.

[8] Nigeria National Petroleum Corporation, Development of Nigeria Oil Industry. http://www.nnpcgroup.com/NNPCBusiness/BusinessInformation/OilGasinNigeria/DevelopmentoftheIndustry.aspx. Visited last on 27, June 2011

[9] Madujibeya above note at 284.

[10] Oil was first discovered in Chad in 1967, but commercial exploitation did not commence until 2004 as a result of political unrests and civil wars. See Alexander Karin and Gilbert Stefan, *Oil and Governance, a case study of Chad, Angola, Gabon and Sao Tome e Principe* (Idasa, 2010) 38.

trillion cubic feet.[11] In general, over half of Nigeria's surface area of 357 000 square meters is covered by 'sedimentary basins where oil bearing rocks are located.'[12]

The Niger Delta with its vast vegetation and rich aquatic environment[13] accounts for Nigeria's onshore oil production. Apart from the onshore deposits, Nigeria boasts a large oil deposit through its continental shelf in the Gulf of Guinea[14] which is predicted to be the future leading offshore oil production centre.[15]

2.3.1 Oil Production

Prior to commercial production of oil, Nigeria had a thriving agricultural sector, which was the main foreign exchange earner between the 60's and 70's. Oil production activities that followed the discovery of crude oil in commercial quantity gradually relegated agriculture and other sectors of the economy to a secondary position, while oil became the mainstay of Nigeria's economy accounting for 95 per cent of the country's gross earnings.[16] From a total production of 16,801,892 thousand barrels in 1961[17]there has been a sharp rise in oil production in the country. In 1999, the total production was 773,677,520 barrels, reaching the pick in 2005 at 918,660,619 barrels. It went down from the 2006 figure of 869,196,506 780,347,940.00 barrels in 2009[18] . This is as a result of outbreak of violence and militancy by different groups in protest against environmental degradation and

[11]NNPC, ibid.
[12] Madujibeya S. A, *African Affairs*, Vol. 75, No. 300. (Jul., 1976) 284
[13]Okonta, Ike and Douglas, Orontos. Where Vultures Feast: 40 years of Shell in the Niger Delta. (2001) 33
[14] The Gulf of Guinea 'spans the Atlantic littoral from Nigeria to Angola according to Traub –Merz it includes West Africa (Nigeria), Central Africa (Cameroon, Gabon, Congo, Equitorial Guinea, Sao Tome & Principe), and Southern Africa (Angola) and Chad'.. see generally, Traub-Merz, Rudolf and Yates, Douglas. Oil in the Gulf of Guinea: Security & Conflict, Economic Growth, Social Development. (2004) 12
[15] Gary, I and N Reisch, Chad's Oil: Miracle or Mirage? Following the money in Africa's newest Petro-State (2003, 9). Cited in GroundWork Report 2005, whose energy future? Big Oil against People in Africa, 37
[16] OPEC, Nigeria: Facts and Figures. Accessed online on 13 November, 2013 at http://www.opec.org/opec_web/en/about_us/167.htm
[17] Nigerian National Petroleum Corporation, 2009 Annual Statistical Bulletin
[18] Nigerian National Petroleum Corporation, 2009 Annual Statistical Bulletin. The decline after 2005 was due to obstruction of production activities by outbreak of violence and militancy in protest against degradation of the environment in the oil producing area in Niger Delta.

demand[19] for improvement in living conditions of communities living in the oil producing areas of the Niger Delta.

Today, the different spheres of government in Nigeria depend on oil revenue for public finance. There is a total neglect of other natural resources, many of which abound in the country. Beyond loss of revenue from other sectors, there is a manifest compromise in the regulation of the environmental aspect of the production of oil, hence the continuing problem of gas emission and environmental problems associated with oil such as oil spillages in the Niger Delta region. In addition, the situation is seen by different opinion leaders as unhealthy for the economy of the country. For instance Olusegun Obasanjo[20] views Nigeria's dependence for public expenditure solely on oil 'as unsustainable and unrealistic since oil is non-renewable.'[21]

2.3.2 Ownership and Control of Oil and Gas

By virtue of the Constitution[22] and other statutes like the Petroleum Act[23] and the Land Use Act[24] the ownership of petroleum and other mineral resources in the country is vested in the Federal Government under the Nigerian Federation. This is further reinforced by the listing of oil and gas under the exclusive legislative list[25] under the constitution. The control covers all the mineral resources, including mineral oils and natural gas under the subsoil, upon any land in Nigeria, under or upon the territorial waters, and in the Exclusive Economic Zone of Nigeria.[26]

The situation is as follows:

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[19] This series of uncoordinated violence involved attacks on oil installations and kidnapping of different oil companies officials

[20] *A former President of Nigeria, in* Obasanjo Decries Over dependence on Oil Revenue *available online at http://economicconfidential.net/new/news/national-news/861-obasanjo-decries-over-dependence-on-oil-revenue*

[21] Olusegun Obasanjo ibid

[22] Section 44(3) Constitution of the Federal Republic of Nigeria, 1999

[23] Section 1, Petroleum Act, 1969, 10, Laws of the Federation of Nigeria 2004,

[24] See section 1 of the Land Use Act, Cap L5 Laws of the Federation of Nigeria, 2004

[25] See item 39, second schedule pursuant to section 4 of the Constitution of the Federal Republic of Nigeria 1999.

[26] See Section 1, Petroleum Act, 1969, P10, Laws of the Federation of Nigeria 2004,, Section 1, Land Use Act CAP L 5 2004 Laws of the Federation of Nigeria.

(1) Exercise of control over all oil related issues including the environmental aspects by the Federal Government to the exclusion of other spheres of government, despite the competence of the other spheres to address environmental issues.[27]

(2) Land and other resources are held in trust in the federation for the common use and benefit of all Nigerians.[28]

(3) Individuals and bodies are not capable of owning mineral resources in situ.

(4) The Federal Government of Nigeria can legislate or administer the oil and gas sectors in the federation to the exclusion of other spheres or tiers of government and other bodies.

The exercise of the state power on control of petroleum or oil and gas resources rests heavily on the exercise of governmental power by the minister of petroleum in pursuance of the federal power of control of mineral resources.[29] Under the Petroleum Act[30] the minister grants different types of rights to Nigerian citizens or companies incorporated in Nigeria in respect of oil prospecting and production. The three types of rights which may be granted are an oil exploration licence, an oil prospecting licence and an oil mining lease.[31] These licences are granted in joint venture or other forms of contract, between the Federal Governments represented by the Nigerian National Petroleum Corporation as parties.

The exploration and production sector of the industry is dominated by multinational corporations like Shell, Chevron, ExxonMobil, Total and Agip Eni.[32] However, indigenous producers are beginning to emerge, for instance oil production from this sector is projected to hit 500,000 barrels per day by the year 2020.[33] The non-participation of the Nigerian state in the direct exploration and exploitation of petroleum resources, however, leaves the sector in the hands of major national and

[27] Control of Oil and gas and other natural resources are vested in the Federal government as they are issues on the exclusive list in the Nigerian federation.
[28]Section 1 of the Land Use Act above.
[29] See Section 1, Petroleum Act 1969
[30]Above
[31] See section 2(1) Petroleum Act 1969.
[32] See Amnesty International report: NIGERIA: PETROLEUM,POLLUTION AND POVERTY IN THE NIGER DELTA (2009) 11.
[33] See Oil Production by Independent E&P firms to hit 500000bpd, The Nation newspaper (Nigeria) Tuesday May 27, 2011.

multinational corporations, while the Nigerian state remains, what Omorogbe called, 'a tax collector'.[34]

The implication of the dominance of the multinationals is that the oil majors are self-accounting in practice. Supervision has been difficult particularly in communities around areas of oil production operations and activities. The companies own virtually everything that is needed in the industry, including environmental monitoring equipment.[35] As a result, such companies dictate policies to the government or postpone implementation of government policies at will. State apparatus and machineries are deployed to their services at will.[36] Since government depends on accrued revenue from the industry, the government is always careful not to stifle the "investors". Unfortunately, the multinational operators of these licenses have been blamed for damage to the once bristling good vegetation of the Niger Delta. For instance, the United Nations Environment Programme Assessment of Ogoni Land Report[37] released in 2012 singled out the Royal Dutch Shell and the Nigerian government partnership to blame for the wanton degradation of Ogoni land in Niger Delta for about 50 years. The report identified the huge damage done to the fragile ecological system of the region.

In addition, the report revealed that it would take 25 years to clean up the polluted area and restore the natural environment at an initial cost of $1 billion.[38] Unfortunately, this report came twelve years after 1990 when the Ogonis, one of the largest ethnic groups in the Niger Delta, decried the poor state of the environment, massive damage from oil operations, and its huge impact on the people in the area. The group then alleged that :

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[34] Omorogbe Yinka, The Legal Framework for the Production of Petroleum in Nigeria. *5 Journal of Energy & Natural Resources Law. (*1987) 237

[35] Findings from interviews conducted at the ministry of environment at the Delta State ministry of environment and at the Rivers State Ministry of environment and non governmental organisations established the fact that the government agencies do not have monitoring stations and even appropriate laboratory for analysis of pollutants. The agencies collaborate with the multinational corporations who double as the pollutants for monitoring and most of the times depend on their data.

[36] Several attempts to visit some of the flow stations in Niger Delta were frustrated by stern looking soldiers who on each occasion ordered us the researcher and accompanying community members back. The few accessed ones at Iwherekhan community were carried out through the careful and risky ingenious efforts of the community youths

[37] See the full report.

[38] Vidal J. Nigeria: Oil-polluted Ogoniland could Become Environmental Model, *The Guardian*Tuesday 9August 2009

> ***"...the search for oil has caused severe land and food shortages in Ogoni one of the most densely populated areas of Africa (average: 1,500 per square mile; national average: 300 per square mile)[39]…neglectful environmental pollution laws and substandard inspection techniques of the Federal authorities have led to the complete degradation of the Ogoni environment, turning our homeland into an ecological disaster."[40]***

In the downstream sector, the Nigerian state operates four refineries located in Port Harcourt,[41] Kaduna and Warri. The four refineries boast a total production capacity of 445,000 barrels per day.[42] These are identified later in the work as major sources of emission in the Niger Delta.

As will be seen later, the overbearing position of the multinational corporations counts as a factor in the intractable problem of mismanagement of emission issues and continuing degradation of the environment in general in the region.

2.3.3 Oil Production and Benefits

On the positive side, oil production in Nigeria has brought some benefits to the Nigerian state, particularly in the following ways:

(1) Increased revenue generation for the federal government and ultimately all tiers of government;

(2) Enhanced training and technology transfer and employment for Nigerian citizens; and

(3) Increase in Nigeria's foreign reserves.

As a petrol producing state, Nigeria is a major player in the arena of world energy politics.[43] This status has enabled it to attract tremendous investments in the sector to the advantage of its economy. Huge income was generated to fund most of Nigeria's development initiatives from earnings from oil production and marketing. In

[39] Paragraph 16 Ogoni Bill of Rights Presented to the Government and the People of Nigeria (October, 1990)
[40] Paragraph 17, Ibid

[41] Port Harcourt 1 and Port Harcourt 2 Refineries
[42] Sulaimon Salau, Pangs of rots in the petroleum downstream sector on Nigeria's economy. The Guardian, Wednesday, January 18, 2012. 46.
[43] Nigeria is a member of the powerful Organisation of Petroleum Exporting Countries.

1965, the first refinery with a capacity of 35,000[44] barrels per day was established in Port Harcourt to meet domestic as well as the export demand for petroleum products.

Within a decade after independence, the new nation state found itself in a protracted civil war that lasted about four years.[45] The challenge of reconstruction and national integration that followed was heavily financed from earnings from oil production. As a state Nigeria became active in the industry by the establishment of the Nigeria National Oil Corporation (NNOC) as a mark of nationalisation of the oil production. This was followed in 1977 by the formation of the Nigerian National Petroleum Corporation[46] as a national enterprise and main authority for Nigeria's oil investment and other related activities.

In terms of long term benefits, the discovery and subsequent production of oil in Nigeria has influenced the growth of commerce and oil related industries. The emergent industries in turn produced employment opportunities for Nigerians and contributed to the growth of foreign reserves, investment of increased proceeds in infrastructures and opened a source of energy supply. Nigerians are employed in the different sectors of the oil and gas industries. At the beginning of operations, Nigerians were engaged in menial tasks in the emerging industry. Differing from the past, Nigerians are now trained and occupy different aspects of the industry, though there is still a huge presence of expatriates. The establishment of the Petroleum training institute[47] in Effurum, and the passage of the Nigerian Content Act in 2007 have bolstered the active presence of Nigerians in the industry.

As pointed out above, the main spin off of the oil industry to the fiscus has been increased government revenue and foreign reserves.

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[44]This later increased to 60,000. See, Development of Petroleum in Nigeria: The history of oil industry in Nigeria is as old as the country itself. http://socyberty.com/economics/petroleum-in-nigeria/#ixzz1QNuKklj9. Visited on 1 July 2011

[45] The Nigerian civil war broke out in 1967 and ended in 1970

[46]Cap. N123, LFN 2004 (Decree 33 of 1977)

[47] Now Petroleum University

2.3.4 Oil Production and Emission in Niger Delta

Beyond the benefits highlighted above, the oil and gas industry in Nigeria is a mixed blessing. While the industry is reputed to bring regular revenue to fund the public sector, it has equally brought along with it misery for the large population in Niger Delta. It is often qualified regretfully as a "resources curse."[48] This is due to the unabated environmental degradation which has brought poverty in terms of loss of farmlands, fishing rights and other traditional economic activities. This is in addition to the restive and violent reactions to the degradation of the environment in the region.

Pollution and environmental damage caused by the oil industry have resulted in serious human rights violations. The United Nations Environment Programme (UNEP) specifically identified violated rights in the region to include the 'right to an adequate standard of living which includes the right to food and water and the right to gain a living through work for hundreds of thousands of people.'[49] These violations equally raise the question of environmental justice considering the fact that the environmental burden is imposed on relatively few people within the Nigerian federation.[50]

In this chapter, the release of gaseous pollutants through different types of emission is identified as one of the sources of air pollution in the upstream sector.

[48] Interview conducted in December 2010 at Ekpan community in Niger Delta near Warri Petroleum refinery.

[49] UNEP report above

[50] Majority of the Over 12 million people that live in the oil producing parts of the nine states that constitutes the Niger delta in Nigeria are mostly members of minority ethnic groups in Nigeria, whose means of lively hood rests heavily on peasant farming and fishing activities in the over 140 million populated Nigerian state. (See Bassey Nnimmo, *The Oil Industry and Human Rights in the Niger DeltaA Testimony before the United States Judiciary Subcommittee on Human Rights and the Law* 24 September 2008). The area is one of those identified by the willkins commission in the build up towards the Nigerian independence as minorities whose interest must be protected under the emerging decolonised state of Nigeria. Oil operations in the area have led to the building and installation of different facilities like oil well heads, oil rigs, miles of pipelines, refineries, and many other related facilities that are sources of serious poisonous gas emissions to the area.

2.3.5 Emission from oil upstream activities

Gas flaring is one major source of gas emission in the Niger Delta. At the different flow stations located in different parts of the region, gas is flared regularly in the course of separating oil, water and gases from extracted crude, in order to produce oil. The consequence is that gases like methane and ethane, carbon dioxide, hydrogen sulphide are released regularly from the flow stations in the form of flares.[51] This carries with it numerous negative consequences that impact on the health and rights of the people in the region.

In Ogoni land alone in Niger Delta, there are flow stations in Alesa, Bornu, Bodowest/ Patrick waterside, Ebubu, New Ebubu 1, Elenlewa/ New Elenlewa, Bodo West, Botem, Horo and Ysorla. It is estimated that about 2.5 billion cubic feet of associated gas[52] are flared per day from about 250 oil wells scattered in the Niger Delta Region.[53]

This practice remains unabated despite the huge loss of revenue, because Nigeria's oil fields lack the infrastructure to produce and market associated natural gas. The loss in revenue is placed at US$ 2.5 billion per year by the Nigerian National Petroleum Corporation. In 2010, about 536 BCF of natural gas was flared. This figure represents 'about a third of the gross natural gas produced in the year.'[54]

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[51]UNEP.*Environmental Assessment of Ogoni Land* (2011, United Nations Environment Programme) 45.

[52] Associated gas is gas produced as a byproduct in oil production fields, while non associated gas refers to hydro carbon reservoirs that contain only gas and no oil.

[53] World Bank Energy Section Management Assistance Programme, Nigeria Strategic Gas Plan, *Report 279/04, February 2004* 30

[54] US Energy Information Administration:Nigeria (2012), accessed online 18-04-2013 at http://www.eia.gov/countries/cab.cfm?fips=NI

Gas flaring poses serious threats to human health in the communities, as flares run for 24 hours nonstop in some locations causing serious discomfort like noise and diseases for people living near the sites where flaring occurs.[55] In June 2011, in a petition to President Jonathan, the Environmental Rights Action contended as follows:

> ***"Gas flaring causes acid rain which acidifies the lakes and streams and damages crops and vegetation. It leads to low farm yields and affects the health and livelihoods of the local people. Gas flaring increases the risk of respiratory illnesses, asthma and cancer, amongst other ailments. The flare stack is often located in the heart of the community a few meters away from homes. According to a conservative World Bank report in 2005, Nigeria loses US $ 2.5 billion annually through gas flaring."***[56]

The release of dangerous chemicals into the atmosphere in Niger Delta has not moved environmental policy makers to action despite the fact that gas emission impacts on poor and vulnerable residents. The economic development comes at a high price to health and environmental wellbeing. At the Iwherekhan Community in Delta state, five years after a Federal High Court in Nigeria declared gas flaring illegal and a violation of the right to life and dignity of human persons in the case of *Jonah Gbemireh v Shell Petroleum and others*, gas flaring still continues unabated. Jonah Gbemreh, the plaintiff in the case, expressed the frustrations of the community on the continuous flaring of gas in their community by saying: that –

> ***"It is obvious that the government of Nigeria does not have regard for its own courts, they don't value our lives, if they cannot respect court decision, then my people are hopeless. Who will help us[57]?"***

Many houses in the community have been abandoned by the owners who could not cope with the impact of the gas flaring from the flow station in the community.[58] The Nigerian government has set several deadlines[59] for phasing out gas flaring. The last deadline was 2008. In short, the expected reversal of pollution from this source has eluded the people.

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[55] Amnesty International Report: Petroleum, Pollution and Poverty in the Niger Delta (2009) 36.

[56] *PETITION: FOR A REAL GAS REVOLUTION, STOP GAS FLARING by Environmental Rights Action/Friends of the Earth, Nigeria* on Wednesday, June 29, 2011 at 12:58pm http://www.facebook.com/notes/environmental-rights-actionfriends-of-the-earth-nigeria/petition-for-a-real-gas-revolution-stop-gas-flaring/10150307699038529. (Accessed on 14 -10-2011)

[57] Interview at Iwherekhan community January 2011.

[58] Gathered from interaction with the Iwherekhan Youth Association

[59] The targeted dates being 1969, 1979, 1984 and December 2008

2.3.6 Refinery Emission

The three refineries in Niger Delta[60] produce fuel oil and gasoline, while the Kaduna refinery produces Lube oil with wax, moulding, Tin/Drum, Manufacturing and sulphur making units, in addition to fuel oil and gasoline.[61] All the refineries are major sources of emissions which pose serious threats to human health and environment. Major emissions reported from the refineries include particulates, SOx, CO, NOx, Carbon Black Dusts/pellets (CB Plant), Hydrocarbons (BTEX & VOCS and PAHs), Polypropylene dust (PP Plant), and Chlorinated Hydrocarbon.[62] These particulates and gases are emitted regularly through the flare towers, process heaters and boilers, while hydrocarbons are released through general fugitive emissions from sources like storage tanks, FCCU, boilers and process heaters, blow-down systems, process drains, vacuum jets pump leakages and cooling towers, tail gas from the acid gas treating plant, and the sludge incinerator.

In the liquefied natural gas operations emission of gas and particulate substances are released through boilers, gas turbines, gas process heaters, regasifiers (LNG), process leaks/other leaks at pump seals, vents from compressor seals, pressure reliefs (i.e. flares and vents) and storage facilities.[63]

Refinery emission is widely unreported, as the main discussion about gas emission in the Niger Delta is usually centred on gas flaring activities. A study by Ndiokwere and Ezihe[64] near Warri, the base of one of Nigeria's four refineries, found elevated levels of metal concentrations in soils and plants. They found:

> ***"High concentrations of the metals were recorded in all the samples from the sites close to the emission sources and the levels decreased with distance away from the sources. Considerable amounts of the metals found in the crops and plants were mainly due to aerial deposition."***

The implication of the above is that the people and the environment around the Warri refinery are susceptible to the hazardous emissions from the facility. The disappointment of the community members about the hazards and the elusive

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[60] Located at Warri, Port Harcourt 1 and Port Harcourt 2
[61] see EGASPIN Part V, A. 2.2
[62] See EGASPIN Part V, A. 3.1.1.1.
[63]EGASPIN. Part V A. 3.1.1.2
[64]Ndiokwere, C.L, Ezihe C.A. The occurrence of heavy metals in the vicinity of industrial complexes in NigeriaEnvironment InternationalVolume 16, Issue 3, 1990, 291-295

development of the area is captured in the words of a community leader at Ekpan[65] who lamented as follows:

> ***"After our land was taken as the location of oil facility, there were serious rancour and fight among the villages over claim of ownership of the location because of our expectations that the facility was going to bring transformation and development to our land and people, unfortunately, we did not know that we were struggling for gradual and permanent poisoning of our homeland and generations unborn". Instead of jobs our fishing and faming occupations have been wiped out the release of black and smelly air each time the refinery is in operation."***

Emissions from Warri Petrochemicals and refinery plants are a major threat to the survival of the residents of the surrounding communities. At Uboji, a community of about 4000 people[66] where the refinery and Nigeria Gas Company are directly located, there has been growing distrust and disaffection between the refinery operators and the community over the impact of gas emission from the facilities at the refinery. The community members complained[67] of the pollution of the air medium through the release of poisonous gases and pollution of what used to be a river but has now become predominantly weed as a result of the release of effluent wastes from the refinery into the river. Kuke Edede, a school certificate holder who is the community public relations officer states as follows:

> ***"Whenever the refinery is in operation, there is usually a yellow chemical which is blown into the air, whenever this is blown we usually feel the impact in our breathing and it is usually followed by a serious odious smell."***

Steven Edeki, 64, the village Adviser to Ubeji Community trust said that

> ***"During our childhood, we were happy to welcome the refinery, there were serious fight among communities around here on the ownership of the land where the refinery is located now, we did not know that it was a dangerous thing they were bringing to our land, we the community regret the presence of the refinery in our land."***

There is a clear indication that governments at all levels in the country have abdicated their responsibility to the people of the area. Despite the outcries of the community, government and oil corporations have not given serious attention to the problem of environmental degradation particularly emission problems in the area. Expressing the frustrations of the people of Ubeji, Edeki said:

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[65] Interview with Ugbaye John an elder of Uboji community at Uboji village January 28, 2011.

[66] George Amatesiro Secretary to the council of elders of Ubeji village at an interactive meeting at the village on January 28 2011.

[67] At a meeting with community leaders on a research visit to Uboji Community on 11th day of January 2010.

"We have spoken to several people including the local government and the environment ministry in Sapele, they often come but no report again from them, several independent bodies have also come on their own promising to do something but as usual nothing happens... our people no (sic) good, they no care whether we live or not, even our representatives in the parliament don't come here, they no feel what we feel[68].We have been condemned to our present condition of life, to sacrifice our health and those of our unborn children to support other Nigerians and people in power who are enjoying the money from the refinery."

The community leaders in Uboji noted that they were aware of the need for an environmental audit but that nobody had ever informed them about any audit being carried out since the refinery was built in 1975.[69]

The traditional, social and economic lives of the Uboji community have been impacted by the presence of the refinery in the area. The economic life of the community which is water based has suffered greatly owing to the activities at the refinery through different releases in the form of waste and gaseous emissions into the environment of the village. The community complained that the refinery does not operate a waste management facility with the result that the river in the area, the Obite aja river, and the creeks are used by the refinery as a waste pit ("our river serves as their waste pit").

This practice has serious consequences on fishing which is the main source of food security for the people in the area. The community Public Relations officer lamented that -

"If you eat any fish you will be tasting kerosene or petrol, we cannot drink water from the wells as black water like charcoal would be coming out, we only drink pure water."[70]

The same community public relations officer further voiced concern that the children also could no longer swim in the riverside as they did in the past.

On a visit to the refinery and the surrounding communities in 2012, the House of Representatives Committee on Petroleum, Downstream, called for the immediate closure of the Warri Refining and Petrochemical Company (WRPC) due to the dangerous emission of Carbon Black Soot on the environment. The committee

[68]The state capital of Delta State.
[69] Research meeting with the council of elders of the committee at Ibeju on 11 January 2010.
[70] A local name for processed water that is produced for sale in sachets – pack"

chairman,[71] who acknowledged a 'lingering crisis between WRPC and the Ekpan community', considered the closing down of the plant 'in order to avert imminent health hazards associated with such emission.'

The negative consequences of gas emission particularly from gas flaring in oil production activities in the Niger Delta have been well articulated in the case of *Jonah Gbemre v Shell Petroleum Development Company and Nigerian National Petroleum Corporation.*[72] In the case the court upheld the arguments of the plaintiffs who were the representatives of the Iwherekhan community in which a Shell gas flaring facility is located. They argued that exploration and production of crude oil and other petroleum activities in the Iwherekhan community in Niger Delta seriously pollutes the air, causes respiratory diseases and generally endangers and impairs the health of members of the community. In upholding the claims of the plaintiffs, the court held that these activities give rise to the following:

(1) Poisoning and pollution of the environment as it leads to the emission of carbon dioxide the main greenhouse gas and a cocktail of toxins that affect their health, lives and livelihood.

(2) Exposure to risk of premature death, respiratory illness, asthma and cancer.

(3) Contribution to adverse climate change as it emits carbon dioxide and methane which causes warming of the environment, pollutes their food and water

(4) Health complications like painful breathing, chronic bronchitis, decreased lung function and death.

(5) Reduction of crop production and adverse impacts on their food security.

(6) Acid rain, corrosion of corrugated house roofs by the composition of the rain that falls as a result of gas flaring. The primary causes of acid rain are emission of sulphur-dioxide and nitrogen oxides which combine with atmospheric moisture to form sulphuric acid and nitric acid respectively.

(7) Acidification of community lakes and streams and damages to vegetation.

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[71]Dagugu Peterside in Okojie George (reporter) Reps want NNPC to Shut Down Warri Plant Over Carbon Emission. Leadership in Nigeria 28 May 2012 (online edition) available at http://www.leadership.ng/nga/articles/25942/2012/05/28/reps_want_nnpc_shut_down_warri_plant_over_carbon_emission.html

[72] Suit No FHC/B/CS/53/05.

Earlier in 2001, in the Social *and Economic Rights Action Center and the Center for Economic and Social Rights* v. *Nigeria*,[73]the African Commission on Human and Peoples Rights found that the Nigerian government violated Articles 2 (non-discriminatory enjoyment of rights), 4 (right to life), 14 (right to property), 16 (right to health), 18 (family right), 21 (right of peoples to freely dispose of their wealth and natural resources), and 24 (right of peoples to a satisfactory environment) of the African Charter on Human and Peoples Rights. The Ogonis had complained about environmental degradation and health problems from oil operations in their land in the Niger Delta. They alleged that the Nigerian State did not monitor the operation of the multinational oil corporations.

The uncontrolled daily release of unhealthy gases has been described as 'serious, under reported and so far received little attention from the governments and the Oil Corporations.'[74] The attitude of government has left the people helpless in the face of unmitigated violations of their rights.[75]

As will be discussed later, against the tenets of the Nigerian constitution and its preamble, and its international obligations, the environmental objective under section 20 of the 1999 Constitution and the fundamental rights provisions, among others, a conclusion can be drawn that there is a clear case of government apathy towards gas emission control in the Niger Delta.

2.4 Oil industry and Emission in South Africa

As an emerging economy and leading industrialised country in sub-Saharan Africa, South Africa relies heavily on oil production as one of its energy sources. Though it is not a crude oil producing nation,[76] commercial oil activities in the country date back to 1884 when the first oil import and trading company was established in Cape Town.[77] As a thriving industry, oil operation at present involves

[73] Communication 155/96, http://www.cesr.org/text%20files/nigeria.PDF
[74]http://www.amnesty.org/en/appeals-for-action/oil-companies-and-the-nigerian-government-must-clean-up-the-oil-industry-in-the-niger-delta accessed on 01 - 10- 2011.
[75] Audrey Gaughran
[76] South Africa does not have commercial crude Oil deposit in its territory.
[77] Mbendi Information Services, Oil and Gas in South Africa – History, Accessed online on 29-10-2009 at http://www.mbendi.com/indy/oilg/af/sa/p0010.htm

about 20 million tonnes of imported crude oil that feeds the refinery and petrol chemical operations in the country.[78]

Despite intense exploration in different parts of the country, no crude oil has been discovered in commercial quantity. Only few discoveries of gas have been made, particularly in the South coast of the country.[79] As a result of non-discovery of commercial oil, South Africa's crude oil supply for refinery operations and the export market rely on imports from Saudi Arabia, Iran and Nigeria.[80] Oil activities are carried out mainly in the refineries that are located in South Durban, Cape Town, Sasolburg, Secunda and Mossel Bay. The refineries in Secunda and Mossel Bay depend on coal and gas as primary products while others, such as Calref (Cape Town), Engen (Durban) Sapref (Durban) and Natref (Sasolburg), rely on imported crude oil as basic raw material.[81]

The ownership of the refineries lies with the multinational corporations which enjoy special privileges from the government. Under the apartheid regime, the operations of the refineries were subsidized in order to keep the companies in business. In the post-apartheid era and under the current democratic dispensation, the oil industry remains classified as a national key point.[82] This arrangement has been identified as inimical to environmental regulation of the corporations.

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[78] Oil and Gas in South Africa: Overview. Available online at http://www.mbendi.com/indy/oilg/af/sa/p0005.htm#5 (visited 29 January, 2012)

[79] For instance around Mossel Bay, while few discoveries have been made off the coast of Orange river and Namibian border, exploration rights have been granted to corporations like PetroSA, BHP Billiton and Royal Dutch Shell in the Orange river basin.See generally, Overview of Upstream in Africa, http://www.saoga.org.za/content/overview-upstream-south-africa?destination=node%2F70, Visited on July 02, 2011.

[79]Ibid

[80]Hallowes David, Toxic Futures, South Africa in the Crises of Energy, Environment and Capital (Groundwork, 2011)174.

[81]Ibid.

[82] See National Key Point Act 102 of 1980

2.5 Gas emission in South Durban

The South Durban Basin provides the location of industrial activities in the eThekwini municipality in the Kwazulu-Natal province of South Africa. Apart from being known for oil refinery activities and other industrial activities, the area is equally known as a busy area for international transportation.[83] It is responsible for the production of 60 per cent of the petrol chemical products consumed in the country.[84]

The community is populated by blacks and coloured people who are mostly poorly paid low income earners. The existing population structure in the area is an outcome of the planning system which deliberately positioned low income earners in between industrial facilities during the apartheid days. The local people are thus susceptible to different forms of environmental hazards, particularly from daily emissions of gaseous and other pollutants from the industries.[85]

Since 1960s, the operations of corporations like the Safref refinery, Engen refinery and others have been identified and blamed for massive air pollution, industrial accidents, death of workers through explosions, and systemic poisoning of the local residents of South Durban as a result of pollution from emissions in the area.[86]

It should be observed here that the blacks, as a result of their locations, have consistently been subjected to continuous inhalation of poisonous gases and are disproportionately bearing the burden of pollution from oil production and other products since the apartheid era. This condition thus imposes an extra cost on health, particularly in coping and treating diseases like asthma, severe chest complaints, and cancer,[87] together with other burdens on the residents of the basin.

In response to the South Durban situation, the South Durban Community Environmental Association has successfully sensitised and coordinated the members of the different affected communities in the area. The association serves as a common

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[83] The Durban sea port is a busy international route for maritime activities, while the Durban international airport was recently relocated from the basin.

[84] South African Environmental Justice struggles against "toxic" petrochemical industries in South Durban: The Engen Refinery Case. Accessed 17 January, 2012 at http://www.umich.edu/~snre492/brian.htm1

[85] Observation from the researcher's visit to South Durban in April 2012

[86] Durban South Community Protests against Engen Emissions http://cpp.org.za.dedi279.your-server.de/index.php/news/all-news-by-date/37-cpp-news/120-durban-south-community-protests-against-engen-gas-emissions

[87] Ibid

platform against the release of gas emissions and other pollutants to communities by industries in the area. The activities of the association have drawn attention to the situation in South Durban. The collaboration of the organisation with other groups and organisations like Groundwork, the Durban University of Technology and the eThekwini Municipality has facilitated studies on the impact of air pollution in the basin. In addition, the collaboration has opened channels for monitoring and reporting of incidents of severe emission and emergencies from oil operations in South Durban. For instance, a study carried out to establish the impact of emissions in 2001, revealed a high prevalence of asthma among students in a school in South Durban, i.e. 54 times higher than the international average.[88] The report clearly linked ambient air pollutant exposures with acute change in health status 'among students with moderate to severe asthma'. In addition, an increased case of mental illness has equally been reported in the polluted areas in the basin.[89]

Pointedly, the refineries in South Durban have been linked with the presence of different chemicals like carbon monoxide, benzene, nitrogen dioxide and ground level ozone (O_3) in the locality. These gases and substances are responsible for health related and other issues like fatigue, mental retardation, kidney problems (in the case of carbon monoxide (CO)), cancer (in the case of benzene), inflammation of lungs bronchial lubes, death of plant tissues (in the case of nitrogen dioxides (NO_2), and irritation of the eyes, poor visibility and respiratory problems in elderly people and children (in the case of ground level ozone (O_3).[90]

Apart from the above, these emissions are known to have direct link with climate change[91].

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[88]The Settlers Primary School Health StudySummary of Draft Final Report of 9th November, 2002 (accessed 12-10-2011) athttp://www.h-net.org/~esati/sdcea/positionpapers.html. The study was carried out in Settlers school, South Durban by scholars from Durban University of Technology, University of Michigan, USA and University of Kwazulu – Natal was to determine the relationship between asthma and outdoor air pollution among primary school learners in Durban, South Africa and to investigate whether outdoor air pollutant concentrations of SO2 , NOx ,O3 , TRS, CO and PM10 are associated with increased symptoms of asthma in the study population, available at http://inchesnetwork.net/p2.pdf. (accessed 05 -10-2011)

[89]Ibid, see also SDCEA-DN Local Action Project 2004-2005 35. Available at http://www.h-net.org/~esati/sdcea/appliedmet6.pdf accessed on 05-10- 2011.

[90]Ibid

[91]Thambiran T, Diab RD. A review of scientific linkages and interactions between climate change and air quality, with implications for air quality management in South Africa, *S Afr J Sci. 2010;106(3/4), Art.* #56, 8 pages. DOI:10.4102/sajs. v106i3/4.56

One of the outcomes of the different actions and protests against air pollution in the basin was the introduction of an air quality management programme called the South Durban Basin Multi Point Programme (MPP) by a collaboration of DEAT, Norwegian Pollution Control Agency, South Durban Community, eThekwini Municipality and civil societies like SDCEA and Groundwork. The programme is credited with different innovations that heralded the changes in air quality management in South Durban and ultimately the making of the National Environmental Management: Air Quality Act in South Africa.[92]

In 2004, seven monitoring stations were established in some parts of the area to monitor gases like sulphur dioxide, ozone, nitrous oxide and particulate matters which are regularly emitted from the refineries and other petrol chemical industries in the area. The purpose was to determine the link between emissions and disease in general and to determine the effect of the different gases on the health of the people in the area.[93] Typical of major refinery operations, regular emission of sulphur dioxide in the area has been linked with 'fossil fuel, coal and oil from power plants, boilers and oil refineries'.[94] Further study by Kistnasamy confirmed the emitted gases from refineries as a major cause of respiratory problems[95] in the basin.

In addition to oil production activities, other factors common to both locations tend to exacerbate the problem of pollution. The factors are discussed below.

(1) Air pollution. Air pollution is linked to release of different gases and greenhouse gases from oil prospecting, crude oil production in different oil fields and refinery operations across Niger Delta. On the other hand, air pollution in South Durban comes majorly from emission sources like gas flaring and other emission sources in refinery operations.

(2) Poverty and vulnerability of members of the communities. The local populations in South Durban and Niger Delta are made up of poor and low income earners. Many are often jobless as a result of emission related

[92] Act 39 of 2004
[93] DEAT, South Africa Country Report, Fourteenth Session of the United Nations Commission on Sustainable Development. (September 2005) para5.5
[94] Above note 89
[95] See Kistnasamy Joy, The relationship between asthma and outdoor air pollution among primary school learners in Durban, South Africa available at http://inchesnetwork.net/p2.pdf. (Accessed05-10-2011).

sicknesses. As a result, it becomes clear that unregulated oil production activities bring in train high incidences of ill health that are linked to joblessness as a result of loss of means of livelihood. In Niger Delta, many victims have lost rights and opportunities to carry out traditional occupations like farming and fishing as result of excessive heat from gas flaring that dries up the vegetation and crops. In these areas the impact of acid rains also resulted in the pollution of fishing waters.

(3) Unequal enforcement of laws. The inequitable and inefficient application of laws, regulations, policies and guidelines in the two countries is responsible for the exposure of the people in south Durban and Niger Delta to high volumes gas emission. In both countries, financially able residents are settled in environmentally healthy sites safe from the threats of pollution. For instance locations like Ikoyi, Abuja, Sandton and Cape Town are homes to senior public officials, influential people, and the "very important personalities" who do not experience pollution or gas emission. The later situation can be ascribed to effective enforcement of laws in the areas.

(4) Proximity of oil facilities to the communities. By contrast in South Durban, the two refineries are located close to residential areas and schools. Similarly in the Niger Delta, oil production facilities are located in close proximity to local villages and sometimes directly on farmlands. At Iwherekhan community the blow station for constant gas flaring activities is placed within a distance of 500 meters to the village, while the station is surrounded by subsistence peasant farm lands. The situation therefore calls for action on the part of the different governments to address the issue of gas emission in the locations.

(5) Interlink between emission from the two areas and global climate change

The two countries have been identified by different reports as Africa's largest contributor of emissions to climate change from Africa.

2.6 The Challenge of Environmental Justice in Niger Delta and South Durban

The prevalence and constant release of emission in the two locations point to the failure of government to regulate polluters through effective legislation to prevent pollution and enforce relevant laws where a facility is already in place. Environmental justice seeks to prevent exposure of people, particularly the vulnerable to the risk of pollution and 'other environmental threats before they occur.' It aims to secure equitable access to clean air, water and other natural resources.

Environmental justice requires activism, which is the organisation of different affected communities and civil society to safeguard aggrieved communities against industries and unfair policies or decisions by government agents in the location of facilities that pollute or threaten to pollute the environment. The principle is rooted in equality and emphasises fairness in the distribution of the burden of economic activities in the society.

Beyond the ordinary meaning of environmental protection, environmental justice addresses issues like social justice, human rights and equity. Bullard submits that an environmental justice framework aims at 'uncovering the underlying assumptions that may contribute to and produce unequal protection.' He identifies three categories of equity.

(1) Procedural equity - that is the extent of application of 'the rules, regulations evaluation criteria and enforcement' in environmental issues without discrimination. According to Bullard, certain practices like non-scientific and undemocratic exclusionary practices, public hearings in remote locations at inconvenient times and the use of languages which are alien to the local people are defective and at best compromises consultation and results in defective protection.

(2) Geographical equity: location and closeness of communities to polluting facilities. This is usually identified with decisions on land use and planning in general.

(3) Social equity: race, ethnicity, class, culture, lifestyles, political power and others, which often determine the location of pollution-generating facilities.

Pollution infested locations across the world are often occupied by low income earners who, therefore, are politically not influential.

In particular, Bullard identifies discriminatory practices in 'housing, land use, industrial planning, health care, and sanitation practices' as foundational to the contemporary environmental justice movement. Bullard's view aptly speaks to the situations in South Durban and Niger Delta where poverty and social disintegration are promoted by pollution, ill health, loss of occupation and means of livelihood, lack basic infrastructures.

2.7 Summary

In the chapter, the impact of the release of gas emission in Niger Delta in Nigeria and South Durban in South Africa on people's health and environment through the impairment of air quality and the global atmosphere is discussed. This pollution in turn raises different pertinent issues. These include securing people's wellbeing, access to environmental justice and the constitutionally guaranteed environmental rights, other rights under international conventions and national frameworks in the two countries and control of greenhouse gases associated with climate change.

It is also noted that despite the availability of different legal instruments, emission control has proven difficult and environmental justice weak in the two locations in the two countries.[96] This position is reinforced by continual agitations by the communities and the civil society over recurring incidence of gas emission from the two locations.

The next chapter provides the philosophical basis for the study. It examines the emergence and the growth of the movement for environmental protection. Different positions on environmental protection and the emergence of a universal consensus which have led to the development of the international legal framework and other measures are discussed.

The global move towards a green economy which is based on the principle of sustainable development informs and forms part of the responses of Nigeria and South Africa to address the challenge posed by the problems of the environment and climate.

The problem situation raised in this study indicates that 'despite available legislation and regulatory mechanisms in both countries, gas emission continues to pose a threat not only to the environment but also to the health of the people and economy of both countries.'[97]

It is further observed that meeting the goals of the different laws still poses a challenge. The continual agitations by the communities and the civil society over the recurring incidence of gas emission and other sources of pollution in the Niger Delta and South Durban indicate the inadequacies of the legal provisions to bring about effective control of gas emission in the two countries.

[97] See Chapter 1

CHAPTER 3

3.0 PHILOSOPHICAL VIEWS ON ENVIRONMENTAL PROTECTION

3.1 Introduction

The previous chapter highlighted and discussed gas emission as challenge to humans and the natural environment in the oil production areas of - Niger Delta and South Durban two locations in Nigeria and South Africa. This chapter covers the theoretical background to the study and research literature, and reviews different perspectives on environmental protection and movements for the protection of the environment particularly the atmosphere and climate. The chapter in particular examines environmental protection as a universal morality. By exploring the morality of environmental protection across the world and narrowing issues to the two locations, the chapter aims to give a sharper environmental focus to the foundation of environmental protection in the study. The chapter therefore aims to provide a backdrop against which the issues in the thesis are assessed.

This chapter aims to highlight the general agreement on environmental protection, the emergence and growth of environmental movements, the morality of environmental protection as a value common to various cultural and religious practices and faiths. It discusses the growth of the environmental morality among nations, the development of international consensus on environmental protection on global challenges from issues like climate change and the threat of gas emissions from fossil fuel operations in the two countries under review.

The first part discusses air quality and clean air as an essential support for life and further discusses environmental protection in general as a value across different religious practices and cultures. It discusses the position of Buddhism, Hinduism, Christianity, and Islam on environmental protection. The part also examines particular cultural practices on environmental protection. The relevance of the views of Jurgen Habermas, in particular his views on communicative action and the influence of the public sphere in matters of environment, are pointed out. The next part explores environmentalism and the movements for the protection of the environment. It

acknowledges the writings and activities of James Audubon, Waldo Emerson, Henry Thoreau, and Rachael Carson in the shaping of the environmental movements of the different eras.

The chapter seeks to achieve two goals: first, it seeks to establish that environmental protection is universal and common to human societies and organisations worldwide. Secondly, it provides a chronologic or historical foundation for the study by analysis of the emergence of environmental movements in different societies and ultimately highlights the current campaign at the global level against green house gas emission from fossil production through identification of the soil production industry as a major source of release of gas emission into the environment and global atmosphere

3.2 Environmental Protection as a Value

Environmental protection as a value is common to mankind. It is a universal morality to protect the environment. This morality has been demonstrated over the ages at different times and levels of the human societies. From the small family unit through communities, provinces and nations up to the global level, humans have acted evidently in favour of environmental protection. The morality in this context manifests in international treaties, domestic laws and policies, religious and cultural practices, environmental movements and actions of different nation states in their domestic policies and international relations.

Philosophers like Hare are in agreement about all systems treating certain moral terms alike in an evaluative sense[1].

Noam Chomsky states that:

> ***"….one of the, maybe the most, elementary of moral principles is that of universality, that is, If something's right for me, it's right for you; if it's wrong for you, it's wrong for me. Any moral code that is even worth looking at has that at its core somehow."***[2]

[1]Hare, R.M, Marvin, Hare, *Sorting out Ethics* (Oxford University Press), 2002

[2] Chomsky Noam, *Terror and Just Response*, ZNet, 02 July 2002, www.chomsky.info/articles/20020704.htm(accessed 10-07- 2010)

Kennedy,[3] writing along this line is of the opinion that '…to protect nature is to follow a moral path'.

These precepts impose responsibilities on every person to be his neighbour's[4] keeper and protect the environment. This responsibility, according to Cregan '…stems solely from how our actions would and do affect others.'[5]

3.3 Religion and Environment

Most faiths and religions across the world support environmental protection. They hold strong doctrines on nature conservation, by treating the environment, and in particular the earth, as sacred. In some religions the art of nature worship is seen as an integral part of faith.[6]

Realising the important place of religion in environmental protection the Harvard Project on Religion and Ecology[7] in 1998 embarked on a three year project. As part of its findings the project called for greater participation from the world's religions in helping to solve the global ecological crises.[8]

A 2004 survey across major religions in the United States showed that 55 to 70 percent of respondents across major religions were in support of '…strong regulation to protect the environment even at the risk of losing their jobs or higher prices for goods.'[9]

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[3]Robert F. Kennedy, Jr. *Nature: A Real Moral Value*http://www.alternet.org/environment/20937?page=1-2 (accessed 06 -08- 2010)

[4] By neighbour here we mean other species apart from mankind in on the earth.

[5]Cregan Joseph.Morality, Responsibility and the Environment at http://www.veritymagazine.com/May2006/Morality_Responsibility_and_%20the_Environment.htm (Accessed 06-08-2010)

[6] See also Verma Nandita, Religion : A Savior for Environment with Particular Emphasis on Hinduism www.iitk.ac.in/.../Context%20and%20Human%20Resource-04-Nandita%20Verma.pdf.pg (accessed 17-09-2010)

[7] The project which began in 1996 was hosted by Harvard University Center for the Study of World Religions, see http://www.nyo.unep.org/harvrel.htm. (accessed 110-7- 2010)

[8]Ibid..

[9] See The Pew Forum (2004) Religion and the 2004 Election: A Pre-election Analysis, available at http://www.pewforum.org/uploadedfiles/Topics/Issues/Politics_and_Elections/green-full.pdf (accessed 18 -10 2012)

3.3.1 Buddhism and Environment

As a religion and philosophy Buddhism is dominant in the eastern world in countries like India, China, Korea, Japan, Central and South East Asia. In those countries it influences the lives and affairs of the devotees. One of the cardinal doctrines of Buddhism is that a devotee must overcome the desire for pleasure and pursue a simple living.

The ancestors, according to the Dalai Lama[10], viewed the earth as 'rich and bountiful.' The Dalai Lama acknowledges the crisis in the environment as 'destruction of Nature and Natural resources' which emanates 'out of ignorance, greed and lack of respect for the earth's living things'. According to him 'there is a universal responsibility to have feelings for others... all beings want the same thing that we want; this is the way to achieve a true understanding unfettered by artificial consideration.' He instructs that:

> ***"(j)ust as we should cultivate gentle and peaceful relations with our fellow human beings, we should also extend that same kind of attitude towards the natural environment. Morally speaking, we should be concerned for our whole environment."***[11]

According to Keown[12], the pursuit of 'lifelong virtues such as wisdom and compassion' is fundamental to attaining human perfection in Buddhism.

The famous sermon on Buddhism by the son of Emperor Asoka recorded in the ancient Buddhist chronicles[13] is a clear statement on the position of Buddhism on environmental protection. In the sermon he declares that:

> ***"…the birds of the air and the beasts have as equal a right to live and move about in any part of the land as thou. The land belongs to the people and all living beings; thou art only the guardian of it."***

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[10] See *Humanity and Ecology"*, The Office of His Holiness the Dalai Lama. 1988 http://hhdl.dharmakara.net/hhdlspeech.html#environment (accessed 07-08-2010)

[11] *Ibid..*

[12] Keown Damien, Bhuddism and Ecology: A Virtue Ethics Approach. *Goldsmith Research online*, http://eprints-grogold.ac.uk/136/. (accessed 13-08-2010)

[13] (The Mahavamsa, or the Great Chronicle of Ceylon, Chap. 14, quoted in I.C.J., Case Concerning the Gabçikovo-Nagymaros Project on the Danube, Sept. 25, 1997, Sep. Op. of Judge C. Weeramantry, n. 44) cited in Dinah Shelton and Alexandre Kiss, *Judicial Handbook on Environmental Law*, UNEP, (2004),p4

Buddhist teaching of austere living is a great impetus to environmental protection, since uncontrolled and unsustainable production is a bane of the environment; producing what is not essential for living just for the purpose of affluence is a clear threat to the principle of sustainable development.

3.3.2 Hinduism and Environment

Hinduism is driven by a strong ecological doctrine. Fundamental to Hinduism is the teaching that God, the Brahman, is in everything and that 'divine forces sustain all biological life on the earth'.[14] In order to please God, it is therefore essential for humans to live in harmony with God's creation, which according to Verma[15] includes the earth, rivers, forests, sun and air. While man's right to exploit the natural resources in the environment is not denied by Hinduism, humans are expected to use the earth as efficient managers based on their awareness of the teachings of Hinduism. The highest worshipper of God according to the Bhagavata-purana loves God by loving His beings.[16]

3.3.3 Christianity and Environment

Christianity does not dispute that man has dominion over the resources of the earth. This right is however expected to be exercised in line with several duties and obligations contained in the Holy Bible. Among the obligations is a duty to 'preserve the earth'.[17]

Right from the beginning of creation, God's love for nature is revealed by his 'planting a garden eastward in Eden' and 'putting a man whom He formed'[18]in the garden. The clear mandate of man in 'the garden of Eden' was to 'tend and keep the

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[14] Nandita Verma. Religion: A Saviour for Environment, with Particular Emphasis on Hinduism. http://www.iitk.ac.in/infocell/announce/convention/papers/Context%20and%20Human%20Resource-04-Nandita%20Verma.pdf (accessed 06-08- 2010)
[15] *Ibid.*.
[16] "Hinduism" *Encyclopaedia Britannica. Ultimate reference suite Chicago: EncyclopaediaBritannica* 2010.
[17] Genesis Chapter 2, Verse 15. *The Maxwell Leadership Bible – New King James Version* (2007) p6
[18] Genesis chapter 2, verse 8 *The Maxwell Leadership Bible – New King James Version* (2007) p4

garden.' This passage shows that Christianity imposes an obligation on Christians to preserve the environment, particularly its wild life.

Man's stewardship in the environment is God's own way of establishing His control and influence on His creations. Since the human being was created in God's image, the human is the only creature that can feel and understand God's concern over other creatures on the earth. It is therefore the position of Christianity that man's dominion over the earth is a position of trust, since humans are expected to account for all their deeds to God.

God's love and concern for other creations in the environment are demonstrated through different injunctions in the Bible. For instance the book of Deuteronomy[19] provides that:

> ***"If a bird's nest happens to be before you along the way, in any tree or on the ground, with young ones or eggs, with the mother sitting on the young ones or eggs, you shall not take the mother with the young; you shall surely let the mother go..."***

Equally, the Bible contains different reasons why God created the earth (environment) which presupposes adequate care and protection by the human being as the steward. Some of these are identified[20] as the need to meet man's basic needs, as contained in Genesis 2:16 ('of every tree of the garden you may freely eat') [21], and to glorify God ('For since the creation of the world His invisible attributes are clearly seen, being understood by the things that are made…') [22]

The Catholic Pontiff, Pope Benedict the IX at a Vatican Conference on climate change expressed this morality when he urged bishops, scientists and politicians to 'respect creation' while 'focusing on the needs of sustainable development.'[23] A Biblical agenda for sustainable development is clearly provided for in the book of Exodus[24] where plot rotation was clearly handed down as a practice to the people of Israel. The passage provides:

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[19] Chapter 22, verse 6, see *Maxwell Leadership Bible New King James Version* at p 228

[20]Bergstrom John C. *Principles of a Christian Environmental Ethic: With Applications to Agriculture, Natural Resources, and the Environment.*www.leaderu.com/science/bergstrom-enviroethics.html. (accessed 30-09-2010)

[21] John C Maxwell, Tim Elmore, (eds) *The Maxwell Leadership Bible* (New King James Version) p 4

[22] Romans 1: 18 -20

[23] Vidal John, Kingston, Tom , *The Guardian,* Friday 27 April 2007. http://www.guardian.co.uk/world/2007/apr/27/catholicism.religion. (accessed 30-09-2010)

[24] See Chapter 23 verse 10 – 11.

> "Six years you shall sow your land and gather in its produce but the seventh year you shall let it rest and lie fallow..."

In modern agriculture shift farming is usually adopted to preserve the fertility of the soil.

3.3.4 Islam and Environment

Though it originated from Arabia in the Middle East, the Islamic religion is a popular religion on earth. The Muslims believe that Allah is the only God, the creator, sustainer and restorer of the world. The Quran, the holy book of Islam, is not only a religious book but also provides a legal code to every Muslim. The corruptible nature of the instinct of man in distinguishing between evil and good is a basis for the application of the Islamic legal code towards defining the correct attitude to the environment and other problems[25].

The Islamic religion carries strong teaching on environmental protection. According to Izzi Deen[26] environmental ethics in Islam is based on a legal foundation, the Sharia 'which is held to be formulated by God', and 'human nature, which was imparted unto man at creation.'[27]

The belief in Islam is that a Muslim, like any other human may 'escapes human laws in his dealings with the environment, but he cannot escape the watchful eyes of the divine warden.'[28] Since God is the creator of all things, whatever He created is not in vain he has not created the heavens and the earth and all that is between them carelessly. [29] Islam dictates that for man to enjoy the benefits of God's creations, he must 'preserve, protect and promote their fellow creations.'[30]

From the above, it may be concluded that God frowns at wastage and willful destruction of resources. The current spate of over-exploitation of the environment and unsustainable means of development which are responsible for environmental disasters

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[25] Mawil Y. Izzi Deen (samarrai) Islamic Environmental Ethics, Law and Society. J.R Engel and J. G Engel (eds) *Ethics of Environment and Development* www.nur.org/.../IslamicEnvironmentalEthics.html (accessed 30-09-2010)
[26] *Ibid*..
[27] Citing Surah 91- 7- 8
[28] Ibid.
[29] Qur'an Surat ad-Dukhan (44), ayahs 38 -39, cited in Bagadar,A.A etal. Environmental Protection in Islam (Second Revised Edition) *IUCN Environmental Policy and Law Paper No 20 Rev*. P.1.
[30] Ibid.

in different parts of the world, particularly in the oil producing areas, cannot be justified under Islam.

In the Quran[31] Allah enjoins:

> ***"O children of Adam! Look to your adornment***
> ***at every place of worship and eat and drink,***
> ***but be not prodigal Lo He loveth not the prodigals."***

The act of drinking and eating in the above passage according to Izzi Deen refers to the utilization of resources[32], which according to the injunction is subject to control. The root of environmental sustainability in Islam is based on the premise that life is maintained with due balance in everything. In all, man is just a maintainer of the earth and does not have sovereign control, since the provisions on earth were not made for human kind alone. God's provisions in the earth are meant for the animals as well[33].

Islam holds an unequivocal position that environmental sustainability and conservation of the natural environment is a commandment of 'God, the Lord and Sustainer of all beings.'[34]

3.4 Environmentalism as an African Value System

The basis of the African respect for and duty to preserve the environment, including to earth's crust, is ontological. Ontological means that for the African reality, all items from non-biological stone matter to the highest human being are populated by a collection of forces. If reality is suffused with this indivisible energy called forces, it follows therefore that the earth too participates in the unbroken chain of reality. Within each realm of reality there is an unbroken continuity of forces, for instance the protection of the rivers against the degradation of polluters has a domino effect over all forms of the material.

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[31] see Surah 7:31 Qur'an above.

[32] Ibid.

[33] This point is made clear in Surah 79:30-33: *"And after that He spread the earth and produced there from water thereof and the pasture thereof, and He made fast hills a provision for you and for your cattle*." Cited in Izzi Deen above

[34] Qur'an Surat ad-Dukhan *op cit* note 32 p 29. It bears mention that the apparent absence of agitations against oil corporations in the Middle East which is well endowed in oil and gas resources attests to the success of the application of the Islamic legal code in the region.

The unbroken continuity in the line of forces plays itself out in the same way in the human domain. There is continuity between the spirits of the living and the dead, of those who are living in the present and of those who are yet to be born. For the Africans, earth is an inheritance bestowed by the creator to humans to help the living sustain themselves as Adam and Eve did in the Adamic garden. As a result, in inhabiting the earth the human subject has a custodial duty to preserve the earth, not to despoil it. The consequence of this ontological system is that land is never the exclusive property of any one person or character. It belongs to all who live in it. Thus, all human beings are temporary custodians of the earth and have a duty to preserve it not only for the benefit of the living and dead but also for the benefit of those still to be born. As a result of the African ontological orientation, the preservation of the environment comes naturally to African communities. [35]

Local people observe values, knowledge and practices that are crucial to environmental management. Some of these are however not expressed in the form of environmental treatises or codified law. They are observed through customary norms, conventions and usages. Others come in the form of oral traditions that guide conduct.

Many customs and environmental practices of the indigenous people across the world have become objects of historical research. Unfortunately many of these have given way to the more complex and technical legal regimes imposed by modernity. Many customary laws, customs and practices of the native people are fully integrated for the protection of the natural environment and its resources.

Customary law and practice rest on long given or implied consent of a people and has its own means of enforcement well entrenched in it, existing in the mind of the members of the community or group of people who are subject to its rule. It operates as a localized set of standards and rules guaranteed by existing local authorities and even a legal system[36] in the country. For instance in Kenya, the court in the case of *Abdilkadir Sheika Hassan and others v Kenya Wildlife Service*[37] in an action on behalf of a community to restrain the defendant who operates under an Act of Parliament from

[35] Ndaba, WJ. Environmentalism for an African value system (unpublished essay)
[36] The high Court laws of states in southern part of Nigeria provides for the application of customary laws that are repugnant to natural justice, equity and good conscience. See for example High Court law of Ondo State of Nigeria.
[37] Civil Case No. 2059 of 1996, High Court of Kenya at Nairobi.

removing Hirola, a rare animal from a particular location described as its natural habitat. The Court noted that 'according to the customary law of the people, those entitled to the use of the land are also entitled to the fruits thereof including the fauna and flora.' It held that 'the respondent would be acting outside its powers if it were to remove any animals/flora from their natural habitat.'[38]

The Sasi custom in the Hanuku society in the Maluku Island of Eastern Indonesia, an area that is popular for its rich coral reef and fishing activities, is integrated in the people on the Island. The custom is reputed for the efficient management of the resources on the island[39] with different features like categorization of laws for the protection of natural resources, conservation and protection laws. social habits, human values and enforcement. The enforcement department is headed by the Kewang[40], while the Kwang Elizza Kissya as the guardian of the Sasi laws[41] must have adequate knowledge of the village eco system[42]. He has the power to suspend harvesting of natural resources[43] whenever the ecosystem is under threat or particular species is under threat.[44] He may reopen the ecosystem for people to harvest enough to last the period of another closure. Violation of Sasi laws is met with punishment that ranges from a fine to caning of a child offender.[45]

Awareness about environment has been elevated to its peak in modern time. However it is important to acknowledge that environmental protection historically began with nature conservation. In most local communities in Africa, particularly in the western and eastern part of Nigeria, communities regulate interaction of their members with nature. Some forests are designated for religious purpose. Hence they are forbidden for activities like hunting or felling of trees. Transgression of such rules is usually met with serious sanctions. In some areas in the Ilaje part of Ondo State in Nigeria fishing is restricted under the customary law of the area to certain rivers or

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[38] See also UNEP's Compedium of Summaries of Judicial Decisions in Environment-Related Cases (UNEP, 2005) 4.
[39] See Moluccas International Campaign for Human Rights. http://www.michr.net/sasi-systemmdash-an-indigenous-way.html.
[40] Ibid.
[41] Ibid.
[42] Ibid.
[43] Ibid.
[44] Ibid.
[45] Ibid.

waters. A clear advantage of practices like this is the automatic sustainability of certain species of plants and animals in these environments.

Having pointed out the above, it is concluded that the degradation of the environment is anti-human, as it amounts to a disturbance in the harmony between the earth and human world, between the living and the dead and among the various vital forces in the hierarchy of forces.

3.5 Habermas' Critical Hermeneutic Theory

3.5.1 Introduction

To bring clarity and a critical hermeneutic element to the current investigation, the ensuing analysis and related arguments below should be understood against the critical teachings of the Neo-Marxist scholar Jurgen Habermas.[46]

Before spelling out the function and value of his critical thought in relation to the environmental crisis in the Niger Delta and Merebank in South Durban, it might be useful to place his critical theory in the context of social justice generally and law in particular. It bears mention right from the start that issues relating to environmental legislation emerge from debates relating to environmental degradation, quality of life and the economy. As a result environmental issues consequently relate to socio-legal issues of human rights, welfare of civil society, the state, governance and law.

3.5.2 Habermas in Historical Perspective

Habermas is an important and influential thinker of the Frankfurt school of critical theory.[47] His extensive writings cover a wide variety of topics such as social political theory, aesthetics, epistemology, language, philosophy of religion, sociology, communication theory and theology, to name but a few. But it is in relation to his theory of communicative action that his critical theory acquires relevance for the topic

[46] The question has been asked whether Habermas is a Marxist. It has been pointed out, correctly I think, that Habermas is not an orthodox Marxist in the sense that Habermas has taken issue with Marx's uncritical scienticism and dogmatism. One of Marx's errors, according to Habermas, is to see historical change as a function of the forces of production and to regard labour as the only basic category and force in social evolution. (see Devine E, Held M, Vinson J, *Thinkers of the Twentieth Centur*y. Firethorn Press, London 227).

[47] Devine E, Held, M, Vinson, J *et al*, at 226.

under examination. Before going into detail into his theory of communicative action as it relates to his theory of law and environmental justice proper, it might be useful to understand his epistemological orientation in so far as it throws light on his views on the validity of our knowledge claims.

Habermas is critical of the human sciences which uncritically adopt the methods of the exact sciences. An entry into Habermas' epistemology should begin with his critique of positivism. His critique of positivism is a decisive break away from the human sciences which uncritically copy the methods of the positivistic natural sciences. In his rejection of positivism Habermas points out that a one-sided interest in scientific objectivity makes social science researchers tend to separate themselves from the social phenomena they research. As a result they end up investigating the social world from the subject-object dichotomy. According to him such scholars will always fail to locate their research activity within the context of the human life world they live in. For Habermas that failure results from forgetting that as a subject the researcher himself is still part of the social reality he is studying, both in respect of his theoretical orientation and practical interests.

Habermas' social theory is critical of the repressive monopolistic society of the present technological period.[48] In the context of the German social reality, he has known and experienced, he ascribes the problems and conflicts which have arisen in Europe's present technological civilization to the partnership that has been forged between the state (public administration) on the one hand and the leaders of business (economic sector) on the other. He sees such a partnership as a conspiracy or collusion that is retrogressive because it compromises the political management of environmental issues as long as the partnership purports to serve the sectorial interests of those who want to dominate. The interest Habermas refers to is that of those who stand to benefit from the ever increasing accumulation of profits from the operation of giant multinational corporations. According to him the large financial allocations made by the leaders of business remain suspect as long as business stands to gain from a silenced, co-opted and pacified government prepared to ignore environmental destruction and

[48] Habermas J : *The Theory of Communicative Action*, Vol. 1 translated by Thomas McCarthy, as *Reason and the Rationalisation of Society* (Beacon Press, 1985) 95

irregular weather patterns which unleash atmospheric conditions that in turn lead to cataclysmic conditions. [49]

Faced with these burning issues of worsening environmental conditions, Habermas takes upon himself issue with governments who do not use the increased profits from oil to improve the living conditions of the citizens. For instance, by providing better transport facilities, better public amenities such as schools, hospitals, clinics and libraries as well as water and electricity and related developmental infrastructures. Though he makes this critical observation, Habermas is not specifically referring directly to Nigeria or South Africa as political entities. Yet the observation remains insightful because it reflects the reality of many societies the world over, more definitely those in Africa.

In reacting critically to the affiliation of the public sector and big business, as he sees Europe, Habermas raises a concern that is at the forefront of the life experience of many marginalized and poor human settlements in most so-called emerging economies such as the communities in the Niger Delta and Merebank south of Durban.

3.5.3 Critique of Positivism

In *Knowledge and Human Interests* Habermas undertakes a critique of positivism in a way that makes a break with methodologies that seek to manage the object of social knowledge along law-like and predictable regularities. To correct the presuppositions and foundations that shape our self-understanding of knowledge, Habermas maintains that there are three knowledge constitutive interests. For him each domain of knowledge is expressed in a particular type of scientific cognition that is rooted in human existence. This means that different types of scientific cognition are tied to the three different types of human interests[50].

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[49] Nkosi M.G: *Ubuntu, Community and Nature: ethical reflections on environmental damage in an African Context*. (An unpublished Master's proposal at the University of Zululand, Stud No: 19690143-2011). It is no surprise that Nkosi rightly observed that in the world in general, and particularly in Africa, widespread desertification now encroaches upon once pristine and arable land surfaces. Prolonged droughts and sweltering heat drain life from biological species. Greenhouse gases and the destruction of the ozone layer threaten the planet earth. New diseases such as HIV and AIDS attack mankind uncurbed as a result of the slow development of inadequate effective drugs. As a result diseases continue to decimate millions of people, particularly in Africa.

[50] Habermas J : *Erkenntnis und Interesse* translated into English as *Knowledge and Human Interests*

The first is the *empirical-analytic* knowledge which aims at the prediction and control of the natural environment. A good example is physics which aims at the formulation of general laws. But to physics can also be added certain types of social sciences which aim at testable general explanations. The human interest linked to this type of knowledge is called technical because the empirical-analytical enquiry is motivated by the desire to manipulate and control the natural environment.[51] Applied to the present investigation, the empirical-analytic domain of knowledge fits the oil explorations and gas flaring operations in the Niger Delta region in Nigeria as well as production of petrol in Merebank, Durban South Africa.

The second is the *historical-hermeneutic* sciences. The interest that guides this type of inquiry is called practical. It focuses on the analyses of texts and human action. Since this interest is practical, it involves understanding communicative action including an analysis of what lies behind a speaker's self-understanding and the norms and rules of communicative action[52].

The third domain of knowledge is the so called *critically oriented* sciences and philosophy. The interest that guides the critically oriented sciences is the emancipatory interest. As examples of the critically oriented sciences Habermas mentions psychoanalysis and the critic of ideology. As can be seen, the critic of ideology reflects Habermas' own relationship to the Neo-Marxist thought. The objective of psychoanalysis and the critique of ideology is to expose the forces and motivations of private interests that hi-jack communication through distorted communication. Habermas argues that under such conditions the emancipatory interest of reaching true consensus in society, unclouded by outside pressures, becomes difficult to attain. [53]

All the above three interests in Habermas' writings point to three aspects of the human's relationship to the natural and social environment as well as development in history. His position debunks the positivists disregard for the tendency of special interests to dominate the society towards promoting narrow or class interest. An example of this tendency is the emerging overwhelming influence of multinational

[51] Devine E, Held M et al: *Thinkers of the Twentieth Century* 226
[52]Ibid.
[53]Ibid at 226.

corporations in the developing countries world which subjugates the political wills of governments in these countries.

As it will be demonstrated in the next section a plan to bring about justice and true emancipation in society by Habermas advocates his theory of communicative action. Analogous to Habermas' theory of communicative action is the African idea of continuous dialogue until collective consensus is reached.

3.5.4 The Main Lines of Habermas' Critical Theory

The ensuing section will give a summary of the main lines of Habermas's critical theory. In the interest of convenience and analysis of his profuse thought, the exposition is broken into three distinct but interlinked pieces of critical theories. These pieces of critical theory are:

1. His theory of communicative action;
2. His idea of law from the perspective of the theory of communicative action;
3. His theory of communicative action in relation to environmental policy.

The section will end with an indication of the relevance of Habermas' theory of communicative action in relation to the rationality of public involvement and participation in public policy formulation in South Africa.

3.5.3.1 Habermas' theory of communicative action and the idea of life world

In Habermas' critical thought the concern with emancipation is central. He is critical of tendencies and practices prevailing in the public sphere that tends to subjugate individuals as free human beings.[54]

Similarly, he decries the forces of bureaucracies and capitalist accumulation that combine to bring pressure to bear on the modern life world. His idea of the ideal life world is one where people are enabled to act as free and competent subjects in harmony with their social environment.

[54]Gadamer H-G: Truth and Method (translated from Warheid und Methode)

Unfortunately, there cannot be reference to an ideal life world in communities destabilised by gas flaring as in Niger Delta, or where environments have been spoilt or degraded by oil spillages.[55]

A clarification of Habermas' idea of *rationalisation* throws light on the emancipatory project of a theory of communicative action. According to Habermas the idea of *rationalisation* is a process by which claims to truth are increasingly exposed to rational criticism and discussion in contrast to validity claims which society is expected to mechanically accept on mere faith. This means that for Habermas communicative action is crucial for the emancipatory process because communicative action enables society to subject the claims of tradition as well as those in power to critical scrutiny. Discursive communicative action is able to challenge tradition and executive authority to justify themselves. [56]

Habermas identifies five conditions of communicative rationality. These are that in an ideal communication with others the participant is –

- Treated with respect;
- Enabled to express views, beliefs and values freely;
- Able to listen to others and in turn be listened to;
- Enabled to rationally argue for and to defend his or her beliefs, values and interests; and
- Enabled to participate as an equal in any decision or action affecting him or her.[57]

From the above theory of communicative action as a starting point, Habermas is able to articulate a theory of law which is ideally suited to respond to the exigencies of modern society where traditional sources of legal authority and legitimacy have broken down.

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[55] Compare M Deflem: Law in Habermas's' theory of communicative Action, 274. Available at http://www.javeriana.edu.co/juridicas/pub_rev/documents/11Deflem.pdf (accessed 12 -03 2010)

[56] Ibid.

[57] Habermas, Jurgen. *The Theory of Communicative Action, Volume Two: Liveworld and System: A Critique of Functionalist Reason* 154, 374(1987) [1981] Boston, Mass.: Beacon Press

3.5.3.2 Habermas' Idea of Law

Habermas argues that in the modern age the only universally recognized source of legitimacy for law is that the law be the result of a democratic law-making process.[58] According to McCormick, this position of Habermas gives room for 'a coercion – free communication' within the polity. There is room for dynamism which is an important character of legislation. Where necessary, change or amendment of the law may be less cumbersome, as the people can always see the need to amend the law whenever it is necessary. This is a clear departure from dictatorship by a few people or an individual.

3.5.3.3 Habermas's Theory of Communicative Action in Relation to Environmental Policy

For Habermas, communicative action rests on three foci:

(1) He advocates for public debate of all issues affecting the freedom and autonomy of the subject in society;

(2) He demands full and active participation in all spheres on all issues that affect public life and wellbeing. For him, a precondition for active participation means that the public must be armed with correct information to understand the situation in their life-world and to be able to make informed choices; and

(3) He rejects systemic tendencies that tend to distort true communication.

He believes that law can play a role in social and constitutional reform. It is a basis of the present investigation that his critical theory speaks to the present gas emission crisis in the Niger Delta and South Durban on various salient points. As indicated earlier, his idea of the life world is not confined only to the European historical or cultural tradition. In this concluding section of the chapter, an indication is given of the relevance of Habermas's theory of communicative action in relation to the rationality of public involvement and participation in policy formulation in South Africa and Nigeria.

[58] Habermas J ;*In Between Fact and Norm*(Cambridge: Polity) 360. Cited in *The Public Sphere: Communication for Governance and Accountability Program* (The World Bank) available at http://siteresources.worldbank.org/EXTGOVACC/Resources/PubSphereweb.pdf (accessed 10- 11- 2011) 448.

3.5.3.4 Communicative Action and Public Participation

The idea of the public sphere provides additional insight into Habermas' position on public participation and communicative actions. The combination of the two theories is important in the search for solutions to the challenges posed by gas emission and environmental pollution in general.

The public sphere is defined by Habermas as a '…network for communicating information and points of view...' He further contends that 'the streams of communication are in the process filtered and synthesized in such a way that they coalesce into bundles of topically specified public opinions'[59].

According to Sina Odugbemi,[60] The public sphere provides a space where free and equal citizens come together to 'share information, to debate, to discuss, or to deliberate on common concerns'. Spichel[61] likens the public sphere to a market space where 'people go to exchange and trade in political goods', the product from the market being public opinion.

A more direct definition is provided by Zarefsky[62] who defines the public sphere as encompassing '…citizens deliberating about common affairs, as distinct from personal or private concerns.' It is according to him 'characterized by a focus on the best interests of the larger community, including everyone not immediately present.'

Tracing the emergence of the concept, Habermas contends that the idea of the public sphere emerged from the ancient Greek city states where citizens participated in political decisions[63] freely through exchange and critical discussion of opinions.

While Fraser and others[64] have criticized the suitability of Habermasian theory of the public sphere for modern governance, the idea has continued to dominate modern debate about governance and public participation in general.

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[59]Ibid.

[60] Odugbemi, A . Public Opinion, the Public Sphere, and Quality of Governance: An Exploration. In S. Odugbemi &T. Jacobson (Eds.), *Governance Reform under Real World Condition: Citizens, Stakeholders and Voice* (pp 15-37) Washington DC: The World Bank (2008) 17.

[61]Above.

[62]*Zarefsky, D, 1993 SCA Presidential Address: The postmodern public. Spectra 30, 9-13 ((1994, March) cited in Maribeth Metzler. Organizations, Democracy, and the Public Sphere: The Implications of Democratic Revolution at a Nuclear Weapons Facility.* The Electronic Journal of Communication, Vol 8 Number 1 *1998,*

[63]Habermas. J. *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeouis Society*. (Cambridge: MIT Press (1962/1995).

Fraser[65] in particular, identified (a) hegemonic dominance 'which promotes dominance that is based on status, and (b) difficulties of defining 'common concern' in the public sphere to justify the attempt to limit the application of the theory by Habermas to Europe. In the same light Nwachukwu Oji[66] contends that Habermas' treatment of the public sphere as 'a single and comprehensive construct' fails to appreciate the complex nature of the public sphere in modern times as a factor that makes the Habermasian theory inappropriate for some countries. Despite the above criticisms, the role of the public sphere for governance in both Nigeria and South Africa is beyond dispute. It goes beyond the narrow application of the principle canvassed by the two writers above.

The dynamism of society and the emergence of mass media have influenced the transformation of the public sphere from a particular location to different platforms. As a result the following have served as public spheres overtime: [67] Royal courts, coffee houses in England, Salons in France, Table societies in Germany, Tribal gatherings in stateless societies like the village square meetings in African societies, religious gatherings, which provide a platform for the weak and poor, newspapers, which in addition to other mass media, provide the opportunity for people to contribute on issues and equally to know the view of others, and at present the different social media and the internet.

The transformation of the public sphere from particular locations to networks in modern times is manifested by the high patronage of the social media through the internet. The transformation has opened a wide channel for citizens to influence public policy and continuously demand accountability from public office holders.

The public sphere theory is relevant for debates, public hearings on governance, and social issues touching on the environment in a modern democracy in general.[68] In

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[64]Fraser, Nancy, Rethhinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy . Social Text, Vol .25 /26, 56-80, cited in *Governing Ethicised Public Spheres: Insight From Nigeria. African Development, Vol XXXV, No 4,* (2010) 167 -168

[65]Above

[66] Nwachukwu, Orji. Governing Ethicised Public Spheres: Insight From Nigeria. *African Development, Vol XXXV, No 4,* (2010) 168

[67]*The Public Sphere: Communication for Governance and Accountability Program* (The World Bank) available at http://siteresources.worldbank.org/EXTGOVACC/Resources/PubSphereweb.pdf (accessed 10- 11- 2011.

[68] See Douglas Kellner. Habermas, the Public Sphere, and Democracy: A Critical Intervention. Available at http://pages.gseis.ucla.edu/faculty/kellner/papers/habermas.htm (accessed 18 -12-2012)

addition, the public sphere promotes participation of the people in a democratic system. It provides a forum for citizens to 'exchange opinions regarding public affairs, discuss, deliberate and eventually form public opinion.'[69] The public sphere is characterised by a 'free flow of information, free expression and, free and open debate.'[70] In the light of the above, it can be said that an unrestricted and functional public sphere provides protection against the abuse of power and a boost for good governance. The importance here is that it provides platforms for the citizens to influence public policy and political decision-making by political leaders and public officials.

The pillars of a functional democratic public sphere is identified by Ogungbemi[71] as 'constitutionally guaranteed civil liberties, free, plural and independent media system, access to public information, civil society, and sites of everyday talk about public affairs.'

In agreement with the above view, it is further stated that the factors enumerated by the writer are crucial in representative democracy and in enthroning good governance which are important factors in environmental sustainability and promotion of the welfare and wellbeing of the people, particularly in areas that are prone to industrial pollution and emission of noxious gases and particulates.

Civil liberty, which includes rights to personal liberty, freedom of speech, freedom of expression, freedom of association *et al* becomes essential in securing the active participation of the people.[72] In line with the Universal Declarations of Human Rights, these principles are entrenched in the 1996 Constitution of Republic of South Africa as well as the constitution of the Federal Republic of Nigeria 1999.

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[69] See *ThePublic Sphere. Communication for Governance and Accountability Program* (The World Bank) available at http://siteresources.worldbank.org/EXTGOVACC/Resources/PubSphereweb.pdf accessed on 10- 11-2011.

[70]The World Bank.Ibid

[71]Above note 57

[72]Ibid.

3.6 The Public Sphere and the Environment in South Africa and Nigeria

The question, however, may be asked if there are guarantees and safeguards for the existence of a sphere or platform for public participation in debates for law making and policy formulation in South Africa and Nigeria? The question can be asked as to what extent this has aided environmental legislation as a tool for the protection from the threat of emission. The answer is in the affirmative. The bottom line in Habermas' writing is the transformation of the oppressive society to a modern society that is just and free. According to Stowe[73] Habermas' writings, particularly on social evolution, aims at 'a good society premised on reason and the harmonious interaction between individuals within everyday life.'

The experience of the people under dictatorial regimes of apartheid and a protracted military rule in South Africa and Nigeria respectively led to the development of a new consciousness that gave birth to legal safeguards to prevent a return to dictatorship and to secure civil rights and freedoms now guaranteed in the constitutions of the two countries.

Environmental injustice has remained one of the vestiges of the apartheid and military regimes in the two countries. In South Africa the South Durban situation can be ascribed to deliberate discriminatory planning by the apartheid regimes. In Nigeria the long period of oil exploration in the Niger Delta region brought severe pollution and hardship to that population. Opposition to it was met with serious repression by the different military regimes purporting to stifle agitations for environmental rights and justice by the local people. The height of the repression (as discussed *infra*) was the execution of Ken Saro Wiwa, an environmental activist and leader of the "Movement for the Survival of Ogoni People" of the Niger Delta.

In Nigeria, the above events and countless other developments led to the emergence of a civil society with a plan for a new platform for the expression of the people's desire to safeguard the environment, environmental rights and environmental justice.

[73]Margaret Stowe. Jürgen Habermas's Concepts, Communication Theory and the Problems of Modern Society citingRitzer, G, *Modern Sociological Theory*, (McGraw-Hill). 2008 441

The role of the new civil society as the forbearers of the new public sphere in environmental protection can be seen in the following developments in the two countries.

3.7 Environmental Movements

3.7.1 Introduction and History of Environmental Protection and Environmental Movements

In modern times environmental movements have emerged in response to the threat to the environment. In general, environmental movements have sought to influence government bodies, policy makers and leaders of big business. While some environmental movements are organised as political parties,[74] most are non-governmental organisations.

Environmental organisations promote moral awareness through the use of mechanisms like scientific research, public education, political advocacy, and hands-on environmental protection, preservation and restoration.[75] To achieve their goals these bodies operate through the media, putting pressure on government, resorting to the justice system and influencing public opinion.[76]

Although agitations for the protection of the environment from time immemorial are global, the pivotal role of the United States environmental movements cannot be overemphasised.

As just indicated, the growth of movements for the regulation of the environment in the United States has been significant particularly in light of the role she has played in environmental protection particularly in environmental law making. In particular the Clean Air Act of the United States is the first attempt in modern law to regulate the atmosphere – the key issue in this investigation.

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[74] It is reported that about 75 environment - based parties known as green parties exist in different part of the world. See The History of Environmental Protection Movement, Public Support and Prospects for the Future, nongovernmental Organisations – a brief http://.libraryindex.com/pages/3265/Environmental-Movements.html downloaded on May 4, 2010. 1

[75] Ibid.

[76] Ibid.

Environmental activism in the United States is usually classified under two periods.

(1) The Conservation era, pioneered by elites, this conservation movement fought to preserve specific aspects of nature for aesthetic and practical purposes[77] like recreation. Silveira[78] attributes the conservation movement in the United States to 'the drive in urbanisation and industrialisation'[79] in addition to 'the destructive practices in the economic activities like mining , overgrazing, timber cutting, mono crop planting and speculation in land and water rights.'[80] Typical of an urban drive, these activities put pressures on the available land spaces and thus began a movement for conservation by the upper class[81] as a reaction to this development.

(2) The modern day grass root movements which were known for their 'direct actions and protests',[82] the emergence of which was influenced by 'anger, energy, and a commitment to democratic processes.'[83]While it is generally believed that environmental protection as a field is a recent development, developments in the United Kingdom and United States point to the fact that the emergence of the moral lies in the past activities of different individuals and groups. To explain this argument Jedediah contends that the early environmentalists or at best naturalists may not have had the language 'environment' to describe their crusade, but that later events and developments identified the activities of these groups as pioneering work in environmentalism.[84]

Beyond traditional practices in environmental protection from time immemorial, the account of the work of Henry Thoreau signaled the beginning of an era of the emergence of pressure groups who demanded that communities discover the

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[77]*The Conservation and Environmental Movements*, see http://socyberty.com/issues/the-conservation-and-environmental-movements/ (accessed 5/4/2010)

[78] Silveira Stacey, The American Movement: Surviving through Diversity, *28 B.C Envt l. AFF. L Rev.497 (2001)*,http://lawdigitalcommons.bc.edu/ealr/vol/iss2/7. (accessed5/4/2010)

[79]Ibid.

[80]Ibid.

[81] Silveira, ibid.

[82] Edwards, Liberty and Environmental Justice in *Ecological Resistance Movements. 35-54.* (Bron Raymond Taylor (ed). 1995) cited in SiIveira Ibid at 489

[83]Ibid.

[84] See Jedediah above note 6

unique values of the earth. As far back as the Victorian era, groups like the National Smoke Abatement Society campaigned against pollution when the Lancashire and Cheshire Association for Controlling the Escape of Noxious Vapours and Fluids were already in existence.[85]

3.7.2. The Era of Conservation and Preservation

The works of John James Audubon,[86] Ralph Waldo Emerson,[87] and Henry David Thoreau[88] have been credited[89] with laying the foundation for environmental conservation movements. In particular, Henry Thoreau's activities and writings inspired environmental movements in the United States. Thoreau's major work *The Walden*[90] regarded as 'America's famous tribute to the harmony of humanity and nature'[91] detailed his experiences with the wilderness between 1845 and 1847 in the Walden Pond, Massachusetts. Thoreau's pioneering work[92] in nature writing greatly influenced the subsequent work of John Muir who was prominent in forest conservation advocacy in the United States.[93]His position was that American industrial practices were leading to the 'waste and despoilment of economic development.' He foresaw that the worst was yet to come.[94]

John Muir's work on nature and the wilderness spurred an 'evangelical awakening' that led to different 'crusades and soul winning' movements in environmental activities, even years and decades after his death. His writings which

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[85] See Markham Adam, *A Brief History of Pollution*, (Earthscan, 1995) 125
[86] Birds of America
[87] The Nature (1836)
[88] The Walden, An account of the authors life in the wood for two years
[89]Above note 6
[90] Published in 1848
[91] Jedediah above
[92] His major works as chronicled by Encyclopaedia Britannica includes "Ktaadn and the Maine Woods" (1848; revised and expanded in *The Maine Woods,* 1864); *A Week on the Concord and Merrimack Rivers* (1849); "Resistance to Civil Government" (1849; republishesd as "Civil Disobedience" in *A Yankee in Canada,* 1866); *Walden* (1854); "The Last Days of John Brown" (1860; republished in *A Yankee in Canada*); "Walking" (1862; republished in *Excursions,* 1863); "Life Without Principle" (1863; republished in *A Yankee in Canada*); and *Faith in a Seed: The Dispersion of Seeds and Other Late Natural History Writings* (posthumously, 1993). See Thoreau, Henry David "Encyclopaedia Britannica. Ultimate Reference Suite. Chicago. Encyclopaedia Britannica 2010
[93] See generally; Thoreau, Henry David "Encyclopaedia Britannica. Ultimate Reference Suite. Chicago. Encyclopaedia Britannica 2010
[94] See Phillip Shabecoff. A Fierce Green Fire. Island Press (2003) cited in *The Conservation and Environmental Movements*. http://socyberty.com/issues/the-conservation-and-environmental-movements/ (accessed 5/4/2010)

were described as 'providing something new'[95] and 'a manual for experience of a certain type'[96] pointed to 'a precise, appreciative, even reverent way of seeing the land…'[97], and 'a register of overwhelming yet exquisite emotional response, with a benign moral interpretation already latent in it.'[98]

His work was greatly influenced by the writings of philosophers like Emerson Waldo and Williams Wordsworth who both believed 'that a single, benign ordering principle underlay all reality and expressed itself in the patterns of both world and mind.'[99] John Muir's greatest legacy to environmentalism was the formation of the Sierra Club in 1893. The activities of Muir and other activists of this era was a reaction to the exploitation of natural resources which dominated the 1870's. The message from the activists was clear - it was towards the efficient use and development of physical resources to address the inefficient management of land.[100] Credited with a strong influence of his work on the government of the United States government in the protection of some wildernesses,[101] he later collaborated with Robert Underwood Johnson to form the Sierra club in 1893.

Environmental activities of this era manifested through the formation of clubs and societies to promote recreational and outdoor activities such as the establishment of parks, wilderness expeditions, hiking and bird watching, among others. The Audubon society[102] founded by George Bird Grinnell in 1896 was formed primarily for the protection of plumage birds from the millinery industry and the protection of certain game birds from unregulated sport hunting.[103]

Equally, the Boone and Crockett club was founded in 1886 through the initiatives of Theodore Roosevelt and George Bird Grimell and others to save '...the

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[95] Jedediah 127
[96] Ibid
[97] Ibid.
[98] Ibid.
[99] Jedediah at 127
[100] Hays, Samuel. From Conservation to Environment: Environmental Politics in the United States Since World War II, in Char Miller & Hal Rothman (eds) , *Out of the Woods: Essays In Environmental 102-07* 1997, cited in Silviera above 499
[101] Andy Reynolds, *A brief History of Environmentalism*http://www.channel4.com/science/microsites/S/science/nature/environment.html Channel 4 Television, London, England (accessed 13 -09- 2009
[102] Americas first known Conservation Society founded in 1886.
[103] Abovenote 4.

wildlife and Yellowstone' and to promote strict hunting codes and later champion the passage of laws, establishment of institutions and the designation of wild lands.[104]

The passage of the Reclamation Act 'to reclaim and settle arid land'[105] in 1902 in the United States is an achievement that can be credited to the movements of the era. Equally around this time, the conservation movement was alive in England.

In assessing the environmental movement of the period, one can safely conclude that the movements were motivated by attempts to protect the mainly nature based pastimes of the wealthy.[106]

3.7.3. The Clean Up Era

In the 1960s America witnessed the repackaging of environmental concern from the land and natural environment-focused campaign to the clean up and control of pollution. Different issues and actors emerged after 1960 to herald the birth of a new movement. Hays[107] attributed this upsurge in movements for environmental protection to two factors: 'increase in personal real income which motivates citizens to search for improved standard of living and amenities,' and increasing levels of education which according to him spawned values associated with personal creativity and self development.

The entry of the media into the struggle is remarkable, for instance the vociferous writings of 'liberal establishment voices,' The Time Magazine, The New York Times,[108] among others, joined other actors in the campaign against society's irreversible obsession with technology and its attendant negative impact on the environment. In one of its features,[109] Time Magazine chronicled the different ways in which human technological advancement has impacted on the environment, describing the human being as the "dirtiest animal who must learn that humans can no longer

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[104] See generally, *History of the Boone and Crockett Club*. http://www.boone-crockett.org/about/about_overview.asp?area=about.

[105] Silveira 500

[106] Silveira agrees with this position, holding that the groups were dominated by wealthy white, Anglo Saxons whose pastimes were hunting fishing and camping.' See Silveira *Ibid.* p.504.

[107] above at 127.

[108] above at 122.

[109] See "Age of Effluence", *Time Magazine*, Friday May 10 1968, http://www.time.com/time/magazine/article/0,9171,902193,00.html. also cited in Jedediah, Ibid.

afford to vent smoke casually into the sky and sewage into the rivers as he did in earlier days when vast reserves of pure air and water easily diluted the pollutants." The publication nostalgically recalled the pre-technology age when natural decay was a 'vital process that balances life in the natural world.' It strongly canvassed the view that humans 'should strive to parallel natural decay by recycling and reusing as much waste as possible.'[110]

While ruling out the possibility of attempting to 'take nature back to its pristine purity', the publication[111] identified environmental awareness among the populace and its integration into the curriculum of colleges and schools as a way of addressing the reality of environmental degradation.

One major actor of the era whose work is seen as a watershed in environmental activism is Rachael Carson,[112] a marine-biologist. Published in 1962, Carson's book *Silent Spring* created awareness about the effect of the use of chemicals, particularly in agriculture and other human activities on the health of human and other species in the environment. Carson's work generated different debates and reactions,[113] and eventually got the attention of the US government under the Kennedy presidency, which ordered the investigation of the issues raised by the book. Her work compelled environmentalists to consider the scientific and ecological basis of environmental degradation.[114] The ongoing research[115] about persistent organic pollutants and mobility

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[110]Ibid.

[111]Above note 110

[112] See Tseming Yang Melding Civil Rights and Environmentalism: Finding Environmental Justice's Place in Environmental Regulation *22 Harv. Env. L. Rev.*

[113] Different reactions followed the publication for instance , after the publication ta booklet titled 'Fact and Fancy' was produced and distributed to editors of magazines and newspapers by The National Agricultural Chemicals association, drawing their attention to the risk of their losing future advertisement revenues if silent spring were to receive favourable reviews. See Gilbertson M. The precautionary principle and early warnings of chemical contamination of the Great Lakes in Poul Harremoes *et alLate Lessons from Early Warnings: The Precautionary Principle 1896 – 2000* (European Environmental Agency, 2001) P126.) citing Lear. L Rachael Carson: *Witness for Nature*. Henry Holt, New York. NY.

See also an account of a letter threatening legal action against the publishers of Silent Spring by the general Counsel of Velsicol Chemical Company unless the last installment in the serialization of the book in the New Yorker was cancelled in Gilbertson .M. Ibid..

[114]Tseming Yang Melding Civil Rights and Environmentalism: Finding Environmental Justice's Place in Environmental Regulation *22 Harv. Env. L. Rev*.

[115] For instance the intensive study of the scientific and policy implications of organochlorine contamination in the great lakes basin is according to Gilbertson, Michael (The precautionary principle and early warnings of chemical contamination of the Great Lakes in Poul Harremoes *et alLate Lessons from Early Warnings: The Precautionary Principle 1896 – 2000* (European Environmental Agency, 2001) P126.) is one of the fallouts of the publication of Silent Spring.

of pesticides is attributed to the publication of *Silent Spring.*[116] Her work ultimately led to the banning of DDT and restriction on the use of other hazardous chemicals.

Apart from the above development, developments like 'the 1969 Santa Barbara oil spill and the burning of the Ohio River along the industrial area of Cleveland'[117] activated the movements, as there were pockets of protests in different parts of the United States to press home demands for appropriate measures on environment or against perceived threats to the environment. For instance, an attempt to convert parkland in the neighbourhood of the University of Colombia into a gymnasium was resisted through a serious protest.[118] Equally, an attempt to convert a neighbouring black community garden to a parking lot for the University of Berkeley was met with protest in 1969.

The growing influence of environmentalists around this period is attested to by their involvement in 'the drafting of the emerging legislations like the Wilderness Act of 1965, the Clean Air Act of 1967, National Trails Act of 1968, and the Wild and Scenic Rivers Act 1968.'[119] In particular, the drafting of the Clean Air Act was influenced by a general outcry and discontent across the world against the growth of particulate objects and gaseous elements across the world.

3.7.4.The American Consensus Era

The 1970's marked the height of environmental awareness in the United States. The question around this period was not whether the environment should be protected, but was about what were the appropriate means and policies to do so. Environment by this era had become a concern of all, according to Kean[120]. The National Environmental Policy bill was sponsored by Senator Henry Jackson of the State of Washington. When passed into law, it was signed by President Richard Nixon, who both belonged to different political divides.

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[116] Martin Von Krauss, Poul Harremoes. MTBE in Petrol as a Substitute for Lead in Poul Harremoes *et alLate Lessons from Early Warnings: The Precautionary Principle 1896 – 2000* (European Environmental Agency, 2001) 116

[117] See GOTTLIEB, *Forcing the Spring : The Transformation of the American Environment* 19 (1993) cited in Silveiriaibid.

[118] Gottlieb Ibid. 106

[119] See Dowie 23 *Ibid*., cited in Silvieria at 507

[120] Thomas H Kean. The Environment Movement in 1985: Between NEPA and 2000, *Columbia Journal of Environmental Law, Vol 10* 1985 No 4. 200

The unity of purpose towards environmental protection in the era was attributed to the 'universality of concern for environment.'[121] Kean's opinion was that 'caring for homeland is not a partisan issue',[122] and that 'it requires concern from Americans of every political persuasion.'[123] According to him 'after all, protection of the soil, air and water that Americans use is more truly a "national defense" issue than most major weapons systems.'[124]

Three major significant developments influenced environmental movements in the era:[125]

(1) The leading role of the federal government of the United States in promulgating the National Environmental Policy Act (NEPA)[126];

(2) The convocation of the Earth day[127]in the United States; and

(3) The formation of Non-Governmental Organisations like the Green Peace in Canada, US neighbour, Friends of the Earth and the National Resources Defence Council.

The earth day attracted the participation of about twenty million Americans from different backgrounds including the radicals and the conservatives,[128] signalling the takeoff of a growing build up for environmental protection particularly against the adverse effects of industrial growth.[129] The establishment of the Environmental Protection Agency in the United States around this time introduced another lasting feature which went a further step towards effective environmental protection and the introduction of administrative regulations of the environment. This was manifested in the establishment of the Environmental Protection Agency (EPA). On another level, attempts to locate a land fill in Northwood manor in East Houston in the State of Texas

[121] Kean, Ibidat 200.
[122] Ibid.
[123] Ibid.
[124] Ibid.
[125]Ibid at 203
[126] "NEPA"42 USC
[127] Kean. above
[128] Hays above 117, cited in Silveria.
[129] Hays117 cited in Silveria.

were challenged in *Bean v. Southwestern Waste Management Corporation*[130]. The residents of Northwood Manor contended that the location of a garbage dump in their neighbourhood was racially motivated and a violation of their civil rights.[131]

At the global level the World Resources Institute was formed in 1982[132] to address issues 'like desertification, deforestation and global climate change' that were identified as global problems which the United States and other industrialised nations were not 'giving priority attention to.'[133] Furthermore the National Environmental Policy Act institutionalises environmental protection as a policy in all federal government undertakings in the United States. The subsequent establishment of the Environmental Protection Agency was a bold move by the conservative government of President Richard Nixon to centrally institutionalise the regulation of environmental control in the country.

Environmental disasters and catastrophes defined the struggle in the 1980s, as the calamities associated with large scale industrial activities became real. The movement became stronger after the Exxon Valdez oil spill[134] in the United States, the Bhopal tragedy[135] from the facility of Union Carbide, an American company in India, and the Chernobyl nuclear reaction[136] in Russia. In addition, the issue of protection of the atmosphere, the ozone hole in the stratosphere and the growing awareness about global warming steadily came into the limelight. The movement of the 1980s was strengthened by the formation of the Environmental Grant makers Association to fund

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[130] See *Bean v. Southwestern Waste Management Corp. United States District Court. 482 F.Supp. 673 (S. D. Texas, 1979 Cited in Not in my Backyard: Executive Order 12,898 and Title Vi as Tools for Achieving Environmental Justice* (October 2003) 14.

[131]*Not in my Backyard: Executive Order 12,898 and Title Vi as Tools for Achieving Environmental Justice* (October 2003) p.14.This is the first sets in the series of court cases on environmental justice

[132]*A brief History of World Resources institute*http://www.wri.org/about/wri-history. (accessed 05-06- 2011).

[133]Ibid.

[134] The Exxon Valdez oil tanker ran aground around Alaska in 1989, spilling about 11 million gallon of inkblot crude oil into the marine environment. Described as the worst man made environmental disaster in Us history , the spillage led to massive destruction of flora and fauna. See Walsh Bryan, Still Digging Up Exxon Valdez Oil 20 Years After. See Time Science, Thursday, June 04, accessed online at http://www.time.com/time/health/article/0,8599,1902333,00.html

[135] It is reported that over 20,000 people have died in Bhopal India since 1984 after an explosion in a chemical factory in which 40 tones of methyl isocynante gas was released into the atmospheric environment. See The *Bhopal Disaster* accessed online at http://www.greenpeace.org/usa/en/campaigns/toxics/justice-for-bhopal/. on 05 August 2014.

[136] Several people were killed from acute radiation poisoning and many left with cases of acute thyroid cancer after the release of radioactive reactor core into the atmosphere in Chernobyl near Ukraine in the old Soviet Union in April 1986. See *Chernobyl Accident 1986*.at http://www.world-nuclear.org/info/chernobyl/inf07.html (accessed 18 -09- 2011)

non-governmental organisations for environmental activities.[137] Though Reagan's presidency was often criticised for its anti- environment stance through its different anti-environmental regulations and policies,[138] the period is recorded as having witnessed the start of a plurality of public interest groups and the adoption of different strategies like lobbying, legal expertise and compromise by environmentalists to pursue their goals. A group of the ten largest and leading environmental organisations came together to form 'the mainstream group' in a coalition of over seven million members to influence government environment policies in Washington, using instruments like litigation,[139] educating elites on environmental issues,[140] and resisting lobbying by industrialists.[141] On the on the other hand groups like Green Peace embraced direct actions and opened the flood gate for grass root environmentalism and direct actions using tools like 'the right to know laws', 'citizens' enforcement powers' and direct actions by mobilising against polluting companies'[142] and making inputs into decisions on the location of facilities.

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[137]*The Environmental Movements* (1980), Citing Ron Arnold and Alan Gottlieb, *Trashing the Economy*, (Bellevue, Washington: Free Enterprise Press, 1993) p 595 seesovereignty.net/p/gov/rise/g_part06.html. (Accessed 15-04- 2011).

[138] Critics' positions on the administration posture against environmental protection are usually premised on policies like the administration's push for more exploration and development of Federal lands and imposition of moratorium on acquisition of more land for natural parks and preserves. See Hayword Stevens. F. *In focus Quarterly* Vol. III, Number 3 fall, 2009. http://www.jewishpolicycenter.org/1409/ronald-reagan-environment (accessed 18-7-2011). The intolerance of environmentalism by the Reagan administration is reported by Dowie to be responsible for the emergence of grass root environmentalism. See Dowie Mark*LosingGround: American Environmentalism at the Close of the Twentieth Century* 206 (1995) cited by Silveira Stacy, The American Environmental Movement Surviving Through Diversity . *Boston CollegeEnvironmental Affairs Law Review* Vol. 28 issue 2, 511

[139] Silveria Stacy, The American Environmental Movement, Surviving Through Diversity: *Boston College Environmental Affairs Law Review. Vol 28 Issue 2*, 510.

[140]Ibid.

[141] Ibid.

[142] Silveira above at 510

3.7.5. The Environmental Justice Movement Era

Awareness of groups and people's rights and social justice rose to prominence in the work of the grass root environmental movements such as the 'Environmental Justice Advocates' and 'Not in My Back Yards' groups. Such movements sprang up to defend the interests of the poor and the coloured people particularly in matters of the location of industrial facilities and dumpsites.

After his failure to secure the United States presidency, Senator Al Gore began a new movement to protect the global atmosphere, particularly in the campaign against global warming.

Environmental justice advocates 'believe that racial minorities are burdened with a disproportionate amount of environmental risks.'[143] This view inspired the active involvement of black and coloured people's organisations like the United Negro. The biggest achievement in the environmental justice crusade was the adoption and proclamation of a 17 point document on environmental justice at the first National People of Colour Environmental Leadership Summit held in Washington DC[144]in 1991. Principle 1 provides:

> ***"Environmental justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction."***

The principles of environmental justice mentioned above remain the guiding principles for environmental protection struggles across the world, and they inspire many groups and movements beyond the United States in different parts of the world. The same principles shaped the movements for environmental protection in Niger Delta[145] in Nigeria and South Africa.

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[143] US General Accounting Office (GAO) study (1983), *Siting Hazardous Waste Landfills and Their Correlation with Racialand Economic Status of Surrounding Communities* cited in *Not in My Backyard: Executive Order 12,898 and Title VI as Tools for Achieving Environmental Justice (October 2003)*14.

[144] See http://saepej.igc.org/Principles.html (accessed 20 -11- 2011)

[145] For instance groups like the Movement for Survival of the Ogoni People Ijaw National Cngress and others in the Niger Delta acknowledges these principles in their different declarations like The Kaiama Declarations, and the Ogoni Bill of Rights respectively.

3.8 Environmental Movement in South Africa

In South Africa, under the apartheid regime, the environmental movement began with and was informed by the protection of white culture recreational activities such as game hunting and other outdoor pastimes. Thereafter different issues have defined environmental activism in South Africa. These issues have ranged from traditional camps of white conservationists to current environmental justice campaigners reminiscent of vigorous campaigns against pollutions as seen in the United States environmental justice movements. The determination of the people to remove every vestige of apartheid policy, particularly in physical planning of settlements and location of polluting facilities gave birth to different grass root movements like the powerful South Durban Community Environmental Alliance and centralised organisations like the Environmental Justice Network Forum and Groundwork.

The South Durban Community Environmental Alliance was formed in 1992 to mobilise members against environmental degradation in the South Durban area through addressing issue like air pollution by refineries and industries, chemical pollution of Isipingo river, illegal dumping of wastes and poorly planned waste sites, the deafening noise of jetliners from the old Durban Airport, public health problems, and the unrelieved lightening of its neighbourhood, to mention but some.

Post-apartheid environmental movements in South Africa involve civil and political actions to draw awareness to the situations of polluted communities and violations of individual and people's environmental rights. These groups were aided by the collapse of the apartheid regime and the protective provisions under the South African Constitution which guarantees environmental rights of the citizens and other protections under the 1996 Constitution.[146] The South African Bill of Rights on the environment and other relevant legislation are comprehensively discussed in the chapter 3.

The Environmental Justice Network Forum is committed to 'linking environment and social justice issues.' According to the Forum, this approach 'seeks to challenge the abuse of power which results in poor people having to suffer the effects of

[146] See in particular, section 24 of the Constitution of the Republic of South Africa, 1996.

environmental damage caused by the greed of corporate bodies and others.'[147] To the Forum, issues like mortality rates, industrial accidents, road and mining accidents, violence and township pollution are all environmental issues.[148]

The social justice dimension of the environmental movement in South Africa makes the message of an environmental protection crusade 'an easy sell' to the people, since every person in the country is conscious of the evil of apartheid injustice. As a result it was not difficult to organise people, particularly in areas where communities are confronted with and involved in pollution problems from industrial facilities and decisions on the location of facilities. The victims of pollution particularly in communities that are impacted by activities of industries, for instance in South Durban, were given different platforms to express themselves through activities of organisations like Groundwork an affiliate of Friends of the Earth International, an international non-governmental organisation with a large number of experts and professionals across the globe. Groundwork's mode of operation revolves around extensive research, information through dissemination of information on the environment and breaches of environmental regulations.[149] Ground work is equally involved in organising local communities that are faced with environmental problems to have a platform. An example of this is the South Durban Community Environmental Alliance.

Earthlife Africa is another prominent environmental group in South Africa, established in 1988, with the objective of '... seeking better life for all people without exploiting other people or degrading their environment', and 'encouraging business and industry to reduce pollution, minimise waste and protect... natural resources.'[150]

The membership is mostly middle class, and has branches in different parts of the country. The campaigns of the organisation are carried out through five different platforms: the toxic group, nuclear group, zero waste group, animal action and climate

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[147] See the EJNF Charter. Cited in Jacklyn Cock, Connecting the Red, Brown and Green: The Environmental Justice Movements in South Africa in *Globalisation, Marginalisation & New Social Movements in Post Apartheid South Africa*. 2004.4.www.ukzn.ac.za/ccs/.

[148] Albertyn, C. Towards Sustainable reconstruction. *Environmental Justice Networker No 1,Vol 9. 23(3/4),* 148-153

[149] Some of their publications include; *The Balance of Rights (2004); Whose Energy Future? Big Oil against People in Africa(2005); Poisoned Spaces: Manufacturing wealth, producing poverty (2006). Peak Poison: The Elite energy Crisis and Environmental Justice (2007)*

[150] See www.earthlife.za.ac.

change.[151] The toxic campaign of Earthlife entails participation of the organisation in Environmental Impact Assessment reviews to prevent construction of toxic generating facilities. For instance its collaboration with Environmental Justice Network, the Legal Resources Centre and the Sasolburg Environmental Committee and other environmental movements successfully prevented the construction of what would have been the largest South Africa's hazardous waste incinerator in Sasolburg. The organisation engages in open protest and picketing to achieve its objective. In 199, it organised the picketing of Durban harbour against a nuclear waste ship.[152]

Other professional bodies like Legal Resources Centre, a public interest law firm, operate at different levels by collaborating and giving professional support to the movements.

Despite its prominence, the South African environmental justice system does not have a central coordinating body to regulate its activities. However, the negotiation of a new Constitution for South Africa provided a unique opportunity to harmonise the views of the movements. Different environmental groups were well represented and ultimately succeeded in getting through clear provisions promoting environmental rights and environmental justice under the constitution.[153]

3.9 Environmental Movement in Nigeria.

In Nigeria, the movement for environmental protection is more pronounced in the Southern part of the country, particularly in the oil rich Niger Delta area, where there has been consistent outcry by communities, their representatives and non-governmental organisations against environmental degradation and impoverishment of the population as a result of pollution from oil operations in the area.

The struggle in Niger Delta started with agitations by different ethnic and community based organizations like The Movement for the Survival of Ogoni People, the Ijaw Youth Congress, and others. Attempts by the military government in Nigeria to repress the struggles of the people of the area led to serious clashes as from the 1990s as

[151] See Jacklyn above at 14.
[152] See Jacklyn aboveat p.14.
[153] See sections 24 of the Constitution of the Republic South African 1996 in particular.

the peaceful agitations were taken over by more militant youths. During this period the Movement for the Survival of the Ogoni People and the Ijaw Youth Congress came out with their different declarations subscribing to the Environmental Justice principles.

It is often difficult to separate the demand by oil producing communities in the area for environmental justice in the Niger Delta from the demand for fiscal federalism in the Nigerian federation. However, it is noteworthy that protests by communities against environmental degradation from oil operations began in the 1980s.

The original face of the struggle for environmental protection in the Niger Delta was in the form of demands for compensation for damages from oil spillages, gas flaring and other forms of pollution by members of communities around oil production locations. Equally, community members often demand that the Nigerian government and oil corporations in the area live up to their respective obligations and responsibilities towards the host communities. For instance, one of the battle cries of the Ogoni people was that:

> ***"…the villages have no clean water, little electricity, few telephones, abysmal health care, and no jobs for displaced farmers and fisherperson, and adding insult to injury, face the effects of unrestrained environmental molestation by Shell every day."***[154]

In 1990, the Ogonis presented the Ogoni Bill of Rights to the Nigerian government and demanded among other things:

> ***"…Political autonomy to participate in the affairs of the Republic as a distinct and separate unit (by whatever name called), provided that this autonomy guarantees political control of Ogoni affairs by Ogoni people; the right to control and use a fair proportion of Ogoni economic resources for Ogoni development; adequate representations, as of right, in all Nigerian national institutions, and the right to protect the Ogoni environment and ecology from further degradation***."

In the Kaima Declarations, the Ijaw youths, while recalling the severe degradation of their villages due to oil activities, declared among others, their determination to '…demand and work for self government and resource control for the ijaw people'[155].

[154]Shell in Nigeria: What are the issues? http://www.essentialaction.org/shell/issues.html. accessed on 10 July 2010.
[155] Kaima Declarations by Ijaw Youths of Niger Delta.11 November 1998. http://www.unitedijawstates.com/kaiama.html, accessed on 18 June 2006.

In 1995 the military government in Nigeria executed the leader of the Movement for the Survival of Ogoni People (MOSOP), Ken Saro Wiwa and five others. The execution followed a trial that was widely condemned across the world.[156] By 1998 many of the oil production platforms had been shut down and taken over by militant youths in Ogoniland. In response, the military forces invaded many villages killing and maiming many people. For instance, in November 1999, the Odi community was razed down and occupied by the military,[157] ironically under a new civilian government. The series of protest against degradation by oil corporations in the Niger Delta can be said to be influential in the emergence of environmental objective clause under section 20 of the constitution of the Republic of Nigeria 1999. The section provides:

> ***"The State shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria"***

The activities of the Movement for the Emancipation of the Niger Delta (MEND) and other local groups which took over the struggle, later introduced more fierce and militant struggles. The groups occasionally attack oil production sites and platforms. This often led to loss of production by the oil companies.[158]

The struggle however changed with the involvement of Environmental Right Action, the Nigerian partner of the Friends of the Earth International. Environmental Right Action's work is focused on: (a) 'defence of the human eco system in terms of human rights and (b) empowerment of local people as a means of promoting environmental responsibility by government, corporation and individuals'.[159] The organization partners with the local people and engages in capacity building and sensitising the local people about their environmental rights. It equally convenes workshops and training for government officials and the private sectors on environmental issues. One important aspect of the work of the group to promote

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[156] President Bill Clinton of the United States was reported to have made personal call to the then head of the Nigerian Millitary government General Sanni Abacha. See Ken Saro –Wiwa (1945 -1995) available at http://kirjasto.sci.fi/saro.htm. accessed on 12 January 2011

[157] Urhobo Historical Society: *Federal Government of Nigeria Invades Bayelsa State.* November 20-24, 1999. Available online at http://www.waado.org/environment/fedgovt_nigerdelta/bayelsainvasion/FederalGovernInvadesBayelsa/Invasion.html (accessed 10-01- 2010)

[158] See Country Analysis Briefs: Nigeria, August 2011. *Energy Information Administration* , www.eia.doe.gov (accessed 17 -06 -2012)

[159] See Environmental Rights Action, About ERA. Available at http://www.eraction.org/about-era (accessed 18-01-2012)

environmental justice is to empower the local people to take cases on environmental issues to court.[160] The climax of its litigation activities in this area was the 2005 judgment in the case of ***Jonah Gbemre v Shell Petroleum Development Company Nigeria Limited and Others.***[161] In this case, the Court in Nigeria decided that gas flaring in the course of oil mining violates the right to life and the peoples' right to a clean environment.

3.10 Summary and Conclusion

In the chapter, environmental protection is identified as a universal morality which pervades different cultural practices, religious beliefs, human institutions and societies. The origin of the morality in the modern day is traced to the pioneering efforts of conservationists and environmentalists like James Audubon, Waldo Emerson, Henry Thoreau and Rachael Carson among others from the American angle. This movement metamorphosed through different ages and eras until the present age of environmental justice movement, which represented a resistance movement against discriminatory location of hazardous and polluting facilities in black homelands in the United States. The central message of the environmental justice movement is fairness and equal distribution of environmental burdens and benefits in the society.

The philosophical writings of Jurgen Habermas, in particular his theory on communicative actions discussed in the chapter justify actions and campaigns of the different movements on environment. These actions promote solutions to human miseries from mismanagement of the environment. His writings aim at a good society premised 'on reason and the harmonious interaction between individuals within everyday life.'

The above movements, particularly developments in the United States, inspired similar movements in places like Niger Delta in Nigeria and South Durban in South Africa, two areas that are noted for pollution from petrochemical operations which is the focus of this thesis.

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[160] Bassey Nnmimmo, Interview at Benin. 12, January, 2010.

[161] *Gbemre v Shell Petroleum Development Company Nigeria Limited and Others* (2005) AHRLR 151 (NgHC 2005)

The effect of this is the emergence of environmental protection as important topic in the period before and after transition from dictatorial regimes in the two countries. This factor influenced the emergence of environmental right as a right under the Constitution of the Republic of South Africa 1996. In the same vein environmental protection emerged as an objective for the Nigerian state under the Constitution of the Federal republic of Nigeria 1999.

The next chapter examines the international dimension of initiatives to secure the atmosphere. This includes the legal frame work and the interconnection between environmental protection and human rights principles.

CHAPTER 4

4.0 INTERNATIONAL FRAMEWORKS FOR EMISSION CONTROL

4.1 Introduction

This Chapter discusses initiatives and instruments on environmental control measures at the international and regional levels of governance towards securing global environment. Attention will particularly be focused on the atmosphere. The emergence and growth of international consensus on environmental protection, climate change and the threat of gas emissions from fossil fuel operations come under review here. As indicated in chapter two, environmental protection is, amongst others, a moral obligation that cuts across different perspectives. In terms of governance, it is accorded recognition at the global, regional and national levels. At the international level, different initiatives have been taken by the United Nations and other international and regional bodies towards securing the global atmosphere, air quality and control of emission of dangerous substances (such as greenhouse gases) that deplete the global atmosphere. These moves have led to the development of international instruments, treaties, practices, and other legal and soft law instruments.

The chapter seeks to attain two goals: (1) to describe the initiatives of the United Nations and other bodies on the sustainability of the environment and control of air quality, and (2) to outline the relevant international instruments that South Africa and Nigeria are parties to. The most significant instruments in respect of the topic are examined, while the less relevant ones are mentioned. The latter part of the chapter examines the interconnection between human rights instruments and environment and the relevance of the instruments to environmental sustainability and emission control.

4.2 Environmental Protection, Universal Morality, and Word Citizenship

The conference of world leaders in Stockholm in 1972 was the largest gathering of world leaders.[1] It marked the first attempt that formalised the morality of environmental protection and institutionalised environmental governance at the global level. The conference was informed by different factors after the release from space of the first picture of earth.[2] The picture brought a new feeling of the unity and interdependence of species on earth. In turn, the new feeling led to a determination to preserve the beauty of a fragile earth, and as a result the need to transform the environmental vision of the earth, conceived in the sixties, was transformed into reality.[3] Since Stockholm there have been increasing efforts to address global and local environmental problems.

4.3 The United Nations and Environmental Protection

As the rallying point for the comity of nations across the world, the United Nations is in the forefront of the promotion of the environmental protection and sustainability. The world body has provided platforms for global environmental meetings which have generated several important Multilateral Environmental Agreements (MEAs).[4] In addition, the General Assembly of the United Nations has, through the United Nation Environment Programme (UNEP), developed different guidelines for the member nations of the United Nations. UNEP has organised different training and produced different information and environmental education materials towards developing capacity on global and local environmental issues.

The first attempt by the United Nations to globalise environmental issues was the convocation of the United Nations Conference on Human Environment in Stockholm in

[1]The summit was attended by representatives from 113 States and delegates from international organisations. See Olav Schram Stokke, Oystein B. Thomessen, *Yearbook of International Co-operation on Environment and Development, 2002/2004*. Earthscan, 20

[2]*Environment, Global Issue* (United Nations http://www.un.org/en/globalissues/environment/ (accessed 19-08-2012)

[3]Ibid.

[4] For instance the United Nations Framework Convention on Climate Change

1972. The latest initiative is the declaration of Environmental sustainability as one of the Millennium Development Goals.[5]

4.3.1 Stockholm Principles

Since Stockholm the international environmental morality has crystallised into a global environmental governance system comprising of adopted principles, guidelines, action plans, resolutions and declarations[6] covering different areas of the global environment.

Initiatives and activities of the international civil society and businesses to protect the environment have increased. Multi-national corporations have come to adopt compliant environmental practices.[7] Some have even invested in environmental sustainability schemes in their areas of operations.

The Stockholm Conference is credited with laying 'the foundations of the international system of environmental law'[8] and dictated later developments in the international community in environmental protection.[9] Today at the international level there are 'over 500 international and regional agreements, treaties and arrangements covering a variety of topics from the protection of the ozone layer to the conservation of the oceans and seas.'[10] Equally, the Stockholm forum provided the platform for the commencement of the intervention of the civil society in environmental issues at global

[5] The Millennium Development Goals (MDG) originated from a decision by 189 members of the United Nations in year 2000 to liberate people from extreme poverty and deprivations. The following developmental goals were set: (1) Eradicating extreme poverty,(2) achieving universal primary education, (3) promoting gender equality and empowering women, (4) reducing child mortality, (5)improving maternal health, (6) combating HIV/AIDs, malaria and other diseases, (7) ensuring environmental sustainability, and (8) developing a global partnership for development. Towards attaining environmental sustainability as MDG goal (7), the following apply: attaining the integration of sustainable development into country projects and programmes, and reducing biodiversity loss by reducing by half the proportion of people without sustainable access to safe drinking water and basic sanitation

[6] Adil Najam , Mark Halle. *Global Environmental Governance: The challenge of Accountability. Sustainable Development Insights*, 05 May, 2010. www.un.org/esa/dsd.(accessed10-06- 2010)

[7]For instance in the oil and gas industry IPEAC and American Petroleum Institute are organisations that are devoted to promoting good environmental practices in the oil production industries

[8]Ibid.

[9] For instance, the Stockholm Declaration on the Human Environments, a major document containing 26 principles on global environmental governance, was produced at the end of the conference and remains a leading document and reference material on environmental protection at all levels

[10] Toepfer Klaus, *Our planet – The magazine of the United Nations Environment Programme (UNEP*) Volume 15 No 3

level. While the conference of heads of government met, a parallel conference of different non-governmental organisations was held. [11]

The developments in international and national laws that followed Stockholm have been acknowledged by the Global Judges Symposium as 'a sound basis for addressing the major environmental threats of the day.'[12] It is doubtful whether there are any countries in the world today that do not impose national environmental legislation.

Beyond treaties among nations, the United Nations Organisation has evidently integrated environmental protection and sustainability into its operation. UN bodies like United Nations Scientific and Cultural Organisation (UNESCO), the International Atomic Energy Agency (IAEA), the Food and Agriculture Organisation (FAO), the International Labour Organisation (ILO), the International Maritime Organisation (IMO), the United Nations Development Programme (UNDP), the United Nations Industrial Development Organisation (UNIDO), and the World Health Organisation (WHO) have put different programmes and standards in place to ensure compliance with principles of environmental protection and sustainability.

4.3.2 Rio Principles

The United Nations Conference on Environment and Development popularly known as' "the Earth Summit'[13] held in Rio de Janeiro, Brazil in 1992 is described as 'the pinnacle of environmental politics.'[14]. It provided a larger forum after Stockholm for the building of a global consensus on environment and development. The summit afforded another opportunity for the scattered movements in the different parts of the world to meet and synchronize their common struggles. At the summit the position of representatives of the different parts of the world were unequivocal on the need to change the approach to management of environment issues and to develop global action plans toward sustainability of the global environment.

[11] Ibid at 20
[12] See Hennie Strydom, *TSAR.* 2004. 4 at 600
[13] The United Nations Conference on Environment and Development
[14] Markham, Adam, *A Brief History of Pollution* (EARTHSCAN, 1995) 124

Major developments associated with the conference include the setting up of the Commission on Sustainable Development and the development of five documents which have since changed the face of environmental management across the globe. These documents are:

(1) Agenda 21, which is a blue print for environmental development through a set of action plans on sustainable development.[15]

(2) The Rio Declaration on Environment and Development, which contains 27 principles which outline the rights and obligations of nation states in meeting the aspirations and wellbeing of the citizens.

(3) The United Nations Framework Convention on Climate Change.

(4) The Convention on Biological Diversity.

(5) A statement of principles to guide the management and conservation of forests.

The development of the local Agenda 21 process and the United Nations Commission on Sustainable Development at the Rio Conference has been recognized as 'encouraging States to provide a more comprehensive account of their own national sustainable development strategies.'[16] More importantly, the Rio conference mandated countries to control their environments through the enactment of adequate environmental legislation and to develop liability legislation and compensation for environmental harm.

Principles 11 and 13 of the Rio Declaration[17] provides that:

> ***"…States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental 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 developing countries."***[18]

> ***"…States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also co-operate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction."***[19]

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[15] Glazewski, Jan *Environmental Law in South Africa* citing Agenda 21 (Second Edition, 2005): An Agenda for Sustainable Development into the 21st Century, Department of Environment Affairs and Tourism May 1998. 35

[16] Stokke and Oystein above note 80

[17] http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78 (accessed 21-02- 2010)

[18] Principle 11, *Rio Declarations* , United Nations Conference on Environment and Development

[19] Principle 13 ibid

While the pursuit of environmental morality at international level has led to improvement in the quality of the environment,[20] particularly at domestic levels, the battle against climate change has made a renewal of the commitment of humanity to environmental protection a necessity.

4.3.3 World Health Organisation on air quality

The World Health Organisation (WHO), as a specialised agency of the United Nations, identifies air pollution as a major environmental risk to health. To avoid these risks the world body suggests a reduction in air pollution level in order to reduce 'the global burden of disease from respiratory infections, heart diseases and lung cancer.'[21] According to WHO, deaths from outdoor air pollution are estimated to be about 1.3 million yearly across the world.

In 2005 the organisation released its air quality guidelines which are applicable as benchmarks to all the countries of the world.[22] The guidelines specifically recommend the reversal of the concentration of selected air pollutants like particulate matters (PM), ozone (O_3), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) across all the regions of the world. Three advantages that are linked to the above recommendations deserve mention. In the first place the recommendations were expected to lead to a reduction of greenhouse gases. In the second place, the recommendations were expected to contribute to the mitigation of global warming. However, by far the most important advantage central to this investigation, is the possible elimination of the burden of emission, which victims in areas such as South Durban and Niger Delta are compelled to cope with daily as a result of pollution from oil operations.

[20]According to Adil and Mark Halle op cit at note 77, there has been reduction in the circulation of ozone depleting substances, while trade in hazardous substances and endangered species have been controlled

[21]WHO.*Air quality and health Fact sheet N°313* Updated September 2011. Accessed online on 18-12-2012 at ahttp://www.who.int/mediacentre/factsheets/fs313/en/index.html

[22] The old guidelines were Europe focused

The WHO released the following guidelines in 2005 on air quality:

(1) Particulate matter

As the name denotes, the materials here are basic particles. The components of particulate matters are 'sulphite, nitrates, ammonia, sodium chloride, carbon, mineral dust and water.[23]

PM2.5is considered more dangerous as it interferes with gas exchange in the lungs. According to a WHO report, chronic exposure to PM contributes to the risk of developing cardiovascular and respiratory diseases such as lung cancer

The WHO Guideline values are as follows: [24]

PM2.5

10 $\mu g/m^3$ annual mean

25 $\mu g/m^3$ 24-hour mean

PM10

20 $\mu g/m^3$ annual mean

50 $\mu g/m^3$ 24-hour mean

(2) Ozone (O_3)

Ozone here refers to the constituent of photochemical smog. This is not the same as 'ozone in the upper atmosphere.'[25] It is formed by industry and vehicle emission and volatile organic compounds from vehicles, solvents and industry. Its impact on human health manifests in breathing difficulties, because of reduced lung function, asthma, and other lung diseases.[26]

[23]Ibid.

[24]WHO.*Air quality and health Fact sheet N°313* Updated September 2011, available at http://www.who.int/mediacentre/factsheets/fs313/en/index.html.

[25]Ibid.

[26] Ibid.

The WHO Guideline values are as follows:[27]

Guideline values

O_3 100 μg/m^3 8-hour mean

(3) Nitrogen dioxide

The transformative and changing attributes of this gas make it dangerous and harmful where its concentration exceeds 200 pg/m^3 nitrogen dioxides (NO_2). As toxic gas it causes the inflammation of the airways. Equally, the gas is in the main source of nitrate aerosols which form an important fraction of $pm_{2.5.}$ The gas is mainly from combustion in processes like heavy power generation and engines in vehicular ships.[28]

The WHO Guideline values are as follows:

Guideline values[29]

NO_2

40 g/m^3 annual mean

200 μg/m^3 1-hour mean

(4) Sulfur dioxide (SO_2)[30]

The WHO Guideline values are as follows:

Guideline values

SO_2

20 ug/m^3 24-hour mean

500 μg/m^3 10-minute mean

Sulphur dioxide is another health threatening gas. The WHO's guidelines state that a concentration of 400pg/m^3 should not be exceeded over a period of 10 minutes. SO_2 emanates from the burning of fossil sulphur containing fossil fuels for domestic heating power generation and motor vehicles.[31] The impact on health is felt most in the respiratory system and the function of lungs. In an exposed environment irritation of the eyes, inflammation of the respiratory tract, including coughing, asthma and chronic

[27] Ibid.
[28] Ibid.
[29] Ibid.
[30] Ibid.
[31] Ibid.

bronchitis are the health hazards associated with this source of emission.[32] In the physical environment, the presence of sulphuric acid and water forms sulphur acid which leads to acid rain. This feature is permanent in localities around oil activities in the Niger Delta.

4.4 The World Bank

The World Bank structure is made up of the International Bank for Reconstruction and Development, and the International Development Association. It plays a pivotal role in promoting environmental morality. Its primary role is to provide low-interest loans, interest-free credit and grants for different functional areas like education, health, public administration, infrastructure financing, private sector development, agriculture, and environmental and natural resources development[33] in developing countries. Environmental protection is fully integrated into the activities and projects of the Bank. To underscore the importance of environmental protection, the Bank has commissioned different policies on as well as research on the environment in most of its operations. In its "Operational Directives on Environmental Assessment"' issued in October 1989,[34] the Bank mandated the integration of the principle of Environmental Impact Assessment for all projects which may impact on the environment.

The environmental strategy of the Bank approved in 2001 prioritises the following in developing countries:

(1) The quality of life that is people's health, livelihood and vulnerability - affected by environmental conditions.

[32] Ibid.

[33] See World Bank http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/0,,contentMDK:20103838~menuPK:1697023~pagePK:51123644~piPK:329829~theSitePK:29708,00.html. (accessed 18 -02-2011)

[34] Further revised in the 1991/1992 financial year to require that people affected by the Bank-supported projects, have access to the information contained in the assessment. See Stokke Schram Olay *et al* ibid. at 279

(2) The quality of growth, by supporting policy, regulatory, and institutional frameworks for sustainable environmental management, and by promoting sustainable private development.

(3) Protection of the quality of the regional and global commons such as climate change, forests, water resources and biodiversity. [35]

In terms of the focus of this study, the establishment of the Global Gas Flaring Reduction by the World Bank represents a major initiative towards addressing the problem of global atmospheric emissions and reduction of wastages of natural gas through flaring and venting. Established at the World Summit on Sustainable Development, in Johannesburg in 2002, GGFR is co-ordinated by the World Bank, and consists of representatives of governments of oil producing countries, state owned and major international oil companies.[36]

The goals of the GGFR Partnership are to - [37]

(1) Improve the legal and regulatory framework for investments in flaring reduction,

(2) Improve international market access to gas,

(3) Provide technical assistance to develop domestic markets for flared gas,

(4) Disseminate information, including information on best practices, and

(5) Promote local small scale use of gas.

In addition, the poverty reduction component of the project aims at exploring the possibility of local use of 'natural gas that would have been flared' in meeting the energy need of neighbouring communities of the oil producing locations.

The Partnership constituted task teams which are charged with the implementation of the projects of the partnership in countries where gas flaring reduction is possible.[38]

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[35]Ibid.

[36] The World Bank, Global *Gas Flaring Reduction Initiative Launched as Public-Private Partnership* (Press release,30-08-2002,http://siteresources.worldbank.org/INTGGFR/64199955-1103819378762/20298987/PartnershipPressRelease.pdf (accessed 21-04- 2011)

[37]Ibid.

[38]Ibid.

4.5 International Legal Framework for Emission Control

As members of the international community of nations, South Africa and Nigeria respectively, are actors in the global campaign against greenhouse gas induced climate change. They support the movement towards control of hazardous substances in the atmosphere and other air media.[39] The two countries are parties to different international agreements and conventions on air quality control and protection of the atmosphere.

Generally, international agreements create obligations, duties and in some circumstances benefits for participating states. Nigeria and South Africa are not exempt from these agreements in the global drive to control greenhouse gases and so create the right conditions for the attainment of the goals of the different agreements. It may be mentioned that international initiatives on environmental protection have always inspired changes at the national levels. Beyond ratification, the international frameworks are expected to guide nations in the quest for the control of substances that pollute the atmosphere.[40] Some of the key treaties relevant to the control of gas emission in the two countries are discussed below.

4.5.1 The Vienna Convention for the Protection of the Ozone Layer

The Convention which was adopted in Vienna, Austria on 22 March 1985 came into force in 1988, with the goal of protecting human health and the environment against the effects of human activities which affect the ozone layer.

Parties in the preamble to the convention acknowledged the principle of states' sovereignty and control over natural resources within their jurisdiction. The need to ensure that parties are in compliance with principle 21 of the United Nations Conference on the Human Environment, which restricts activities (particularly those that are capable of causing damages) by nations to national jurisdictions, is emphasised in the Convention. The preamble also acknowledges the peculiar circumstances of developing nations.

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[39] South Africa on its part was host to the Conference of parties to the UNFCCC in 2011

[40] Munn, R.E, Timmerman, Examples of Government Responses in P.Munn, R.E, La Riviere. J.W.M and Campagne Lookeren N van. (eds) *Policy Making in an Era of Global Climate Change* (Kluwer) 1996, 129.

By its design, the convention has a global reach as it is 'open to all states and regional economic integration organisations.'[41] Thus far 196 countries, including Nigeria[42] and South Africa,[43] have ratified the Convention.

The Convention was informed of the anxieties generated by the discovery in 1974 by scientists that chlorofluorocarbon gases (CFCs) were capable of migrating to the ozone stratosphere and remaining there. By nature, CFC_s gases are associated with releasing chlorine which is capable of breaking the ozone layers. The need to address this danger and other factors addressed in the preamble[44] led to the 1985 convention.[45]

In defining the ozone layers as 'the layer of atmospheric ozone above the planetary boundary layer'[46] the convention creates four categories of obligations for the parties towards addressing the challenge of depletion of the ozone layers. The four obligations are divided into general obligation,[47] research and systematic observation,[48] co-operation in the legal, scientific and technical fields,[49] and transmission of information.[50]

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[41] Stokke Olav Schram and Thommessen B Oystein,*Yearbook of International Co-operation on Environment and Development 2002/2003 (*Earthscan*)* 101

[42] Nigeria ratified the convention on 31 October, 1988, see http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-2&chapter=27&lang=en. (accessed 18-03-2011)

[43] South Africa ratified the Convention on 15 January 1990. See http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-2&chapter=27&lang=en. (accessed18-03- 2011)

[44] These factors include awareness of the potential harmful impact on human health and the environment through modification of the ozone layers; the world plan of action on the ozone layer by the United Nations Environment Programmes; the need for further research and the determination of the parties to the Convention 'to protect human health and the environment against adverseeffects resulting from modification of the ozone

[45]Weiss E Brown, The Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol On Substances that Deplete the Ozone Layer. *United Nations Audiovisual Library Of International Law*(UN,2009) available at http://untreaty.un.org/cod/avl/pdf/ha/vcpol/vcpol_e.pdf (accessed 15 -01- 2012)

[46] Article 1 Vienna Convention for the Protection of the Ozone Layers

[47] Article 2 Vienna Convention for the Protection of Ozone Layers

[48] Article 3 Convention for the Protection of Ozone Layers, the provisions of the article is further clarified in Annex 1 to the convention include issues like:Status of the ozone layer; (b) tropospheric and stratosphere concentrations of source gases for the HOx, $NO_{x,}$ ClO_X and carbon families; (c) the temperature from the ground to the mesosphere; (d) wave length – resolved solar flux reaching and thermal radiation leaving the earth's atmosphere; (e) wavelength – resolved solar flux reaching the earth's surface in the ultra-violet range having biological effects; (f) aerosol properties and distribution from the ground to the mesosphere; (g) climatically important variables, (h) trace species, temperatures, solar flux and aerosols

[49] Article 4 Convention for the protection of Ozone Layers

[50]Article 5 Vienna Convention for the Protection of Ozone Layers. The transmission and exchange of information is further clarified under Annex II to cover issues like scientific information (like planned and ongoing research), emission data needed for research, scientific results published in peer reviewed literature on the understanding of the physics and chemistry of earth's atmosphere and its susceptibility to change, assessment of research results and recommendation, technical information on availability and cost of chemical substances, and of alternate technologies to reduce the emission of ozone modifying substances and alternative technologies, socio-economic

Under the general obligations state parties agree to take appropriate measures, to cooperate, to adopt and to apply appropriate legal and administrative measures, procedures, standards, and domestic measures (in line with the obligations of parties), and to consider scientific and technological research results. This is expected to be done within the context of the convention and the protocol, in collaboration or co-operation with international organizations, towards protecting human health, environment and control of human activities which portends adverse effects on the ozone layer.

The Convention provides for a Conference of Parties (COP), which is to be held regularly to adopt 'rules of procedures' and 'financial rules', and to 'pursue continuous renewal of the convention towards attaining the identified obligations of parties antecedent to the convention, the annexes and protocols.[51],

Parties agreed to address the modification of the ozone layer, which introduces biological effects on the earth surface,[52] and vertical distribution of the ozone.[53] In addition Annex 1 to the Convention identifies[54] chemicals like carbon,[55] nitrogen[56]chlorine,[57] bromine,[58] and hydrogen substances[59] which are likely to have the potential to modify the chemical and physical properties of the ozone layer[60]. Finally, the need to address particular needs of developing countries is expected to enjoy the co-operation of parties towards the promotion of appropriate scientific and technical research in such countries as demanded by the convention.

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and commercial information on substances in Annex 1, and legal information on national laws, administrative measures and legal research, relevant to the protection of the ozone layer, methods and terms of licensing and availability of patents relevant to the protection of the ozone layer.

[51] See Aricle 6 Vienna Convention on Substances that Deplete the Ozone Layers

[52] This modification process is claimed to have potential consequences for human health, organisms, eco- systems and materials useful to mankind.

[53] This has potential consequences for weather and climate change. See Annexe I generally

[54] Paragraph 4 Annexe I

[55]Carbon monoxide (CO),Carbon dioxide (CO2), Methane (CH4), Non-methane hydrocarbon species

[56]Nitrous oxide (N2O) and Nitrogen oxides (NOX)

[57]Fully halogenated alkanes, e.g. CCl4, CFCl3 (CFC–11),CF2Cl2 (CFC–12), C2F3Cl3 (CFC–113), C2F4Cl2 (CFC–114) and Partially halogenated alkanes, e.g. CH3Cl, CHF2Cl(CFC–22), CH3CCl3, CHFCl2 (CFC–21)

[58]Fully halogenated alkanes, e.g. CF3Br

[59]Hydrogen (H2), Water (H2O)

[60]Ibid.

4.5.2 The Montreal Protocol on Substances that Deplete the Ozone Layer

The Montreal Protocol on Substances that Depletes the Ozone Layer, which 183 parties attended, came into force in January 1989[61] as a protocol to the Vienna Convention. The obligations of parties to the Vienna Convention are as follows:

(1) To eliminate –

> "....the emissions of substances that deplete the ozone layer globally, on the basis of developments in scientific knowledge, taking into account technical and economic considerations and bearing in mind the developmental needs of developing countries."[62]

(2) To address the eradication of the production of unnatural chemicals that deplete the ozone layers. For this purpose the protocol emphasise (a) scientific research and findings by parties, and (b) trade restrictions in the form of sanctions, with a total ban on signatories from trade and exportation of the controlled substances with and to non- party states under Article IV of the protocol. A further proposal was made for the consideration of a future ban on the importation of products made with controlled substances.

(3) To mitigate the effect of the measures above, the protocol provides for different measures and trade incentives.

In order to secure the involvement of developing countries, the protocol creates some incentives under article 5 and 10 of the protocols. Under Article 5[63] parties with an annual calculated level of consumption of the controlled substance of less than 0.3 kilograms per capita as at the date of the coming into force of the protocol, are exempted for a period of ten years to enable them to meet their basic domestic needs. These parties are mostly developing countries. Article 10 on the other hand establishes a mechanism to provide financial and technical assistance in addition to transfer of technologies to parties to promote their compliance with control measures set out in the protocol. A multilateral fund, which is to be funded by contributions from parties that are not operating under paragraph 1 of the Article 5, is available to parties with less than 0.3 kilograms per capita of the controlled substances as provided for under the mechanism.

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[61] Stokke Olav Schram and Thommessen Oystein *Yearbook of International Co-operation on Environment and Development* 2002/2003 (Earthscan, 2002) p 101

[62] See *Preamble to the Montreal Protocol (UNEP Ozone) 2000*. Available at http://www.unep.org/ozone

[63] See Article 5(1)

4.5.3 United Nations Framework Convention on Climate Change (UNFCCC)

The United Nations Framework Convention for Climate Chang**e**[64] is one of the immediate reactions of the international community to the different doomsday reports by different scientists, experts and bodies. Prominent among these is the International Panel on Climate Change which has, since the early 1990s, been consistent in releasing reports about the impact of emissions on the atmospheric environment and on global climate change induced by greenhouse gases.

Adopted in New York City on May 9, 1992 the convention came into force on 21 March 1994.[65] Because of the global nature of the climate change problem, participation in the convention is open to all members of the United Nations, the specialised agencies, parties to the statute of the International Court of Justice, and regional economic integration organisations.[66] (Greenhouse gases are defined under the convention as 'those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation.')[67]

The objectives of the convention are:[68]

(1) Stabilising greenhouse gas concentrations in the atmosphere. The objective is aimed at limiting the gaseous substances in the atmosphere to a level that would prevent dangerous anthropogenic interference with the climate system, and within a time frame that would allow ecosystems to adapt to climate change naturally.

(2) Ensuring that food production is not threatened.

(3) Enabling economic development in a sustainable manner.

To achieve the above objectives and avert additional warming of the earth surface and the atmosphere, the adverse effect on natural environments and

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[64] *United Nations Framework Convention on Climate Change*, http://unfccc.int/essential_background/convention/background/items/1349.php. (Accessed 10-05-2012)

[65] Nigeria and South Africa ratified the convention on 27 November 1994 and 27 November 1997 respectively, see at http://unfccc.int/resource/docs/2005/cop11/eng/inf01.pdf. (Accessed, 17 June 2011)

[66] StokkeOlav Schram, Thommessen Oystein B (eds*), Yearbook of International Co-operation on Environment and Development 200/2003 (Earthscan)* 92

[67] Article 1UNFCCC

[68] See Article 2 of the United Nations Framework Convention on Climate Change. Available at http://unfccc.int/essential_background/convention/background/items/1349.php. (accessed 13-03-2012) See also Stokke Schram, Olav and Thommessen B Oystein, *Yearbook of Interational Co-operation on Environment and Development* 2002/2003

humankind,[69] parties are committed to different measures and arrangements under the convention.

Parties to the convention are grouped into three categories[70] according to their commitment to the convention and economic viabilities.

(1) The Annex I parties consist of industrialised nations across the world who were members of the Organisation for Economic Co-operation and Development (OECD), countries with economies in transition , the Russian Federation, Baltic States, and states from central and Eastern European states.

(2) Annex II parties include mostly developed countries, European Community members and the original OECD member states. Countries here are expected under the convention to give financial assistance to developing countries to enable the countries to adapt to the adverse effects of climate change In addition, Annex II countries are expected to take steps to promote the development and 'transfer of environmentally friendly technologies to developing countries and Economies in Transition' (EIT) and 'pursue emission reduction activities[71]'.

(3) The Non-Annex I Parties category is mostly made up of developing countries. These are countries that are considered vulnerable to the uncertainties of climate change. The category includes countries with 'low lying coastal areas', 'those that are under threat from 'desertification' and countries whose economies rest on income from fossil production and trade.[72] The convention especially recognised the situation of the countries classified as least developed countries (LDCs)[73] by the United Nations. It provides that the special position of the

[69] Preamble to *The United Nations Convention On Climate Change*

[70] See Annex I and II to the *United Nations Framework Convention on Climate Change;* see also Article 4(8) UNFCCC

[71] See Article 4 (3) generally.

[72] Article 4 (8) UNFCCC

[73] The group of least developed nations (LDCs) is made up of the weakest and poorest nations of the world as was officially pronounced by the UN General Assembly in 1971. The current list includes Afghanistan, Benin, Bhutan, Botswana, Burundi, Chad, Ethiopia, Guinea, Haiti, the Lao People's Democratic Republic, Lesotho, Malawi, Maldives, Mali, Nepal, Niger, Rwanda, Somalia, Sudan, Uganda, United Republic of Tanzania, Upper Volta (now Burkina Faso), Samoa and the Yemen Arab Republic. Other nations were added later: Bangladesh, Central African Republic, Democratic Yemen, and the Gambia in 1975; Cape Verde and the Comoros in 1977; Guinea-Bissau in 1981; Djibouti, Equatorial Guinea, Sao Tome and Principe, Sierra Leone and Togo in 1982; Vanuatu in 1985; Kiribati, Mauritania and Tuvalu in 1986; Myanmar in 1987; Mozambique in 1988; Liberia in 1990; Cambodia, Madagascar, Solomon Islands, Zaire and Zambia in 1991 and Eritrea and Angola in 1994. Botswana

countries should be considered in funding and transfer of technological activities of parties to the Convention.

The duty of states is to enact environmental legislation and standards and set management objectives and priorities. Furthermore, developed countries are obliged to take immediate action (while acting in a flexible manner towards developing response strategies on the global, national and where agreed, regional levels) regarding their relative contribution to the growth of the greenhouse effect.[74]

The convention outlines the following principles as guidelines to parties in the implementation of the convention:[75]

(1) Protection of 'the climate system for the benefit of present and future generations of humankind' on the basis of equity, with the developed nations taking the lead.

(2) Full consideration of the specific and special circumstances of developing state parties, particularly the vulnerable states.

(3) Precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.

(4) Recognition of parties' rights and obligations to promote sustainable development.

(5) Promotion of a supportive and open international economic system towards sustainable economic growth and development for all parties, particularly developing country parties.

Stemming from the above principles, it becomes evident that it is the collective duty of state parties to reduce the adverse consequences of climate change through promotion of sustainable development and progressive reduction of emission. To attain the above purpose, all the parties to the Convention are bound to a long list of commitments outlined under Article 4(1) of the convention. Key issues among these are the publication of inventories on emission sources and removal of sinks (reservoirs) not covered by the Montreal protocol, climate change mitigation programmes at different levels, co-operation in development, use and transfer of technology,

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was removed from the list in 1994. See UN resolutions: UNCTAD II 1968 (resolution 24(ii)),UNCTAD III in 1972 (resolution 62 (III)), and UNCTAD IV, in 1976, (resolution 98 (IV)) respectively

[74] Preamble to the United Nations Convention On Climate Change

[75] Article 3 UNFCCC

sustainable development, and exchange of scientific technological, legal, social and other information among other issues.[76] Annex I parties furthermore have the following specific commitments under the convention:[77]

(1) Limiting anthropogenic emission of greenhouse gases, and protecting and enhancing its greenhouse gas sinks and reservoirs through adoption of new national policies and measures.

(2) Communication of their policies and measures on limiting anthropogenic emission of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs within six months of the entry to force of the Convention. This is aimed at returning parties individually and jointly to their 1990 levels.

(3) Calculation of emission sources in respect of the above based on best available technology.

(4) Review of the adequacies of national policies and measures limiting anthropogenic emission of greenhouse gases and communication to parties by the Conference of Parties, for appropriate action by the COP.

The emergence of the UNFCCC was an unprecedented step at using the instrument of international law to replace the anarchy and disparate approaches to regulating the threatening challenge of climate change. This measure became necessary since the existing treaties on the atmosphere,[78] like the Convention on Long Range Trans-boundary Air Pollution[79] and the Convention on the Depletion of the Ozone Layers, do not adequately address the causes and consequences of climate change.[80]

Under Article 4.8, non-Annex I parties like Nigeria, South Africa and other developing countries are given special consideration and attention. These gestures are however meant to aid countries in this category to meet their individual specific and special needs which may follow complications from climate change[81] or measures that are designed for the implementation of response measures to climate change.[82]

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[76] See Article 4(1) UNFCCC, generally

[77] Article 4 (2) UNFCCC

[78]Sten Nilsson, Pitt David*Protecting the Atmosphere: The Climate Change Convention and its context* (Earthscan, 1994) 33

[79] 18 I.L.M. 1442 (1979)

[80] 26 I.L.M. 1529 (1987)

[81] South Africa and Nigeria are facing different vulnerabilities from climate change. In the case of Nigeria there are different reports of unprecedented flooding across the country and desertification and extreme weather

The UNFCCC has both positive and likely adverse implications for Nigeria and South Africa as developing economies. It is expected that emission control measures, which will reduce dependence on oil by developed countries, would bring low consumption of fossil fuels and consequently low prices[83] for oil exports from developing countries like Nigeria. Equally, fears have been raised about the likelihood of the relocation of energy intensive industries from developed countries to developing countries.[84] Specifically, the Convention singled out among other areas of concern 'countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products.'[85] This addresses the situations in South Africa and Nigeria, where the economies depend on the exportation of oil in the case of Nigeria and domestic consumption of refined petroleum products and coal as a source of energy in the case of South Africa.

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conditions in the northern part of the country, where a large expanse of farmland has been lost to desertification in most northern states

[82] See Article 4.8 UNFCCC

[83] Polidaano, C, etal, op cit. Jotzo,F., Heyhoe,E., Jakeman,G., Woffenden, K., Fisher, B.S The Kyoto Protocol and Developing Countries: Impacts and implications for Mechanism Design,*ABARE Research Report* 2000.4 (Canberra) 12

[84] Ibid.

[85] Paragraph h Article 4.8 UNFCCC

4.5.4 Kyoto Protocol

The Kyoto protocol to the United Nations Framework Convention on Climate Change[86] was adopted in Kyoto, Japan on 11 December, 1997. It came into force on 16 February 2005.[87] In 2001, a later conference of parties at Marrakesh in Morocco[88] adopted more detailed terms and rules for the realisation of the objectives of the Protocol. At present there are 192 parties to the protocol.[89]

One of the shortcomings of the UNFCCC was that it did not establish greenhouse gas emission targets. This weakness was addressed in Kyoto, as the protocol was adopted to commit industrialised nations to work towards reducing and stabilising greenhouse gas emissions in the global atmosphere. The protocol is therefore an improvement on the UNFCCC, which is merely persuasive, in terms of the expected obligations of the industrialised nations towards reduction of greenhouse gases.

The Kyoto protocol reiterates the culpability of the industrialised nations to the damaging impacts of greenhouse gas emissions as a major factor in the climate change menace. Identifying 37 industrialised nations, the protocol sets binding targets for the countries and the European community towards the reduction of greenhouse gases for the period 2008 to 2012. The protocol imposes emission limitations and reduction commitments on individual parties in Annex I to the UNFCCC.[90]

Article 3 of the protocol specifically makes it obligatory for parties grouped under Annex 1 to individually or jointly accomplish their commitments in terms of greenhouse gas emission limitations and reductions to 5 percent lower than the 1990 levels. They are to ensure that the aggregate anthropogenic carbon dioxide emissions of the greenhouse gases, as set out in Annex A, do not exceed the assigned limits. The goal here is to effect a 'reduction in the overall emissions of such gases by at least 5 per cent below the 1990 levels in the commitment period 2008 to 2012[91].' The protocol aims to

[86] 11 December 1997 *Treaty Series* vol. 2304. 148
[87] United Nations Framework Convention on Climate Change, available at http://unfccc.int/kyoto_protocol/items/2830.php (accessed 17 -01- 2012)
[88] Conference of Party 7
[89] See Status of the Ratification of the Kyoto Protocol accessed on 10 May, 2011 at http://unfccc.int/kyoto_protocol/status_of_ratification/items/2614.php
[90] This consists of developed or industrialised countries
[91] Article 3 (1) Kyoto Protocol to the United Nations Framework Convention on Climate Change

control six gases, that is, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2), hydro fluorocarbons (HFC_s), per fluorocarbons (PFC_s), and sulphur hexafluoride (SF_6).

The list of the commitments of parties is contained in Annex B to the protocol. Article 20 provides for the amendment of the protocols at the instance of any party to the protocol. Agreement on any proposed amendment is expected to be moved by consensus of the parties.[92] The Annexes to the protocol are taken as integral to the protocol. Annex A contains a list of the greenhouse gases[93] and their sources[94].

While developing countries like Nigeria and South Africa do not have obligations to cut their greenhouse gas emissions under the protocol they, however, have obligations to 'submit an initial national communication report on each nation's emissions and the predicted impacts on climate change, and to develop National Climate Change Response Strategies.'[95]

While parties are expected to adopt national measures to meet their targets under the UNFCCC, the Kyoto Mechanisms protocol provides for parties with three market based mechanisms[96] to assist them to meet their targets: Emission trading (ET), Clean Development Mechanism (CDM), and Joint Implementation (JI)

In order to meet their obligations under Article 3 of the Convention, the Joint Implementation mechanism enables any Annex 1 party under Article 6 of the protocol, to transfer or acquire emission reduction units from any other such party. This is however limited to projects aimed at reducing anthropogenic emissions by sources or for enhancing anthropogenic removals by sinks of greenhouse gases in any sector of the economy[97]. The advantage of the mechanism is that it promotes foreign investment and transfer of technology

The above situation envisages a situation in which a country did not exhaust its emission permit. In such a case, the country may permit the remnants to be transferred to another country in need of credits. This is carried out under a system called carbon

[92] Article 20(3) Kyoto protocol

[93] The greenhouse gases under Annex A are listed as Carbon dioxide (CO) 2;Methane (CH) 4; Nitrous oxide (NO) 2; Hydrofluorocarbons(HFCs); Perfluorocarbons (PFCs);Sulphur hexafluoride (SF)

[94] The sectors and their sources as identified under Annex A are energy, industrial processes, solvent and other products use, agriculture and waste industries, and manufacturing industries

[95] See Articles 4, Article 12 of UNFCCC.

[96] See article 12, Kyoto Protocol to the United Nations Framework Convention on Climate Change

marketing, emission trading and cap and trade. However, a party that is not in compliance with its obligations under Articles 5 and 7 of the protocol would not qualify to acquire emission reduction units, while acquisition of emission reduction units is made supplemental to domestic actions in order to meet commitments under article 4. Joint Implementation and Emission Trading provide opportunity for Annex I countries to meet their obligations under the convention and the protocol. The arrangement is, however, subject to certain conditions which include the project having 'the approval' of the concerned parties, and 'providing a reduction in emissions sources.'[98] Article 12 of the protocol defines the Clean Development Mechanisms and identifies the purpose as 'to assist parties not included in Annex 1' to achieve sustainable development and to contribute to the ultimate objective of the convention, and to assist parties included in Annex1 to achieve compliance with quantified emission and reduction commitments under article 4.[99]

The Clean Development Mechanisms is an incentive to the Annex 1 countries which enables the parties to establish carbon sink projects like afforestation, reforestation, renewable energy generation projects and energy-efficient technologies in developing countries.

Under the Treaty, countries must meet their targets primarily through national measures. However, the Kyoto Protocol offers them an additional means of meeting their targets by way of the three market-based mechanisms.

[98] See Article 3Kyoto Protocol. the United Nations Framework Convention on Climate Change
[99] Article 12(2) Kyoto protocol

4.5.5 The Stockholm Convention on Persistent Organic Pollutants (POPs)

The aim of the Stockholm convention is to protect human health and the environment from persistent pollutants[100] through a precautionary approach as enunciated under principle 15 of the Rio Declarations on Environment and Development. Adopted on 22 May, 2001 the convention came into force on 17 May 2004,[101] participation in the convention being open to all nations.[102]

To achieve the aim, parties to the convention agreed on measures to reduce or eliminate intentional production of the substances identified as persistent organic pollutants in the annexes and generally known as the dirty dozen.[103] Persistent organic pollutants 'are carbon based semi volatiles that are capable of remaining in the environment and have capacity for long travel through evaporation and atmospheric cycling and disposition.'[104] They are considered very dangerous to human health[105] since they are toxic and can persist in the environment for a long period of time, accumulate and transfer from one specie to another through the food chain.[106]

Parties have the following obligations:[107]

(1) To prohibit and/or take legal or administrative measures[108] to (a) eliminate the production and use of chemicals listed in annex A, and (b) not to import or export these chemicals.

(2) To restrict the use and production of chemicals listed in Annex A or Annex B, and these are imported only for (a) the purpose of environmentally sound disposal, or (b) a purpose which is approved or permitted for such party under Annex A or B.

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[100] Article1Stockholm Convention on Persistent Organic Pollutants

[101] See Stockholm Convention on Persistent Organic Pollutants, Status of Ratification, accessed online on 18 May 2012 at http://chm.pops.int/Countries/StatusofRatification/tabid/252/language/en-US/Default.aspx

[102] See article 24 *Stockholm Convention on Persistent Organic pollutants*

[103]The dozen toxic chemicals are eight pesticides (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene); two industrial compounds (polychlorinated biphenols (PCBs) and hexachlorobenzene, which is also a pesticide); and two byproducts of combustion and industrial processes(dioxins and furans). See *Going Forward: The 'Dirty Dozen' UN Treaty To Be Signed in Stockholm This Week.* (May 20, 2001 edition: Agence France Presse). *http://www.commondreams.org/headlines.shtml?/headlines01/0520-01.htm*(accessed 18-06- 2012)

[104] See *Persistent Organic Pollutants and Stockholm Convention: A Resource Guide*.(Prepared by Resources Future International for World Bank, 2001) 1 - 2

[105]Ibid.

[106]United States EPA. *Persistent Organic Pollutants: A Global Issue, A Global Response.* Available at http://www.epa.gov/international/toxics/pop.html(accessed 18-05-2011)

[107]Article 3 Stockholm Convention on Persistent Organic Pollutants www.**pops.int**/documents/convtext/convtext_en.pd (accessed 18-05-2011)

[108] See article 3 in general

Article 4 of the convention creates a register for the identification of parties with exemptions to items listed under Annex A and Annex B. These are parties that consider total elimination of the substances not feasible for economic or other reasons.

The Convention contains six annexes which further clarifies the provisions of the convention and lists other information regarded relevant to the implementation of the convention. These include chemicals that are not subject to elimination under the convention,[109] restriction of the production and use of DDT to disease vector control,[110] identification of PCDD/PCDF, HCB, PCB as unintended chemicals and their sources of production,[111] requirements and screening criteria on new additions to the list of substances identified under the convention,[112] information on the risk profiles of the substances under the convention,[113] and information on socio-economic considerations for the prohibition of the substances.[114]

In order to attain this goal, the convention created members' commitment. Parties are expected to apply the use of best available techniques and practices towards replacing the existing POPs, so preventing activities that could lead to the development of new ones. Implementation plans are to be developed by each party and forwarded to the conference of the parties within 2 years of the convention coming into force so to meet their obligations under the convention.

Two action plans on intentional and unintentional productions of POPs are designed under the convention. At the National level, action plans [115] are to reflect the general guidance on prevention and release reduction measures outlined in Annex C and general guidelines on best available techniques and best environmental practices to be adopted by the conference of the parties (COP)[116]. Furthermore, national focal points are to be established by each party to co-ordinate exchange of information on POPs and possible substitutes or modified materials.

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[109] See Annex A
[110]See Annex B
[111]See Annex C
[112]See Annex D
[113] See Annex E
[114]See Annex F
[115] Article 5 Stockholm Convention on Persistent Organic Pollutants
[116] Article 5ibid

In order to assist developing country members, the convention provides for technical and financial assistance from developed country members based on the national goals, plans and programmes of the developed party, and the countries with economies in transition may use these towards the implementation of their obligations under the convention. Article 13 of the convention creates obligations for developed country parties to provide 'new and additional financial resources' to enable developing country parties and nations with economies in transition to meet the 'agreed incremental costs of implementing measures which fulfill their obligations under the convention.' This arrangement is, however, subject to agreement between a recipient party and the participating entity. Furthermore, a financial mechanism was established under the control of the Conference of the Parties to assist developing countries and parties with economies in transition, to secure sustainable financial assistance towards meeting their commitments under the convention. The fund is to be operated through the institutional structure of the Global Environment Facility (GEF) on an interim basis[117] between the time of the coming into force of the convention and the first Conference of the Parties.

4.5.6. Summary

Securing the global atmosphere has attracted responses at the international level through international treaties and agreements. The section highlights the provisions of some of the relevant international agreements to the topic of the research, namely, the Vienna Convention for the Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer, the United Nations Framework Convention on Climate Change (UNFCCC), Kyoto Protocol, the Stockholm Convention on Persistent Organic Pollutants (POPs).

These instruments identify production and emission of certain substances like hazardous chemicals, carbons and greenhouse gases as having negative consequences on the atmospheric and human health. They created obligations for parties, while taking special measures like creating mechanisms to aid developing countries, co-operation

[117] Article 14 ibid

agreements, exchange of information, technical support and direct investment in developing countries to enable them to cope with the ban and control of these substances.

As developing nation parties to these agreements, South Africa and Nigeria do not have direct obligations, but they are expected to put in place legal frameworks, local institutions and measures to take advantage of the different support and other mechanisms in the agreements towards control of emission of these substances within their respective boundaries.

The next section examines the impact and the challenge of protecting the global atmosphere particularly against emission from fossil and other activities in primary energy production.

4.6 Human Rights and Environmental Protection

4.6.1 The Relationships between Human Rights and the Environment

Some environmental issues are known to have severe impacts on people and their lives. The obligations of a State towards its own citizens under the different international human rights covenants act as a test which usually reveals how a State treats and handles the human rights of its citizen, particularly in the face of economic activities.[118]

The usefulness of human rights instruments for environmental protection has been acknowledged by different scholars and activists.

Gearty is one of the contemporary writers who explores the relationship between human rights and the environment. He contends[119] that environmental rights are human rights. This position he premised on two factors: (i) the fact that people's livelihoods, their health and sometimes their very existence depend upon the quality of and their access to the surrounding environment, and (ii) recognition of peoples' rights to

[118] Roth Kenneth, The Dynamics of Human Rights and Environment. Presentation at the University of San Diego on 20 September 2007

[119] Gearty Conor, Do human rights help or hinder environmental protection? *Journal of Human Rights and the Environment*, Vol. 1 No. 1, March 2010, 7–22

information, participation, security and redress. He[120] extols the following as qualities of the link between human rights and environment: (a) the emphasis on controlling the abuse of power, (b) the capacity to equip social movements with a language of protest, and (c) provision of a platform for change and the use of protest by human rights movements.

De Feyter, writing on social justice in the age of the market, observes[121] that the human rights instrument –

> ***"may contribute to addressing the adverse ecological consequences of economic globalization' through: (a) enabling individuals to challenge the impact of environmental degradation on their own lives; and (b) forging alliances between the environmental and the human rights movements."***

Roth expressed the view that while violations of human rights are reported across the world, most nations however do not want to be seen as violators of the rights of their citizens. According to him, this position has helped in the cause of 'shaming nations for human rights violation' as a powerful weapon by the human rights movements and crusaders across the world.[122] In his contribution to the use of human rights to empower the people, Roth's view is that the human rights angle creates the critical space for the people and environmental activists to speak out against pollution and other challenges they are facing from destructive practices by polluters, as these touch issues that affect human rights.

Boyle acknowledges different sources of environmental rights legislation, particularly under international law. He contends [123] that environmental rights can be realised under the three different generations of human rights: the International Covenant on Civil and Political Rights, known as first generation rights; the International Covenant on Economic, Social and Cultural Rights, known as the second generation rights, and the collective rights, known as third generational rights.

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[120]Ibid

[121] De Feyter, Koen, *Human rights: Social Justice in the Age of the Market*(University Press, 2005) 22

[122] Roth Kenneth, *The Dynamics of Human Rights and Environment*. Presentation at the University of San Diego on 20 September 2007.

[123] Boyle Alan, *Human Rights and the Environment: A Reassessment*, First Preparatory Meeting of the World Congress on Justice, Governance and Law for Environmental Sustainability.12-13 October, 2011, Kuala Lumpur, Malaysia. http://www.unep.org/delc/Portals/24151/Towardsthedeclarationhumanrights.pdf (accessed 04-04- 2012)

4.6.2 The Need for Human Rights in Environmental Protection

The clamour for the application of human rights principles to environmental issues in places like Nigeria and South Africa is informed by the apparent failure of the common law rules and the different institutions involved in environmental governance in the countries. The rigidity of common law, which holds on tightly to technicalities, is evident in the dearth of decided cases on environment in the two countries. The few ones that are filed are easily dismissed or struck out on technicalities. For instance, public interest actions which are the bedrock of environmental action are stifled for lack of *locus standi* by courts in most of the cases filed in Nigerian and South African courts in the period before the current constitutions. While cases like *Milani v. South African Medical and Dental Council and others,*[124]can be justified under the old order before the 1996 constitution in South Africa on locus standi, it appears as if the Courts in South Africa remain rigidly committed to the common law principles in disregard of the new thinking under the 1996 constitution. Equally, in a recent case of *Laskey & another v Showzone CC & others*, [125] the issue of technicality came up again in a case in which the applicant applied to the court for an interdict to restrain the respondents from further causing noise pollution in the neighbourhood, in line with the provisions of the noise control regulation. The Court, despite establishing the fact that the respondents were actually wrong, surprisingly held that the applicants would have to show some special injury or damages that is different from that of the entire public.

[124]1990 (1) SA 899 (T) at 902. An action filed by the plaintiff to challenge the first applicant, a chiropractor, and the second applicant, the South African Associated Health Service Professions Board with whom first applicant was registered, brought an application against the South African Medical and Dental Council, the first respondent, and the Minister of National Health and Population Development in his capacity as such, the second respondent, for a declaratory order to the effect that a particular rule of the first respondent, approved by the second respondent, be declared null and void, alternatively that, on a proper construction of that rule, it did not prevent medical practitioners and dentists from assisting the second applicant in the training of students or intending practitioners as defined in the Associated Health Service Professions Act 63 of 1982. The court held that the applicants were required to show that they were 'interested persons' in terms of s 19(1) of the Supreme Court Act 59 of 1959, concerning 'any existing, future or contingent right or obligation to bring the proceedings.The court further held that the particular rule of the council, made, as it had been, by an entirely separate body to that governing first applicant, did not infringe on first applicant's right to associate with registered medical practitioners or second applicant's right to approach such practitioners with a view to assisting in the training of intending practitioners as defined in the Associated Health Service Professions Act 63 of 1982. The rights which applicants wished the Court to enquire into were not their rights but those of medical practitioners registered with the first respondent and who were the only persons who could fall foul of that rule

[125] (2007) (2) S.A. 48 (C)

While Summers[126] does not rule out the future use of a common law remedy, he is of the opinion that 'it is not suitable for the protection of the integrity of a common resource such as the environment' which, according to him, 'is in the broader public interest.' He identifies different factors such as (a) the anachronistic 'demand for proof linking the harm to the wrongful conduct of the defendant', (b) 'the dependence of common law on litigation for relief, and (c) the anthropocentric character'[127] which limits application of common law to protection of private properties as factors that militate against common law in environmental protection.

4.6.3 Relevant international treaties on human rights and environmental protection

Many international treaties and agreements on human rights pre-date the emergence of environmental protection on the agendas of the nation states. Human rights instruments have emerged as a viable alternate tool to the ever technical and rigid common law rules, the forbears of environmental protection laws in Nigeria and South Africa. Many of the principles of environmental rights or human rights can be traced to different legal instruments with sources in international declarations, conventions and treaties, constitutions, and legislation of the respective countries.

[126]Summers Richards, Common law remedies for Environmental Protection in Alexander Paterson & Louis J Kotze (eds.) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives*. (JUTA, 2009) 368

[127] That limits applications to protection of private properties

4.6.3.1 The United Nations, Human Rights and Environment

The United Nations provides an important platform for the promotion of the interrelationship between environmental problems and human rights. Different international conferences have been held and many declarations, treaties and soft laws have been developed under the auspices of the United Nations on the subject matter.

The preamble to the charter which was adopted in San Francisco in 1945,[128] the UN states as follows:

> ***"…determination to reaffirm faith in fundamental human rights, in the dignity and worth of men and women… and establishment of conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained and to promote social progress and better standards of life in larger freedoms."***

The first real move to acknowledge the human rights instrument as a useful tool for environmental protection emerged at the UN Conference on Human and Environment at Stockholm in 1972. The Stockholm Declarations on the environment contains certain 'common principles to inspire and give the peoples of the world in the preservation and enhancement of the human environment.'[129]

It proclaims among others that - [130]

> ***"…both aspects of man's environment, the natural and the manmade, are essential to his well-being and the enjoyment of basic human rights – even the right to life itself. The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world, it is the urgent desire of the peoples of the whole world and the duty of all governments."***

Current realities confirm the above position, as environmental damages in different parts of the world have been found to have serious consequences on the fundamental and the socio-economic rights of people in different parts of the world. For instance, issues like impaired health, job loss, drought, food shortages, forced migration, diminishing arable land, change in livelihoods, flooding, water shortage, which have serious consequences on living, have been linked to environmental damages.[131] Different courts, commissions and tribunals at national and regional levels

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[128]Adopted in San Francisco in 1945.Available at http://treaties.un.org/doc/Publication/CTC/uncharter.pdf. accessed on 23 June 2011

[129]Adopted at the United Nations Conference on Human Environment at Stockholm from 5 to 16 June 1972. See the preambles

[130]See proclamation 1 and 2 of the Declaration of the United Nations Conference on the Human Environment. http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503

[131] Kenneth Roth, above

have adopted these principles, while lawmakers have been guided by the principle in enacting laws for the protection of the environment.

4.6.3.2 Universal Declaration of Human Rights, 1948

The Universal Declaration of Human Rights of 1948 is foundational to subsequent treaties and covenants on human rights. While it was not drafted for immediate enforcement it remains a source of inspiration to human rights legal regimes, as many provisions of different covenants and constitutions of nations across the world have re-enacted many of the provisions in the Declaration.

Article 25 of the Universal Declaration of Human Rights[132] says:

> ***"…Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services..."***

As indicated in chapter 2, the release of gas emissions into the environment has serious consequences on issues of food production, housing and increased spending on medication with sicknesses being imposed on people living in the areas of development and industrial activities. These are issues that impact on the life style and dignity of individuals and people.

While the Universal Declaration of Human Rights is a non-binding international document, its influence is overwhelming as it establishes and gives 'human rights precedence over the power of the state.'[133] This declaration is cardinal to human rights jurisprudence, as human rights remain a potential instrument for application of international moral and diplomatic pressure on countries that violate the principles contained in the declarations.

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[132] Article 25(1) available at http://www.un.org/en/documents/udhr/index.shtml#a25. (accessed 10 -03- 2011)

[133]See United Nations Association in Canada, Questions and answer about the Universal Declaration of Human rights available at http://www.unac.org/rights/question.html.(accessed 10-03-2011)

4.6.3.3 International Covenant for Civil and Political Rights, 1966

The International Covenant on Civil and Political Rights was adopted by the United Nations General Assembly in December 1966. At present there are 74 signatories and 167 parties to the covenant.[134]

Usually categorised as first generation rights, Boyles identifies the rights under the covenant as anthropogenic, since it focuses on individuals and not on the environment. This category of rights gives individuals, groups and NGOs access to environmental information, judicial remedies and political process, and its usefulness is in 'facilitating participation in environmental decision making and compelling governments to meet minimum standards of protection for life, private life and property from environmental harm.'[135]

The place of this covenant in environmental protection lies in its provisions on the right to life. Article 6(1) of the covenant declares as follows:

> ***"Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life."***

The right to life has been interpreted in different jurisdictions to include a right to an environment that is devoid of pollution.

In Bangladesh, in the case of *Dr. Mohiuddin Farooque v Bangladesh, represented by the Secretary, Ministry of Irrigation, Water Resources and Flood Control and others*[136] the Supreme Court of Bangladesh Appellate Division (civil) held that:

> ***"...although we do not have any provision like Article 48A of the Indian Constitution for protection of the environment, Articles 31 and 32 of our constitution protect the right to life as a fundamental right. It encompasses within its ambit, the protection and preservation of environment, ecological balance free from pollution of air and water, sanitation, without which life can hardly be enjoyed. Any act or omission contrary thereto will be violation of the said right to life."***

[134] As at July 2012, see International Covenant on Civil and Political Rights Status as at 07 -07 -2012. Available online at http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-4&chapter=4&lang=en

[135] above

[136] 48 Dir 1996. See also Compendium of Summaries of Judicial Decisions in Environment - Related Cases (UNEP, 2005) 90

In India, in the case of*Subash Kumar v State of Bihar*[137]the Supreme Court of India held that:

> ***"...the Right to life in Article 21, includes the right to enjoyment of pollution-free water and air for the full enjoyment of life. If anything endangers or impairs the quality of life, an affected person or a person genuinely interested in the protection of society would have recourse to Article 32."***

Upholding the declarations of the Stockholm Conference of 1972, (restating the Stockholm principles), the Court in India also held in the case of *M. C. Mehta v Union of India and others*[138] that:

> ***"...both aspects of man's environment, the natural and manmade, are essential to his well-being and the enjoyment of basic human rights – even the right to life itself. The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world, it is the urgent desire of the peoples of the whole world and the duty of all governments."***

In Nepal, in the case of *Advocate Kedar Bhakta Shrestha and others v HMG, Department of Transportation Management and others*[139] the Supreme Court of Nepal held that:

> ***"…the Environment Protection Act 1996, Environment Protection Act 1997, and the Nepal Vehicle Emission Standard, 1999 have been brought into existence to protect and promote a healthy environment as mandated by the directive principles of the Constitution… The environment is interlinked with the right to life and therefore appropriate measures have to be taken for the protection of the environment… Personal freedom to carry on a business or occupation, cannot limit and abrogate the right to a healthy environment, which is linked with the right to life of the people at large. No one is entitled to carry on a business or occupation that is harmful to public health". Every individual has an inherent right to live in a healthy environment. Therefore it is the responsibility of the state to respect and protect such right."***

[137] AIR 1991 SC 420, see also Compendium of Summaries of Judicial Decisions in Environment - Related Cases (UNEP,2005) 104

[138] AIR 1988 Supreme Court 1037, also see Compendium of Summaries of Judicial Decisions in Environment - Related Cases (UNEP,2005) 104

[139] Writ No 3109 of 1999, also see Compendium of Summaries of Judicial Decisions in Environment -Related Cases (UNEP,2005) 138

The Court, in interpreting the Pakistani Constitution of 1973[140] in *Ms Shehla Zia and others v WAPDA*[141]held among other considerations the following:

> ***"The word life has not been defined in the constitution but it does not mean nor can it be restricted only to the vegetative or animal life or mere existence from conception to death. A wide meaning should be given to the word 'life" to enable a man not only to sustain life but also to enjoy it."***

In the above cases, a common factor that emerges is that the constitutions of the respective countries do not have the right to environment in its provisions, but the judiciaries in these countries have become proactive in recognising the right to life as a component of environmental protection.

4.6.3.4 International Covenant on Social Economic and Cultural Rights

The International Covenant on Social Economic and Cultural Rights was adopted by the United Nations General Assembly in December 1966. It only came into force in 1976.[142] The Covenant is the bedrock of the different socio-economic rights known also as second generation of rights, some of which have been domesticated through different constitutions across the world.

The method of domestication has been either for the provisions to be made part of the "Directive principles state policy as adopted in constitutions of countries like India, Pakistan and Nigeria,[143] or as specific rights like health, education housing and environmental rights.

Socio-economic rights establish a clear covenant between a state and its citizens, in particular, while some of these rights may not be enforceable directly because of the peculiar situations of the different countries or the non-justiciable status of the directive principles in the constitutions. However, certain rights such as environment, health, housing and others (as socio-economic rights) are recognized

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[140] Articles 9, 14 and 184(3)

[141] Human Rights Case No: 15-K of 1992, also reported in Compendium of Summaries of Judicial Decisions in Environment - Related Cases (UNEP,2005)

[142] See the United Nations Treaty Collection available online at http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-3&chapter=4&lang=en. (accessed07 -07- 2012)

[143] Chapter II titled Fundamental Objectives and Directive Principles of State Policy under the Constitution of the Federal Republic of Nigeria, 1999 which contains the political, economic, and social objectives of the Nigerian state

under the South African Constitution and some other countries. Irrespective of the status of these rights, one common factor is that they impose obligations on governments to meet and guarantee certain conditions and needs that support living.[144]

This study is in agreement with Glazewski[145] and Boyle[146] that environmental rights fall within the categories of rights under the International Covenant on Economic Social and Cultural rights and even the International Covenant on Civil and Political Rights. However it is argued here that the International Covenant on Economic Social and Cultural Rights is foundational to environmental rights and other rights, as an examination of the provisions of the covenant establishes a direct impact of a degraded environment on the rights that are articulated under the instrument. In line with Boyles's position, the covenant serves as a platform to promote a right to 'a decent, healthy or sound environment as an economic or social right.'[147]

Article 12 of the Covenant provides for the highest attainable standards of health. It particularly identifies 'the improvement of all aspects of environmental and industrial hygiene' as one of the steps to be taken by the State parties to achieve the full realisation of the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.[148]

The Committee on Economic Social and Cultural Rights of the UN General Assembly in its general comment on the above provision expansively acknowledged the components of article 12.2b of the covenant to include the improvement of all aspects of environmental and industrial hygiene. In particular, environmental and industrial hygiene is defined to include the following: prevention of occupational accidents and disasters, adequate supply of safe and potable water, basic sanitation, prevention and reduction of exposure of the people to harmful substances or other

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[144]Roth, above
[145] Glazewski Jan. *Environmental Law in South Africa* 2ed, (2005) LexisNexis, p 70
[146] Boyle,above1
[147]Ibid
[148]Article 12 (2) (b), International Covenant for Economic, Social and Cultural Rights, adopted and opened for signature, ratification and accession by General Assembly resolution 2200A (XXI) of 16 December 1966. Available at http://www2.ohchr.org/english/law/cescr.htm

harmful environmental conditions that impacts upon health, and minimisation of the cause of health hazards in the working environment.[149]

By the same token, the covenant contains other relevant provisions like the recognition of the right of everyone to the enjoyment of just and favourable conditions to ensure safe and healthy working conditions.[150] These provisions are applicable in situations where, for instance, local people, especially farmers, are not able to pursue their means of livelihood as a result of the release of gas emission or other pollutants in their neighbourhood.

Article 10 (3) of the covenant can be relied on as a tool for environmental justice. It provides as follows:

> "***Special measures of protection and assistance should be taken on behalf of all children and young person without any discrimination for reasons of parentage or other conditions. Children and young person should be protected from economic and social exploitation. Their employment in work harmful to their morals or health or dangerous to life or likely to hamper their normal development should be punishable by law. States should also set age limits below which the paid employment of child labour should be prohibited and punishable by law."***

4.6.3.5 The African Charter on Human and Peoples Rights and the Right to Environment

The African Charter on Human and Peoples' Rights, also called the Banjul Charter, was adopted as a regional document for Human Rights protection by African heads of States and governments in 1981 at the Organisation of African Unity conference held in Nairobi, Kenya.[151] The Charter made provision for a plethora of rights, one of which is the provision of article 24 which provides that:

> ***"All peoples shall have the right to a general satisfactory environment favourable to their development."***

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[149] See Committee on Economic, Social and Cultural Rights: Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights, *General Comment No 14 (2000)* E/C. /12/2000/4: The Right to the highest attainable standard of health, article 12 of the International Covenant on Economic, Social and Cultural Rights. Available at http://www.unhchr.ch/tbs/doc.nsf/%28symbol%29/E.C.12.2000.4.En

[150] Article 7 (b) above note 68

[151] The African Charter on Human and Peoples' Rights, Nairobi, 27 June 1981, available online at http://www.africa-union.org/official_documents/treaties_%20conventions_%20protocols/banjul%20charter.pdf. Accessed on 10-07-2011

The inclusion of article 24 in the charter can best be described as apt and a reflection of the traditional African society in harmony with the natural environment, a practice that transcends generations. In the words of Polycarp,[152] 'while the express recognition of the right to environment in Africa is innovative, what the right embodies is the right of every African to an environment that is not harmful to their health as implicit in those ancient conservation and management practices'. One may add here that the right to environment is as well a customary right in any African society. The content of this customary right involves the communal right of every member of the traditional African society to a decent and sustainable environment.[153]

For Nigeria and South Africa as parties to the African Charter on Human and Peoples' Rights, there is a clear obligation for these nations to promote respect for environmental rights within their respective borders. Under article 1 of the charter, member states and parties are obliged –

> ***"…to recognize the rights, duties and freedoms enshrined in this Chapter and shall undertake to adopt legislative or other measures to give effect to them."***[154]

The opportunity to put the environmental rights provision in the charter to test came up in the Ogoni case[155] where the African Commission on Human and Peoples' Rights stated that:

> ***"The Charter requires the states to take reasonable and other measures to prevent pollution and ecological degradation, to promote conservation and to secure all ecologically sustainable development and use of natural resources."***

In line with the above position, The ECOWAS Community Court in*Socio Economic Rights Action Projects v Federal Republic of Nigeria*[156]emphasized the obligations of ECOWAS Member States under Article 1 of the African Charter on

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[152] Emeka Polycarp Amechi, 'Enhancing Environmental Protection and Socio-Economic Development in Africa: A Fresh Look at the Right to a General Satisfactory Environment under the African Charter on Human and Peoples' Rights', 5/1 *Law, Environment and Development Journal (2009),*58 available at http://www.lead-journal.org/content/09058.pdf. (accessed 10 - 06-2011)

[153] In the traditional African setting, activities that have the tendency of harming the health or occasion discomfort to the members of a community are either outlawed or located far from the community. Locating a facility that generates poisonous emission near a community offends traditional African norms and the customary right to environment. The traditional African society would have outlawed such activity

[154] Article 1,Ibid

[155] Social Economic Rights Action Centre v Federal Republic of Nigeria See *International and Comparative Law Quarterly, vol. 52, July 2003,* 749-760

[156]General list N°ECW/CCJ/APP/08/09 , JUDGMENT N° ECW/CCJ/JUD/18/12

Human and Peoples Rights, to comply with Article 24 of the Charter.The obligation of each state party to the Charter under Article 24[157], according to the Court is "both an obligation of attitude and an obligation of result". The Court held that Nigeria as a state party to the African Charter is under international obligation "to recognise the rights, duties and freedoms enshrined in the Charter and to undertake to adopt legislative or other measures to give effect to them" .The court found in the case that despite all the measures supposedly put in place to control environmental degradation in the Niger Delta, the federal Government of Nigeria failed in the discharge of its obligations towards securing the rights under Article 24 of the charter.

Above obligation of parties under the charter are according to Fons Coomas[158]"of immediate application". This therefore presupposes immediate measures by state parties in form of enactment, enforcement and monitoring of relevant legislation in order to secure the rights under the charter.

4.6.4 Growth of the Interlink Between Human Rights and Environmental Protection

The nexus between environment and human rights has been acknowledged by different quarters and documents. The general consensus is that 'a clean and healthy environment is essential to the realization of fundamental human rights.[159] The integration of these principles into the United Nations system can be traced to the commissioning of a special rapporteur in 1989 to study the link between human rights and the environment. In the final report which came out in 2004,[160] the rapporteur observed that 'the communications received by the Special Rapporteur highlight the

[157]Securing the right of all people to "a general satisfactory environment favourable to their development".
[158] Fons Coomas, The Ogoni Case before the African Commission on Human and Peoples' Right. (Accessed 10-10-2010) http://www.righttoenvironment.org/ip/uploads/downloads/OgoniCaseProf.Coomans.pdf.
[159]Earth Justice Report 2007, 1
[160] Economic, Social and Cultural Rights: Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights. Report submitted by the Special Rapporteur on toxic waste,Mrs. Fatma-Zohra Ouhachi-Vesely available online at http://www.ban.org/library/hrcrep.pdf

negative impact such practices have on the fundamental rights set forth in the principal human rights instruments.'[161]

The Rapporteur made the following recommendations.

(1) An elaborate international code of conduct for transnational corporations to be adopted on the basis of the relevant human rights standards and the nine principles relating to human rights, labour and the environment of the global compact proposed by the United Nations Secretary-General.[162]

(2) Human rights bodies must remain vigilant for rights violations associated with the activities of multinational corporations, toxic wastes and other environmental problems, and supervisory mechanisms should be strengthened and codification efforts continued.[163]

(3) The role of non-governmental organizations, local communities and associations, trade unions, workers and victims should be strengthened. Freedom of expression, the right of association and legal remedies should be consolidated.[164]

The Sub-Commission on the Promotion and Protection of Human Rights of the United Nations Commission on Human Rights in 2003 adopted the norms on the responsibilities of transnational corporations and other business enterprises with regard to human rights[165] and declared:

> ***"Transnational corporations and other business enterprises shall carry out their activities in accordance with national laws, regulations, administrative practices and policies relating to the preservation of the environment of the countries in which they operate, as well as in accordance with relevant international agreements, principles, objectives, responsibilities and standards with regard to the environment as well as human rights, public health and safety, bioethics and the precautionary principle, and shall generally conduct their activities in a manner contributing to the wider goal of sustainable development."***

[161]Para. 9
[162]Para. 103
[163]Para. 104
[164]Para. 106
[165]Adopted at its 22nd meeting, on 13 August 2004.U.N. Doc. E/CN.4/Sub.2/2003/12/Rev.2 (2003)available at http://www1.umn.edu/humanrts/links/norms-Aug2004.html

The Earth Justice in its 2007 report recognized the link between human rights and environment. The report acknowledges '…repeated and increasing recognition of a human rights based approach to environmental protection.'[166] According to the organisation, the recognition of this link 'demonstrates that the right to a clean and healthy environment, whether as a separately codified right or through the application of other human rights to environmental harms, is emerging as an important component of international law.'[167]

In the same vein, other moves can be identified in the crystallisation of the principles, unlike different legal concepts that owe their emergence to the distant past or 'centuries of tradition'[168]and practices. The foundation of the Human Rights approach to environmental protection can be traced to recent developments.

The following developments are acknowledged for their roles in the emergence of human rights as instrument for environmental protection.

(1) The movement for the extension of constitutionally guaranteed and court enforced human rights to include a fundamental right to environment. Jurists like Nobel prize winner Rene Cassim, and WP Gormley are identified with this group. Both laureates advocated for 'a right to a healthful and decent environment.'[169] This school has consistently been followed by the courts in India in numerous cases and recently by the Federal High Court in Nigeria in the case of *Jonas Gbemire v Shell Petroleum and others*.[170] As far back as 1984 Salvatore Patti identified 'the constitutionally protected right to a healthy environment as being implicit in the protection of 'personality rights'.[171]

(2) The first principle of the Stockholm Declaration of the United Nations conference on the Human Environment (1972) which states that '(m)an has a fundamental right to… adequate condition of life in an environment of a quality that permits a life of dignity and well-being.'

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[166] Environmental Right Report 2007: Human Rights and the Environment (Earth Justice, 2007) 1 available at http://earthjustice.org/sites/default/files/library/references/2007-environmental-rights-report.pdf
[167]Ibid.
[168]Cowen.above
[169]See 'Human rights and environment' *Beitrage Zur Umweltsgestaultung* Heft A41 (1976) 20. Cited in Susannah Cowen (ed) Cowen Selected Essays JUTA 2009. 259
[170]Suit No: FHC/B/Cs/53/05.
[171] Salvatore Patti, cited in Cowen ibid at 259

(3) Direct provisions for environmental rights and right to environment in some countries' constitutions. This development has been attributed to a growing awareness about the environment. According to Carl Bruch *et al*,[172] new Constitutions have a tendency to address environmental issues. For instance the 1996 Constitution of the Republic of South Africa, unlike previous versions, is lauded for its environmental rights and justice provisions.

(4) Liberal interpretation of provisions of the constitution of some countries like India, Bangladesh and others. While some national constitutions like the Constitution of the Republic of South Africa, Niger and others carry clear provisions on environmental rights, some do not have direct provisions on environment, but the courts have successively engaged the procedural rights to open access for protection from environmental degradation. Such rights, described as 'instrumental in achieving sound environmental decision making',[173] have been engaged where there have been no direct and categorical provisions for environmental rights.

Damage to environment in whatever form is a violation of human rights. Judge Weeramantry[174] states as follows:

> ***"The protection of the environment is a vital part of contemporary human rights doctrine, for it is a sine qua non for numerous human rights such as the right to health and the right to life itself. It is scarcely necessary to elaborate this, as damage to the environment can impair all the human rights spoken of in the universal declarations and other human rights instruments."***

While it is seen as a ready tool for the marginalised and vulnerable, 'human rights is a tool for all, both the weak and the strong.'[175] It is non-discriminatory in its application, called 'inclusiveness'[176] - this attribute of non-discrimination is according to De Feyter[177] pivotal in ensuring equality of protection regardless of the economic status of the person.

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[172] Bruch Carl, Coker Wole and Van Arsdale Chris, Breathing Life into Fundamental Principles: Implementing Constitutional Environmental Protection in Africa(*ELI* 2001)
[173] Dinah Shelton, Alexander Kiss, *Judicial Handbook on Environmental Law*. (UNEP, 2005) 27.
[174] Case concerning the Gabgkovo-Nagymaros project (Hungary v Slovakia)1997 ICJ Rep7. Separate Opinion of Justice Weeramantry, 4.
[175]De Feyter Koen,*Human Rights: Social Justice in the Age of the Market* 24
[176]Ibid
[177] Ibid

4.6.5 Human Rights and the Right to a Healthy Environment

The existence of environmental rights as a principle of environmental protection as stated earlier, can be traced to different international conventions and treaties, constitutions of different nations, and local statutes in different jurisdictions. While some provisions are explicit and categorical in referring to a right to environment, some are merely procedural and allow open access for activism or steps towards promoting the existence of such rights. The latter sets of rights are good instruments for 'achieving sound environmental decision.'[178]

The human rights principle has proven to be an instrument of social mobilisation. All over the world, the principles of human rights have been relied on by groups to advance their cause or to draw attention to their struggle. De Feyter,[179] in promoting this position, contends that human rights contribute to the self-esteem of groups and individuals who may feel powerless due to their living conditions. The different freedoms afforded by human rights are according to De Feyter 'legal devices that can be relied on before a judge.'[180] The Iwherekhan community in Niger Delta is a good example of this. In their attempt to challenge the continuous release of emission through gas flaring by Shell Petroleum Development Corporation, the community relied on the Bill of Rights principles under the Nigerian Constitution. In the case of Jonah Gbemre, [181] the communities succeeded in persuading the court to declare for the first time that gas flaring is illegal in Nigeria and that continued release of gas emission through flaring in the community amounts to a violation of the right to life and dignity of the human person.[182]

The internationalisation of the Ogoni people's struggle in the same Niger Delta area was driven by the resort to human rights and the claim of violent violation of the rights of the people by the Nigerian State and its business partner, Shell Petroleum.

The presentation of the Ogoni Bill of Rights to the Nigerian government in October 1990 and the subsequent filing of the petition on behalf of the people by the Socio Economic Rights Action Centre (SERAC) before the African Commission in

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[178] Dinah Shelton and Alexander Kiss, above
[179] De Feyter, above
[180] Ibid.
[181] *Jona Gbemre v Shell Petroleum Development Company & others*
[182] Ibid.

2001,[183] are resorts to human rights. This conforms to the expectations under the Rio Declaration on Environment which states:

> ***"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 processes. States 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."***

Aaron Lercher in his work:*Are There Any Environmental Rights?*argues that a human being has 'a right against negligent, reckless, or intentional risk imposition, which is analogous to the natural right.'[184] In agreement with this view it is submitted that invasion of these rights may be prevented or challenged where the people have the right to participate at any stage of decision-making. The right can be exercised at different stages. Participation can take place, for instance, at the stage of law making through effective representation, direct participation at parliamentary hearings on proposed environmental law and policies, or at the stage of administrative decision-making in respect of an authorisation, license or permissions in pursuance of existing laws.

One of the major issues in Nigeria and South Africa is how to make other actors[185] in the two countries account for their activities in the environment, particularly as it affects human rights. Or better put, where the other actors can have recourse to other higher or different legal obligations, then the human rights instrument becomes ineffective.

Making the human right principle work will entail a clear message from the state as the go between the people and facilities' owners that there is no short cut in obeying state laws on environment. The best medium through which to do this is the Constitution. Where human rights are recognised as primary for any activity in the country, it will not be a continuation of the "business as usual approach,." De Feyter argues that –

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[183] See *Social and Economic Rights Action Center (SERAC) and anor v Nigeria (2001)AHPLR 2001 60*

[184]Lercher Aaron. Are there any Environmental Rights? Available online at http://www.lib.lsu.edu/faculty/lercher/Are%20There%20Any%20Environmental%20Rights.pdf. Accessed 10 07-2010. Or *Environmental Values* 16(2007): 355-368

[185]Other actors in this case include the polluters who have been identified in these countries to include mostly the multinational corporations and the other state backed corporations

"…companies should not be able to declare human rights irrelevant to their works, and ...should not take cover behind the profit motive in order to absolve themselves of responsibility for human rights violations in which they are complicit."[186]

The whole issue about gas emission in apartheid South Africa and the present day Nigerian situation in Niger Delta rests on the economic survival of the two regimes. While Nigeria is still battling with jumpstarting other non-oil sectors of the economy,[187] apartheid South Africa was contending with international sanctions to force the regime to embrace democracy. Yet these factors, as discussed previously, which left the two economies at the mercy of the multi-nationals, can no longer be used to justify continuing violations of environmental rights by multi-nationals and other polluters. To make these actors account to the state and the people is an agenda that must be pursued. This is attainable through the integration of the human rights principles with the business and operations of companies or organisations in the countries.

On the part of the government, the international obligation to promote respect for human rights under the different human rights instruments include monitoring of the enforcement of domestic laws and ensuring compliance by its agents, the multinational corporations and other non-state actors. In the *SERAC v Federal Republic of Nigeria case*[188]Nigeria's failure to put in place 'other measures' under Article 1 of the African Charter to prevent the degradation of the Niger Delta region by the Multinational Oil Corporations and hold environmental offenders accountable was held to be a breach of its international obligation. This failure according to the court promotes impunity which led to continuous violations of the rights protected under article 24 of the African Charter.

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[186] Unfortunately in places like Niger Delta, there are reports of flagrant disobedience of court others by the multinational corporations and other polluters, who despite court orders still continue with practices that the courts have declared illegal or a violation of human rights. An example here is the continuation of gas flaring despite the declaration of such practice as illegal by the Federal High Court in Benin Nigeria as far back as 2005, in the case of *Jonah Gbemire and others v Shell Petroleum* cited earlier.

[187] Thus relying totally on exportation of oil at present, this position affects Nigeria's will as a nation to impose strict rules in the exploitation of its oil deposits, particularly in controlling the hazardous activities of the oil corporations in Nigeria

[188]Above note 156.

4.7 Environmental protection and the Global Atmosphere

4.7.1 Three Major Developments

Unlike the earth's surface, the outer space does not have national or regional boundaries. No nation has sovereign power over the atmosphere;[189] it is rather agreed to be a common concern of mankind.[190] The preservation of the atmosphere is for the 'collective survival of all species on earth.'[191] The view in this section is that there is a common obligation on humanity and the different governing authorities[192] as custodians of the atmosphere to protect and preserve it.

Attempts at managing the global atmosphere to protect humanity and resources have been intensified in recent times by some developments that posed different challenges to humanity. Three major developments in the recent history of man are important in shaping humanity's resolve towards securing this global common.

(1) The use of the atmosphere to test nuclear weapons between 1940s and 1960s.

The release of the 'first nuclear bomb code named "Trinity" at Alamogordo, New Mexico on 16 July 1945 by the United States[193] signaled the beginning of a nuclear weapon testing race that was subsequently followed by nations like the Soviet Union,[194] Britain,[195] France,[196] China,[197] and India.[198] It is estimated that over 438 megatons of atmospheric nuclear weapons have been used. The testing and the attendant release of radioactive substances have serious consequences for the environment since the process entails release of substances like plutonium, uranium, strontium, cesium, benzene, polychlorinated biphenyls (PCBs), mercury and cyanide.[199] Some of these substances, according to the Friends of the Earth, remain hazardous for many years and 'are either carcinogenic,

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[189] Vogler, John. *The Global Commons: A Regime Analysis*, (Wiley) 1995 see end note 3 p 148

[190] See the preamble to the Framework Convention on Climate Change, which states that *'The parties ... acknowledging that change in the Earth's climate and its adverse effects are a common concern to mankind'*.

[191] Vogler op cit. 125

[192] At all level of governance, for instance the international, national and local levels.

[193] *Green Peace*, History of Nuclear Testing. *(1996)*http://archive.greenpeace.org/comms/nukes/ctbt/read9.html. *(accessed 1-07- 2011), see also The First Atomic Test, accessed at http://www.cddc.vt.edu/host/atomic/trinity/trinity1.html#part1*

[194] 29 August 1949. See Green Peace ibid

[195] 3, October1952 . See Green Peace, above

[196] 3 December 1960. See Green Peace, above

[197] 16 October 1964. See Green Peace, above

[198] 18, May 1974. See Green Peace, above

[199] Friends of the Earth (Flanders& Brussel), *Effects of Nuclear Weapons*. Accessed online on 19-02-2013 at http://www.motherearth.org/nuke/begin2.php#3

mutagenic or both.'[200] In the United States alone, about 4500 sites have been identified as contaminated by pollution from nuclear weapon production facilities. This development constitutes a serious threat to human lives and the living environment. Sensing the menace posed by the continuation of testing of nuclear weapon to humanity, a tripartite agreement[201] was entered into by governments of the United States, United Kingdom and the Union of Soviet Socialist Republic as original parties in October 1963 to –

"...achieve the discontinuance of all test explosions of nuclear weapons for all time, determined to continue negotiations to this end, and desiring to put an end to the contamination of man's environment by radioactive substances."

In addition, the parties to the agreement undertook furthermore to -

"… refrain from causing, encouraging, or in any way participating in, the carrying out of any nuclear weapon test explosion, or any other nuclear explosion, anywhere which would take place in any of the environments described'; that is in 'the atmosphere; beyond its limits, outer space; or under water, including territorial waters or high seas."[202]

(2) The release and consequent effect of chlorofluorocarbons (on the atmosphere and human health). This was generated by the wide use of aerosols in the 1970s in the cooling industry, and resulted in stratospheric ozone depletion. The effect of this is severe both on human health and the global environment. It is known to have negative impacts on lungs, liver, heart, the central nervous system and kidneys. The impact is more severe at the global level, where the long stay of the gases in the atmosphere destroys the ozone layer, leaving behind high global warming.[203] The international response to this menace was the negotiation of the Montreal Protocol on September 16, 1987. The protocol, among other measures, provides for a freeze on consumption of the substance.

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[200]Ibid

[201]Treaty BanningNuclear Weapon Tests in the Atmosphere, in Outer Space and under Water(1963)

[202] Article 1(2) and Article 1(1) a of *Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water* (1963)

[203]Scottish Environmental Protection Agency, *Scottish Pollution Release Inventory: Chlorofluorocarbons*accessed online on 18-04-2013 at http://apps.sepa.org.uk/spripa/Pages/SubstanceInformation.aspx?pid=114

(3) Lately, the greenhouse effect and the problem of global warming. This challenge as discussed subsequently in this chapter is a fallout of global dependence on fossil fuels as sources of energy. The outcome of this is the excessive release of different gas emission in the form of carbon dioxide and other greenhouse gases. Unfortunately the UN Framework Convention on Climate Change as an international agreement, while outlining the policies on greenhouse gas emission, did not expressly prohibit any '... development which would emit such gases,'[204] This situation has made gas emission a serious burden to mankind globally and even in local areas where many heavy industries and oil production facilities are located.

4.7.2 Climate Change

The quest for development and growth in the society through massive production which began the industrial revolution dates back to the period between 18th and 19th century Britain. The era ushered an unprecedented growth that caused serious transformation of every aspect of life even beyond the borders of Britain. The term "industrial revolution" is credited to 'Arnold Toynbee an economic historian who used the term to describe England's economic development from 1760 to 1840.'[205]

Different factors have been credited with the revolution. Montagna,[206]describing events that led to the start of the industrial revolution posits that –

> ***"…advances in agricultural techniques and practices resulted in an increased supply of food and raw materials, changes in industrial organisation and new technology resulted in increased production, efficiency and profits, and the increase in commerce, foreign and domestic, were all conditions which promoted the advent of the industrial Revolution."***

[204]See *Greenpeace Australia Ltd v Redbank Power Company Pty Ltd and Singleton Council Land and Environment Court of New South Wales.*86 LGERA 143 (1994) (Australia)

[205] Industrial Revolution http://www.britannica.com/EBchecked/topic/287086/Industrial-Revolution. (accessed 14-04-2011)

[206] Joseph A. Montagna, *The industrial Revolution* .Yale – New Haven Teachers Institute, http://www.yale.edu/ynhti/curriculum/units/1981/2/81.02.06.x.html. (accessed 14 .04. 2011)

Markham[207] identified other factors like 'increase of productivity of workers by the invention of the flying shuttle and spinning jenny; the invention of the steam engine which replaced natural power supply; and the enlightenment which swept though the age producing new entrepreneurships.'

The Industrial Revolution is relevant to this work because it is said to supply the background of the emergence of a new method of production in the quest to meet society's ever growing wants. The revolution is not limited to Great Britain of the 19th century where it all started. It became globalised since the 20th Century.[208]

On the other side of this growth, however, is that human lives are endangered by the hazards that are associated with pollution in different parts of the world which are as a result of a combination of factors like weak regimes and unregulated industrial activities, particularly through the release into the environment of different polluting objects like emissions, amongst others.

Pollution does not only affect the global environment in terms of climate change as a result of the release of Green House Gases (GHG), it is equally responsible for the spread of terms of spread of diseases. According to Hanrahan et al,[209] upward of one billion people are affected by 'legacies of pollution' which has 'led to an increased burden of disease, reduced quality of life and life expectancy.'[210]

The United Nations Framework Convention on Climate Change[211] defines climate change as:

> ***"…a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods…"***

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[207] Markham, Adam, *A Brief History of Pollution*, above

[208] Ivo Rens in Sten Nilson and David Pitt, *Protecting the Atmosphere: The Climate Change Convention and its Context*. (Earthscan) 1994, p ix

[209] David Hanrahan, Richard Fuller, Aadika Singh. *Cost Effectiveness and Health Impact of Remediation of Highly Polluted Sites in the Developing World* (Blacksmith Institute), http://www.blacksmithinstitute.org/files/FileUpload/files/Polluted%20Places/costEff1.pdf. (accessed 15-04-2011)

[210] Ibid.

[211] Article 1, Para.2 UNFCC

On the other hand the Inter-governmental Panel on Climate Change (IPCC) defines the term more broadly. It defines Climate change[212] as:

> ***"...a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity."***

The UNFCC definition limits climate change to human activity. In its 2007 Synthesis Reports[213] IPCC clarified the definition under the United Nations Framework Convention on Climate Change (UNFCCC) as changes of climate *induced by* human activity.

Previous concerns about the likely globalisation of pollution problems like 'anthropogenic heats and chemicals'[214] were confirmed in 1985, when a big hole was discovered in the atmosphere around Antarctica.[215] This discovery in the Antarctica has been attributed to the buildup of chlorofluorocarbons[216] and other greenhouse gases like nitrous oxide, water vapour, carbon dioxide and methane that have been responsible for global warming.[217] Carbon dioxide (CO_2) 'being the principal greenhouse gas'[218] is linked to different activities like burning of fossil fuels such as coal, oil and natural gas.'[219]

While the 1990s marked the beginning of serious efforts to address the problem of global warming, domestically the United States Global Climate Protection Act of 1987[220] indicates a clear intention on the part of the United States to regulate activities within its borders in order to secure the atmosphere. The US move was a starter for global leadership response to climate change and other related environmental matters.

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[212] Climate Change 2007 Synthesis Report available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_frontmatter.pdf (accessed 12 -02-2012)
[213] Ibid.
[214] Elsom, Derek. M abovep 5
[215] Elsom, ibid
[216] Gore, Al, *Earth In The Balance: Forging a New Purpose* , (Earthscan, 1992) 9
[217] Rumsey AB, King N D, Climate Change: Impacts, Adaptation, And Mitigation; Threats and Opportunities, in Strydom & King (eds) *Environmental Management in South Africa* (JUTA 2nd.ed 2009) 1051
[218] Rumsey AB, King N D, above
[219] Rumsey & King, ibid
[220] Pub L. No. 95 -367 cited in Reitze. Arnold W. *Air Pollution Control Law: Compliance and Enforcement* (Amazon.com, 2001) 421

Some of the issues in the 1990s were concerns about the melting of the ice caps and the glaciers. Fears were also expressed about the likely impact of the sea level on low-lying countries.

In light of the above, it becomes evident that the past fears of global warming have been vindicated by various actual social and political problems associated with global warming.[221] Though the presence of pollution in the environment, particularly in the ambient air, is often blamed on human activities, natural occurrences are known to impose severe pollution on mankind in specific locations of the earth. The recent earthquake and tsunami in Japan provided a pointer to this indisputable danger. About 13,948 people were[222] said to have been killed. Japan and the entire world are living in fear as a result of the likely release of poisonous gases. The explosion of the Fukushima nuclear power plant is said to have been badly affected by the tsunami that followed the earthquake.

Naidoo,[223] president of Greenpeace, commenting on the reality on the ground, is of the opinion that climate change 'constitutes the greatest challenge to future world security.' He points out that the next global political and social unrest is likely to be caused by a scarcity of water and other natural resources.

Disasters associated with global warming and climate change issues are known to have displaced a lot of people across the world. As at 2005 about 20 million environmental refugees were said to be dispersed in different parts of the world.[224] The United Nations University - Institute of Humanity (UNU-EHS) has predicted that over 150 million eco refugees will exist by year 2050.[225] In 2010 alone, 373 natural disasters

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[221] See *Annual Report of the United Nations High Commissioner for Human Rights and Reports of the Office of the High Commissioner and the Secretary-general*.15 January, 2009. 5.2 available at http://www2.ohchr.org/english/issues/climatechange/docs/A.HRC.10.61_AUV.pdf. (accessed 19 -05- 2011

[222] See *English News* http://news.xinhuanet.com/english2010/world/2011-04/14/c_13829448.htm (accessed15 -04-2011)

[223] Simpson Mike. SA's green warrior king: Kumi Naidoo takes Greenpeace International to new heights. *Leadership (Edition 305, June 2010)*16

[224]Stefan Lovgren. Climate Change Creating Millions of "Eco Refugees", UN Warns. *National Geographic News*(November18, 2005) http://news.nationalgeographic.com/news/2005/11/1118_051118_disaster_refugee.html (accessed 15-04-11)

[225] Stefan Lovgren, ibid

were reported. These disasters cost US4110 billion and claimed 300,000 lives with 207 million people affected.[226]

Besides natural disasters, climate change is linked to the increase in the spread of diseases across the world, particularly in developing and poor countries. According to Johnson[227] the burden of diseases is inflicted on humanity through climate change by -

> ***"...more frequent and intense droughts and floods; extension of habitats for disease vectors (spreading malaria and dengue fever, for example); expanding areas where plants and livestock are impacted by pests and pathogens; lower yields of some agricultural crops (in turn impacting nutrition); salinization of coastal areas, including freshwater supplies resulting from sea level rise; and so on."***

According to the World Health Organization[228] in 2005 more than 3 million deaths were attributed to climate sensitive diseases across the globe, with more than one third happening in Africa. According to Margret Chan,[229] the prevalence of weak health infrastructure will make developing countries less able to cope with the impact of climate change.

Nigeria and South Africa have not been spared from the menace of climate change. Flooding is occurring even in unlikely places. Mention can be made of the northern part of Nigeria. States like Kebbi, Adamawa and Plateau in the northern part of Nigeria have not escaped climate change, in addition to desertification in major parts of the region.[230] Coastal states like Lagos, Ondo, Delta, Rivers, Bayelsa, and Cross River have regularly had to struggle against destructive flooding from the Atlantic Ocean in recent times.[231]

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[226] Climate Change: Banire Raises Alarm as Japan Count Cost of Quake, Tsunami. *Vanguard Newspapers 18 -04-2011*.http://www.vanguardngr.com/2011/03/climate-change-banire-raises-alarm-as-japan-count-cost-of-quake-tsunami/(accessed 18-04-2011)

[227] Johnson, Ian Letter from our President. *Environment matters at the World Bank. (Annual review)* 2005.1

[228] WHO Fact No 8, *Ten Facts on Climate Change and Health*, October 2012 http://www.who.int/features/factfiles/climate_change/facts/en/index7.html (accessed 10-01-2013)

[229] WHO Director-General. See *W.H.O: Ten Facts on Climate Change and Health, October 2012.* http://www.who.int/features/factfiles/climate_change/en/(accessed 10-01-2013)

[230]According to Muiz Banire, the Commissioner for Environment, Lagos State. Nigeria. Nigeria is known to be in the region of the most vulnerable countries to the climate change disasters. Desertification is ravaging 11 states including Katsina, Kano Borno, adamawa, Kebbi, Zamfara, Bauchi, Sokoto, Gombe, Jigawa and Yobe. The increasing loss of vegetation has brought about intense heat resulting in meningitis, heat rash and heat wave

[231]Ibid.

The Stein Committee reports[232] as follows:

> ***"Climate change will affect the basic elements of life for people around the world - access to water, food production, health, and the environment. Hundreds of millions of people could suffer hunger, water shortages and coastal flooding as the world warms."***

The review further issues a warning:[233]

> ***"If no action is taken to reduce emissions, the concentration of greenhouse gases in the atmosphere could reach double its pre-industrial level as early as 2035, virtually committing us to a global average temperature rise of over 2°C. In the longer term, there would be more than a 50% chance that the temperature rise would exceed 5°C. This rise would be very dangerous indeed; it is equivalent to the change in average temperatures from the last ice age to today. Such a radical change in the physical geography of the world must lead to major changes in the human geography - where people live and how they live their lives."***

The factual basis of the concerns which Stein raised is no longer in doubt as some of these climate changes have occurred throughout the world, including South Durban and Niger Delta.

4.7.3 Fossil Oil as a Source of Emission

The increase in demand and use of different forms of energy has a corresponding impact on the global environment. In particular the atmosphere is impacted or polluted through the release of particulate and gaseous substances. According to the WHO[234] this release has been increased by the rise in the use of petroleum products. The presence of these substances generates different challenges and problems for humans at different levels of governance. Globally the challenge of the green house effect of fossil fuels has been catastrophic. This is made manifest in the topical issue of global warming and climate change and the search for alternative sources of energy. In Nigeria and South Africa, gas emission from oil operations has been blamed for the pollution of the environment in Niger Delta and South Durban.

This part identifies gas emission from oil production as a source of global and local atmospheric pollution.

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[232] Stern Review: The Economic of Climate Change (Summary of Conclusions) http://webarchive.nationalarchives.gov.uk/20110218142827/webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/sternreview_summary.htm (accessed 17-04-l 2011)

[233] Stern,*Review*, ibid

[234] Elsom, Derek M,*Atmospheric Pollution: A Global Problem* (2nd ed. Blackwell, 1992) p 4 citing WHO 1972

Industrialisation relies heavily on the availability of energy. The main sources of energy worldwide are coal, oil and natural gas. The three are classified as fossil fuels, while alternative sources include renewable like solar power, wind power, and water power. Despite the move towards alternative sources of energy, fossil fuel remains the main stay of world energy supply. A 2009 report by the Energy Research Architecture reveals daily production of the following: about 70 million barrels of conventional petroleum; 10 million barrels of liquid hydro-carbons from natural gas; and 1.7 million barrels of unconventional fuels from tar sand, natural gas and chemical addictives. Fossil fuels are found as deposits and extracted from the earth crust formations that occurred through natural means some millions of years ago from 'dead plants, trees and millions of small plants called algae buried in the earth and later turned into large basins of sedimentary rock' under the earth's surface.'[235] Otherwise known as the Petroleum family, fossil fuels include the conventional oil and the 'unconventional petroleum like Bitumen or raw oil from tar sand, extra heavy oil and pyrolysis or crude oil made from Oil shale, synthetic fuels made of natural gas and coal.'[236] The latter is a major feature of the South African oil industry.

The World's reliance on fossil fuel (particularly oil) is attributable to the fact that it is affordable[237] and more efficient than other sources of energy. This factor provides the needed access to economic growth and development. In 2009 alone the world's total consumption of crude oil was placed at 84,077,000 barrels per day.[238] Increasing industrial activity across the world, particularly in the developing countries, is expected to lead to more energy demand and ultimately more production of fossil fuels.

In its World Oil outlook 2010, the International Energy Agency,[239] predicted an increase in the World's primary energy demand which the report claimed still revolves around fossil fuels particularly oil, coal and natural gas as dominant energy sources by 36% between 2008 and 2035. Similarly, the Organisation of Petroleum Exporting

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[235] Where Fossil Fuels Come From, http://www.energyquest.ca.gov/story/chapter08.html (accessed 27-06- 2011)
[236]International Energy Association, *World Outlook 2010*, http://www.worldenergyoutlook.org/media/weowebsite/2010/WEO2010_es_english.pdf (accessed 15-05-2010)
[237] It is estimated that about $300 billion or 0.7 per cent of global GDP is being spent on energy subsidies annually. SeeCutting Fossil Fuel Subsidies Can Cut Greenhouse Gas Emissions Says UN *Environment Report* http://www.enn.com/pollution/article/38060
[238]*BP statistical Review of World Energy*, June 2010
[239] International Energy Association World Outlook *2010*, above

Countries (OPEC) predicts that global oil demand would rise from 86.6 million barrels per day in 2010 to 109.7 million barrels per day by 2035.[240] The implication of the above predictions is that production of fuel will increase and this will equally subject the environment and the health of the people to unavoidable pollution. The continuous growth in demand for oil compels governments worldwide to subsidise the production and consumption of petroleum products. It is reported that the global consumer subsidies for petroleum was nearly $60 billion in 2003[241] and is projected to reach about $250 billion in 2010.

The need for the use and development of oil and other fossils can no longer be denied, particularly in the context of oil producing countries and the consumers, yet their impacts and costs on the environment, health and society have in the course of time been underestimated. According to O'Rouke,[242] 'the actual distribution of costs and benefits of increased oil production among countries, communities and individuals is almost completely hidden from public attention.' O'Rouke's skepticism should be seen in the light of neglect or inaction about the environmental and health impact of oil operations by corporations and governments in different places, including the Niger Delta and South Durban.

Different reports[243] have decried productions in the two locations as having dire consequences on the human and natural environment and imposing a huge burden on the local people. Hallowes[244] describes the situation as follows:

> ***"At every point in the fossil fuel production chain, where the bosses 'add value' and make profit, ordinary people, workers and their environments are assaulted and impoverished. Where oil is drilled, pumped, processed and used, in Africa as elsewhere, ecological systems have been trashed, peoples' livelihoods have been destroyed and their democratic aspirations and their rights and cultures trampled."***

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[240] *World oil Outlook* 2011 http://www.opec.org/opec_web/static_files_project/media/downloads/publications/WOO_2011.pdf (accessed 15-05-2012)

[241] David Coady, Robert Gillingham, Rolando Ossowski, John Piotrowski, Shamsuddin Tareq, and Justin Tyson, *Petroleum Product Subsidies: Costly, Inequitable, and Rising*, (abstract), 2005 also available on http://earthtrack.net/documents/petroleum-product-subsidies-costly-inequitable-and-rising (accessed 10-05-2011)

[242] O'Rouke O and Connolly. *S. Annual Review of Environmental Resources. (2003), 28*: 588

[243] As would be shown in chapter 6

[244] Hallowes David, *Toxic Futures: South Africa in the Crises of Energy, Environment and Capital* (UKZN, Groundwork, 2011) 194

4.7.4 Gas Emission in Oil Production

All petroleum extraction methods are known to have grave and negative consequences on the environment and human health. The release of gas emission is one of those consequences, particularly the drastic rise in emission of green house and non green house gases and the debilitating impact on climate and the immediate environment. The oil industry entails different operations, the classification of which is often made into two or three major operations, i.e. the upstream, downstream and the petrochemical operations, with each being a potential source of gas emission and other pollutants in the environment. The Environmental Guidelines and Standards for Petroleum Industry in Nigeria identify two broad categories: upstream and downstream operations. Whatever the categories, the oil industry operations cover activities like exploration, production, terminal operations, hydrocarbon processing plants, oil and gas transportation and marketing.[245]

Upstream operations in the industry entail exploration and production. It is the sector that deals with the search for and production of petroleum in its crude and unrefined form. This operation includes drilling of wells for underground or underwater search for deposits of oil and gas and ultimate transfer to the refinery. Downstream operations entail activities like refinery operations, distribution, transportation and marketing of finished petroleum products.

Grec and Maior[246] posit 'that eruptive crackers often lead to atmospheric pollution with combustion gases' in the extraction of oil from the earth crust. They identify the following as factors that are responsible for gas emission in the upstream operations of the petroleum industry:

(1) Technical failure as a result of the application of heat methods in extraction activities.

(2) Gas flow from the oil deposit through blowholes affected by the process of combustion in the operation areas.

(3) Formation of flow pathways of both gas injection and combustion.

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[245] *Environmental Guidelines and Standards for the Petroleum Industry in Nigeria* (2002) Part 1 Para.3

[246] Grec Aurica, Maior Corneliu. Earth Oil Extraction - Major Environmental Pollution Source, *Environmental Engineering and Management Journal November / December 2008*. Vol 7, No 6, 763 -768

The Niger Delta comes into focus here. The destructive practice of gas flaring, which is a feature of the above outlined factors by Grec and Maior, is a regular occurrence in the oil rich region in Nigeria.[247]

4.7.4.1 Types of Emissions in Upstream Operations

In the upstream operations extraction and transportation of crude oil are responsible for huge gas emission released into the environment through different sources and types of emission (see *infra*). In the oil industry the identified greenhouse gases as recognised under the Kyoto protocol includes carbon dioxide CO_2, methane CH_4, nitrous oxide N_2O, hydro fluorocarbons HFC_s, per fluorocarbons PFCS, and sulphur hexafluoride.[248] Some compounds that are covered under the Montréal protocols, such as chlorofluorocarbons and hydro fluorocarbons which fall among the greenhouse gases that oil companies are expected to account for in the course of operations.[249]

Emission of carbon dioxide and some CH_4 and N_2O, according to IPIECA, is a normal occurrence in the course of operation upstream, in addition to the fact that they are components of the materials used in the course of operation.[250] Additional sources of emission of gases like HFC_s, PFC_s, and SFC_s is introduced into the environment in the course of production through other supporting operations by other allied companies like oil service companies. According to IPIECA[251] they are not direct emission from oil operations but from activities like power generation, fertilizer production and manufacturing of petrol chemicals.

Types of emissions in upstream operations are fugitive emission, flaring of associated gas, vented emission, combustion emission and stationary emission.

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[247]Osuoka A and Roderick. `*Gas flaring in Nigeria: a human rights environmental and economic monstrosity*op cit ,note 7(chapter1)
[248]IPIECA,Refinery air emissions management **:** Guidance document for the oil and gas industry (2012) 7
[249] IPIECA, ibid
[250] IPIECA, ibid
[251] IPIECA, ibid

Fugitive emissions occur from leakages from equipments within the oil industry. It is associated with the release of volatile organic compounds like methane. This source of emission is considered dangerous, because of the concentration of CH_4 in many gaseous streams as well as the presence of CO_2 in some streams.[252]

Flaring of associated gas is more common in extraction, where natural gases produced in association with oil are disposed of through flaring. This is considered a safety practice in the oil industry. The reality however is that it is a major source of greenhouse gases.

Vented emissions derive from physical or chemical processing of materials within the petroleum industry, in addition to activities like gaseous or liquid hydro carbon, streams, venting of CO_2 removed from gas streams, the production of CO_2 in the manufacturing of hydrogen, and venting of CH_4 produced with oil.[253]

Stationary emissions come from the combustion of fuels in boilers, furnaces, heaters and stationary turbines[254]. It is mainly responsible for greenhouse gases.[255]

Mobile emission consists of emissions from moving objects like ships, trains, trucks, automobiles and aircrafts. They constitute a major component of the greenhouse gases.[256] The sources of emission at this stage include 'crude oil and condensate storage facility, combustion sources, Glycol dehydration operations and fugitive sources'. [257] Other sources are loading operations and venting.

[252] IPIECA, ibid
[253] IPIECA, ibid
[254] IPIECA, ibid
[255] IPIECA, ibid
[256] IPIECA, ibid
[257] IPIECA, Guideline for Reporting Green House Gas Emission 2nd Edition 2011, 5-1

4.7.4.2 Downstream Emissions

Oil refining is made up of complex systems; the major operation, which is the conversion of crude into secondary or finished products, is determined by the type of products.[258]

Emission in a refinery is determined by factors like age of the plant, location, size and types of products and complexity of operations in a refinery.[259] For instance, a refinery with complex hydro carbon products will produce more combustion emission due to higher energy demand and use.[260] Additionally, regional variation and specification in 'fuel quality specification' will also determine the amount of emission from such facility,[261] since there would be need for extra efforts in processing the product(s).

Emissions in refinery operations in the oil and gas industry are liked to different sources and activities within refinery operations. The following classification is made by the International Industry Petroleum Environmental Conservation Alliance (IPIECA):[262]

(1) Hydro carbons - this includes fugitive and volatile organic compounds.

(2) Combustion products: No_x, So_x, H_2 s, Co, Co_2, Pm and others. Emission from this category is traceable to seal leakages, or evaporation through contact with other object from outside the production process.[263]

(3) Primary hydrocarbon emission, which arises from piping system fugitive leaks, product loading, atmospheric storage, and waste water collection and treatment.

(4) Energy use and combustion. Emissions under this category originate from the use of high volumes of energy in heating in the refining process. Equipment like boilers, heaters, gas turbines, generators and catalytic crackers require much energy and ultimately generates and releases emissions of combustions.

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[258]IPIECA . Refinery air emission management: Guideline document for the oil and gas industry. (Revised edition, 2012) 3
[259]Ibid.
[260] Ibid.
[261] Ibid.
[262] IPIECA, Refinery air emission management: Guideline document for the oil and gas industry, op cit
[263]Ibid

While the obvious importance of the development and use of oil as a resource cannot be over- emphasised and has been justified, particularly by exporting countries and even the consumers, the truth is that the environmental impact and costs have been downplayed and these have been a major concern across the globe. Production of oil comes at a great cost to communities and individuals since 'there are real tradeoffs resulting from increased oil production and consumption.'[264] These tradeoffs include security, economic development benefits, and human rights.

4.7.5 Summary

This section has examined the crucial place of the atmosphere as a 'global common' in the survival of all species on earth. This section showed that the use of the atmosphere for nuclear weapon tests in the past, release of chlorofluorocarbons, release of different substances and gases into the global atmosphere and the greenhouse effect of the release of carbons and other gases from industrial activities acted as major sources of emission into the atmosphere.

Importantly, the production and use of fossil, particularly oil and gas as the world's most popular source of energy has proven to come at a great cost to the global atmosphere and the local environments. The upstream and downstream operations are responsible for different sources of gas emission into the atmosphere. The effect of these in the global atmosphere includes global warming and the climate crisis. At the local level human suffering, ill health and other socio-economic issues are generated, and all these bring into focus the interrelationship between human rights and environmental protection.

[264]D O'Rourke, Sarah Connolly, Just Oil? The Distribution of Environmental and Social Impacts of Oil Production and Consumption.*Annua. Rev. Environ. Resource,* 2004.28589

4.8 Conclusion

The different activities and awareness about the environment coupled with other factors across the world discussed in chapter 2 inspired a global consciousness about environmental protection and sustainability. This culminated in the United Nations Conference on Human Environment in Stockholm in 1972. Different Multilateral Environmental Agreements have since been developed after the conference under the umbrella of the United Nations. In addition, different international bodies like the World Bank, World Health Organisations and others have developed different programmes to promote the global environmental sustainability initiatives.

The chapter has examined the international legal framework for control of air quality within the context of environmental protection and the interconnection between environment and human rights. It points out certain developments like testing of nuclear weapons, production and the use of substances that deplete the ozone layers, emission of greenhouse gases and the greenhouse effect, particularly the global climate change as catalysts for the emergence of some of the international instruments on emission control. Fossil and production of primary energies like oil and gas were singled out for discussion as a major source of gas emission. The chapter revealed the global consensus on the interconnection between environmental problems and human rights. A comprehensive list of international treaties that are considered relevant to air quality and emission control was highlighted in the chapter.

Some conclusions should be drawn from the numerous legal instruments and declarations. Securing the global environment is presented as a responsibility of all nation states. However, the developed countries have pressing obligations and are saddled with some responsibilities under many relevant treaties on global atmospheric emission control. A greater responsibility of these nation-states however lies in the domestication or implementation of these agreements.The aim of the agreements being to control emissions and other substances and to assist developing nations to comply and cope with the control measures imposed in the treaties. The importance of human rights instruments as tools for emission control, particularly in holding states and non-state actors accountable for environmental pollution is discussed. The relevance of the International Bill of Rights and in particular the African Charter on human and people's

rights in emission control and environmental protection is noteworthy. The pivotal focus of the chapter is that it provides basis and standards for the discussion in the subsequent chapters and the conclusion.

Chapters 5 and 6 will examine emission control in South Africa and Nigeria from the respective positions of the Constitutions of the two countries and other frameworks. The chapters will equally prepare the ground for a further discussion in chapter 7 on the question of the adequacy of the regulatory frameworks for promoting environmental protection in the two countries. This attempts to answer the poser raised by Ian Currie and de Waal on the inadequacy of the regulatory framework in South Africa,[265] and the application of the different frameworks to emission control in the two countries.

[265] Currie Ian , Johan de Waal, *The Bill of Rights Handbook*, (2005) JUTA 521

CHAPTER 5

5.0 CONSTITUTIONS AND LEGAL FRAMEWORKS FOR EMISSION CONTROL IN NIGERIA

5.1 Introduction

The chapter introduces constitution as a key instrument in control of environment and other environmental problems. Section 5.1.1 which provides the background for the discussion in both countries' legal framework examines key constitutional principles and doctrines as vital tools for emission control in general. The second part addresses key provisions of the Nigerian perspective through the Constitution of the Federal Republic of Nigeria 1999 and Chapter 4 of the 1999 Constitution of Nigeria which contains the Bill of rights under the Nigerian constitution, as well as relevant statutes that are in place for emission control in Nigeria. The objective here and in the next chapter is to establish the roles of these instruments in the quest for control of gas emission

5.1.1 The Role of Constitutions

While different factors are responsible for constitutional development, post-World War II constitutions adopted in different parts of the world have been greatly influenced by Article 21(3) of the 1948 Universal Declaration of Human Rights[1], which states:

> ***"The will of the people shall be the basis of the authority of government; this shall be expressed by periodic and genuine election."***

There is no better way to express this legitimacy as stated above than in an article of association that is freely made by or subscribed by members of a free society, with clear provisions on guarantees and assurances of citizen's wellbeing and security on all fronts. The concept of a constitution has been variously defined from different shades of opinion. In the interest of brevity it is hereby narrowed to particular scholarly definitions *infra*.

[1]Universal Declaration of Human Rights (UDHR), available at http://www.un.org/en/documents/udhr/. (accessed 20- 09 – 2011)

A Constitution embodies the fundamental laws governing a political entity such as an association, a nation or state. According to Achim,[2] a constitution –

> ***"…seeks to regulate the complex and divergent interests which exist within a given State, in the first place, it defines the confines of the State and spells out the totality of powers and authority which may be exercised therein. It defines the organs of the State in which the powers and authority of the State may be vested. It places limits on the powers and authority which it vests and usually provides a mechanism for ensuring that these limits are observed."***

Niki Tobi also defines the constitution as 'the highest law of the land, the *fons et origo* of any legal system.'[3] According to him, the constitution as the basic law guarantees good life and human security which are expressed under different provisions such as the bills of rights and other principles that are enshrined in the sacred document.

Feyter's submission[4] on the meaning of a constitution provides a guide for the discussion in the chapter. He contends that "constitutions are the basic laws of the land, setting limitations on the exercise of sovereignty by the ruler. They increasingly include human rights catalogues often inspired by international norms."

A Constitution gives expression to the aspiration of a people and the ideals which a society promotes. For instance, the desire to promote good government and welfare of all persons in Nigeria is clearly stated in the preambles to its 1999 Constitution. South Africa's constitution is unequivocal about the desire of the nation to uphold democratic values, social justice and fundamental human rights among others.[5]

Importantly, the preambles to a constitution represent the motivating spirit which is fully expressed in the provisions in a constitution. Chief Justice Marshall in *Sturges v. Crownshield*[6] held:

> ***"The spirit of an instrument, especially of a constitution, is to be respected not less than its letter, yet the spirit is to be collected chiefly from its words."***

According to Baldwin, 'mutual safety was one of the prime motives of society and consequently, an important obligation of constitutional governance.'[7]

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[2] Achims A. The Legitimacy of Constitutional Change: The Enactment of the 1999 Constitution, in *Issues in the 1999 Constitution*, I.A. Ayua & Ors (eds), Nigerian Institute of Advanced Legal Studies, 2000 2

[3] Niki Tobi, Justice of the Supreme Court of Nigeria , Presentation of the Report of Nigerian Constitution DebateCoordinating Committee (CDCC) available at http://www.waado.org/nigerian_scholars/archive/debates/constitution/cdcc.html(accessed 20 - 09- 2011)

[4] Feyter De Koen, *Human rights: Social Justice in the Age of Market* (Halifax, 2005) 37

[5] See the preambles to the two constitutions: Constitution of the Republic of South Africa, 1996 and the Constitution of the Federal Republic of Nigeria

[6] 17 US 122 at 202

Novak identifies the 'ancient Roman practice of government's pre-occupation with the safety of the people'. According to Novak, this 'signifies the overarching public responsibility to the health and safety of the people of Rome.'[8] Modern states have welfare at the centre of their activities and responsibilities towards the people. A state's guarantee of safety of its members involves creating the enabling environment in the form of legal frameworks and putting appropriate machinery in place.

Generally, a constitution in a representative democracy stands above other laws.[9] As a living law, the constitution gives life to every institution and authority in a nation. It guarantees to the citizens fundamental right,s such as the right to life, the right to justice, and in recent times, the right to a clean and healthy environment. Most constitutions contain a supremacy clause which establishes the supremacy of the constitutions. Constitutions do not just emerge; they are products of 'moments of profound importance in the life of the nation for which they apply.'[10] These moments are usually turning points or time of dynamic changes in the structure or nature of governance, or at best a geographical restructuring. Sometimes, a constitution may emerge as product of civil strife or war.

Albie Sachs wrote about the 'specific spirit and tenor of every constitution', which 'emerges from intense intellectual and social combat', which 'will reflect the balance of forces at the moment of drafting.'[11]

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[7] Baldwin, Henry. Cited by William J Novak in *The People's Welfare: Law and regulation in 19th Century America* (UNC, 1995) 52

[8] Ibid.

[9] In a nation like Britain where the constitution is unwritten, the parliament is supreme, because of the parliamentary system of government

[10] Albie Sachs, (*Introduction) Writing Autobiographies of Nations*accessed on 20-09-2012athttp://www.nimd.org/documents/N/nimd_handboek_totaal_def_20090706123428.pdf. In the case of South Africa, the constitution of 1994 and 1996 marked a turning point in the nation as it created a new democratic regime, which put an end to the infamous apartheid regime, while in the case of Nigeria, the 1999 Constitution marked the end of military rule and the beginning of another democratic era.

[11] Ibid.

Ishmael Mahomed[12] states that:

> ***"The Constitution of a nation is not simply a statute which mechanically defines the structures of government and the relations between the government and the governed; it is a mirror reflecting the national soul, the identification of the ideals and aspirations of a nation: the articulation of the values bonding its people and disciplining its governed. The spirit and the tenor of the Constitution must therefore preside."***

The above definition by Mahomed's is soul searching for a nation as it touches on the very basis for the existence of a state. It raises questions like:

(1) What are the responsibilities of the state towards its citizens or the shareholders in the entity called state?

(2) What are the goals of the state towards its citizens?

(3) What are those acts of state that would make citizens to feel part of a society or protected by the society?

(4) Does the state feel the hurt of its citizens by identifying with them in tackling anything that threatens the interest or survival of such citizen?

(5) If the last question is in the affirmative, the question again will be what are the available machineries for protecting these interests?

The above questions indicate issues that a constitution aims to address in any society. As a social contract between the citizens and the people, the constitution protects the citizens from the vagaries and challenges that threaten or diminish membership of the state. In this manner, pollution in the form of emission has the potential of weakening the quality of life of a citizen or compromising the environment in which the citizen should be enjoying citizenship.

In view of the different positions on the meaning of a constitution, the position taken here is that a constitution is an important tool in the hands of the state and citizens to protect the citizens. This position places an obligation on governments to secure the welfare of its people. Crises occur where the wellbeing of the people is sacrificed in the pursuit of economic gains, of pursuits of economic gains, particularly where the state abdicates its responsibility to protect the people. A constitution may determine the extent of commitment of a nation in the international system and how a nation may be bound by its international commitments. For instance, the mode of ratification and

[12] *S v Acheson* 1991 (2) SA 805 (NM) at 813

assenting to international treaties or agreements are usually spelt out in most constitutions.

In the case of Nigeria, an international agreement will not be binding until it has been submitted to the National Assembly for ratification, [13] while in South Africa an international agreement becomes law when it is enacted into law by national legislation, while a self executor provision of an agreement that has been approved by parliament becomes law automatically. The mandate of the state to act on these international agreements is derived from these legislative endorsements. Importantly, it is submitted that the legislative arm has an important role in representative democracies to make constitutional provisions a reality. This opportunity is embedded in the process of enacting laws that will make the constitutional provisions go beyond a mere declaration of lofty principles and ideals, but in actualising the principles and adapting same to the realities of daily living.

5.1.2 Constitution and Environmental Governance

The important role of constitution as safeguard for non-economic interests and the vulnerability in the society is identified by May as a factor for its indispensability as a tool for environmental protection.[14] Making constitutional provisions work for environmental protection depends on the available institutions of governance like the arms of government, administrative bodies and Non-governmental organisations. In this wise, the relevance of a constitution can also be seen in that 'it provides the framework for the administration of environmental law'[15] and governance. The actual application of the framework largely depends on allocation of powers and limitations of the powers of the other arms - executive and the judiciary at national, provincial levels and each tier of government - the national government, provincial (or state) and the local must be clearly marked out for efficiency by the constitution or basic laws of the

[13] See section 12 of the Constitution of the Federal Republic of Nigeria 1999. See also section 231 and 233 of the Constitution of the Republic of South Africa respectively

[14] May James R, *Constituting Fundamental Environmental Rights Worldwide*, 23 Pace Envtl. L. Rev. 113 (2006)

[15] Glazewski J. *Environmental Law in South Africa*(LEXISNEXIS BUTTERWORTHS, 2000) 12.

state. This structure is a sure basis for state mandate to protect the environment from environmental degradations through related noxious emissions.

Gamble says:

> ***"Governance denotes the steering capacities of a political system, the ways in which government is carried out, without making any assumption as to which institution or agents do the steering. For any social order like the economy, governance needs to be understood at two levels. First, there are the basic laws, rules, standards, and principles which provide the constitutional framework for governing. Many of these will not be formalized, but are implicit in the process of governing. Second, there are the techniques, tools, practices, and ethos of governing, associated with particular institutions and agents. The state is always involved in governance, but often in enabling rather than a directing role, helping to establish and sustain the institutions in society, including crucially markets, which make steering possible."***[16]

The United Nations Environment Programme (UNEP) defines environmental governance to incorporate the 'rules, policies, institutions that shape how humans interact with the environment.'[17] According to UNEP, attaining good environmental governance entails recognition of the role of government, NGOs, private, public and others whose activities 'impact the environment,'[18] all working together on a common goal of environmental protection and sustainability.

The constitution as the basic law in a state defines governmental powers and provides for the existence of the different institutions, legislation and platforms for role players and stakeholders to participate in governance.

Addressing the role of a constitution in control of gas emission and other environmental issues is a complex topic, since every activity or action in state must find its root in the constitution. However, this inquiry will be limited to the following for the purpose of a comparative analysis.

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[16]Gamble, A. Economic Governance in J Pierre (ed.) *Debating Governance. Authority, Steering and Democracy*. (Oxford University Press: 2000) 110 -111

[17]*UNEP Environmental Governance Fact sheets* 2009 UNFCCC Conference in Copenhagen. http://www.unep.org/environmentalgovernance/ (accessed 08/10/2010)

[18]Ibid.

5.1.3 Executive Arm of Government and Environmental Protection

Government's role through the executive arm includes creating the structures and appropriate conditions for other stakeholders to discharge their different obligations or voluntary actions. Ultimately, issues like availability of appropriate legal regimes, regulations, standards, enforcement of laws, adequacy of the available rules, democratisation of the system - that is, active participation of the local people in the process in affected areas - and access to justice to seek remedies can be engineered by the government through the executive arm and appropriate enabling environment.

Equipping parliament with power to legislate on the environment offers an effective channel for constitutional environmental action. This promotes a virile legislature. The latter is crucial to the growth and consolidation of an environmental protection regime. The environment field itself is ever dynamic and evolving. It demands continuous amendment and development of new regulatory measures towards sustaining the ecological system through incorporation of new ideas and technology. On the other hand, the role of an independent and environmentally responsive judiciary can only be possible where there is no encumbrance under the constitution.

As the coordinating arm of government, the executive arm at all levels of government intervenes in different ways by formulating policies and making recommendations to the parliament, prosecuting polluters, making subsidiary legislations in the form of regulations, standards or listing, and negotiating international agreements in respect of environment on behalf of the country.

This position justifies the opinion of Jon Pierre that

> ***"Governance theorists see the role of government in governance as a contextual phenomenon: the pursuit of the collective interests takes different forms in different political and institutional contexts and governments can be either the key coordinating actor or one of several powerful players in that process."***[19]

[19]Pierre, J. (2000). Introduction: Understanding Governance in J Pierre (ed.) *Debating Governance. Authority, Steering and Democracy*. (Oxford, 2000) 241

5.1.4 Public Participation

Public participation is known by different descriptions like "citizens involvement", "indigenous people's rights", "local community consultations" etc.[20] For a developing nation, addressing environmental spoliation particularly by multinationals, as in the case of gas emission and other forms of pollution from the oil industry, poses a great dilemma. The real challenge is in protecting the environment and promoting the national income of the state. It is therefore imperative that the constitution makes adequate provision for the people to be informed by operators of facilities about developments in their neighbourhood, particularly the possibility of the danger of hazardous activities being generated, and the state creating opportunities for them to be heard and to challenge threats to their wellbeing.

Public participation affords the people the opportunity to be part of decision making in local affairs in their immediate environment under their peculiar circumstances.

In acknowledgment of the need to give voice and create access to justice for the people on environmental issues, different international frameworks and principles support the active participation of the public in decision making being crucial to environmental protection and to secure environmental rights.

According to Du Plessis[21] public participation relates to the 'notion of participatory democracy.' This position connotes the existence of rights that are available to the people to exercise in decision making around environmental governance issues. This principle takes governance beyond the monopoly of actors in the traditional three arms of government directly to the public usually through the civil society. By this a platform for interaction between government and civil society is established to promote dialogue, partnership and exchange of information towards evaluation of 'policies', projects, 'programmes' and other development initiatives.[22]

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[20] Du Plesis A. Public Participation, Good Environmental Governance, and Fulfilment of Environmental Rights *P. E. R 2008* (2)

[21] Anel du Plessis, Public Participation, Good Environmental Governance and Fulfillment of Environmental Rights,*P E R 2008* (2) 134

[22]Du Plessis,*op cit* citing Pring, Noe, *Organisation of American States Public Participation Strategy*

Additionally, the participation of the judiciary can be activated through public participation by citizens' suits. At the 1992 United Nations Conference on Environment and Development in Rio de Janeiro it was declared[23] that:

> ***"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 processes. States 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."***

Furthermore, Agenda 21,[24] one of the foremost sets of principles on environmental protection adopted at the Rio conference, identifies 'the commitment and genuine involvement of all social groups to the effective implementation of the objectives, policies and mechanisms agreed to by Governments.'[25] It further states that 'individuals, groups and organizations should have access to information relevant to environment and development held by national authorities.' This includes information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection measures.[26]

[23] Principle 10, Rio Declarations adopted by more than 178 Governments at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3 to 14 June 1992
[24] Adopted by more than 178 Governments at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil, 3 to 14 June 1992
[2525] Preamble to Chapter 23 of Agenda 21
[26]Chapter 23 of Agenda 21

5.1.5 Judicial Power and Environmental Protection

The judicial power of interpretation under the constitution remains an important instrument that has brought tremendous development to the growth of environmental law. It remains a powerful tool for the control of gas emission in the two countries under review, and others. As seen in the case of India,[27] an active and independent judiciary has been in the forefront for securing a healthy atmosphere and environment in different parts of the country through reliance on the constitutional provisions on judicial powers, and progressive interpretation of the provisions.

The role of the judiciary in the ongoing battle for environmental protection has been well articulated under the Johannesburg Principles on the Role of Law and Sustainable Development.[28] The principles are:

(1) Interpretation of different types of agreements, national constitutions and statutes concerning the protection of the environments. This requires the 'greening of interpretation' of constitutions through application of the principle of sustainable development to judicial interpretations.

(2) Peaceful resolution of conflicts in order to protect the environment and avoid conflict. This implies to boldly and fearlessly implement and enforce applicable international and national laws in order 'to alleviate poverty and sustaining an enduring civilization' and protecting the present and future generation.

(3) Integrating human values as set out in the United Nations Millennium declaration - freedom, equity, solidarity, tolerance, respect for nature and shared responsibility with contemporary global civilization by translating these shared values into actions through strengthening respect for the rule of law, both internationally and nationally.

(4) Enhancement of public interest in a healthy and secure environment.

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[27] 'Besides the assigned role of interpretation and adjudication of environmental law the Court has laid down new principles to protect the environment, reinterpreted environmental laws, created new institution and structure, and conferred additional powers on the existing ones through a series of illuminating directions and judgments'. See Geetanjoy Sahu, 'Implications of Indian Supreme Court's Innovations for Environmental Jurisprudence',4/1 Law, *Environment and Development Journal* (2008), p. 1,. The Court in Nigeria made an attempt to emulate the Indian example in the case of *Jonah Gbemre v Shell Petroleum BP*, but this tempo has not been sustained

[28] The *Johannesburg Principles on the Role of Law and Sustainable Development* adopted at the Global Judges Symposium held in Johannesburg, South Africa, on 18–20 August 2002

The above mandate of the judiciary is realisable under the Constitutions of South Africa and Nigeria, if the right atmosphere like a free and independent judiciary and access to court that supports effective judicial administration is in place. The principle can act as an effective platform to attain environmental justice particularly for the vulnerable confronted daily by gas emissions in Niger Delta and South Durban.

5.2 Legal Frameworks for Emission Control in Nigeria

5.2.1 The Nigerian Constitution

Constitution making in Nigeria began in 1922 with the promulgation of the Clifford Constitution by the colonial government.[29] The Constitution was an attempt 'to give the local people a say in their affairs', as the constitution made provision for the election of four Africans into the parliament in Lagos and Calabar. The other members were nominees of Her Majesty into the Legislative Council.

The current constitution[30] in Nigeria is a product of an initiative to end military rule in Nigeria. The long stay of the military in government in Nigeria redefined Nigeria's federation by introducing different challenges. Commenting on this Gbadamosi Adeola opines that –

> ***"…since the nation attained independence in 1960, the military have had a longer stay in power than their civilian counterpart. These facts pose a plethora of problems for the new democratic state in Nigeria, because federalism in its classical understanding has a zero tolerance for centralization of political power for which the military is well known."***

In agreement with Gbadamosi,[31] it may be mentioned that one of the legacies of the military in Nigeria's federation is the emergence of a gargantuan, headmaster style central government - the federal government of Nigeria which has over-centralized nearly everything including exercise of governmental power, despite provisions to the contrary under the Nigerian Federal constitution. In 1998 the military government

[29] Subsequent ones being the Richard Constitution of 1946, Macpherson Constitution of 1951, Federal or Lyttleton Constitution 1954, The independence Constitution of 1960, Republican Constitution of 1963, The 1979 Constitution, The 1989 Constitution and at present the 1999 Constitution

[30] Constitution of the Federal Republic of Nigeria 1999

[31] Gbadamosi Tajudeen Adeola . Military Legacies and the Challenge of Managing Diversities In Nigeria's Federation. *IFF summer University 2008 – Paper for Week 2*

established a Constitution Debate Coordinating Committee to begin the process of drafting a new constitution to usher in a new civilian dispensation after serious agitations for a return to civil rule in Nigeria. The mandate of the committee was to 'pilot the debate, co-ordinate and collate views and recommendations canvassed by individuals and groups and submit the report not later than 31 December 1998.'[32] The process eventually led to the promulgation of a new constitution which was fashioned after the 1979 constitution that was aborted by the return of the military rule in Nigeria in 1984.

Between 1983 and the making of the new constitutions in 1999, two important environmental events took place in Nigeria, being the importation of toxic wastes to Nigeria in 1985,[33] and the outcry across the globe that followed the execution in 1995 of Ken Saro Wiwa, an environmentalist and leader of the Movement for the Survival of the Ogoni People.[34] Unfortunately these events were not reckoned with by the military in the build-up towards the new constitution, as the environmental issue was not one of the 10 key issues[35] that the military government handed over to the Constitution Debate Coordinating Committee for consideration in the discharge of their duties[36] of collating views of Nigerians towards fashioning a new constitution for the country.

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[32] See Presentation of the report of Nigerian Constitution Debate Coordinating Committee by Justice Nki Tobi. Available at http://www.waado.org/nigerian_scholars/archive/debates/constitution/cdcc.html (accessed10 -03 2010)

[33] The Federal Military Government Immediately promulgated the Hazardous Wastes (Criminal Provisions) Decree 1985 and later set up the Federal Environmental Protection Agency, and enacted different important environmental laws

[34] There were protests in major capital cities across the world, the International community reacted with the expulsion of Nigeria from Commonwealth Nations, cancellation of existing loans to Nigeria, and the investigation of Nigeria's human rights record by the United Nations Human Rights Commission. Shell Petroleum Development Company has been under severe attack for its role in the incident

[35]Presentation of the report of the Nigerian Constitution Debate Coordinating Committee by Justice Nki Tobi. Available at http://www.waado.org/nigerian_scholars/archive/debates/constitution/cdcc.html (accessed10- 03-2010)

[36] The issues for the debate include zoning of political offices, cultivating a sense of belonging among Nigerians, multiple vice presidents,forceful seizure of political authority, devolution as a criterion for distributing the national wealth, how to make the political institutions work, establishment of a National Judicial Service Commission, principle of Derivation, devolving more power to the states and local governments, proportional representation of political parties in cabinet and the idea of a constitutional court. See presentation of the report of Nigerian Constitution Debate Coordinating Committee by Justice Nki Tobi,http://www.waado.org/nigerian_scholars/archive/debates/constitution/cdcc.html. (accessed10- 03 2010)

5.2.2 Supremacy of Nigerian Constitution

The Constitution of the Federal Republic of Nigeria 1999 came into operation on May 29, 1999. It retains the political and geographical structure of Nigeria. It provides for a federation of 36 component states,[37] seven hundred and sixty eight local government areas,[38] and six area councils[39] where different governance activities are discharged and coordinated.

Section 1(1) of the constitution declares the supremacy of the constitution, providing as follows:

"***The Constitution is supreme and its provisions shall have binding force on all authorities and persons throughout the Federal Republic of Nigeria.***"[40]

On the status of the Nigerian constitution and other laws in the federation, the Supreme Court of Nigeria in ***Adisa v Oyinlola***[41] (Justice Onu) held as follows:

"The Constitution being the supreme law of the land stands above other enactments, statutes, or laws and its provisions cannot be made subject to any other Act or enactment except by direct and clear (other constitutional) provision to that effect."

Additionally, Section 1(2) of the Constitution provides as follows:

"The Federal Republic of Nigeria shall not be governed, nor shall any person or group of persons take control of the Government of Nigeria or any part thereof, except in accordance with the provisions of this Constitution."

The implication of the above provision is that the exercise of governmental power is expected to be subject to the tenets, visions and aspirations of the constitution. In governance activities or operations of governmental powers, the provisions of the constitution remain what a compass is to a sailor - it provides a guide to the stakeholders in governance.

By the above provision the values that are promoted by the constitution automatically bind or inform the direction that the conduct of government affairs and other laws in the country follow, and no other value may be pursued that is in conflict with the provisions

[37] See Section 2 and 3 of the Constitution of the Federal Republic of Nigeria 1999

[38] Section 3(6) Constitution of the Federal Republic of Nigeria 1999, see also second column of part 1 of the first Schedule to the constitution

[39] The area councils are located in the Federal Capital Territory. See Section 3(6) and also Part II of the first schedule to the Constitution of the Federal Republic of Nigeria 1999

[40] Constitution of the Federal Republic of Nigeria,1999

[41](2002) 10 WRN 125

of the constitution. As discussed earlier, the values which the constitution promotes can be found in the preamble to the constitution which states that the constitution is -

> ***"…for the purpose of promoting good government and welfare of all persons…on the principles of Freedom, Equality and Justice***…"[42]

Flowing from the above preamble to the constitution are the following challenges to the government of Nigeria:

(1) Promotion of good government,

(2) Promotion of the welfare of all persons in Nigeria,

(3) Pursuit of the principles of equality and justice, and

(4) Consolidation of the unity of the people of Nigeria.

The above, among others, provide yardsticks for determining the goodness, efficacy and success of the Constitution of the Federal Republic of Nigeria of 1999, most especially in the areas of environmental protection and the control of the noxious emissions from different activities in the country. The impact of gas emission in the Niger Delta area of Nigeria, in particular, and other parts of the country raises serious issues of health, welfare and justice, particularly the issue of environmental justice, considering the enormity of the burden that the development of Nigeria's economy imposes on the people, oil being the mainstay of the economy of Nigeria.

Exposing the people to the hazards of gas emission raises a serious question about the commitment of the Nigerian government to the values contained in the preamble to its own constitution. The preamble identifies the promotion of the welfare of all persons as a goal of the constitution.

[42]See the preamble to the Constitution of the Federal Republic of Nigeria 1999

5.2.3 The 1999 Constitution and Environmental Protection

Except in section 20, the constitution contains no specific provision on environmental protection; however, the silence of the constitution does not entirely lock out the possibility of environmental protection through the constitution.

The 1999 constitution contains several provisions with which liberal interpretation will go a long way in making it an effective instrument for combating the menace of environmental degradation and gas emission in Nigeria.

Section 20 of the Constitution of the Federal Republic of Nigeria 1999,[43]otherwise known as the environmental objective, provides as follows:

> ***"The State shall protect and improve the environment and safeguard the water, air and land, forest and wild of Nigeria."***[44]

The inclusion of the environmental objective clause in section 20 of the constitution is a departure from the old regimes of constitution making in Nigeria.[45] This should be seen as an attempt by the drafters of the Constitution to underscore the need for direction along environmental protection. However, a lack of proper direction led to continuous violence in the oil producing areas, where there has been serious agitation for proper management of the environment.

In order to give meaning to the lofty aspirations of the provisions of the constitution under chapter II, the different government establishments and functionaries are obliged to adhere to the provisions under chapter II and apply them in the exercise of their respective powers.

Sections 13 and 14(2) (b) of the constitution re-emphasise the commitment of the Nigerian states to the professed principles in the preamble to the constitution. Section 13 creates an obligation for government operators to be guided by those aspirations which are clearly articulated and outlined in chapter II under the fundamental objectives and directive principles of State Policy. The section provides as follows:

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[43]Chapter II of the Constitution of the Federal Republic of Nigeria 1999 is on the Fundamental Objectives and Directive Principle of State Policy which includes section 20

[44] Uwai Maryam, Fundamental Objectives and Directive Principles of State Policy: Possibilities andProspects in *Justice in the Judicial Process,* C.C Nweze (ed) 166

[45] None of the previous constitutions, particularly after independence in 1960, made reference to environmental protection

> ***"It shall be the duty and responsibility of all organs of government and of all authorities and persons, exercising legislative, executive or judicial powers to conform to, observe and apply the provisions of this chapter. "***[46]

Section 14(2)(b) declares that '… the security and welfare of the people shall be the primary purpose of government.'

The pursuit of environmental objectives by the Nigerian government has been demonstrated in the passing of some environment related laws and setting up of institutions towards making the environment safe for people. What appears to be a source of hope for environmental protection under section 20, however, is complicated by the provisions of section 6(6) which declare issues under chapter II of the Constitution where the environmental objective is articulated, as non-justiciable. Section 6 (6) provides as follows:

> ***"The judicial powers vested in accordance with the provisions of the section – (c) shall not, except as otherwise provided by this Constitution, extend to any issue or question as to whether any act or omission by any authority or person or as to whether any law or any judicial decision is in conformity with the Fundamental Objectives and Directive Principles of State policy set out in chapter II of this Constitution."***

While different opinions have been expressed about the implication of any clause under the directive principle, courts in Nigeria have been consistent in their position that any issue raised in line with provisions under chapter II of the Nigerian Constitution cannot be entertained by the court.[47]

What appears to be the present position of the court is the opinion of Ogwuegbu JSC in the case of the *Attorney-General of Ondo State v Attorney-General of the Federation*[48] where the Justice of the Supreme Court of Nigeria held that '…Courts cannot enforce any provisions of Chapter II of the Constitution until the National Assembly has enacted specific laws…'.

The conclusion in the light of the position of the court in the above case then should be that the making of laws on environmental objectives or issues by the National

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[46] Section 13 equally falls under Chapter II of the Constitution – the fundamental objectives

[47] See for instance the case of ***Bishop Olubunmi Okogie (trustee of Roman Catholic Schools) & Ors v Attorney –General of Lagos State***, 1 NCLR 218, ***Attorney-General of Ondo State v Attorney-General of the Federation& Ors,*** 2002 Federation Weekly Law Report Part 111 P. 1972, *Attorney General of Lagos State v Attorney – General of the Federation*, (2003) MJSC 1

[48] *supra*

Assembly liberates the objective from the comatose imposed by virtue of its inclusion under the Directive principles chapter. The enactment of the National Environmental Standards Regulations Enforcement Agency Act of 2007 has concluded this process of making environmental issues justiciable.

5.2.4 Governance under the 1999 Constitution

As discussed in the first part of this chapter, making constitutional provisions work to tackle environmental issues depends on the available governance institutions and the coordinating role of the government.

Typical of a presidential system of government, the constitution provides for three arms of government: the executive, judiciary and the legislature. At the central level the federation power is shared between the three separate arms of government; the executive, the judiciary and the legislature. The legislative power at the central level is vested in a Bi-cameral legislature called the National Assembly (comprising of the Senate and the House of representatives). The executive power is vested in the presidency that is the president,[49] ministers[50] and other executive bodies.[51]

What appears to be the introduction of formal environmental governance in Nigeria can be traced to the incidence of illegal importation and dumping of toxic wastes in Koko village in the now Delta State in the south region of the country in 1985. In reaction to the discovery of the harmful activity, the Federal Military Government of Nigeria introduced different measures and structures on environmental protection, foremost amongst the moves are the promulgation of the Harmful Waste (Criminal Provisions) Decree[52], The Federal Environmental Protection Agency Decree,[53] and the establishment of the Federal Environmental Protection Agency.

[49] Section 130, Constitution of the Federal Republic of Nigeria 1999
[50] Section 147, Constitution of the Federal Republic of Nigeria 1999
[51] See Section 153, Constitution of the Federal Republic of Nigeria 1999
[52] Decree 42 of 1988
[53] Decree 58 of 1988 and 59 (amended) of 1992

5.2.5 Human Rights and the Role of the Human Rights Commission

Nigeria serves as an example of a nation where environmental rights have not been incorporated into the constitution despite the different environmental problems facing the country, particularly from oil operations.

The absence of a clear provision on environmental and other socio-economic rights calls for a creative and dynamic approach to the application of human rights principles under the Bill of Rights in chapter 4 of the constitution to address the problem of gas emission which lingers in the country.

Human rights principles were introduced into the Nigerian constitution for the first time in 1960 through the independence constitution.[54] While the first generation of human rights has been featuring regularly in the subsequent constitution, socio-economic rights related issues were first introduced under the 1979 constitution under the directive principles of state policy and subsequently under the 1999 constitution. The reason for their location under the directive principles, according to the Constitution Drafting Committee, is 'to avoid constant confrontation between the different arms of government and the fact that the fundamental objectives and directive principles relate to policy goals or direction rather than to the existence or extent of legal right vested in any individual or group, which is subject to the court of law'[55]

Chapter 4 of the 1999[56] constitution, in sections 33 to 43, provides for the fundamental human rights. These include the rights to life,[57] dignity of the human person,[58] personal liberty,[59] fair hearing,[60] private and family life,[61] freedom of thought, conscience and religion,[62] freedom of expression and the press,[63] peaceful assembly and

[54] The previous constitutions since the Clifford Constitution of 1922 up to Milverton Constitution of 1956 do not have any provision for human rights principles
[55] See Constitution Drafting Committee (1978-79) Report Vol. 1 p.viii, cited in Okon E. Emmanuel, The Environmental Perspective in the 1999 Nigerian Constitution,*Environmental Law Review* (2003) 269
[56] See sections 33 to 34 Constitution of the Federal Republic of Nigeria 1999
[57] Section 33
[58] Section 34
[59] Section 35
[60] Section 36
[61] Section 37
[62] Section 38
[63] Section 39

association,[64] freedom of movement,[65] freedom from discrimination,[66] and the right to acquire and own immovable property anywhere in Nigeria.[67]

Nigeria as a member of the African Union has ratified the African Charter on Human and People's Rights, and the National Assembly in compliance with the provisions of section 12(1) of the 1999 constitution[68] enacted the African Charter on Human and People's Rights (Ratification and Enforcement) Act[69] to domesticate the provisions of the charter. By the domestication, the Supreme Court in Nigeria has held that the provisions of the charter are applicable directly as enforceable rights in Nigeria. In *Gani Fawehinmi v Sanni Abacha*[70], the Supreme Court of Nigeria held as follows:

> ***"Where… treaty is enacted into law by the National Assembly, as was the case with the African Charter which is incorporated into our municipal (i.e. domestic) law by the African Charter on Human and Peoples' Rights (Ratification and Enforcement) Act Cap 10 Laws of the Federation of Nigeria 1990 (hereafter is referred to simply as Cap 10), it becomes binding and our courts must give effect to it like all other laws falling within the judicial powers of the courts. By Cap 10 the African Charter is now part of the laws of Nigeria and like all other laws the courts must uphold it. The Charter gives to citizens of member states of the Organisation of African Unity rights and obligations, which rights and obligations are to be enforced by our courts, if they must have any meaning. It is interesting to note that the rights and obligations contained in the Charter are not new to Nigeria as most of these rights and obligations are already enshrined in our Constitution. See Chapter IV of the 1979 and 1999 Constitutions."***

Fundamental human rights have been described as a condition to good governance.[71] In other words, without human rights, the whole idea of good governance would amount to cheap and idle talk.

Government's obligation to promote the realisation of human rights has been restated recently. The Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights of September 2011[72] declares that -

> ***"...the obligations of states in respect to human rights extend to ensuring respect, protection and fulfillment of human rights, including civil, cultural, economic, political and social rights."***

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[64] Section 40
[65] Section 41
[66] Section 42
[67] Section 43
[68] The Assembly actually acted in pursuance of a similar section under the 1979 constitution
[69] Cap 10 laws of the Federation of Nigeria 1990
[70] S.C. 45/1997 (2000) 6 NWLR (Pt.660)228
[71] Akinseye-George, Yemi *Legal System, Corruption and Governance in Nigeria*, New Century Law Publishers Ltd, (2000) 98
[72] At a gathering convened by Maastricht University and the International Commission of Jurists, a group of experts in international law and human rights adopted the Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights on 28 September 2011, available at http://www.ciel.org/Publications/Maastricht_ETO_Principles_21Oct11.pdf. (accessed 12-01-2013)

As discussed in chapter 4, both African Commission on Human and Peoples Rights and the ECOWAS court have upheld the obligation of Nigerian government under regional agreements to protect the rights of the people in the country from the destructive activities of the multinational corporations[73]

As stated earlier, different rights protected under the Nigerian Bill of Rights and the African Charter on Human and People's Rights are violated through the release of gas emission. The issue of gas emission through gas flaring and its implication for human rights was one of the major issues before the court in the case of *Jonah Gbemire and others v Shell Petroleum and others*.[74]

In this case the plaintiffs, who are members of the Iwherekan community, alleged that the first and second respondents who were in the oil and gas business in Nigeria were engaged in the exploration and production of crude oil and other petroleum products in Nigeria. The companies were alleged to have been engaged in massive, relentless and continuous gas flaring in the community. The activities of the oil companies led to serious air pollution causing respiratory diseases and generally endangered and impaired their health. They claimed that these violations gave rise to the following:

(1) Poisoning and polluting the environment as it leads to the emission of carbon dioxide, the main greenhouse gas - the flares contain a cocktail of toxins that affect their health, lives and livelihood.

(2) Exposing them to risk of premature death, respiratory illness, asthma and cancer.

(3) Contributing to adverse climate change, as it emits carbon dioxide and methane which cause warming of the environment, and also pollute their food and water.

(4) Causing painful breathing, chronic bronchitis, decreased lung function and death.

(5) Reducing crop production and adversely impacting on their food security.

(6) Causing acid rain. Their houses are corroded by the composition of the rain that falls as a result of gas flaring. They held that the primary cause of acid rain is the emission of sulphur-dioxide and nitrogen oxides which combine with atmospheric moisture to form sulphuric acid and nitric acid respectively. The

[73] See

[74] *Jonah Gbemre v Shell Petroleum Development Company Nigeria Ltd and oothers* Suit No: FHC/B/CS53/05 delivered on the 14th day of November 2005

acidic rain consequently acidifies their lakes and streams and damages their vegetation.[75]

The plaintiffs asserted before the court that the constitutional guarantees of the right to life and dignity of human persons available to them as citizens of Nigeria include the rights to a clean, poison-free and pollution-free air and healthy environment conducive for human beings to reside in their environment, to develop and to have full enjoyment of life, and that these rights to life and dignity of the human person have been and are being violated and continuously threatened by persistent violation of these flaring activities.

In its judgment, delivered by Honourable Justice C.V. Nwokorie[76] the Court declared as follows:

"1 The constitutionally guaranteed fundamental rights to life and dignity of human person provided in section 33(1) and 34(1) of the Constitution of Federal Republic of Nigeria, 1999 and reinforced by Art 4, 16 and 24 of the African Charter on Human and Peoples Rights (ratification and enforcement) Act Cap A9, vol. Laws of the Federation, 2004 inevitably includes the right to a clean, pollution free and healthy environment.

2. The actions of Shell Petroleum Development Company and Nigerian National Petroleum Corporation in continuing to flare gas in the course of their oil exploration and production activities in the Applicant's community was a violation of their fundamental rights to life (including healthy environment) and dignity of human person guaranteed by section 33(1) and 34(1) of the constitution of the Federal Republic of Nigeria 1999 and reinforced by Articles 4, 16 and 24 of the African Charter on Human and Peoples.

3. The failure of the deponents to carry out environmental impact assessment in the community concerning the effects of their gas flaring activities was a violation of section 2(2) of the Environmental Impact Assessment Act, Cap E12 vol. 6 Laws of the Federation of Nigeria 2004 and contributed to the violation of the Applicant's fundamental rights to life and dignity of human person

[75] The case is one of the cases funded in Nigeria by the Environmental Rights Action (ERA) which is the Nigerian partner of the Friends of the Earth International to promote environmental rights in Nigeria

[76] On 14th November 2005

4. That the provision of the Associated Gas Re-injection Act, cap A 25 vol. 1 Laws of the Federation of Nigeria, 2004 and section 1 of the Associated Gas Re-injection (continued flaring of gas) Regulations, section 1, 43 of 1984, under which the continued flaring of gas in Nigeria may be allowed are inconsistent with the Applicant's Right to life and/or dignity of human person enshrined in section 33(1) and 34(1) of the constitution of Federal republic of Nigeria 1999 and Articles 4, 16 and 24 of the African Charter on Human and Peoples Right Act, Cap A9 vol. 1 Laws of the Federation of Nigeria 2004 and were therefore unconstitutional, null and void by virtue of section 1(3) of the same constitution."

The court, accordingly, restrained the respondents from further flaring of gas in the applicant's community. It further ordered the Attorney-General of the Federation to immediately set into motion the necessary processes for the enactment of a Bill by the National Assembly for the speedy amendment of the relevant sections of the Associated Gas Re-injection Act and the regulations made there under, and to quickly bring them in line with the provisions of chapter 4 of the Constitution.

In line with the above decision of the court, the scope of the constitutionally guaranteed right to life has been expanded. The implication now is that any activity that threatens or is likely to have an impact on life and the dignity of the people in the environment in Nigeria may be declared illegal by the court. The significance of the Jonah Gbemire's case lies in it's being a watershed in environmental right jurisprudence in the country[77]. Furthermore, the activists and interventionist approach of the court in its order, mandating the Attorney –General to set in motion a process for the amendment of the Associated Gas Reinjection Act,is in line with trends in environmental jurisprudence in democracies like India, Pakistan, Bangladesh and others[78].

[77]This is the first time that a court in the country would adopt the human right principle as instrument for environmental protection.

[78]Some of the decisions of courts upholding the environmental right content of fundamental human rights from these countries are discussed in chapter 4.

The National Human Rights Commission of Nigeria was established in 1995.[79] The objectives of the commission[80] are (a) to facilitate the implementation of Nigeria's international obligations under the international Bills of Rights and other treaties, (b) to create an enabling environment for extra-judicial recognition, promotion and enforcement of all rights under the Constitution of the Federal Republic of Nigeria 1999 and other laws in the country, and (c) to provide a forum to address allegations of violations of human rights by public officers and agencies.

To achieve the above objectives, the commission is empowered under the Act 'to do all things' that are 'required or permitted be done' by the Act or any other enactment.[81] It is submitted here that any other enactments here include Nigeria's obligations under Article 24 of the African Charter on Human and people's Rights which forms part of the African Charter on Human and Peoples' Rights (Ratification And Enforcement) Act.[82] The African Charter Act provides for the enforcement of the provisions of the African Charter on Human and People's Rights in Nigeria. By implication the National Human Rights Commission's mandate includes enforcement of the 'right to a general satisfactory environment that is favourable to development' as articulated under the Charter, as these provisions have been domesticated in Nigeria.

Despite above provisions and even the catch-all functions and power of the Commission, there is no record of any intervention by the Commission in instances of gas emission or environment related rights violations in the well reported oil pollution cases in the Niger Delta of Nigeria.

It is observed that the aim of the Act in promoting extra-judicial recognition, promotion and enforcement of rights is an attempt to overcome the apparent difficulties that are associated with litigation in the enforcement of human rights. The challenge is to explore non-judicial measures which the Commission may use for the enforcement of the rights.

[79] See the National Human Rights Act Cap 10 LFN 2004
[80] See the preambles to the National Human Rights Commission Act, ibid.
[81] Section 6 National Human Right Commission Act
[82] CAP. A 9 L.F.N. 2004

5.2.6 Executive Power and Institutional Framework for Control of Gas Emission

Before 1988, environmental control responsibilities in Nigeria were scattered among different government agencies and ministries.[83] There was no known institution with sole power to control environmental issues before this time.[84]

The National Policy on Environment that was launched in 1989 made recommendations for a national mechanism for cooperation, coordination and regular consultation on environment.[85] Furthermore, the policy recommends 'harmonious management of the policy formulation and implementation process through the establishment of effective institutions and linkages within and among the various tiers and levels of government - Federal, State and Local.'[86]

The policy recommends the establishment of a separate body to control environmental issues. This led to the establishment of the Federal Environmental Protection Agency (FEPA) in 1989.

The Department of Petroleum Resources is an arm of the Federal Ministry of Petroleum Resources in Nigeria. It has the responsibility of regulating oil production in Nigeria. By implication, the environmental aspect, which includes gas emission control, also comes under its control. It specifically has a duty 'to enforce safety and environmental regulations to ensure that those operations conform to national and international industry practices and standards.'[87]

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[83] For instance the management of forestry resources was within the purview of the ministry of Agriculture

[84] Ojo Godwin UYi, Gaskiya Jayeoba (eds) *Environmental Laws of Nigeria: A Critical Review* (ERA, 2003) 621.

[85] See paragraph 7 of the Nigeria National Policy on Environment

[86] Ibid.

[87] The Department equally has responsibility to do the following : supervising all petroleum industry operations being carried out under licences and leases in the country in order to ensure compliance with the applicable laws and regulations in line with good oil producing practices; enforcing safety and environmental regulations and ensuring that those operations conform to national and international industry practices and standards; keeping and updating records on petroleum industry operations, particularly on matters relating to petroleum reserves, production and exports of crude oil, gas and condensate, licenses and leases as well as rendering regular reports on them to Government; advising Government and relevant Agencies on technical matters and policies which may have impact on the administration and control of petroleum; processing all applications for licenses so as to ensure compliance with laid-down guidelines before making recommendations to the Minister of Petroleum Resources; ensuring timely and adequate payments of all rents and royalties as at when due; monitoring government indigenisation policy to ensure that local content philosophy is achievable. Seehttp://www.dprnigeria.com/dpr_roles.html

To realise its environmental protection obligations in the oil industry, the department issued the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN).[88]

5.2.7 Judicial Powers and Air Quality Control

The Constitution in Nigeria establishes a hierarchy of courts for the federation and vests the judicial powers of the Nigerian State in the courts.[89]

The courts established under the constitution, known as the superior courts of records,[90] are The Supreme Court of Nigeria, The Court of Appeal, The Federal High Court, State High Court, Sharia Court of Appeal, Customary Court of Appeal, High Court of the Federal Capital Territory, Sharia Court of Appeal of the Federal Capital Territory, Customary Court of Appeal of the Federal Capital Territory and Customary Court of Appeal of a State.[91]

The National Assembly or any House of Assembly is empowered under the Constitution to establish other courts other than the ones listed in the constitution.

The Supreme Court of Nigeria in addition to serving as the final appeal court on matters from the Court of Appeal[92] has the original jurisdiction to the exclusion of any other courts in disputes between a State or States on one hand and the federation, and by necessary implications on matters on interpretation of the Constitution.

Under the 1999 Constitution, the judicial power extends to -

(1) All inherent powers and sanctions of a court of laws, and

(2) All matters[93] between persons or between government or authority and to any person in Nigeria, and to all actions and proceeding relating thereto, for the determination of any question as to the civil right and obligations of that person.

[88] Released in 1991 and reviewed in 2002 pursuant to the Petroleum Act 1969, and sections 25 and 36 of the Petroleum (Drilling and Production) Regulation 1969

[89] See section 6 of the constitution generally

[90] Section 6(3) of the Constitution of the Federal republic of Nigeria 1999

[91] Section 6(5) of the Constitution of the Federal republic of Nigeria 1999

[92] Section 233 of the Constitution of the Federal Republic of Nigeria 1999

[93] See section 6(6)(a) of the 1999 Constitution of Nigeria

The provision of section 13 of the constitution illuminates the shadowy situation under the constitution, particularly about the environmental objective, regarding the intention of the Nigerian government about environmental protection.

Section 13 provides that:

> ***"It shall be the duty and responsibility of all organs of government and of all authorities and persons, exercising legislative, executive or judicial power, to conform to, observe and apply the provisions of this chapter of the constitution."***[94]

In terms of matters on gas emission or environmental issues in general, the court is expected to be guided by the spirit and words of the above provisions of section 1 that is a combination of the preamble and the words of section 14.

It is argued here that the fundamental objectives gave birth to the other provisions of the constitution and so every other provision or law must reckon with these aspirations of the State, irrespective of the provision of section 6(6)(c) of the constitution, which provides that –

> ***"The Judicial powers vested in accordance with the foregoing provisions of this section - (c) shall not, except as otherwise provided by this Constitution extend to any issue or question as to whether any act or commission by any authority or person or as to whether any law or any judicial decision is in conformity with the Fundamental Objectives and Directive Principles of State Policy set out in Chapter II of this constitution."***

The question of what should be the attitude of the court in Nigeria when faced with environmental issues particularly as it affects the interest of the people was up for the interpretation of the Supreme Court of Nigeria in the case of ***Adediran v Interland transport Ltd***.[95]The supreme court in interpreting the provisions of section 6(6)(c) of the constitution held that the common law principle which differentiates between private and public nuisance no longer holds in Nigeria, in view of the unhindered access to the court that is provided under section 6 (6)(c) of the constitution.[96]

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[94] Section 13 falls within chapter II of the constitution of the Federal Republic of Nigeria 1999, which deals with the Fundamental Objectives and Directive Principles of State Policy

[95] Adediran and Anor v. Interland Transport Ltd (1991) 9 NWLR, pt 214, 155

[96] The court was ruling on a similar provision under the 1979 Constitution

5.2.8 Legislative Power and Air Quality Control

The legislative powers of the federation is vested in the National Assembly comprising the Senate and the House of Representatives at the National level and the 36 Houses of Assembly operating at the state levels in the Nigerian federation.[97]

The constitution clearly marks out boundaries of law making between the national assembly and the other component units, creating three legislative lists – the exclusive, concurrent and residual legislative lists.[98] The National Assembly has power to make laws on any issue or item that is on the exclusive legislative list[99] to the exclusion of state assemblies, while they both have legislative power over issues that are on the concurrent list.[100]

Section 4 provides as follows:

> ***"(1) The National Assembly shall have power to make laws for the peace, order and good government of the Federation or any part thereof with respect to any matter included in the Exclusive Legislative List set out in Part 1 of the second Schedule to this constitution.***
> ***… (3) The power of the National Assembly to make laws for the peace, order and good government of the Federation or any part thereof with respect to any matter included in the Exclusive Legislative List shall, save as otherwise provided in this constitution, be to the exclusion of the Houses of Assembly of States.***
> ***(4) In addition and without prejudice to the power conferred by subsection (2) of this section, the National Assembly shall have power to make laws with respect to the following matters, that is to say:***
> ***(a) any matter in the Concurrent Legislative List sets out in the column of part II of the Second Schedule to this Constitution to the extent prescribed in the second column opposite thereto, and***
> ***(b) any other matter with respect to which it is empowered to make laws in accordance with the provisions of this Constitution."***

The following items under the schedule referred to above in the constitution are potential sources of gas emission and general environmental degradation on which the Federal Government of Nigeria may legislate:[101] arms, ammunition and explosives, aviation including airports, safety of aircraft and carriage of passengers and goods by air,[102] construction, alteration and maintenance of Federal trunk roads,[103] maritime

[97] See section 4 (1) of the Constitution
[98] See section 4 generally
[99] The items are listed in Part 1 of the Second Schedule to the Constitution
[100] The items are listed in the first column of Part II of the Second Schedule to the Constitution
[101] Item II of the Second Schedule to the Constitution of the Federal Republic of Nigeria 1999
[102] Item 3 of the Second Schedule to the Constitution of the Federal Republic of Nigeria 1999
[103] Item 11 of the Second Schedule to the Constitution of the Federal Republic of Nigeria 1999

shipping and navigation,[104] mines and minerals, including oil fields, oil mining, geological surveys and natural gas,[105] nuclear energy, and railways.[106]

Oil mining and production have been identified in this work as a major source of gas emission. Considering the above provision of the constitution, it implies that it is the National Assembly, and by implication, the Federal government of Nigeria, through its agencies, that has power to manage gas emission problems from oil operations and other mining activities.[107]

The exclusive legislative list contains issues over which the governments of the federating States have power to the exclusion of the federal government to make laws through its legislature. By this, the emission generating activities may (or ought to) be controlled through laws or regulations from the state governments.

As stated earlier, the Federal and the State governments may both exercise power on the concurrent legislative list. While the federal government may exclusively legislate on oil and gas issues[108] the State governments are not restricted from legislating on facilities generating emission in general, under this list. Controlling gas emission is one area of environmental protection that calls for understanding and cooperation between the two levels of government. The expected cooperation, however, is missing in the governance of air quality in Nigeria.

Under the popular and restrictive principle of covering the field, sarcastically known as "federal might" in Nigeria, it appears impossible for a State to make a more stringent law or laws that will conflict with federal laws particularly on issues like gas emission control and environmental matters in general, particularly where the issue, as in this case, is environmental (gas emission) from petroleum operation which falls within the concurrent legislative. Ruling on a similar issue in the case of *Independent*

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[104] Item 36
[105] Item 39
[106] Item 55 of the Second Schedule to the Constitution of the Federal Republic of Nigeria 1999
[107] This particular situation is identified as one of the drawbacks for control of gas emission in chapter 6 of this work, as other levels of government whose backyards are used to generate hazardous activities (like emission) do not have control over gas emission.
[108] See item in the second schedule. The items on the list include antiquities and monuments, electricity, archives, collection of taxes, industrial, commercial or agricultural development, scientific and technological research, statistics, trigonomical, cadastral and topographical surveys,and tertiary, technological and post-primary education.

National Electoral Commission of Nigeria v Balarabe Musa & other[109], the Supreme Court clearly stated the position, According to Ayoola JSC:

> ***"The doctrine of covering the field can arise in two distinct situations. First, where in the purported exercise of the legislative powers of the National Assembly or a State House of Assembly, a law is enacted which the Constitution has already made provisions covering the subject matter of the Federal Act or State law. Secondly, where a State House of Assembly by a purported exercise of its legislative powers enacted a law which an Act of the National Assembly has already made provisions covering the subject matter of the State law. In both situations, the doctrine of covering the field will apply because of the "federal might" which relevantly are the Constitution and the Act."***

The implication here is that the state or local government in Nigeria is not in the position to legislate on gas emission from oil operations where there is existing federal legislation, even when the law does not serve the purpose.

5.3 Nigerian Legislation on Emission Control

The plaguing of natural resources commenced in different parts of Nigeria with the coming of the Europeans[110] and colonialists. This continued unabated even in the period after colonisation without regard to the environmental implications. The culture of environmental impunity manifests clearly in the oil and gas sector of Nigeria's economy which is dominated by multinational oil corporations. This is particularly promoted by the obvious inadequacies of the legislative frame work for control of gas emission, among other environmental problems in the sector. Previous attempts at environmental legislation in Nigeria were restricted to sanitation, the first set of known environmental legislation are the Public Health Act of 1958 and the Criminal Code Act of 1958.

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[109] *Independent National Electoral Commission, Attorney-General of the Federation v. Alhaji Abdulkadir Balarabe Musa*SC. 228/2002

[110] Of significance here is the monopoly of the Royal Niger Company which commenced with the 1895 massacre of over 2000 people in Brass by a British troop. The attack eventually led to the establishment of British protectorate and access to the hinterland for the European merchants acting with mandates from her majesty the Queen of England. See Okonta I, Douglas O Where Vultures Feast: 40 Years of Shell in the Niger Delta. (ERA/FoEI, 2001) 14.

In the period after independence complaints and conflicts on environmental degradations were left for the courts to decide based on the common law principles of nuisance, trespass to land and negligence. Legislation in the era was sector based and aimed at specific activities without clear environmental protection objectives.

The environmental legislation regime in Nigeria can be classified into two eras, the pre-1988 and the post-1988 era respectively. The pre-1988 environmental regulation era in Nigeria did not aim at environmental protection or air quality control, as there was no attempt at policy making or at governance level to establish the link between economic development, natural resources, use and environment. Legislation in this era were reactions to the changes in the different sectors of the society and enacted '... in order to rectify immediate problems of health and safety' that 'were associated with the economy, industry and urbanization.'[111] Relevant legislation for gas emission control that were enacted in the period before 1988 are discussed in the next section, and post-1988 legislation is discussed afterwards. Direct legislation on environmental control in Nigeria can be traced to the 1980s, precisely after 1988 Koko toxic waste dump incident,[112] which according to Fagbohun[113] 'forced the government to reassess its role in environmental issues.' This new move by the government led to new legislation and policies, for instance the Harmful Waste Criminal Provisions) Act, the FEPA Act, and the Nigerian National Policy on Environment by the Federal Government of Nigeria.[114]

[111] Fagbohun OLanrewaju, The Law of Oil Pollution and Environmental Restoration: A Comparative Review,(Odade, 2010) 285.

[112] A village in now Delta state in MidwestNigeria. See also Adegoroye Adegoke, The Challenges of Environmental Enforcement in Africa: The Nigerian Experience. Presentation at Third International Conference on Environmental Enforcement, April 25-28, 1994, Oaxaca, Mexico.

[113] Fagbohun, op cit note 370 at 286.

[114] These agencies were discussed fully in chapter 4. See also See also Adegoroye Adegoke, The Challenges of Environmental Enforcement in Africa: The Nigerian Experience Presentation at Third International Conference on Environmental Enforcement

5.3.1 Pre-1988 Legislation

5.3.1.1 Criminal Code

The criminal code Act is a general statute on crime in Nigeria. It was enacted in 1916 under the colonial regime for the purpose of establishing a code of criminal law for Nigeria, the then newly amalgamated country[115] which was created out of the colony of Lagos, and the northern and southern protectorates of Nigeria.

Section 304 of the Act creates a duty for persons in charge of dangerous sources to take responsibility for protection of the air medium. It provides as follows:

> ***"It is the duty of every person who has in his charge or under his control anything whether living or inanimate, and whether moving or statutory, of such nature that in the absence of care or precaution in its use or management, the life, safety, or health of any person may be endangered, to use reasonable care and take reasonable precautions to avoid such danger; and he is held to have caused the consequences which result to the life or health of any person by reason of any omission to perform that duty."***

While the Act appears to be a tool for air quality management and possibly emission control, the provision of section 247 of the code betrays its inappropriateness for modern day emission control. This is as a result of the weak penalty for the offence created under the section of the statute. The section provides as follows:

> ***"Any person who…vitiates the atmosphere in any place so as to make it noxious to the health of persons in general dwelling or carrying on business in the neighbourhood or passing along a public way; or do any act which is and which he knows or has reason to believe to be likely to spread the infection of disease dangerous to life, whether human or animal, is guilty of a misdemeanour and is liable to imprisonment for six months."***

The extent of the relevance of the statute forms part of the analysis in chapter 6 of this work.

[115] The colony and protectorates of Nigeria

5.3.1.2The Mineral Oil (Safety) Regulations

The regulations were made under the Mineral Oil Act,[116] which has since been repealed by the Petroleum Act. Issues like application of best standards in oil productions towards protecting the environment from pollution from the use of equipment in the oil industry are addressed under the regulation.

Part II of the regulations imposes certain duties on licencees and lessees. Rhese are stated under Regulation 3 as duties to: (a) appoint a manager in charge of all operations, (b) notify the Director of DPR of such appointment and any other, (c) provide adequate fire fighting and first aid equipment, (d) not to drill or search for petroleum or natural gas within150 metres of any building other than where flame proof or explosion proof electric lighting installation are.

The duties of the managers are spelt out in Part III of the regulations. Under Regulation 5, the manager has a duty to ensure that the provisions of the regulations are fully complied with.

Part IV imposes on the employees working under licence or in a leased area a duty to ensure that the best standards in relation to oil field practices are adhered to in order to minimize any pollution to the environment through either air, land and water. An offence of failure to comply with the regulations by licencee, lessee, manager or employees as provided under regulations III, is punishable with a penalty of one hundred Naira (N100) or imprisonment not exceeding 6 months or both.[117]

The Regulations' focus is mainly [118] on maintaining adherence to best standards in oil field practices in order to limit pollutions from the activities in the industry to the environment, and also to ensure the safety and protect health of workmen. A curious finding however is that Regulations 12 and 13 implicitly promote release of noxious gases into the atmospheric environment outside the facilities.

In terms of the low penalties attached to offences under the regulations and the present realities of the devastating impact of gas emission and air pollution on

[116] Mineral Oils Act repealed under section 14 of the Petroleum Act CAP P10 LFN 2004, Vol. 13
[117] See Regulation 27
[118] Particularly in regulations 6 - 26

humans and the environment, it may be correct to say the regulations haves surely outlived their usefulness.

5.3.1.3The Petroleum Act (Cap. P10, LFN 2004)

The Act was enacted in 1969 with the objective of providing for the exploration of petroleum from territorial waters and the continental shelf of Nigeria.

Petroleum is defined under the Act as -

> ***"…mineral oil (or any related hydrocarbon) or natural gas as it exists in its natural state in strata and does not include coal or bituminous shales or other stratified deposits from which oil can be extracted by destructive distillation."***

In Nigeria, ownership of petroleum and other natural resources[119] are vested in the state[120], which is clarified in the context under the constitution to mean Government of the Federation of Nigeria[121].

The Minister of Petroleum, as the executing officer of the Act, has diverse powers which include the granting exploration licences, oil prospecting licences, and oil mining leases[122], 'for exploration, to prospect and to search for, win, work, carry away and dispose of petroleum.'[123]

In pursuance of the provisions of section 2(3) of the Act, the minister may, in his opinion, act in the interest of the public by imposing special provisions on natural gas. These provisions may include (a) the incontestable right of the federal government of Nigeria to take 'any natural gas produced with crude oil by the licencee or lessee free of

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[119] Under section 44 of the constitution of the Federal Republic of Nigeria 1999, these resources are described as '...the entire property in and control of all minerals, mineral oils and natural gas in, under or upon any land in Nigeria or in, under or upon territorial waters and the Exclusive Economic Zone of Nigeria…" Similar provision is available under the Land Use Act cap L5 L.F.N 2004

[120] See section 40.

[121] See the later part of section 44 of the Constitution of the Federal republic of Nigeria 1999. Which provides *'...the entire property in and control of all minerals, mineral oils and natural gas in, under or upon any land in Nigeria or in, under or upon territorial waters and the Exclusive Economic Zone of Nigeria shall vest in the Government of the Federation and shall be managed in such manner as may be prescribed by the National Assembly'*

[122] See section 2 of the Petroleum Act

[123] See section 2 of the Petroleum Act.

cost at the flare or at the agreed cost and without payment',[124] (b) a requirement for the payment by the licencee or lessee of royalty on natural gas produced and sold.'[125]

Under section 8, the Minister's supervisory power over the petroleum industry and every operation includes access to all the areas covered by the licences and leases and to all refineries and installations subject to the Act. This is for the purpose of inspection of activities going on in the facilities, and for enforcement of the provisions of the Act and any other regulations made therein.[126]

In the course of the visit to any of the above-mentioned facilities the minister is further empowered by the Act to do any of the following:[127] (a) arrest an offender without warrant, (b) order, in writing, the appearance of any licencee or lease holder or their contractors, (c) suspend a licence or lease pending the time that he is convinced that danger to lives and properties has been averted, and (e) suspend any operations where, in his opinion, there has been contravention of the Act. The Minister may also make regulations, 'prescribing anything required for the purpose of the Act'[128] and also for providing generally for matters relating to licences and leases granted under his authority pursuant to the provisions of the Act.[129] Furthermore, the Minister may make regulations on pollution generally and in particular in terms of control and prevention of pollution of the atmosphere. This power may be exercised inherently through his power to make inquiries into accidents, regulating the construction, maintenance and operation of installations, regulating refineries and refining operations, among others.[130] The minister's power of control may also be exercised through the application of Regulation 42 which requires of the licencees and lessees of oil exploration and production to submit to the Minister any feasibility study, programme or proposal on utilisation of natural gas discovered in their areas of operation.

The Act creates certain offences, namely, interference or obstruction of holders of licences and leases in their exercise of any right granted under the Act,[131]construction

[124]Para 34 first schedule to Section 2(3) of the Petroleum Act
[125]Para 34 first schedule to section 2(3) of the Petroleum Act.
[126] Section 8(1)(c) of the Petroleum Act.
[127] See section 8(1) in general.
[128] Section 9(1) a
[129] See section 9(1) b
[130] See section 9 (1) in general
[131] Section 13 Petroleum Act

of refineries without a licence, exploration, prospecting for, winning or working petroleum otherwise than in pursuance of licence, or doing without appropriate licence any act for which a licence is required. It prescribes payment of N2000 (two thousand Naira), forfeiture of the products, and payment of an amount equivalent to the value of the product, as the case may be, as penalties for the offences enumerated above

5.3.1.4 Petroleum Drilling and Production Regulations, 1969

The Petroleum (Drilling and Production) Regulations were made pursuant to the provisions of Section 9 of the Petroleum Act, and the regulations commenced on 27th November, 1969.

The regulations regulate the grant and operations of oil prospecting, oil exploration, and mining licences. Among other things, the regulations provide for commencement and operations of oil exploration, drilling, field development, obligations of holders of the different licences, and compensation for damages to the environment by the holders and operators.

Regulation 21 attempts to introduce payment of compensation for damages to protected trees and productive trees, fishing rights, while the regulation specifically provides for control of pollution under Regulation 25, which provides as follows:

> ***"The licence or lessee shall adopt all practicable precautions including the provision of up to date equipment approved by the Director of Petroleum Resources, to prevent the pollution of inland waters, rivers, watercourses, the territorial waters of Nigeria or the high seas by oil, mud or other fluids or substances which might contaminate the water, banks or shore line or which might cause harm or destruction to fresh water or marine life and where pollution occurs or has occurred, shall take prompt steps to control and if possible, end it…"***

The power of control of emission or pollution under the regulations is exercisable by the Director of Petroleum or the Minister in the following ways:

(1) Mandatory submission of a regulated field development programme by licencee or lessees to the minister before commencement of activities.[132]

(2) Approval of methods and practices of exploration and production by the director of DPR.[133]

(3) Mandatory submission to the minister of any programmes, feasibility study or proposals for utilisation of natural or discovered gas in the course of operation by licence or lessees.[134]

(4) Supervisory power of the Director of Petroleum Resources to give directions in order 'to ensure proper exploitation of petroleum and conservation practices in the licensed and leased lands.'[135]

The Regulations are relevant to the present investigation, since unutilised gases, particularly from oil exploration and production, usually end up as sources of gas emission through flaring and venting. The provision should obviously aid emission control and environmental protection in the oil prospecting and production areas. The implementation of the above provisions is however questionable owing to conflict of interest, since the government is equally in partnership with the oil corporation for or exploration and production.[136] As a major stakeholder in the profit from oil production, government agencies often allow polluters to walk away without sanction. Fagbohun's position is more lucid on this, He observes that, being the land owner that gives permits and licences for exploration and mining of minerals, the Federal Government derives 'fees, rentals and royalties' from the activities, and that 'there was always a lack of impetus on the part of government... to strictly implement oil related laws.'[137] The director of DPR, in order to preserve his job, may choose to promote government's profit maximisation goal from oil production at the expense of regulation.

[132] Regulation 37, Petroleum (Drilling and Production) Regulations.
[133] Regulation 38 Petroleum (Drilling and Production) Regulations.
[134] See Regulation 42
[135] See Regulation 43
[136] See chapter II
[137] Fagbohun Olanrewaju The Law of Oil Pollution and Environmental Restoration: A Comparative Review (Odade, 2010) 307.

5.3.1.5 Petroleum Refining Regulations 1974

The Petroleum Refining Regulations commenced on 22July 1974, to provide for procedures for the establishment and management of refineries and safety in refinery operations.

Under the regulation, construction and operation of a refinery is subject to the grant of a licence by the minister.[138] Approval may be given in the form of a licence by the minister for either construction or operation of a new refinery, or enlargement or modification of an existing one.[139] The regulations contain provisions for the appointment of a manager by the licensee to supervise the construction and have 'continued charge of all operations under the licence.' [140] Licensees are implored to observe good refining practice under the regulation in conformity with international standards in all aspects of the construction, operation and maintenance of a refinery is emphasised by Regulation 7.[141]

The regulations prescribe some safety measures. These measures include provisions for: safety clothing and appliances[142], adequate medical facilities and first aids[143], protection against dangerous parts of machinery[144], training of inexperienced worker[145], and instructions on emergency procedures[146].

The manager is obliged under the regulations to issue the following types of reports: a monthly statement on production and other issues, annual reports, books, records, and special reports on any other aspect of refining operations.[147]

The regulations provide that pressure vessels to be used in the refineries are to be of good construction and sound materials. The director is mandated to set acceptable standards for their maintenance. Equally, procedures for the maintenance of the oil pressure vessels are outlined under the regulations.

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[138] This is subject to such terms and conditions as may be prescribed by the minister. See regulation 2 Petroleum Refining Regulations 1974.
[139] Regulation 2
[140] Regulation 4
[141] Regulation 7
[142] Regulation 12
[143] Regulation 13
[144] Regulation 14
[145]Regulation 15.
[146] Regulation 16
[147] See part III of the Regulation

Regulation 38 addresses the issue of spillage of crude products or chemicals inside a refinery. It directs immediate notification of the inspector where there is an occurrence of any accident.

Gas emission issues may be raised under regulation 42, which requires a full report where there is an incidence of fire explosion. The issue of environmental pollution in general is mentioned under regulation 44. The use of up to date equipment as recommended by the Director is obligatory, while the manager is expected to adopt all 'practicable precautions.' These precautions include the provision of up to date equipment 'to prevent pollution of the environment by petroleum or petroleum products.'[148]

In terms of sanction for non-compliance, two offence are created under regulation 45, namely (a) failure to comply with the directives of the Director in the exercise of his power under the regulations, and (b) failure to comply with the terms of any warning notice displayed. The penalty under the regulation for non-compliance is N100 or six months imprisonment.

Despite a refinery being a major source of gas emission, the issue of gas emission or air pollution is not mentioned under the regulation. This gap remains a serious weakness. In addition, it appears as if a refinery was given carte blanche to operate without any legal control in terms of environmental compliance. This justifies the earlier stated view that several laws before 1988 were without environmental protection objectives.

5.3.1.6 Associated Gas Re-Injection Act. Cap. A25, L.F.N 2004

The operative date of the Act is 28th September, 1979. The purpose of the Act is to compel all oil and gas producing companies 'in Nigeria to submit preliminary program for gas re-injection and detailed plans for implementation of gas re-injection.'[149] The aim is to ensure that gas resources are fully utilised instead of being flared by the licencee or lease holder.

[148] Regulation 4 Petroleum Refining Regulations 1974
[149] Long title to the Associated Gas Reinjection Act, Cap. A25 LFN 2004; Vol. 7

Section 1 provides as follows:

> ***"Notwithstanding the provision of regulation 42 of the Petroleum (Drilling and Production) Regulations made under the Petroleum Act, every company producing oil and gas in Nigeria, shall not later than 1st April, 1980, submit to the Minister a preliminary program for (a) schemes for the viable utilisation of all associated gas produced from a field or groups of fields; (b) project or projects to re-inject all gas produced in association with oil but not utilised in an industrial project."***

The Act prescribed October, 1980 as a mandatory date for oil companies to submit detailed plans and programmes for implementation of gas reinjection to the minister.[150] According to the Act, the plans address the following: (a) the implementation of programmes relating to the re-injection of all produced associated gases, and (b) schemes for the viable utilisation of all produced associated gases.[151] The directive under the Act covers all categories of gases, including those that were already earmarked for some alternative utilization.[152]

The Act makes gas flaring by oil companies illegal without a written permission of the minister after 1st January, 1984.[153] The issue of a permit or certificate to any company engaged in oil or gas operation by the minister is at the minister's discretion or in the wording of the Act subject to 'the minister's conviction' or 'satisfaction that the utilisation or re-injection of the produced gas is not appropriate or feasible in a particular field.'[154]

The terms and conditions to be imposed for continued gas flaring in any field is at the discretion of the Minister. However the permit is subject to payment of 'such sum as the minister may from time to time prescribe for every 28.317 Standard Cubic Metres (SCM) of gas flared.'[155]A penalty of forfeiture of the concession of the particular field for non- compliance with the provisions of the Act is prescribed under section 3 of the Act. The Minister also may order the withholding of all or part of any entitlements of any offending person to offset the cost of necessary action for reinjection or restoration in accordance with good oil-field practice.[156]

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[150] See section 2
[151] See section 2 generally.
[152]Section 2.
[153] See Section 3
[154] See section 3(2) Associated Gas Re-injection Act
[155] Section 3(2)b, Associated Gas Re-Injection Act.
[156] See section 4.Associated Gas Re-Injection Act

It is submitted that the absence of sanctions in the Act to compel compliance with the provision on compulsory production and submission of feasibility proposal on utilisation of discoverable associated gas or natural gas by corporations, renders the legislation a weak instrument[157] for control of gas emission. This is evident in the failure of the Act to address the issue of gas flaring in the country despite different deadlines under the Act.

Another shortcoming of the Act is the discretion given to the minister to determine the issue or not of a gas flaring permit by 'his conviction or satisfaction' instead of forensic or expert verifications. This may subject the process to manipulation and abuse.

5.3.1.7 The Associated Gas Re-Injection (Continued Flaring of Gas) Regulations 1985

These regulations significantly outline conditions under which a certificate may be issued by the minister for continued flaring of gas under section 3(2) of the Associated Gas Re-injection Act. These are: (a) where at least 'more than seventy-five percent of the produced gas is effectively utilized, (b) where the produced gas contains more than fifteen per cent impurities such as N_2, H_2, CO2, etc., and (c) where the ratio of the volume of gas produced per day in the field from the nearest gas line or possible utilisation point is less than 50,000 SCF/KM, this subject to the Gas to Oil ratio of the particular field being less than 3,500 SCF/bbl, and that it is not technically advisable to re-inject the gas in the particular field. However, in appropriate cases the minister may order production of oil from a field that does not meet the conditions stated above,[158]

The power to review the regulation regularly is vested in the minister who may exercise this power as he or she deems fit.

[157] Malumfashi, Garba 'Phase-Out of Gas Flaring in Nigeria by 2008: The Prospects of a Multi-Win Project (Review of the Regulatory, Environmental and Socio-Economic Issues),' *Petroleum Training Journal* Vol. 4 No. 2 July 2007. 116
[158] Ibid.

5.4.2 Post-1988 Legislation

5.4.2.1 Federal Environmental Protection Agency Act (FEPA)

The establishment of the Federal Environmental Protection Agency (FEPA) in 1989 elevated environmental issues to the national limelight from the previous approach. FEPA was established as a separate entity with a personality of its own as a body corporate. This body was responsible for the development of the environment and biodiversity conservation and sustainable development of the nation's natural resources in general. Its mandate also include development of environmental research and technology[159]. It operated at the federal level and with zonal offices in some major cities like Port Harcourt, Benin, Lagos and Kano.

An important provision in the Act establishing the agency is the provision for integrated collaboration and cooperation among the different stake holders in environmental management and necessarily in air quality administration. This is provided for under section 9 of the Act,[160] which mandates the Director of the agency to consult with relevant agencies, institutions and states. The director has, in particular, a duty to 'encourage and promote the coordination of environmentally related activities at all levels' in consultation with appropriate agencies.[161]

Generally, the FEPA Act made provisions for setting up of national environmental standards to regulate water quality, air quality and atmospheric protection, noise control, hazardous substances and other pollution related issues.[162] On the protection of Nigeria's air quality resources, FEPA provides for the establishment of criteria, guidelines, specifications and standards.[163]

In certain instances, after the emergence of FEPA, some agencies for environmental control in some sectors continued their activities[164] but were doing so on behalf of FEPA. The Petroleum Inspectorate Department of the Ministry of Petroleum

[159]Section 4 FEPA Act CAP F10 LFN
[160]FEPA Act
[161]Section 9(a) FEPA. CAP F10 LFN
[162]See part II of the Act
[163] Section 17, Federal Environmental Protection Agency Act, Cap F10 LFN 2004
[164] See Okoro dudu – Fubara Margaret. T, *Law of Environmental Protection*. (Caltop, 1998) 206 - 207

Resources maintained its mandate of regulating the pollution aspect of petroleum operations under the institutional networking mandate of FEPA.[165]

State Environmental Protection Agencies were established during the FEPA era. Though the agencies were creations of the State, their duties were discharged in collaboration with FEPA. Enforcement of environmental rules, standards and laws in the country were under the control of FEPA. At the state's level State Environmental Protection Agencies were established to manage environmental issues. The operation of the state agencies, despite state enabling laws, were however subject to the overriding control of FEPA in line with its mandate as stated above. With the exit of the military from government in 1999, the new government established a new Federal Ministry of Environment, while FEPA's operation was whittled down. The new Federal Ministry of Environment comprises environment related departments of federal government. Furthermore, in 2007 the government established the National Environmental Standards and Regulations Enforcement Agency (NESREA)[166] with the responsibility of enforcing all environmental laws, guidelines, policies, standards and regulations in Nigeria and Nigeria's international in environment.

5.4.2.2 Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN)

EGASPIN was originally issued in 1991 and subsequently revised in 2002 by the Department of Petroleum Resources. The objective is to regulate activities[167] in the petroleum industry in Nigeria and to guide compliance by role-players and industries with the environmental aspects of different legislation in the oil and gas industry.

The making of the guidelines is based on the authority conferred on the minister of petroleum empowered under different laws in the oil industry to make regulations and guidelines on certain issues for the industry. In particular, section 8(i)(b)(iii) of the Petroleum Act, 1969 authorises the Minister of Petroleum Resources to make

[165]See section 23 Federal Environmental Protection Agency Act F10 LFN 2004
[166] Established under the National Environmental Standards and Regulations Enforcement Agency Act 2007
[167] Aminu Jubril, foreword to The Environmental Guidelines and Standards for The Petroleum Industry In Nigeria (EGASPIN) (Department of Petroleum Resources, 2002 Revised edition).

regulations in respect of prevention of pollution of water courses and the atmosphere. Some other statutes are referred to in this section.

The guidelines identify the activities in the industry to include exploration, production, terminal operations, hydrocarbon processing plants, oil and gas transportation, and marketing. Furthermore, issues like sources and characteristics of gaseous, liquid and solid wastes generated, principal control methods and effluent limitation and standards are covered by the document.

Generally, the objectives of the guidelines and standards are to -[168]

(1) establish guidelines and standards for the environmental quality control of the petroleum industry, taking into account existing local conditions and planned monitoring programmes,

(2) provide, in one volume, for the operator and other interested persons, a comprehensive integrated document on pollution abatement technology, guidelines and standards for the Nigerian petroleum industry, and

(3) Standardise the environmental pollution abatement and monitoring procedures, including the analytical methods for various parameters.

Regarding the sources of emission in the oil and gas industry, the guidelines are divided into different parts on the basis of their categories and sub-divisions in the petroleum industry. Some of these sub-divisions of the industry are known sources of emissions and potential air pollutants in oil and gas operations.

(1) Seismic, drilling and well.[169] These activities generate sulphur dioxide (from fuel with sulphur content) and exhaust smoke (heavy hydrocarbons) from diesel engines that powers oil rigs. Licencee or lessees are obliged under the guidelines to obtain an environmental permit from the Department of Petroleum Resources before Seismic and drilling operations can be commenced in Nigeria.

(2) General wastes. [170] Two types of wastes are identified as sources of emission here, i.e. potential and continuous sources. The potential sources include wastes from (a) fuel combustion from oil water separation, (b) any heating requirements

[168] Part I, particularly at paragraph 4.

[169] See Part II EGASPIN. See also section 25 and 36, of the the Petroleum Act 1969 with the Petroleum (Drilling and Production) Regulation 1969, and the Explosive Act 1964 and Explosive Regulation 1967

[170] See Part III EGASPIN. See also Sections 25 and 36 of the Petroleum (Drilling- and Production) Regulations,1969

in crew living quarters, and (c) any electric power generation facilities needed for pumps as potential sources of emission. Continuous sources of emission are linked with gas flaring. Emissions of concern from such flaring consist primarily of carbon monoxide (CO), oxides of nitrogen (NO_x), sulphur (Six) and particulate. Outright prohibition of gas flaring being a major control here, other control methods are (i) the issue of an 'appropriate waiver and a permit' to flare the gas, issued by the Director of Petroleum Resources, (ii) an appropriate fine for every standard cubic meter flared, in accordance with existing laws, (iii) the installation of an appropriate facility or device as approved by the Director of Petroleum Resources for the removal, alteration, disposal, storage or prevention or creation of emission of air pollutants by the licencee, and (iv) mandatory environmental audit by the licencees or operators.

(3) Terminal Operations. [171] These operations include storage, dehydration, fiscalisation and piping or exportation to, and/or from, tank farms or terminals. Inefficient control and malfunctioning of equipment may result in the discharge of oil and oily wastes thereby polluting land, waterways, marine and offshore environments. Furthermore, EGASPIN identifies combustion wastes from the gas turbines, combustion engine, and the hydrocarbon emissions from tank vents as sources of gas emission from these activities. The emissions here are characterised by the following parameters: (i) particulate/smoke; (ii) NO_x, (iii) CO, (iv) hydrocarbons, and (v) $SO_{x.}$ Treatment and control of emissions as directed by the guideline is similar to those for control of emission from production activities examined above.

(4) Hydrocarbon processing operations.[172] These relate to operations and activities in the different oil refineries in the country. These include fuel/gasoline refinery, and the lube oil refinery and the petro- chemical refinery. In the fuel/oil gasoline refinery the major air pollutants here are (a) particulates, (b) SO x, (c) CO, (d) NOx, and (e) hydrocarbons. Particulate emissions are released from SO_x, CO and

[171] See Part IV EGASPIN see also (a) Petroleum Decree No.51, 1969 (b) Petroleum (Drilling and Production) Regulations, 1969. (c). Oil in Navigable Waters Regulations 1968. (d) Oil Pipelines Ordinance (CAP145 of 1956) as amended by the Oil Pipelines Act 1965.

[172] See Part V, EGASPIN.which embodies Regulation 8:1b (iii) of the Petroleum Act No.51 of 1969. Regulations (7); (24:1, 2c), (27); (35:1); (38:1 & 2); (43:1, 3,4) of the Petroleum Refining Regulations, 1974.

NO_x, particularly from the flare tower, process heaters and boilers, which are fired by refinery fuel gas. The major source of hydrocarbon emissions is general fugitive emissions throughout the refinery - storage tanks, FCCU, boilers and process heaters, blow-down system, process drains, vacuum jet pump leakages and cooling towers. Other primary pollution sources are the tail gas from the acid gas treating plant and the sludge incinerator.[173] In the lube oil refinery, the air pollutants are similar to the fuel oil/gasoline refinery above. Furthermore, pollutants like (i) particulates, (ii) carbon black dusts/pellets (CB Plant), (iii) SOx, (iv) NOx, (v) Cox, (vi) hydrocarbons (BTEX & VOCS and PAHs), (vii) polypropylene dust (PP Plant), and (viii) chlorinated hydrocarbon are peculiar to the petrochemical refinery and plants. These are released from sources like carbon black reactor/bag filter, dryer and bagging units, raw propylene condensation, light separation, drying, storage and purification units, and combustion reactions (gas turbines/steam boilers). The guidelines recommended for control are as above.

(5) Liquefied petroleum gas, natural gas, gas conversion and processing plants.[174] Emissions from these sources include (a) $N_{x,}$ (ii) $SO_{x,}$ (iii) CO, (iv) particulates, (v) hydrocarbons, and (vi) possibly CO2 and H2S which are all common to gas operations. These emissions are released through sources like boilers, gas turbines, gas process heaters, regasifiers (LNG), process leaks/other leaks at pump seals, vent from compressor seals, pressure reliefs (i.e. flares and vents), and storage facilities.

(6) Oil and gas transportation.[175] This involves transportation of hydrocarbons by pipelines, barges, ships, road tankers, rail wagons, etc. The recommended control measures under the Guidelines for this sector are –

(a) For air pollution from barges, tankers and FPSOs, the use of (i) an inert gas system on board (IGS), (Tankers are mandated to have this system fitted. The inert gas system enables a vessel to maintain non-flammable

[173] See EGASPIN above at 9

[174] Part VI of EGASPIN, see also Petroleum Decree No. 51 1960; Regulations 7(a)-(c); 8(b) (iii), 8(C).8(e) and Petroleum Refining Regulations 1974, 7; 38

[175] Part VI EGASPIN

atmosphere in the cargo tanks and equally prevents cargo vapours from escaping into the environment), and (ii) the use of a vapour return system during loading of hydrocarbon emissions from vessels and cargos not fitted with an inert gas system; and

(b) For air pollution from road tankers and rail wagons, hydrocarbon emissions are generally controlled by the use of a vapour collection device manifolded into a vapour recovery unit.

(7) Marketing operations.[176] This basically relates to the medium through which the petroleum products are made available to the ultimate consumers. Two methods are identified under the guidelines: depots and the retail outlets. Some activities like loading of arms/bays, tank vents, drains, generator exhausts, etc at the depot are identified as major sources of gaseous pollutants (hydrocarbon emission, flue gases etc.). On the other hand, the retail outlets are not known to generate serious emission elements except where minor emissions arise from generators used to power filling stations dispensing fuel to the ultimate consumers.

Gas Emission Control under EGASPIN

EGASPIN identifies particulates and gas emissions as major hazards from petroleum production activities in the air medium. It regulates the use of venturi/impingement scrubbers and alternate controls in the industry through provision for the use of bag or fabric filters, electrostatic precipitators, granular bed filters, and others.

In terms of control of gas emissions, EGASPIN identifies:

(a) oxides of sulphur (So_x), (b) oxides of Nitrogen (NO_x), nitrogen oxide and dioxide, (c) carbon monoxide (CO), and (d) hydrocarbon as major gaseous emissions from oil operations, and prescribes different control methods for these emissions under Part V[177].these are:

[176]Part VII EGASPIN.

[177] For instance it recommends for: Oxides of sulphur: (So_x)energy conservation,Use of low sulphur fuels; (iii) Fuel desulphurization (iv) absorption processes by use of molecular sieves; (v) Flue gas treatment which involves wet scrubbing with limestone/lime, etc; Oxides of Nitrogen ($N\ O_x$), Nitrogen oxide and dioxide: Combustion modifications (ii) Fuel modifications by denitrification, Design modifications of burners, proper burner location and spacing; (iv) Treatment of flue gases for NOx, removal by catalytic decomposition, non-selective and

i. Environmental management tools. For the purpose of protection and preservation of the environment, the Guidelines recognize Environmental Evaluation Reporting and Environmental Impact Assessment Reporting 'as additional enforcement tools in the oil and gas industry in Nigeria.'[178]

ii. Environmental Evaluation Reporting. The Environmental Evaluation Report under the Guidelines is to evaluate an already 'polluted' or 'impacted' environment in order to assess the state of the recipient environment, for the purpose of decision making and formulation of strategies for protection and restoration.'[179]

iii. Environmental Impact Assessment Reporting. An Environmental Impact Assessment Report on the other hand is designed under the Guidelines for the assessment of all actions that will result in a physical, chemical, biological, cultural, social etc. modification of the environment as a result of the a new project.[180] The use of EIA in the oil and gas industry is emphasised in the guideline. In particular, EIA is mandatory in the following activities in the industry before the commencement of any activity:[181] (a) all seismic operations, (b) oil and gas field developments onshore, nearshore, offshore and deep offshore like development well drilling, construction of crude oil production, tankfarm and terminal facilities including FPSOs, (c) laying of crude oil and gas delivery lines, flowlines and pipelines in cumulative excess of 20km length and/or as determined by the Director of Petroleum Resources, (d) in the instance of hydrocarbon processing facilities like oil refineries and petrochemicals,

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selective catalytic reduction, adsorption/absorption reactions by solids and liquids, respectively; Carbon Monoxide (CO) Carbon monoxide emissions; combustion through good practice, which includes proper design, application, installation, or operation and maintenance of process heaters, burners and auxiliary systems;(ii) Energy conservation by techniques such as preheating the furnace air and process side material; (iii) Energy source substitution of fuel oil by natural gas, hydroelectric and nuclear energies; (iv) Gas cleaning with shift converters on the hydrogen plant and the CO boiler in the FCC unit. Hydrocarbon, Hydrocarbon emissions; Routing the off-gas to a boiler or process heater to combust the hydrocarbons; (ii) Partially flashing off-gas from the rich absorbent solution and recycling the gas back through the absorber;(iii) Proper design of storage tanks; (iv). Integrated hydrocarbon vapours recovery systems; (v). Maintaining wet scrubbers or condensers on the vents of fixed roof tanks; (vi). use of activated carbon as an absorbent

[178] In addition to other enforcement tools like Compliance monitoring; Revocation of Licences and Leases; Sanctions (fines); Compensation; Issuance of some interim guidelines on waste discharges as enforcement tools in the petroleum industry in Nigeria.

[179] Paragraph 1.4.1 Part VIII EGASPIN

[180] Paragraph 1.4.2 Part VIII EGASPIN

[181] Paragraph 1.6, Part VIII, EGASPIN.

liquefied natural gas/natural gas liquids/GC & P plants, liquefied petroleum gas (above 20,000 litres), blending plants, product filling stations (combined capacity above 20,000 litres), construction of a product depot with a combined capacity of 50,000 bbls or more, (e) construction of waste treatment and/or disposal facilities, for activities such as a waste water treatment plant, an incineration process above 300Kg/hr, engineered sanitary land filling, and land farming/composting/ex-situ bioremediation in excess of 1.25Km2 of land take, and (f) dredging activities of about 500m2. Additional features of the EIA regime under EGASPIN include the following:

(a) The engagement of EIA consultants. The guidelines direct the engagement of EIA consultants and reviewers who shall be 'competent and have attended prescribed courses in the principles and practice of the EIA process and environmental management relating to the determination of the feasibility of projects.'[182]

(b) Determination of the significance of impact on the environment. To determine the significance of the impact of a particular project on the environment in the industry, the guidelines identify two factors, that is (a) the significant effects /impacts that may have both beneficial effects, and or detrimental effects, and (b) the short term, primary and secondary effects of the project due to potential violations of air quality, changes in land use, changes in energy use and supply, the potential and significant socio-cultural consequence of an activity, damage to historic and anthropogenic sites, and other factors listed in the guidelines.[183]

(c) Content of the EIA report. According to the Guidelines, an EIA report is expected to include the following in its content: (a) The summary, which shall give an overview of the project, significant environmental impacts, ameliorating and mitigating measures and the environmental management plan (Post – EIA monitoring) to be implemented by initiator, and the significance of the residual environmental impacts following

[182] Paragraph 4.4.2 Part VIII, EGASPIN
[183] Paragraph 4.0 Part VIII, EGASPIN

amelioration or mitigation', and (b) the project setting, which includes air quality assessment, climatology, meteorology and gaseous emission as part of the baseline description. Other issues in the project setting being: (i) declaration, (ii) the need and description of proposed action, (iii) the general layout, (iv) construction deal, (v) operation and maintenance, (vi) abandonment plans, (vii) alternatives, and (viii) baseline description of the existing environment and resources used, which covers issues like land, water, flora and fauna, (ix) the socio- economic aspect, (x) water use, (xi) waste management, (xii) noise assessment, (xiii) hazards; (xiv) risk assessment, (xv) environmental impacts, (xvi) mitigating and ameliorating measures, and (xvii) an environmental management plan, which is mandatory under the guidelines as an integral part of EIA and Environmental Evaluation Report, [184] and which must include a design and implementation of an appropriate post EIA monitoring.

Enforcement of EIA. Under the Guidelines, proponents of the affected project are expected to involve the Department of Petroleum Resources in the development, implementation and operation of a post EIA monitoring programme.[185]

Furthermore, the Guidelines requires the prevention, control and combating of oil and hazardous substance spills. Holders of licences for exploration, prospecting, exploitation, hydrocarbon processing, transportation, marketing and other oil and gas related activities are required to take/adapt practical precautions to prevent pollution.

IV. **Environmental audit**.

The Guidelines mandate licencees /operators to conduct Environmental audits to facilitate the management control of environmental practices and to assess compliance with the management system and regulatory requirements. Related to this is the provisions relating to effluent limitations, standards and monitoring. It sets limits for the various allowable discharges into the environment.

[184] Paragraph 5.8 Part VII EGASPIN
[185] Ibid

V. **Monitoring**.

Generally, waste generators are under an obligation to monitor wastes from the different sources from the sources to the receiving environment that is from 'cradle to grave'.[186]

In respect of emission, the Guidelines provide for the monitoring of existing gaseous emission points and also the monitoring of rain water in the production areas.[187] It is required of a licencee or leasee to (a) estimate potential air pollutants of emission from any point source, (b) register and obtain permits from the Director of Petroleum Resources in respect of all point sources, (c) install an appropriate facility as approved by the Director of Petroleum Resources, (d) monitor point sources and the ambient environment as approved by the Director of Petroleum Resources.

The aim of the monitoring programme is to determine the efficiency of the control equipment, technology and the control of ambient concentrations of emissions. The following measures are backups for the monitoring of gaseous emissions: (a) development of an emission inventory, (b) installation of an appropriate sampling point, (c) sampling and laboratory analysis of emission rates, flare temperature, volume discharged, combustion products (like oxides of sulphur, nitrogen, carbon, etc), particulates, mass balance of combustion products, hydrogen sulphide, ozone, THC/VOCS and heavy and trace metals. Additional monitoring measure is available through the rain water monitoring programme. This prescribes sampling of rain waters from the locations and distances around the wind direction of the activity. The measuring parameters are outlined in the guideline.[188]

The licencee or operator must forward the report of point source and rain water monitoring to the Director of Petroleum Resources.[189] Sampling of emission from the

[186]Paragraph 4.5, 4.8 etc.

[187]Paragraph 4.4.1 Part

[188] i) Wind velocity, ii) Wind direction, iii) Air temperature (ambient), iv) Pressure and Relative humidity v) Precipitation vi) Wind turbulence vii) Sun radiation. Equally, the parameters for sampling and analysis of rain water is expected to include: pH, Conductivity, SOx (Sulphate, Sulphide), NOx (Nitrate, nitrite), HCO3, Total Hydrocarbons (THC)/Volatile Organic Carbon (VOC), Heavy and Trace Metals. See paragraph 4.4.3s

[189]Paragraph 4.4.3

gaseous point source is supposed to be weekly or continuous. It is to meet the standards under the ambient air quality standard proposed under EGASPIN.

VI. Ambient Air Quality Standards.

EGASPIN proposes ambient air quality standards to support monitoring of gaseous emission from oil production activities. Pollutants like Suspended Particulate Matter (SPM): black smoke, total SPM, carbon monoxide, sulphur dioxide, nitrogen dioxide, and lead are monitored. The monitoring of these substances are expected to be frequently carried out weekly, with the specified times in the ambient air quality standards and, where applicable, continuously as approved by the Director of Petroleum Resources.[190]

Implementation, enforcement, offences, penalties and miscellaneous provisions.

EGASPIN establishes general principles for enforcement of environmental legislation in the oil and gas industries and related operations in Nigeria.

For the purpose of enforcing compliance with the provisions of the Guidelines and Standards, the following conditions are applicable:

(a) an inspector who is authorised may, without warrant, demand the production, examine and take copies of any permit, licence, certificate or other document, and also require any equipment, system, sample or any item in relation to non-conformity with environmental standards or requirements.

(b) where any inspector, has reasonable grounds to believe that an offence has been committed against the provisions of the guidelines and standards he may without warrant: (i) enter and search any oil and gas facility or structure, in which he has reasons to believe that an offence against the provisions of the guidelines and standards has been committed; (ii) perform or cause to perform tests and take samples of any substance relating to the offence which is found in the oil and gas facility or structure searched, and (iii) cause any person or persons to be arrested, whom the inspector has reason to believe has committed such offence.

[190] Paragraph 4.4.4.

The Guideline makes the obstruction of any authorised inspector in the course of the exercise of the powers conferred on the inspector under the Petroleum Act 1969, or failure to comply with lawful enquiries or requirements made by an authorised inspector, an offence which on conviction will make the offender liable to a fine not exceeding N500,000, or to imprisonment for a term not exceeding 2 years, or to both such fine, imprisonment and/or revocation of licence/permit.

Where a person or body corporate knowingly or recklessly makes any statement in the purported compliance with a requirement or to furnish information which is false in a material particular, the person or body corporate commits an offence and shall on conviction be liable to a fine not less than one hundred and fifty thousand naira (₦150, 000), or imprisonment for a term not less than two (2) years, or to both such fine, imprisonment and/or revocation of licence/permit.

Any person or body corporate, who contravenes any provisions of the environmental guidelines and standards, commits an offence and shall on conviction, where no specific penalty is prescribed therefore, be liable to a fine, imprisonment and/or revocation of licence/permit. Where the offence is committed by a body corporate or by a member of a partnership, firm or business, every director and/or relevant management staff, shall be liable.

Fines and compensation are payable in the following specific situations:

(a) Failure to register existing point. Failure by any person, body corporate or operator to register an existing point source(s) within the period specified, payment of a fine of one hundred thousand naira (N100,000) per day for as long as the violation persists.

(b) Oil/Chemical/Hazardous materials spillages. All avoidable spillages, when they occur, shall attract a royalty not less than five hundred thousand naira (N500,000), to be deducted at source and an additional fine of one hundred thousand (N100,000) for every day the offence subsists. The spiller (operator or owner of a vessel) must pay adequate compensation to those affected, and must restore/remediate the polluted environment to an acceptable level as shall be directed by the Director of

Petroleum Resources. Any aggrieved party in case of disputes, may under the circumstances seek remedy in court or tribunal.

(c) Persistent violators. Where any person, body corporate or operator of a vessel or facility, persistently violates the provisions of the guidelines and standards, the lease, licence and/or permit may be revoked.

In terms of environmental management, the Guidelines requires of licencees/operators in all oil and gas activities to institute planned and integrated environmental management practices. This measure is aimed at ensuring that unforeseen, identified and unidentified environmental issues are controlled. For effective environmental management EGASPIN mandates clear identification, definition, documentation and communication of roles, responsibilities and authorities..

From the above provisions, it becomes evident that EGASPIN is an ambitious response to the challenge of pollution in the oil and gas industry in Nigeria. The measures under EGASPIN appear to be an attempt to bridge the gaps under the environmental protection provisions of the different legislation regulating the oil industry in Nigeria. In attempt to proffer solution to the environmental challenges of oil business and offer protection to the communities around production areas, it outlines sources of pollutions and prescribes some measures.

On the whole, a glance at the document raises different issues in terms of its usefulness and reliability as an effective tool for control of gas emission and environmental protection in the oil industry in general. For instance, the status of the document as a subsidiary legislation has been questioned, while the competence of the Department of Petroleum Resources to administer the guidelines and other legislation in the oil industry remains a subject among experts.

5.4.2.3 National Environmental Standards and Regulations Enforcement Agency (NESREA) (Establishment) Act

The National Environmental Standards and Regulation Enforcement Agency Act was enacted in 2007. The Act provides for the establishment of the National Environmental Standards and Regulation Enforcement and Regulation Agency (NESREA) as Nigeria's flagship 'enforcement agency for environmental standards, regulations, laws, policies and guidelines.'[191] NESREA was established to

> ***"...have 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 guidelines."***

The enactment of the Act finally ended the Federal Environmental Protection Agency regime, which became inactive with the scrapping of FEPA and transfer of its mandate to the Ministry of Environment in 1999

Unlike the position under the FEPA regime where in FEPA's authority to regulate the environmental aspects of oil production[192] was not questioned, the NESREA Act is unequivocal in excluding oil related issues from the operations of the Act.[193] This is in spite of the broad mandate and power of the Agency on enforcement of environmental laws and standards.

The Agency is mandated under the Act to make regulations to set 'specifications and standards to protect and enhance the quality of Nigeria's air resources'.[194] This is in order to 'promote public health, welfare and the nation's human, animal, marine or plant life.'

The mandate to make regulations is to feature the following, namely -

(a) Minimum essential air quality standards for human, animal, marine or plant health;

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[191] See section 1 of NESREA ACT.

[192] Section 23 of the Federal Environmental Protection Agency Act Cap L. LFN 2004 actually provides for collaboration between FEPA and the Ministry of Environment (Petroleum Resources Department) in the removal of oil related pollutants that are released into the Nigerian environment.

[193] See section 7 NESREA Act

[194] See section 20 (1) of NESREA Act, 2007

(b) 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, marine or plant health;

(c) The most appropriate means to prevent and combat various atmospheric pollution;

(d) Control of atmospheric pollution originating from energy sources, including that produced by aircraft and other self-propelled vehicles, industries, factories and power generating situations or facilities;

(e) Standards applicable to emissions from any new mobile or stationary source; and

(f) The use of appropriate means to reduce emission to permissible levels[195].

In order to effectively monitor and track down pollution sources, the Act provides for the establishment of monitoring stations[196]. This is to aid determination of the actual or potential dangers of substances in the air medium.

In anticipation of the making of the regulations on air resources management, the Act prescribes penalties for certain offences that are created under subsections 3 and 4 of section 20, it prescribes a fine not exceeding N200, 000 or imprisonment for a term not exceeding one year, or both such fine and imprisonment of the offender and additional fine of N20, 000.00 for everyday the offence subsists.[197] In the case of a corporate body, the penalty is a fine in the sum of N2, 000,000 and an additional fine of N50, 000 for every day that the act that constitutes the offence lasts.

The Act mandates the Agency to collaborate 'with other relevant agencies to undertake studying of data and to recognize development in force in other countries regarding the total effect of all substances, practices, processes and activities that may affect the stratosphere.'[198] This provision is an acknowledgment of the international dimension of pollution of the atmosphere and international cooperation towards control of substances in the air. The mandate on collaboration with other agencies include collaboration on programmes 'for the control of any substance, practice, process or

[195] See Section 20(a) NESREA Act generally.
[196] Section 20(b) NESREA Act.
[197] Section 20(2).
[198] Section 21(1)

activity' like ozone and other activities that may be anticipated to endanger public health or welfare.[199]

It is observable that the penalties under the Act differ from those under the pre-1988 Acts. The latter provisions appear more severe, for instance contravention or offences by a body corporate attracts a fine of two million naira (N2, 000,000) and an additional fine of fifty thousand naira (N50,000) for everyday the offence subsists.[200]

5.5 Nigerian Policies on Emission Control

5.5.1 National Policy on Environment

Launched in 1989, the National Policy on Environment made recommendations for a national mechanism for cooperation, coordination and regular consultation on environment.[201] Furthermore, the policy recommends 'harmonious management of the policy formulation and implementation process. This supports the establishment of effective institutions and linkages within and among the various tiers and levels of government - Federal, State and Local.'[202] Furthermore, the policy recommends the establishment of a separate body to control environmental issues.

The goal of Nigeria's national policy on environment is to 'achieve sustainable development in Nigeria'[203] and specifically to (a) secure a quality of environment adequate for good health and wellbeing, (b) conserve and use the environment and natural resources for the benefit of present and future generations, (c) restore, maintain and enhance the ecosystems and ecological processes essential for the functioning of the biosphere. The aim being to preserve biological diversity and the principle of optimum sustainable yield in the use of living natural resources and ecosystems.'[204]

In order to achieve above goals in the air quality of the country, the policy recommends the following strategies:[205]

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[199] Section 21(2) NESREA Act 2007
[200] Section 20(4) NESREA Act 2007
[201] See paragraph 7 of the Nigeria National Policy on Environment
[202] Ibid.
[203] Available at http://www.nesrea.org/images/National%20Policy%20on%20Environment.pdf (accessed 19 -12-2010)
[204] National Policy on Environment,ibid.
[205] Ibid.

(1) Designating and mapping of the National Air Control Zones and declaring air quality objectives for each designated Air Control Zone.

(2) Establishing ambient air quality standards and monitoring stations at each designated zone.

(3) Licensing and registering of all major industrial air polluters and monitoring their compliance with laid down standards.

(4) Providing guidelines for the abatement of air pollution.

(5) Establishing standards for the control of fuel additives with respect to trace elements especially Pb, S, Va, Ni, Cr and Zn.

(6) Prescribing stringent standards for the level of emission from automobile exhausts and energy generating plants and stations.

(7) Monitoring and minimising the incidence of "acid rains".

(8) Promoting regional cooperation aimed at minimising the atmospheric transportation of pollutants across international boundaries.

5.6 Summary

The Nigerian Constitution of 1999 came into being after a protracted military era. The process of its making was supervised by the military high command. The constitution provides for a constitutional democracy and recognises the different constitutional principles such as the supremacy of the constitution, and the separation of powers. While the constitution contains a Bill of Rights, the human rights provision is limited to civil and political rights. The constitution treats socio-economic rights issues as fundamental objectives and directive principles of state policies. An important provision is the creation of three legislative lists under the constitution, by virtue of which the power to control emission from oil operation is vested mainly in the national government.

The relevant legislation for control of gas emission in Nigeria, particularly in the Niger Delta area, consists of laws that regulate oil and gas or petroleum operations. These statutes prohibit certain activities that contribute to pollution of the environment and the atmosphere in particular by licence and permit holders in oil processing and productions. The minister or Director of the Department of Petroleum Resources wields enormous powers under the statutes, as their discretion come to play in most situations. Since these statutes predate the enactment of Nigeria's 1999 Constitution, the different constitutional and democratic principles are not reflective in the statutes. While the new NESREA Act provides for control of emission in certain activities, it clearly excludes oil and gas activities from its reach. The old and existing legislation in the oil industry however contains some provisions which are highlighted above. As discussed above, the most relevant piece of legislation, the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (EGASPIN), is better described as a subsidiary legislation having been compiled by a department in the Ministry of Petroleum Resources. It should however be pointed out that different measures are in place under the outlined legislation for control of gas emission in Nigeria, particularly from the oil industry. The relevance and effectiveness of these statutes are discussed and analysed in chapter seven.

CHAPTER 6

6.0 CONSTITUTIONS AND LEGAL FRAMEWORKS FOR EMISSION CONTROL IN SOUTH AFRICA

This chapter examines key provisions of the South African perspective on emission control through the Constitution of the Republic of South Africa 1996 and other framework. The Environmental rights provisions under section 24 of the constitution and other provisions in the Bill of rights are significant in the growth of South Africa's environmental and emission control laws. These key provisions are examined in terms of the emergence of novel legislations and policies on environmental management and air quality control in particular in the jurisdiction. Furthermore the incorporation of different measures under the international frameworks through the different legal instruments is examined and discussed towards control of emission in South Africa.

Chapter 5 and 6 prepares the ground for a comparative analysis of the application of the different frameworks to emission control in both Nigeria and South Africa in chapter 7.

6.1 The South Africa Constitution

6.1.1 Background to the 1996 Constitution

The making of a new South African constitution was the final stage in the series of political reforms towards steering South Africa from its pariah status in the comity of nations as a result of its isolation for the apartheid policy and the hostilities and restiveness in the territory. The process started in the early 1990s with the unbanning of the political parties, release of political detainees, and negotiations by different working groups on different subjects about the future South Africa, and by 1993 a subsequent agreement was reached among the parties to have a new constitution for the territory after an initial arrangement that will see the parliament adopting an interim constitution to guide the transition.[1]

[1] See Rautenbach I.M. and Malhherbe E.F. *What Does the Constitution Say? The Complete Constitution Made Easy* (Van Schaik 2011) 2

The interim constitution became operational in April 1994. It made provisions for the process of making the new constitution and certain standards and requirements which the document must meet before it could be adopted. A fundamental requirement was that the new constitution must be adopted by the Constitutional Assembly by a two third majority[2] and must be certified by two third majority members of the Constitutional Court that it complies with the constitutional principles as provided under the 1994 interim Constitution,[3] before it could come into effect. The process of negotiating the new constitution took place between 1994 and 1996. Apart from the different committees supported by technical advisers that were created to work on various issues that would later form the provisions of the new constitution, different segments and political groupings were given opportunities to make representations in the process.

The throughput of the process is the Constitution of the Republic of South Africa 1996, which has been described by Bobby Speek as 'a victory over racism and coercion'.[4] The constitution is deeply informed by the human rights culture that evolved within the broader anti-apartheid struggle. The protracted struggle against apartheid produced an 'already sensitised' society, thus raising the stake at the negotiation of the new constitution. The negotiation of the constitution is better described as the final stage of the struggle against apartheid and various injustices of the era. Different shades of opinions were represented and projected at different events like symposia, talks, rallies, public lectures and negotiations that preceded the drafting of the constitution. It is therefore not out of place or miraculous that a progressive constitution that is right conscious and a powerful instrument for environmental justice was produced at the end of the struggle.

The important role of a constitution in a society can be seen in the transformation of the South African society after the collapse of apartheid. What really

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[2]Section 73(2) Constitution of the Republic of South Africa Act 200 of 1993 repealed by Constitution of the Republic of South Africa, [No. 108 of 1996], G 17678, 18 December 1996

[3] See section 73(6) ibid

[4] Speek Bobby, Interview at Groundwork, Pietermaritzburg, April 2012

changed after apartheid in South Africa was not a restructuring of the geographical entity, but the constitution - the transformative power of the constitution suddenly abated the gale of violence and protests as a result of the new sense of belonging and the expected protective role of the state which should include protection from environmental hazards like emission.

The 1996 Constitution as a negotiated document produced a new state that produced new national goals and aspirations which are captured in the preamble, which reads as follows:

> "We, the people of South Africa,Recognise the injustices of our past;
> Honour those who suffered for justice and freedom in our land;
> Respect those who have worked to build and develop our country; and
> Believe that South Africa belongs to all who live in it, united in our diversity.
> We therefore, through our freely elected representatives, adopt this Constitution as the supreme law of the Republic so as to -
> Heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights;
> Lay the foundations for a democratic and open society in which government is based on the will of the people and every citizen is equally protected by law. Improve the quality of life of all citizens and free the potential of each person; and Build a united and democratic South Africa able to take its rightful place as a sovereign state in the family of nations."

The preamble reflects the immediate history of the South African society. This informed the making of a document with a resolve to eagerly do away with relics of injustice and domination which was reflected in the state-backed release of gas emission in south Durban under the previous regime.

The new constitution in attempting to usher in a new people oriented regime, according to Nelson Mandela -[5]

> "...speaks of both the past and the future. On the one hand, it is a solemn pact in which we, as South Africans, declare to one another that we shall never permit a repetition of our racist, brutal and repressive past. But it is more than that. It is also a charter for the transformation of our country into one which is truly shared by its entire people - a country which in the fullest sense belongs to all of us, black and white, women and men."

It is therefore a position in this work that the act of release of gas emission into the environment in any part of South Africa and South Durban in particular, which foists a

[5]Former President Nelson Mandela. Foreword to *the Post-Apartheid Constitutions: Perspectives on South Africa's Basic Law.* Further reading at more:http://www.safrica.info/about/democracy/constitution.htm#ixzz1ZP2EnwWd

state of helplessness on the weak and vulnerable, is antithetical to the very end and purpose which the constitution aims to achieve.

6.1.2 Supremacy of the Constitution

The constitution declares its supremacy over any other law or institutions. Constitutional supremacy establishes the finality of a constitution as a source of law, the prescriptions in the constitution and any other laws in the polity is subject to no other law than the constitution itself. The provision is a bulwark against tyranny and authoritarianism. Any law or procedure or authority to be exercised in the state must flow from the constitution as a fountain, equally every authority in the country must carry out the prescriptions of the constitutions as it affects the operations of the authority or institution. Where there is conflict in respect of the interpretation of any clause in the constitution, the Constitutional Court established under the constitution has the exclusive jurisdiction in interpreting such provision.

Section 2 of the constitution in declaring the supremacy of the constitution states:

> ***"This constitution is the supreme law of the Republic; law or conduct inconsistent with it is invalid, and the obligations imposed by it must be fulfilled."***

Including provisions like the above in constitutions was long justified by Alexander Hamilton[6], his opinion is that:

> ***"There is no position which depends on clearer principles, than that every act of a delegated authority contrary to the tenor of the commission under which it is exercised, is void. No legislative act, therefore, contrary to the Constitution, can be valid. To deny this, would be to affirm that the deputy is greater than his principal; that the servant is above his master; that the representatives of the people are superior to the people themselves; that the men acting by virtue of powers, may do not only what their powers do not authorize, but what they forbid."***

The importance of the supremacy of the constitution in South Africa to this discourse is that the constitution clearly makes environmental protection a priority for all government officials and agencies. The fallout of the above is the enthronement of constitutionalism; that is any law that is made by the parliament that is inconsistent with the provisions of the constitution will be invalid and of no effect. Flowing from above

[6] Federalist Paper No 78, cited in David Van Wyk, John Lugard, Bertus De Villers and Dennis Davis (eds) *Rights and Constitutionalism: The New South African Legal Order*. (JUTA 1995) 5

also is the obligation of the operators of governmental powers to adhere to the provisions of the constitution in the discharge of their respective duties. Duties here include approval of location of facilities and other activities and ensuring that the principles highlighted above are adhered to when government officials are taking decision that mitigates or promote gas emission from facilities.

6.1.3 Human Rights and the Environment, and the Role of the Human Rights Commission

The 1996 Constitution provides a broad spectrum for addressing the challenge of gas emission and other environmental problems in South Africa. South Africa has clearly indicated its determination to give serious attention to environment and the wellbeing of the people in order to ensure a sustainable environment. This is evident in the wording of the constitution and the elevation of environment to a fundamental justiciable right.

The constitution explicitly provides for environmental rights. This move according to the court in *BP Southern Africa (Pty)ltd v MEC for Agriculture, Conservation and Land Affairs*:

> ***"…will lead to the goal of attaining a protected environment by an integrated approach, which takes into consideration ...socio-economic concerns and principles"***[7]

This move places South Africa in the committee of nations with clear provisions in their constitutions on environmental rights.[8]

[7] 2004 5SA 124

[8] It is estimated that about 60 countries of the world have adopted environmental rights as a constitutional provision. See May J R and E. Daly, New Directions in Earth Rights, Environmental Rights and Human Rights: Six Facets of Constitutionally Embedded Environmental Rights Worldwide *IUCN Academy of Environmental Law e-Journal Issue 2011 (1)*

In Chapter 2, the constitution provides as follows:[9]

"Everyone has the right:

(a) to an environment that is not harmful to their health or well-being; and

(b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:

(i) prevent pollution and ecological degradation;

(ii) promote conservation; and

(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."

The above section which doubles as a fundamental right in the bill of rights in the constitution stands out as an instrument for environmental protection and as one of the key provisions for attaining the visions articulated in the preamble of the 1996 constitution. It makes no pretence to the course of environmental protection and sustainability. It came as a relief in the quest for environmental justice and as a weapon of protection for the people against hazardous or harmful activities in the environment while equally creating obligations for the state to secure the right.

Environmental rights as provided under the provision may be addressed through the two broad provisions in the above section of the constitution as follows:

(1) The right to an environment that is not harmful to human health or wellbeing.

The crux of the provision above is to ensure that individuals or groups in the country are not exposed to objects or materials that can impair their health and wellbeing, and also it connotes the need for preservation of environment as a support for life and wellness of the people in South Africa.

The scope of the provision is wide and capable of accommodating any action to challenge any act with potential negative impact on human health and wellbeing of individuals.[10] Being a justiciable right the provision is an important

[9]Section 24 of the Constitution of the Republic of South Africa 1996

[10] Koetze above

instrument for environmental justice. The section provides a good platform to address the issue of gas emission – the subject matter of this work. This gives us the impetus to think that individuals may rely on the right where their health or wellbeing is under threat by activities of individuals and groups or organisations or decisions of the state that may promote environmental degradation.

A polluting facility may be challenged by the affected individuals or through their representatives or restrained by the government through different means. For instance, application can be made to court, or government may design new standards or enact new legislation to serve the right issue.

According to Glazewski:[11]

> ***"…if air pollution or the placement of disposal sites is to be subjected to constitutional challenge on the grounds that people's health is being damaged, the challenge will have to be brought in terms of the environmental clause."***

In the light of Glazewski's view, the right may be asserted in many ways, like (a) challenging and invalidating laws and decisions which are in conflict with the provisions, or (b) stopping decisions of governments or individuals that may be dangerous to or threaten the health of the people within South Africa. The section has the thus aims to impose on or engender responsibility from the people towards environmental protection. It is a drive for the environment in that the people as individuals and groups now see themselves as managers or 'custodians'[12] of the environment. Glazewski further identified a new tendency or concern for environmental integrity, that is, a morally, responsible and ethical use the environment.[13]. This aspect is expected to aid the civil society in intervening on behalf of the poor or vulnerable communities in matters of gas emission and other environmental problems.

(2) The right to have the environment protected.

This aspect of the right places a constitutional duty on the state to ensure that the environment is free of distortions or pollution. To attain this right, the government's duties range from making appropriate legislation, setting standards, building the

[11] Glazewski J. Environmental Justice and the New South African Democratic Legal Order, in Glazewski Jan and Bradfield Graham, *Environmental Justice and the Legal Process*. (JUTA, 1999) 8

[12] Glazewski, ibid

[13] Glazewski, ibid

capacity of its institutions and officials towards preventing and mitigating pollution and damage to the environment through harmful or hazardous activities like gas emission and other pollutants.

Generally speaking, an environmental right is one of those socio-economic rights called third generation rights whose applications are usually subject to national aspirations andavailability of resources.[14] This provision, however, places obligations on the government of South Africa.

The 'wellbeing' aspect of the provision under section 24(b) has been a subject of judicial interpretation. It is the position of the court in *HTF Developers (Pty) Ltd v The Minister of Environmental Affairs and Tourism*[15] that paragraph (b) of section 24 'is more in the nature of a directive principle, having the character of a so called second generation right imposing a constitutional imperative on the state to secure the environmental rights by reasonable legislation and other process.' While one agrees with the position of the court, it is equally important to note that being in the league of directive principles, however, does not cloak the section with a status such as Nigeria's directive principles which are basically unenforceable under the constitution. Beyond groups and individuals, Section 24 generally, creates an obligation for the government to protect the environment and promote the right which is not 'a right to healthy environment'[16] *per se*, but rather meant to address environmental impact on people's health.[17]

Being a constitutional right, the provision of section 24 has the advantage of wider enforcement channels and opportunities. According to Koetze[18] the constitutional status 'enhances the number, nature and scope of legal remedies', as the victim may rely on all constitutional remedies to assert the right. Applying the section to the Durban situation, it is appropriate to state that the residents of South Durban have the

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[14] "*In its language, the Constitution accepts that it cannot solve all of our society's woes overnight, but must go on trying to resolve these problems. One of the limiting factors to the attainment of the Constitution's guarantees is that of limited or scarce resources*" (par. 43)

[15] 2006 (50 SA 512

[16]Groundwork .*The Balance of Rights: Constitutional promises and struggles for environmental justice*. The groundwork report 2004. 45

[17] Ibid.

[18] Kotze J Louise, the South African Environment and the 1996 Constitution: Some Reflections on A Decade of Democracy and Constitutional Protection of the Environment, *Dieitos Fundamentais Justica N1 – OUT/DEZ* 2007. 40

right to an environment that is not harmful to their health or wellbeing and to have the environment protected not only for their benefit but also the future generations.

In line with its obligations under this provision, the South African government has given meaning to the provisions of the section. For instance, the government has taken different legislative measures by enacting several pieces of legislation and adopting new policies and plans on air quality regulation and other environmental media. Some of the major environmental legislation includes the National Environmental Management Act[19] (NEMA) and many others which have direct impact on control of gas emission, particularly the National Environmental Management: Air Quality Act,[20] the National Framework on Air quality and other regulations and policies.

Additionally, the constitution[21] is explicit on the need to interpret legislation in a manner that will promote the spirit of the constitution. In particular, section 39 of the constitution prescribes standards to be applied by courts, tribunals or any forum in interpreting the Bill of Rights in the constitution, the overriding goal being the promotion of the spirit and purpose of the Bill of rights.

Established under section 184, the National Human Rights Commission has the mandate (a) to promote respect for human rights and a culture of human rights, (b) to protect, develop and attain human rights, and (c) to monitor and assess the observance of human rights in the Republic.

In addition to the above, the Commission has a mandate to monitor compliance with the Promotion of Access to Information Act. The Commission has a responsibility to require relevant organs of state to provide it with information on the measures that they have taken towards realising the rights in the Bill of Rights,[22] namely, environment and other areas like housing, food, water, social security and education.

With the above mandate, the Commission is in position to act as a watchdog for environment related rights and other provisions under the constitution. For instance, the Commission acting on its mandate can facilitate the release of information about the

[19] Act 107 of 1998
[20] Act 39 of 2004
[21] Section 39(2) Constitution of the Republic of South Africa 1996
[22] Section 184 (3)

nature /and classification of gases that are emitted from facilities into the environment from industries or their promoters. It is however important to note that there is still a disconnection between the agency and the people in terms of protection of environmental rights in places like South Durban and other polluted areas. No known role has been played by the National Human Rights Commission in facilitating justice for the people of South Durban.

6.1.4 Other Right under the Constitution that are Relevant to Control of Gas Emission

The nature of environmental harm that is associated with gas emission as a major environmental problem demands an exhaustive search for avenues or channels to prevent its release. Where this has occurred, there is the need to seek and secure justice for the people that are affected by the adverse effects. In line with the above, a cursory look at other provisions in the Constitution of South Africa particularly other recognised rights is taken in the next part of the write up, to assess their relevance to the study.

6.1.4.1 Right to Equality

Section 9 of the Constitution is a restatement of the democratic and egalitarian nature of the society that is created under the constitution. It provides that -

"(1) Everyone is equal before the law and has the right to equal protection and benefit of the law.

(2) Equality includes the full and equal enjoyment of all rights and freedoms. To promote the achievement of equality, legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination may be taken.

(3) The state may not unfairly discriminate directly or indirectly against anyone on one or more grounds, including race, gender, sex, pregnancy,

marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth.

(4) No person may unfairly discriminate directly or indirectly against anyone on one or more grounds in terms of subsection (3). National legislation must be enacted to prevent or prohibit unfair discrimination.

(5) Discrimination on one or more of the grounds listed in subsection (3) is unfair unless it is established that the discrimination is fair."

Equality is one of the tenets of the rule of law and an important feature of a free and democratic society. The apartheid regime in South Africa was built on non-equality of the members of the pre-1994 South Africa, and this reflected in the different policies of the past, leaving a legacy of environmental discrimination in areas like South Durban, black locations and other industrial areas.

The presence of the equality provision under section 9 of the Constitution gives assurance of a clear departure from the past policies to the people.[23]

The different calls for environmental justice across the world are for equal treatment of people in terms of the burdens and benefits accruing from developments in the society. Indigenous people, the weak and the poor are often made to bear the hazards that are associated with "developments", the benefit of which accrues to few. The position here is that "projects" or developments which violate the fundamental rights of the people constitute an affront to the principle of sustainable development.[24] This is antithetical to environmental justice which is at the root of environmental campaigns in South Durban and other industrial locations across the world.

Scott,[25] adopting the definition of US Environmental Protection Agency, defines environmental justice as:

> ***"The fair treatment of people of all races, cultures, incomes and educational levels with respect to the development, implementation and enforcement of environmental laws, regulations and policies… air treatment implies that no population of people should be forced to shoulder a disproportionate share of the negative environmental impacts of pollution or environmental hazards due to a lack of political or economic strength."***

[23] Section 9(1) Constitution of The Republic of South Africa

[24] See also Marcos A Orellana, *Indigenous Peoples, Energy and Environmental Project in Chile's Alto BioBio*, http://www.ciel.org/Publications/Ralco_Brief_22Jul04.pdf.

[25] Environmental Justice: A New Era of Community Empowerment, Political Activism, and Civil Rights Litigation, *7 ENVTL. CLAIMS J. 5*, 11

Groundwork's position is that:

"Environmental justice obtains where relations between people, within and between groups of people, and between people and their environments are fair and equal, allowing all to define and achieve their aspirations without imposing unfair, excessive or irreparable burdens or externalities on others or their environments, now and in the future[26]."

An environmental justice campaign is usually at the grassroots level in which 'direct actions like demonstrations, picketing, petition drives and other forms of participatory protest'[27] are engaged towards enthroning equality in the distribution of the burdens of development and growth in the society. The principle emerged in 1982 in the United States when an African-American community in North Carolina opposed the development of a hazardous waste landfill in the neighbourhood.[28]

The same principle underlies the campaigns of the South Durban Community Environmental Alliance, which has been in the forefront of the agitations against unequal exposure to a hazardous environment due to the emission of poisonous gases that have been linked to a series of diseases and other health and social related problems from petrol and chemical facilities located in the area.

The struggle against apartheid was against inequality, this therefore brings into fore the determination of the constitution to wipe off any vestige of apartheid or a reminder of this unwholesome past of the society. The problem of gas emission is a product of deliberate apartheid discriminatory practice directed at relocated poor blacks and coloured people. This policy threw the people into areas where they remain exposed to gas emission and other polluting substances from the about 120 facilities scattered in residential areas.[29]

With reference to the above, it is submitted that this unequal exposure of communities in South Durban to hazards of constant release of impure and poisonous

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[26] GroundWork *Balance of Rights* (2004) 15

[27] See Alice Kaswan, Environmnetal Justice: Bridging the Gap Between Environmental Laws and "Justice". *The American Environmental Law Review. Vol. 47*, p 227, citing Regina Austin & Michael Schill, Black, Brown, Poor & Poisoned: Minority Grassroot Environmentalism and the Quest for Eco-Justice.*1 KAN, J.L. & PUB. POL'Y 69, 72*

[28] See Alice Kaswan, Environmnetal Justice: Bridging the Gap Between Environmental Laws and "Justice". *The American Environmental Law Review Vol. 47:*227, citing David E. Newton, *Environmental Justice: A Reference Handbook Book* 1-3 (1996)

[29]South African Environmental Justice struggles against "toxic" Petrochemical industries in South Durban: The Engen Refinery Case. Available at http://www.umich.edu/~snre492/brian.html accessed on 10-08- 2010

chemicals violates the principle of environmental justice as articulated above. The same condition cannot be justified under the provision of section 9 of the Constitution.

While the Promotion of Equality and Prevention of Unfair Discrimination Act[30] did not in any way mentioned environment or environmental protection as its focus in its provisions, this work is in agreement with the position of Kotze[31] that the provisions are 'tools for claimants for equality in the context of demand for environmental justice.'[32]

The preamble to the act states that redressing conditions like inequalities and unfair discrimination:

> ***'...lies in the Constitution which, amongst others, upholds the values of human dignity, equality, freedom and social justice in a united, non-racial and non-sexist society where all may flourish.'***[33]

6.1.4.2 Right to Just Administrative Justice

Section 33 provides as follows:

"(1) Everyone has the right to administrative action that is lawful, reasonable and procedurally fair.

(2) Everyone whose rights have been adversely affected by administrative action has the right to be given written reasons.

(3) National legislation must be enacted to give effect to these rights, and must –

(a) Provide for the review of administrative action by a court or, where appropriate, an independent and impartial tribunal;

(b) Impose a duty on the state to give effect to the rights in subsections (1) and (2); and

(c) Promote an efficient administration."

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[30] No 4 of 2000

[31] Louis J Kotze, The South African Environment and the 1996 Constitution: Some Reflections on A Decade of Democratic and Constitutional Protection of the Environment, *Direitos Fundamentals N1 – OUT/DEZ.2007* 47

[32] While taking note of the progress made in South Africa with the coming of the new constitution, the Act in the preamble acknowledges the need to address certain challenges like systemic inequalities and unfair discrimination which still 'remain deeply embedded in social structures, practices and attitudes,' which it claims undermines the aspirations of South Africa's constitutional democracy

[33] See the preambles to the Promotion of Equality and Prevention of Unfair Discrimination Acts

The right guarantees to the people fairness and reasonableness in any administrative action. Fairness here connotes a fair hearing and its tenets like adequate opportunity to bring one's case before an administrative body, to defend it, and to be heard. Equally, the right presupposes that any action of the state that impacts on the people must have clear justification under the law. For instance, any decision of a government agent or body that promotes directly or indirectly or neglect the control of gas emission from any facility may be questioned under this section.

In line with the mandate of the constitution,[34] the South African parliament has passed the Promotion of Administration of Justice Act.[35] The act applies to and binds all the role players at the National, provincial and local spheres of government.

The Act:

(1) Provides for guidelines and rules for administrators in decision making.

(2) Mandate administrators and role players to explain and justify their day to day activities as they affect the people.

(3) Empowers the people to challenge decisions of administrators in court.

(4) Mandates the administrators to inform the people of their right to challenge any decision.[36]

6.1.4.3 Access to Information

The right to access to information is an internationally recognised tool for environmental protection and for the realisation of environmental rights.[37]

Section 32 of the constitution provides for the right of every person to access any information that is in the custody of the government or its agents or anybody, which may be required for a person to exercise or protect the rights created under the constitution.

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[34] Section 33(3)

[35] No 3 of 2000

[36] See generally Currie Ian and Klareen Jonathan, *The Promotion of Administration of Justice Act, Administrators Guide (2006)* 3

[37] The Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters guarantees 'the rights of access to information, public participation in decision making, and access to justice in environment matters in order to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being.' (Although the Convention was a regional convention in Europe it serves as a guide to non members.

The constitution[38] provides:

(1) Everyone has the right of access to -

(a) Any information held by the state; and

(b) Any information that is held by another person and that is required for the exercise or protection of any rights.

This provision in the Bill of Rights is of importance for protection of the people, particularly from the hazards of gas emission in South Durban and other vulnerable locations, the goal being to give the people unhindered access to environmental data from public and private sources. As a technical area, the need to promote environmental transparency cannot be over- emphasised in emission control and air quality. Different kinds of information is held by government agents, polluting corporations, individuals and different laboratories that can be useful to determine the extent of the release of gases, especially when the emission exceeds the approved limit under the regulation or local planning laws. A determination of the toxicity of the release can be used in order to protect the people and the public.

According to Sand[39] the knowledge or ignorance of some information may be decisive for precautionary action. The inclusion of privately held information in the section may be justified by the fact that there is a lot of privately-held environmental and health risk information that may even debunk or bring some undisclosed information held by the usually secretive government agents and corporations into the limelight.

The growth in environmental transparency is attributed to developments like the Bhopal tragedy in India and other major environmental disasters from facilities in local communities.[40]

As in other provisions, the constitution mandates the state to enact legislation to give effect to the right and may provide reasonable measures to alleviate the administrative

[38] Section 32 of the Constitution of the Republic of South Africa, 1996

[39] Sand, Peter H, *The Right to Know: Environmental Information Disclosure by Government and Industry*. Revised version of a paper presented to the 2nd Transatlantic Dialogue on "The Reality of Precaution: Comparing Approaches to Risk and Regulation" (Warrenton/VA, 15 June 2002) and the Conference on Human Dimensions of Global Environmental Change: Knowledge for the Sustainability Transition (Berlin, 7 December 2002) available at http://www.inece.org/forumspublicaccess_sand.pdf (accessed 10-09-2011)

[40] Discussed in chapter 1

and financial burden which the implementation of the provisions of the right may impose on the State.[41]

6.1.4.4 Locus Standi

Section 38 of the constitution creates different capacities under which the rights under the constitution may be enforced.

According to the constitution, anyone listed in this section has the right to approach a competent court, alleging that a right in the Bill of Rights has been infringed or threatened, and the court may grant appropriate relief, including a declaration of rights.

Under the section, persons may approach the court -

(a) In their own interest;

(b) On behalf of another person who cannot act in his/her own name;

(c) When acting in the public interest.

In the instance of an association, is the association may approach the court acting in the interest of its members.[42]

Locus Standi or legal standing is a requirement which has its origin in common law that a litigant must meet before proceedings in any civil action in court can take place. This involves the ability of the party initiating the action to establish his/her direct interest that qualifies him/her to commence the action in the matter before the court for litigation.

The Court in the case of *Tergniet and Toekoms Action Group v Outeniqua Kreosootpale (Pty)*[43] held that –

> ***"…locus standi concerns the sufficiency and directness of interest in litigation and that sufficiency of interest depends on the particular facts of each individual case."***

Prior to the emergence of the 1996 Constitution, the issue of locus standi was a major problem in litigation on environmental issues, since according to Kidd,[44] 'most

[41] Section 32(2)
[42] See section 38 of the Constitution of the Republic of South Africa
[43] Case 10083/2008 (C) 23 January 2009 (unreported)
[44] Kidd Michael, *Environmental Law* (JUTA, 2008) 224

environmental issues affect the public interest rather than the interest of an identifiable plaintiff.' The provision of this section is a relief to litigants seeking to enforce the rights that are in the constitution, particularly environmental rights. This is a potent instrument to combat gas emission in South Durban. It is expected that the dearth in litigation on environmental matters will be cured by this provision, but the civil society is yet to explore this opportunity.

6.1.4.5 Right to Life

Section 11 of the constitution provides that 'everyone has the right to life.' The right to life has been one of the foremost instruments for the protection of environment in countries without direct provisions on environmental rights. The use has however not been prominent in the struggle for the protection of environment in South Africa

This situation can be explained by the presence of the right to environment under the constitution. It is submitted that a claim under the environmental rights provision in South Africa may be reinforced by a resort to the right to life provision under the constitution.

The proprietary of the application of the right to life in gas emission problems is understandable from the fact that the direct impact of gas emission on human health can be harmful and dangerous, particularly the spread of chronic diseases. The impact of air pollution from combustion sources (of which gas emission is a major source in South Durban) on human health across the world is alarming. A recent study[45] shows that 'air pollution, largely from combustion sources, caused overall about 1,152,000 deaths (8,747,000 daily) worldwide in 2004.'[46] As observed by Boryle,[47]the focus is on human and not on environment itself.

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[45]Annette Prüss-Ustün, Carolyn Vickers, Pascal Haefliger and Roberto Bertollin,Known and unknowns on Burden of Disease Due to Chemicals: A Systematic Review, *Environmental Health* 2011, 10:9.

[46]Cohen AJ, Anderson HR, Ostro B, Pandey KD, Krzyzanowski M, Künzli N, Gutschmidt K, Pope CA III, Romieu I, Samet JM, Smith KR: Urban air pollution, in Ezzati M, Lopez AD, Rodgers A, Murray CJL (ed)*Comparative quantification of health risks*. World Health Organization; 2004 cited ibid.

[47] Above

In India, the courts have been consistent in establishing and upholding the link between the right to life and environmental pollution. The court in *Charan Lal Sahu v. Union of India*[48] held that the right to life guaranteed under section 21 of the Indian constitution includes the right to a wholesome environment. Also in the case of *Subhash Kumar v. State of Bihar*,[49]the Court held that the right to life guaranteed under section 21 includes the right of enjoyment of pollution free water and air for full enjoyment of life.

6.1.4.6 Right to Dignity

Section 10 of the Constitution provides that everyone has an inherent dignity and the right to have his/her dignity respected and protected. The victims of gas emission in South Durban (as discussed earlier) are usually local residents who are mostly the poor or the vulnerable groups of people. Subjecting the people to gas emission or stacks of smokes and odious smelly gas can best be described as dehumanising and a violation of the right to human dignity.

6.1.4.7 Housing

Section 26 of the constitution provides for the right to housing. It states that -

(1) Everyone has the right to have access to adequate housing, and

(2) The State must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right.

The application of the right in gas emission control may be canvassed from the fact that even where people are able to secure housing, the right may be violated by consistent release of odious emissions to the extent that the neighbourhood becomes uninhabitable.

[48]AIR 1990 SC 1480
[49]AIR 1991 SC 420/ 1991 (1) SCC 598

6.1.4.8 Other Rights

In driving an environmental justice agenda, protests and mobilisation of communities has become a major feature of the struggle. The awareness about the South Durban situation is a product of activities of the civil society and community associations. To protest or prevent emission release, individuals may come together to claim or exercise their rights where they are bound by common interest like living in the same neighbourhood.

The constitution of South Africa contains adequate provisions and instruments under the Bill of Rights for the promotion of individual, mutual, or group interests against polluters. Some of these opportunities are wrapped in the form of freedoms and rights such as the right to freedom of association,[50] the right to assemble, [51] political participation, [52] the right to join and maintain cultural, religious and linguistic association,[53] and the opportunity to approach a court when the rights of the member have been violated.[54]

6.1.5 Executive Power, Emission Control and Cooperative Environmental Governance

The constitution provides for three spheres of government in South Africa[55] with distinct powers and responsibilities. The spheres of government (national, provincial and local) are however projected under the constitution for collaboration in addressing key issues in South Africa, despite the clear demarcation of the respective areas of operations and responsibilities of the spheres.

Under the cooperative governance arrangement, the constitution clearly makes provision under chapter 3 for the spheres of government to collaborate in addressing

[50] Section 18 Constitution of South Africa
[51] Section 17
[52] Section 19
[53] Section 31
[54] Section 38
[55] Section 40 which provides that in the Republic, government is constituted as national, provincial and local spheres of government which are distinctive, interdependent and interrelated

some issues. This arrangement is one of the key features of the constitution and has been the basis for addressing key challenges that are faced by nations with more than one layer of government.

Section 41(1) provides as follows:

"All spheres of government and all organs of state within each sphere must –

(a) Preserve the peace, national unity and the indivisibility of the Republic;

(b) Secure the well-being of the people of the Republic;

(c) Provide effective, transparent, accountable and coherent government for the Republic as a whole;

(d) Be loyal to the Constitution, the Republic and its people;

(e) Respect the constitutional status, institutions, powers and functions of government in the other spheres;

(f) Not assume any power or function except those conferred on them in terms of the Constitution;

(g) Exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of government in another sphere; and

(h) Co-operate with one another in mutual trust and good faith by -

(i) Fostering friendly relations;

(ii) Assisting and supporting one another;

(iii) Informing one another of, and consulting one another on, matters of common interest;

(iv) Co-ordinating their actions and legislation with one another;

(v) Adhering to agreed procedures; and

(vi) Avoiding legal proceedings against one another."

As a platform for environmental governance, the arrangement provides a platform for collaboration on gas emission control, the menace of which cuts across the different functions and of these spheres of governance in South Africa. Furthermore, the cooperative governance arrangement gives room for friction free working relations

between the spheres of governance, in view of the clear demarcation of responsibilities of the spheres under the constitution.

This principle has been followed in the making and implementation of different legislation and frameworks on environmental protection and other subjects in South Africa.

The Intergovernmental Relations Framework Act[56] specifically aims at entrenching cooperative governance in South Africa. Section 3 of the Act identifies the objective of the act as 'facilitating and coordinating the implementation of policy and legislation, including coherent government; monitoring such implementation; providing for effective services; and realising national priorities.'[57]

In the same light, other legislation on environment, like the National environmental Management Act, the Air Quality Act and others, have provisions on cooperative governance and specify procedures and mechanisms for in this regard.[58] The National Environmental Management Act declares the environment as a 'functional area of concurrent national and provincial legislative competence and all spheres of government and all organs of government must cooperate with, consult and support one another.'[59]

6.1.6 Judicial Power and Access to Court on Emission Control

Bringing polluters to justice in protecting rights of the people, and giving meaning to the provisions under the constitution on environmental rights and other provisions in the constitution demands a functional and dependable judiciary.

Access to justice is cardinal in restoring the confidence of the people when faced with a debilitating environmental situation like exposure to gas emission. It equally provides opportunity for the judiciary to interpret statutes of parliament or conduct of

[56] Act 13 of 2005

[57] See also Kotze Louis J, Environmental Governance in Alexander Paterson & Louis J Kotze (eds) *Environmental Compliance and Enforcement in South Africa: Legal Perspectives*. (JUTA, 2009) 123

[58] For example, the National Environmental Management Act (NEMA) provides for the establishment of the Committee for Environmental Coordination, Environmental Management and Implementation plans. The National Air Quality Act on its own part provides for the National Framework on Air Quality Management

[59] See the preambles to the National Environmental Management Act No 107 of 1998

the executive arm of government to ensure that they are in line with the provisions of the constitution.

The conference of chief justices in the Court of appeals of District of Columbia in their resolution in 2004[60] concludes that:

> ***"The Judicial branch ...shoulders primary responsibility to preserve and protect equal justice and take action to ensure access to the justice system for those who face impediments they are unable to surmount on their own."***

This position of the court was reinforced recently by Justice Ngcobo, former South African Chief Justice who contends that:

> ***"…it is a necessary component of the doctrine of separation of powers that courts have a constitutional obligation to ensure that the exercise of power by the other branches of government occurs within constitutional bounds."***[61]

He further holds, that:

> ***"…the fact that the entire constitution itself had to undergo judicial scrutiny in the constitutional court before it became operational is a pointer to the expected role of the court which is to ensure that only the constitution which represents the will of the people has the final say."***[62]

Section 34 of the constitution, as a guarantee for access to justice, provides a platform for victims or likely victims of gas emission in South Africa to seek justice. The section provides as follows:

> ***"Everyone has the right to have any dispute that can be resolved by the application of law decided in a fair public hearing before a court or, where appropriate, another independent and impartial tribunal or forum."***

The structure of the courts and their jurisdictions as machineries for administration of justice in South Africa is set out in Chapter 8 of the constitution.[63] Section 165 vests the judicial authority of the Republic in the courts, emphasising the independence of the courts and subjecting the institutions only to the constitution and the law.[64] To ensure the independence of the judiciary, the constitution mandates all

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[60] Order Establishing District of Columbia Access to Justice Commission, December 2004, available at http://www.dcappeals.gov/dccourts/appeals/orders/M-220OrdEstablishingDCAccesstoJusticeComm.pdf, accessed on 18 February, 2011

[61] Justice Sandile Ngcobo,South Africa's Transformative Constitution: Towards an Appropriate Doctrine of Separation of Powers, *2011 Stell LR 37*.

[62]Ngcobo, ibid.

[63] See section 165 -179 generally

[64] S 165 (2)

organs of the state to uphold the independence, impartiality, dignity, acceptability and effectiveness of the courts.[65]

There has been debate in recent times as to what should be the extent of the role of the court in South Africa in respect of policy formulation, which President Zuma contend is the exclusive preserve of the executive arm of government. To President Zuma, the areas of responsibility between the judiciary and the elected branches of government should be distinguished especially in the areas of policy formulation.[66] But former Chief Justice Ngcobo's position is that the constitution 'does not require an absolute categorisation of institutions, powers and functions.'[67]

He contends that what the constitution envisages is that

> '***There will be some encroachment upon one branch by another branch or branches resulting in the lines between the branches being blurred at times.***'[68]

The courts that are established under the South African constitution in order of hierarchy are:[69] the Constitutional Court,[70] the Supreme Court of Appeal, the High Court and the Magistrate Court. While the Constitutional Court is the final say on constitutional matters, the Appeal Court is the final court on appeal matters.

The finality of the Constitutional Court's say on any constitutional matter[71] is established under section 167 wherein a constitutional matter is defined to 'include any issue involving the interpretation, protection or enforcement of the Constitution.' The court, to the exclusion of any other court, may consider the following issues:[72]

(1) Disputes between organs of state in the national or provincial sphere concerning the constitutional status, powers or functions of any of those organs of state.

(2) The constitutionality of any parliamentary or provincial Bill, but may do so only in the circumstances anticipated in section 79 or 121.[73]

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[65] Section 165(4)
[66] Business day Nov 1 2011, cited in Barnard Naude Jaco, Zuma reignites separation of powers debate. Available at http://www.thoughtleader.co.za/jacobarnardnaude/2011/11/02/zuma-reignites-separation-of-powers-debate/. Accessed on 10-11 2011
[67] Sandile Ngcobo, above
[68] Sandile Ngcobo, above
[69] See section 166
[70] Section 167(7)
[71] Section 167 (3)
[72] Section 167 (4)
[73] The issues here are about assent to bill by the president and provincial premier respectively

(3) Applications envisaged in section 80 or 122.[74]

(4) The constitutionality of any amendment to the Constitution.

(5) That Parliament or the President has failed to fulfill a constitutional obligation.

In terms of section 144 it must too certify a provincial constitution.[75]

Additionally, the Constitutional Court has the responsibility of taking a final decision on whether an Act of Parliament, a provincial Act or conduct of the President is constitutional, and must confirm any order of invalidity made by the Supreme Court of Appeal, a High Court, or a court of similar status, before that order has any force.

The Supreme Court of Appeal's jurisdiction covers any other issue that is not related to the constitution as stated above and the court is the highest in terms of appeal, specifically on

'(a) appeals; (b) issues connected with appeals; and (c) any other matter that may be referred to it in circumstances defined by an Act of Parliament.'[76]

The issue here is that any environmental issue, like gas emission, may end up in the Constitutional Court, since environment is a constitutional issue.

The Courts of lower jurisdictions, like magistrate courts, equally play certain roles in terms of prosecution of offenders in environmental matters. The main civil actions in environment related matters are litigated in the High Court, the Constitutional Court and the Supreme Court of Appeal.

[74] The issue here is about constitutionality of a bill at the National parliament and the provincial legislature

[75] On signing, keeping and publication of provincial legislation

[76] See section 168 generally

In its interpretation of the provisions, the courts are to be aided by reliance on any reasonable interpretation of any legislation that is consistent with international law. This aids the pursuit of justice in gas emission cases since environmental protection laws thrive on developments at the international level where new principles and treaties are developed and ratified regularly by nation states'[77] environmental law generally. In*Fuel Retailers Association of Southern Africa v Director General Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province*[78].The court emphasis the need for environmental protection, holding that -

> ***"...the importance of the protection of the environment cannot be gainsaid. Its protection is vital to the enjoyment of the other rights contained in the Bill of Rights; indeed, it is vital to life itself. It must therefore be protected for the benefit of the present and future generations."***[79]

6.1.7 Legislative Power and Emission Control, and Conflict between National and Provincial Legislation

Governmental power at the national level in South Africa is shared among the three traditional arms of government, the executive, legislature and the judicial arms of government. While there is a distinct separation between the judiciary and the two other arms, the fact that the parliament selects the president[80] limits the strict application of the principles of separation of powers between these two arms of government. The relationship between the executive and the legislature however has some areas that demand collaboration.

The legislative powers or authority in the Republic is shared among the National Parliament, the Provincial parliaments and the municipal councils. Each of these exercises its authority based on the allocation of responsibilities in the constitution.

The national legislative authority is vested in the parliament, comprising of the National Assembly and the National Council of Provinces at the national level,[81] under

[77] South Africa is a signatory to different international treaties and conventions on Human rights, and air quality and pollution
[78] 2007 (6) SA 4 (CC)
[79] Paragraph 102
[80] See Section 86 of the Constitution of the Republic of South Africa 1996
[81] See section 42 of the Constitution of the Republic of South Africa 1996, generally

section 44. On the other hand the Provincial power is vested in the Provincial legislature, while the municipal council is, under section 156, vested with some areas of legislative competence.

In line with the supremacy status of the constitution, laws from the legislative arm of government must be towards realising the objectives that are set out in the constitution, and inconsistent laws are by virtue of the provisions of section 2 of the constitution invalid.

Generally, the legislative mandate of the parliament which is conferred on the National Assembly includes the power to -

(1) Amend the Constitution,

(2) Pass legislation with regard to any matter, including a matter on the concurrent legislative list in functional areas listed in Schedule 4,[82] and

(3) Assign any of its legislative powers, except the power to amend the Constitution, to any legislative body in another sphere of government.

The National Council of Provinces on the other hand has power to -

(1) Participate in amending the Constitution,[83]

(2) Pass legislation with regard to any matter within a functional area[84] and any other matter required by the Constitution to be passed,[85] and

(3) Consider any other legislation passed by the National Assembly.[86]

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[82] The matters are listed as administration of indigenous forests, agriculture, airports other than international and national airports, animal control and diseases, casinos, racing, gambling and wagering, excluding lotteries and sports pools, consumer protection, cultural matters, disaster management, education at all levels, excluding tertiary education, environment, health services, housing, indigenous law and customary law, subject to Chapter 12of the Constitution, language policy and the regulation of official languages to the extent that the provisions of section 6of the Constitution expressly confers upon the provincial legislatures legislative competence, media services directly controlled or provided by the provincial government, subject to section 192, nature conservation, excluding national parks, national botanical gardens and marine resources, police to the extent that the provisions of Chapter 11of the Constitution confers upon the provincial legislatures legislative competence, pollution control, population development, property transfer fees, provincial public enterprises in respect of the functional areas in this Schedule and Schedule 5, public transport, public works only in respect of the needs of provincial government departments in the discharge of their responsibilities to administer functions specifically assigned to them in terms of the Constitution or any other law, regional planning and development, road traffic regulation, soil conservation, tourism, trade, traditional leadership, subject to Chapter 12of the Constitution, urban and rural development, vehicle licensing, and welfare services

[83] In line with provision of section 74 which outlines the procedures for amendment of the constitution

[84] Under section76 and listed in schedule 4

[85] In accordance with section 76

[86] In accordance with section 75

At the provincial sphere, the legislative authority which is the provincial parliament includes the power to make a constitution for the province or to amend same where there is an existing one, but the constitution in this case is subject to the national constitution.

Other powers vested in the provincial parliament include the passing of legislation for the province on any matter within the functional area on the concurrent list[87] and areas that are assigned to the provincial legislature by the National parliament, among others.[88] The provincial parliament may also legislate on matters that are classified as local government matters.[89]

Under the regulatory legislative authority over municipalities, a provincial parliament[90] in exercise of its supervisory role may legislate on matters over which such municipality has power. Also under section 76 of the constitution, while the National parliament may not ordinarily legislate on issues listed under schedule 5, it is however expected to legislate on such issues where it is necessary to maintain (a) national security, (b) economic unity, (c) essential national standards, (d) establish minimum standards required for the rendering of services, and (d) to prevent actions taken by a province which is considered prejudicial to the interest of another province or the entire country.

Many of the activities that have been identified over which the different spheres of government have legislative competence cover potential sources of gas emission.

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[87] Note 21

[88] See section 104 and particularly issues listed in note 21 above, being issues in the concurrent list and other issues listed in schedule 5, which are exclusively within the authority of the provinces. Some of the issues on the exclusive lists include abattoirs, ambulance services, archives other than national archives, libraries other than national libraries, liquor licences, museums other than national museums, provincial planning, provincial cultural matters, provincial recreation and amenities, provincial sport, provincial roads and traffic, veterinary services, excluding regulation of the profession.

[89] Schedule 5(b). Issues here include beaches and amusement facilities, billboards and the display of advertisements in public places, cemeteries, funeral parlours and crematoria, cleansing, control of public nuisances, control of undertakings that sell liquor to the public, facilities for accommodation, care and burial of animals, fencing and fences, licensing of dogs, licensing and control of undertakings that sell food to the public, local amenities, local sport facilities, markets, municipal abattoirs, municipal parks and recreation, municipal roads, noise pollution, pounds, public places, refuse removal, refuse dumps and solid waste disposal, street trading, street lighting, traffic and parking

[90] The matters are listed are in part B of schedule 4 to the Constitution and Part B of schedule 5 to the Constitution

The legislative mandate for environmental protection is established under section 24 of the constitution. This is provided as the right of the people:

> ***"...to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that***
>
> ***(i) Prevent pollution and ecological degradation;***
>
> ***(ii) Promote conservation; and***
>
> ***(iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."***

In consonance with the above mentioned measures is the power of the legislative arm of the National and the provincial governments to make laws to prevent pollution in all its ramifications and ensure the sustainability of the environment through promotion of the principles of sustainable development. This is in line with the constitutional mandate in the constitution. Equally, the provision provides opportunity for the legislative arm to internalise the principles of sustainable development to make it reflective of the wishes and aspirations of the people and the realities of South Africa's ecological situation.

To its credit, the legislature has seized the opportunity provided under the constitution to enact laws towards delivering its environmental mandate under the constitution. Commencing with the National Environmental Management Act[91] (NEMA) which is the framework law on environmental protection in South Africa, different laws have been enacted on the environment directly and indirectly, and different laws have been enacted in pursuance of NEMA for regulation of specific sectors. Some of the laws after the coming into force of the 1996 Constitution includes the National Environmental Management: Air Quality Act 39 of 2004, the National Environmental Management: Biodiversity Act 10 of 2004, and the National Environmental Management: Protected Areas Act 57 of 2003.

In intra- or inter-governmental relations there is bound to be conflict. The Constitution in Section 146 addresses conflict between national legislation and provincial legislation in the functional areas listed in schedule 4 of the Constitution. It provides that national legislation takes priorities over provincial legislations in certain instances, for instance -

[91] Act 107 of 1998, amended by the NEMA Act 46 of 2003, and the NEMA Act 8 of 2004

(1) Where the subject matter cannot be effectively regulated by provincial legislation. The problem of gas emission may come in here because of the nature of the problem which often spreads beyond provincial boundaries.[92]

(2) Where the national legislation deals with a matter that, to be dealt with effectively, requires uniformity across the nation and the national legislation provides that uniformity.[93]

6.2 South African Legislation on Emission Control

The focus in this part is to identify and discuss the relevant legislation relevant to the control of gas emission as regards South Durban in the Kwazulu-Natal province and South Africa in general. In all, there exists a series of legislation on environmental protection in South Africa. The law making power of the Republic is vested in the three spheres. The legislative mandate in the constitution has led to the development of new national legal framework for environmental management and control in pursuit of sustainable development in the Republic.

By virtue of the provisions of section 24, section 44[94] and schedule 4 to the Constitution, the National Assembly, the Provincial legislature and the municipal council have mandates to make laws on air quality. Legislation for control of gas emission in South Africa is contained in the country's legislative framework for air quality management. This comprises the international agreements and treaties on air quality or atmospheric pollution control that South Africa has assented to,[95] and the domestic legislation including the constitution and policies on environmental management, pollution control, and air quality. These two broad sources provide the legal framework for air quality management and governance.[96]

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[92] See Section 146(2)(a)

[93] Section 146(2)(b)

[94] Section 44 deals with the power of the national parliament on different issues like constitutional amendments, power to pass legislation on matters within functional areas under schedule 4 and 5 and others and to assign any of its legislative powers etc, some of these have implications on emission control and air quality management.

[95] Discussed earlier in the first part of this chapter

[96] The 2007 National Framework for Air quality management in the Republic of South Africa released by the Department of Environment and Tourism in line with the directive under section Section 7 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) is an explicit document on the framework for air quality management in South Africa.

Within the context of the democratic constitutional framework embodying inter alia the right to an environment that is not harmful to a person's health and wellbeing, South Africa, within the period of the coming into force of the constitution, has broadened the legislative framework on air quality management and control. Prior to the commencement of the 1996 constitution, the Atmospheric Pollution Prevention Act[97] (APPA) was still applicable as the main legislation on air quality, though a new Air Quality Act was already enacted.[98]

6.2.1 The National Environmental Management Act, 1998 (Act no 107 of 1998)

In line with the provisions of section 24 of the constitution on environmental rights and in exercise of the legislative mandate, the South African parliament promulgated the National Environmental Management Act in 1998. The Act which came into force in 1999 grew out of the 'white paper on environmental management policy for South Africa'[99] after 'the Consultative National Environmental Policy Process (CONNEPP).'[100] It serves as the legal framework on environmental protection in South Africa.[101] The Act repeals earlier provisions of the Environmental Conservation Act 73 of 1989. There have been different amendments to the Act between its introduction in 1998 and 2011.[102]

Under the Act environment is defined as:

> ***"…the surroundings within which humans exist and that are made up of the land, water and atmosphere of the earth; micro-organisms, plant and animal life; any part or combination of the above and the interrelationships among and between them; and the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing."***[103]

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[97] Act no 45 of 1965

[98] The Air Quality Act was signed into law in 2004, while some of the sections were suspended until April 2011 when the all the provisions of the Act came into full force.

[99] Kidd Michael, Environmental Law (JUTA, second edition, 2011) 36.

[100] Ibid at 37.

[101] Glazewski Jan, Environmental Law in South Africa (LexisNexis, 2005, second edition) 137.

[102] The amendments have been carried out under the following legislation; The Minerals and Petroleum Resources Development Act 28 of 2002; the National Environmental Management Amendment Act 56 of 2002; the National Environmental Management Amendment Act 46 of 2003; the National Environmental Management Act 8 of 2004; the National Environmental Laws Amendment Act 44 of 2008; the National Environmental Management Amendment Act 62 of 2008; the National environmental Laws Amendment Act 14 of 2009. See Kidd Michael *op cit* at page 36.

[103] See section 1 of the Act

The preamble details the philosophies behind the promulgation of the Act.[104]

(1) The state of the environment in South Africa and the need for 'livelihood in an environment that is not harmful to health or wellbeing.'[105]

(2) The need for the State to 'respect, protect and fulfill the social, economic and environmental rights of every one and meet the basic needs of the previously disadvantaged communities.'[106]

(3) Inequality in the 'distribution of wealth and resources, poverty and outcome of environmentally harmful practices.'[107]

(4) The demand of sustainable development for the integration of socio-economic and governmental factors in decisions through reasonable legislative and other measures that prevent pollution and environmental degradation, promote conservation and secure ecologically sustainable development.[108]

(5) The need for all spheres of government and organs of state to cooperate and consult with one another.

Additionally, section 24 of the South African constitution acknowledges the challenge of pollution and environmental degradation from different development and economic activities. Recognising the principle of sustainable development, the constitution imposes an obligation on the legislature to adopt legislative measures to secure the right of the people to a healthy environment which is protected in the course of pursuits of economic and development activities.[109]

In the light of the above, the Act aims at delivering the constitutional mandate of effective management of the South African Environment through the pursuit of the objectives as outlined in the preamble.

(1) Developing a 'framework for integrating good environmental management, into all development activities.'

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[104] See the preambles to the NEMA Act 107 of 1998, generally.
[105] Ibid
[106] Ibid
[107] Ibid
[108] Ibid
[109] See section 24(b) Constitution of the Republic of South Africa 1996, which provides : ' ... to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that - (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development'

(2) Promoting certainty in decision making on environment issues by organs of state.

(3) Establishing principles to guide the exercise of environmental functions.

(4) Ensuring that organs of state maintain the principles guarding the exercise of functions that affects the environment.

(5) Establishing procedures and institutions to facilitate and promote public participation in environmental governance.

(6) Enforcement by the state, and providing channels for the civil society to enforce environmental laws.

The NEMA as the legal framework for environmental protection and sustainability is applicable throughout the Republic to all activities of the different spheres of government and the private sector. With different comprehensive provisions, the Act's key provisions address major issues like the principles of sustainable development, cooperative environmental governance and centralised coordination of environmental activities through integrated environmental management.

6.2.1.1 Principles

The Act provides for a set of principles to guide environmental protection and management in the Republic.[110] This includes actions of all organs of state that may affect the environment significantly. In particular the principles (a) are to apply together with other issues such as the state's responsibility towards the realisation of the social and economic rights under chapter 2 of the constitution, and (b) serve as the general framework for the formulation of environmental management and implementation plans.

Section 2 of the Act acknowledges the state's duty to 'respect, protect and promote' the socio-economic rights which include environmental rights, particularly in addressing the needs of persons 'disadvantaged by unfair discrimination under the previous apartheid regime.' The principles under the Act are to serve as guidelines, references and guides for all organs of government, conciliators, and for interpretation,

[110]Section 2 NEMA Act 107 of 1998.

administration and implementation of the Act and other relevant laws for the protection of the environment.

The principles enshrined in the Act state that :

(a) People and their needs are 'at the centre of environmental management', and that peoples' physical, psychological, developmental, cultural and social interests are important,'[111]

(b) Social, environmental and economic development must be sustainable, and[112]

(c) All factors in sustainable development must be considered.

The Act further provides for the polluter pays principle and the precautionary principle. Together with sustainable development, these three are widely known and acceptable as environmental management principles. These need some elaboration.

(1) Sustainable development. The internationally accepted principle of sustainable development[113] is a cardinal principle of environmental protection under the Act.The Act provides that 'development must be socially, environmentally and economically sustainable.'[114] This point is further emphasised through exhaustive detailing of instances and factors[115] that determine its application in different activities towards environmental protection and sustainability in South Africa. These factors include: avoidance of biological disturbance, environmental justice, integrated environmental management, equitable access to environmental resources, benefits and services, responsible and equitable use of renewable resources, avoidance of disturbance of landscapes and sites that constitute the nation's national heritage, avoidance of wastes with accent on recycling or reuse, anticipation and avoidance of negative impacts on the environment and people's rights, non jeopardy of the ecosystem where renewable resources are being exploited or in use, a risk-averse and cautious

[111] Section 2(2) NEMA, Act 107 of 1998

[112] Section 2(3) NEMA. ACT 107 of 1998

[113] The principle was first canvassed by the United Nations World Commission on Economic and Development (Brundtland commission) report of 1987, the commission concluded that development and environment are interrelated and dependent on one another. The report recommended the adoption of the principle by the United Nations for future developments across the world. This was folloed up by the adotion of the report by the United Nations General Assembly, available at http://www.un.org/documents/ga/res/42/ares42-187.htm. Accessed on 12 10 2012

[114] Section 2(3) NEMA Acts

approach, responsibility for the environmental health and safety, promotion of the participation of all interested and affected parties in environmental governance, recognition of the interests, needs and values of all interested and affected parties in environmental governance, environmental education and awareness towards community wellbeing and empowerment, consideration for social, environmental and economic impacts of all activities, and respect for and protection of workers' rights to refuse to undertake harmful work (to health and environment). Decisions must be based on openness and transparency with provision for: access to information, resolution of conflict of interests between organs of state, discharge of global and international obligations for national interests, public trust and use of environmental resources to satisfy national interests, polluters paying for the cost of pollutions, recognition of the role women and youth play in environmental management, and specific management of sensitive, vulnerable or stressed ecosystems. [116]

(2) Polluter pays principle. This is a widely recognised principle of environmental protection. This principle demands that those who are responsible for environmental harm or likely harm of any kind must take the responsibility of remedying or removing the sources of environmental pollution. This duty, which includes the duty of care, is imposed on polluters and those persons whose activities have the tendency to pollute the environment in South Africa – they must avoid polluting the environment by taking appropriate measures in their activities. The Act sets out this principle as follows:[117]

> ***'…The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment."***

(3) Precautionary Principle. To promote sustainable development, the Act emphasises 'the application of a risk-averse and cautious approach, which takes into account the limits of current knowledge about the consequences of decisions and actions.'[118] This approach is in line with one of the core principles of

[116]See section 2(4) NEMA Act
[117] Section 2(4)(p) of NEMA ACT 109 of 1998.
[118]See section 2(4)(a)(vii) of NEMA.

environmental protection - the precautionary principle. The precautionary principle entails immediate reaction or response to the likelihood of danger to the environment, particularly to the health of humans, plants and animals. The principle may be invoked 'when a phenomenon, product or process may have a dangerous effect identified by a scientific and objective evaluation, if this evaluation does not allow the risk to be determined with sufficient certainty.'[119] The basis of the principle is the non-predictability of the extent of some harm to the environment and the fact that damages are often irreversible. Reiterating the principle, Kidd[120] submits that it is 'better to avoid any possible harm than to try to remedy later.'

In addition to the above principles and the jurisprudence emanating from South African case law indicated in this section further relevant key provisions of NEMA in gas emission control are discussed in the next part.

6.2.1.2 Administration and Management of the Environment

6.2.1.2.1 Cooperative Environmental Governance

Generally, the political administration of South Africa is carried out under the broad and popular principles of Cooperative Governance as laid down in the constitution[121] on integration and interrelatedness of the spheres of government. All the major statutes on environment in the country subscribe to this principle, and this as one of the aims of the National Environmental Management Act. The long title to the Act provides inter alia:

> ***"…To provide for co-operative environmental governance by establishing principles for decision making on matters affecting the environment, institutions that will promote cooperative governance and procedures for co-ordinating environmental functions exercised by organs of state."***[122]

[119] See Communication from the European Union Commission of 2 February 2000 on the precautionary principle. Available at http://europa.eu/legislation_summaries/consumers/consumer_safety/l32042_en.htm.accessed on 12 - 09- 2011.
[120] Kidd, *above*
[121] See chapter 3 of the Constitution of the Republic of South Africa.1996. this is discussed in chapter 3 of this work.
[122] Long title of N E M A, Act 107 of 1998.

6.2.1.2.2 Environmental Implementation Plans and Environmental Management Plans

The Act provides for procedures for cooperative governance in environmental issues, by providing for the preparation of environmental management plans at the different spheres of governance. At the national level, the Act identifies[123] the departments of Environment Affairs and Tourism, Land Affairs, Agriculture, Housing, Trade and Industry, Water Affairs and Forestry, Transport, and Defence as departments whose functions may affect the environment.[124] Together with the provinces, the departments must individually prepare an environmental implementation plan within one year of the promulgation of the Act and at least every four years thereafter.[125] Equally, departments whose functions involve the management of the environment like Environmental Affairs and Tourism, Water Affairs and Forestry, Minerals and Energy, Land Affairs, Health, and Labour[126] must also prepare an environmental management plan within one year of the promulgation of the Act, and at least four years thereafter.[127] Also, the national institutions listed above 'may prepare a consolidated environmental implementation and management plan.'[128]

For consistency, the organs of state mentioned in the Act, that is the national departments and the provinces,[129] must 'take into consideration every other environmental implementation plan and environmental management plan already adopted.'

To attain the overall goal of cooperative governance, the Act provides for coordination and harmonisation of the environmental policies, plans, programmes and decisions of the various national departments that exercise functions that may affect the

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[123] Schedule 1 to N E M A , Act 107 of 1998.
[124] See section 11(1) of N E M A, Act 107 of 1998.
[125] The minister is however empowered to extend the period of submission of the plans for a period not exceeding 12 months. Compliance with this provision has consistently suffered delay as many of the departments despite ministerial interventions in the form of extension of deadlines have not brought out the expected compliance. According to Michael Kidd, *op cit*, despite the approval of extension of deadlines for submission till 2001, plans were still being approved as at 2003.Another extension which was due for submission in 2008, despite its illegality of extension beyond the statutory one year according to Kidd (see Michael Kidd 'setting a bad example: The State's compliance with environmental law in South Africa in Michael Kidd & Shannon Hoctor cited in Kidd Michael Environmental Law op cit note..) is yet to be complied with by the affected departments and provinces.
[126] Listed in schedule 2 to NEMA Act 107
[127] See section 11(2) of NEMA, Act 107 of 1998.
[128] Section 11(3) of NEMA, Act 107 of 1998.
[129] That is those listed in schedule 1 and 2 of the NEMA Act. These lists may however be amended by the minister in a gazette on the application of any government department.

environment. Also included in the category are government departments that are entrusted with powers and duties aimed at the achievement, promotion, and protection of a sustainable environment as well as in provincial and local spheres of governance.[130]

Sections 13 and 14 of the Act specify the contents of the plans, and they are mandatory. The expected information include :

(a) A description of policies, plans and programmes that may significantly affect the environment,[131]

(b) Methods and manners of enforcement and conformity of the plan with the environmental principles, constitution and other relevant norms as determined by relevant ministers,[132]

(c) How the relevant national agency or province will discharge its obligations in compliance with the relevant legislative provisions, national norms and the constitution, and [133]

(d) Recommendations for the promotion of the objectives and plans for the implementation of the procedures and regulation under chapter 5[134] to enable the minister to evaluate the performance of the environmental sustainability initiatives.

In addition, environmental management plans are to contain descriptions of:

(a) Functions exercised by the relevant department in respect of the environment,[135]

(b) Applied environmental norms and standards, and norms and standards envisaged under the constitution, set or applied by the relevant department,[136]

(c) Policies, plans and programmes of the department that are designed to ensure compliance with its policies,[137];

[130]Section 12, NEMA, Act 107 of 1998.
[131] Section 13(1)(a)
[132] Section 13(1)(b)
[133] Section 13 (1)(c)
[134] The procedures here are generally about Integrated Environmental Management.
[135] Section 14(a)
[136] Section 14(b)
[137] Section 14(c)

(d) Priorities regarding compliance with the relevant department's policies by other organs of state and persons,[138] and arrangement for cooperation with the national and other spheres of government.[139]

The information and descriptions are to be submitted to the minister or the MEC, as applicable, for approval.[140] Every organ of the state is expected to discharge its obligation without delay. It is obligatory for an annual report to be given within three months of the end of a financial year. However, in order to ensure effective protection of environment, failure by one organ of state to submit, or to adopt and publish the requisite plan, or to adopt or publish its plan, is not expected to affect the exercise of the function of such organ.[141]

The purpose of the environmental implementation plans and environmental management plans stated under section 12 of the Act is to:

(a) Coordinate and harmonise activities, 'environmental policies, plans and programmes of the national departments that exercise functions that may 'affect the environment',

(b) Promote and ensure adherence to the cooperative governance principle under the constitution,

(c) Secure environmental protection in every part of the country,

(d) Guide against actions from any province that may impact on the economy and health in other provinces or the country as a whole, and

(e) Aide the minister in monitoring and assessment of a sustainable environment.

[138] Section 14(d)
[139] Section 14(e)
[140] A15(1)
[141] See section 15 of NEMA Act

6.2.1.2.3 Decision Making and Conflict Management

Chapter 4 of the Act deals with decision making and conflict management. This is rooted in the principle of fairness. The Act prescribes different methods of conflict resolution in environmental issues, but with special emphasis on conciliation as the first choice of dispute resolution mechanism. The Act specifically prescribes the use of conciliation,[142] arbitration,[143] and investigation[144] which are some of the mechanisms of the widely recognised alternative dispute resolution mechanisms.

The Act recommends that any minister, MEC or municipal council must under certain circumstances[145] consider conciliation as the first option for dispute resolution before taking a decision, namely:

(a) Where there is a difference or disagreement concerning the exercise of any of its functions which 'may significantly affect the environment adversely' under section 17, or

(b) Where there is a pending appeal arising from a difference or disagreement regarding the protection of the environment brought under any law.'[146]

The reason for this may be attributed to the seemingly advantages of ADR over the traditional litigation option, since litigation is usually expensive, technical and usually protracted in nature. Generally, some of the attributes of ADR like flexibility and non- complex procedures will endear ADR as a better alternative to litigation in a continent where people are still indifferent to environmental issues.

The nature of environmental degradation and subsequent disputes which usually involve large members of the community demands immediate resolution in order to avoid social unrest or irreparable damages. Equally, the social nature of the disputes[147] demands mechanisms that can settle disputes fast, and reconcile the community and corporations. ADR, therefore presents a better option, since it provides a platform for the public to participate in decision making and environmental management in general.

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[142] See section 17 of NEMA Act

[143] See Section 19(1) NEMA Act, which provides that a ' difference or disagreement regarding the protection of the environment may be referred to arbitration in terms of the Arbitration Act, 1965 (Act 42 of 1965)'

[144] See Section 20. of NEMA Act

[145] See section 17 NEMA

[146] See section 17(1)(a) 7(b)

[147] Environmental matters are usually related to common resources like Air, water and other natural resources which supports life and community directly

It is normally a first option in any traditional African society where reconciliation and communal living is at the root of the legal system.

The power of the Minister, MEC or municipality to investigate may be exercised at the instance of an interested party or anyone. Section 17(2) is noteworthy. It provides that:

> ***"Anyone may request the Minister, a MEC or Municipal Council to appoint a facilitator to call and conduct meetings of interested and affected parties with the purpose of reaching agreement to refer a difference or disagreement to conciliation in terms of this Act, and the Minister, MEC or Municipal Council may, subject to section 22, appoint a facilitator and determine the manner in which the facilitator must carry out his or her tasks, including time limits."***

The above arrangement may be a guarantee for access to environmental justice, as the opportunity to request for conciliation is not restricted to a particular group. This opens the door way for individuals who are aggrieved and even the civil societies that are involved in environmental issues to demand intervention without any need to prove standing in order to promote their respective interests or protest violations.

Additionally, the court or tribunal may, when dealing with a matter regarding the protection of the environment, 'order the parties to submit the dispute to a conciliator appointed by the Director-General and suspend the proceedings pending the outcome of the conciliation.'[148] The power to investigate under section 20 of the Act is exercisable by the appointment of one or more persons by the minister to assist him or her or, after consultation with a municipal council or MEC or another national minister, to assist such a municipal council or MEC or another national minister in the evaluation of a matter relating to the protection of the environment.[149]

[148] Section 17(3) NEMA, ACT
[149] See section 20 of NEM ACT

6.2.1.2.4 Integrated Environmental Management

Since environmental management is a joint responsibility of the three spheres of government in South Africa, the different authorities and agencies play different, similar, complimentary and sometimes contradictory roles in environmental management and control. Integrated environmental governance is a tool for harmonisation of different policies of the different authorities in environmental control. It is a tool that has been successfully used in environmental management in the European Union and other parts of the world.

In section 23 the Act strives 'to promote the application of appropriate environmental management tools, in order to ensure the integrated management of activities.' It identifies six general objectives of Integrated Environmental Management.[150]

(1) Integration of the environmental principles under section 2 into decisions that may affect the environment.[151]

(2) Minimizing negative impacts of activities on the environment through identification, prediction and evaluation of the (a) actual and potential impacts of activities on the environment, (b) socio-economic conditions and cultural heritage, (c) risks, (d) consequences, and (e) alternatives and options for mitigation of activities.

(3) Ensuring that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them.

(4) Ensuring adequate and appropriate opportunity for public participation in decisions that may affect the environment.

(5) Ensuring the consideration of environmental attributes in management and decision making which may have a significant effect on the environment.

(6) Identification and employment of the best environmental management technique for a particular activity in line with the principles in section 2 of NEMA.

[150] Section 23(2)(a) –(f).
[151] See section 23(2)(b)

6.2.1.2.5 Environmental Authorization and Section 24

Environmental authorisation as contained under the Act is important to this study, since environmental authorisation is crucial to environmental protection and in particular the development of new facilities in general in South Africa. This provides opportunity to limit release of emission through prevention of uncontrolled development of emission generating facilities or the monitoring of the installation of facilities to eliminate gas emission from the onset.

The 2008 amendment of the National Environmental Management Act brought some changes to section 24 and chapter 5 of the Act in general. The amended provision addresses 'listed activities or specified activities', and the need to 'consider, investigate, assess and report their potential consequences for or impacts on the environment. '[152]

The section provides as follows:

> ***"In order to give effect to the general objectives of integrated environmental management laid down in this chapter, the potential consequences for, or impacts on the environment of listed activities or specified activities must be considered, investigated, assessed and reported on to the competent authority or the minister of Minerals and Energy, as the case may be, except in respect of those activities that may commence without having to obtain an environmental authorisation in terms of this act."***

In other words, unless certain activities are listed or specified, they may be carried out without prior environmental authorisation under the Act. The report of the investigation referred to above, is to be forwarded to the competent authority or the Minister of Minerals and Energy. Certain activities, may however be carried out without obtaining authorisation[153] but they still need to conform to relevant norms and standards.[154] Under the new amendment, section 24(c) identifies the Minister of Mining and Minerals as the competent authority in terms of authorisation for activities in the mining and minerals sector.

The Minister and the MEC with the concurrency of the minister may identify[155] (a) activities which may not commence without environmental authorisation from the

[152] See section 24(1) NEMA ACT as amended under National Environmental Management Act 8 of 2004.
[153] See Section 24(1) NEMA Act as amended.
[154] See section 24(2)d.
[155] Section 24(2)b

competent authority,[156] and (b) geographical areas based on environmental attributes, and as specified in spatial development tools adopted in the prescribed manner by the environmental authority, inwhich specified activities may not commence without environmental authorisation from the competent authority.[157] Under section 24(3) thee Act requires of the minister and the MEC to gather and make available information and maps disclosing the peculiarities of the environment like the sensitivity, extent, interrelationship and significance of such attributes in their geographical areas.

Section 24 outlines the procedures and the mandatory requirements for every application for authorisation. In general, provisions are made for 'procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the environment.'[158] The two categories of authorisation (mentioned above as (a) activities which may not commence without environmental authorisation from the competent authority,and (b) geographical areas based on environmental attributes) are to be guided by the following:

(a) Coordination and cooperation between organs of state in consideration of assessments which fall under a jurisdiction that is more than one organ of state; that any decision in respect of a proposed policy, programme, process, plan or project takes into consideration; findings and recommendation flowing from an investigation; general objectives of integrated environmental management under the Act; and the principles of environmental management set out under section 2; a description of the environment likely to be significantly affected by the proposed activity; Investigation of the potential consequences for or impacts on the environment of the activity and assessment of the significance of those potential consequences or impacts; public information and participation procedures which provide all parties – including interested parties reasonable opportunity to participate

(b) Investigation of the potential consequences or impacts of the alternatives to the activity on the environment and assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity;

[156] Section 24(4)a NEM Act.
[157] Section 24(4)bNEM Act.
[158] See Section 24(1)

Investigation of mitigation measures to keep adverse consequences or impacts to a minimum; Investigation, assessment and evaluation of the impact of any proposed listed or specified activity on any national estate referred to in section 3(2) of the National Heritage Resources Act; reporting on gaps in knowledge, the adequacy of predictive methods and underlying assumptions, and uncertainties encountered in compiling the required information; investigation and formation of arrangements for the monitoring and management of consequences for or impacts on the environment, and the assessment of the effectiveness of such arrangements after their implementation; consideration of environmental attributes identified in the compilation of information and maps contemplated in subsection (3); Provision for the adherence to requirements that are prescribed in a specific environmental management Act relevant to the listed or specified activity in question159.

Section 24(4A) contains provisions on environmental impact assessment. Where it is adopted as the environmental management tool or instrument for authorisation of an activity, then the above provisions in section (4)(b) will apply[160]. Furthermore the Minister and the MEC are vested with the power to make regulations on EIA and the following procedures.

In line with the mandatory requirements under section 24(5), the Minister and the MEC may regulate on a number of matters.

(1) The application for, issue of, and the monitoring of compliance with, environmental authorization.

(2) The efficient administration and processing of environmental authorisation

(3) Fair decision making and conflict management in the consideration and processing of applications for environmental authorization.

(4) Applications to the competent authority by any person to be exempted from the provision of any regulation in respect of a specific activity.

(5) Appeals against decisions of competent authorities.

[159] See Section 24(4)(b)
[160] See section 24(4A)

(6) The management and control of residue stock piles and deposits on a prospecting, mining, exploration and production area.

(7) Consultation with land owners, lawful occupiers and other interested or affected parties.

(8) Mine closure requirements and procedures, the appointment of liability for mine closure and the sustainable closure of mines with an interconnected or integrated impact resulting in a cumulative impact.

(9) Financial matters.

(10) The monitoring and environmental management programme performance assessments.

(11) The preparation, evaluation and adoption of prescribed environmental management instruments.[161]

(12) Requirements to lay down the procedure to be followed for the identified environmental management tools and instruments.

(13) Prescribing of fees after consultation with the Minister of Finance for the consideration and processing of applications for environmental authorisation, and the review of documents, processes and procedures by specialists on behalf of the competent authority. The authority may after due consultation with the Minister of Finance, request the provision of financial or other security to cover the risks to the state and the environment of non-compliance with conditions attached to environmental authorisations.

(14) Specifying that specified tasks performed in connection with an application for an environmental authorisation may only be performed by an environmental assessment practitioner registered in accordance with the prescribed procedures.

(15) Requiring that competent authorities maintain a registry of applications for, and records of decisions in respect of, environmental authorisations.

(16) Specifying that a contravention of a specified regulation is an offence and prescribing penalties for the contravention of that regulation.

[161] Section 24(4bA)

(17) Prescribing minimum criteria for the report content for each type of report and for each process that is contemplated in terms of the regulations in order to ensure a consistent quality and to facilitate efficient evaluation of reports.

(18) Prescribing review mechanisms and procedures including criteria for, and responsibilities of all parties in the review process.

(19) Prescribing any other matter necessary for dealing with and evaluating applications for environmental authorisations.

The Minister or MEC is further empowered to:

(a) Develop or adopt norms or standards for activities or, for any part of an activity or for a combination of activities, contemplated in terms of subsection (2)(d),

(b) Prescribe the use of developed or adopted norms or standards in order to meet the requirements of this Act,

(c) Prescribe reporting and monitoring requirements, and

(d) Prescribe procedures and criteria to be used by the competent authority for the monitoring of such activities in order to determine compliance with the prescribed norms or standards.

The Act prescribes certain offences and penalties in terms of listing of activities. Some of these are:

(a) Commencing a listed or specified activity in terms of section 24(2)(a) or (b) without a grant of an environmental authorisation by the competent authority or the Minerals and Energy or any activity listed under section 24(2)(d) unless it is done in terms of an applicable norm or standard,[162]

(b) Commencing or continuing an activity listed in terms of section 24(2)(d) unless it is done in terms of an applicable norm or standard,[163] and

(c) Failing to comply with or contravention of (i) the provisions of subsection (1)(a) and (1)(b), (ii) conditions applicable to any environmental authorisations granted for a listed or specified activity, (iii) any condition applicable to an

[162] See section 24F
[163] Section 24F(b)

exemption granted in terms of section 24M, and (iv) an approved environmental management programme.

Furthermore, certain defences are created under the Act, for instance in respect of section 2(2) above it will suffice to show that the activity was commenced or continued in response to an emergency, so as to protect human life, property or the environment.

A person that is convicted for an offence in terms of section 24F(2) is liable to a fine not exceeding R5 million or to imprisonment for a period not exceeding ten years, or to both such fine and such imprisonment.

Section 24H section provides for registration of members of associations as environmental assessment practitioners and the said association as registration authority. The minister is empowered to prescribe the terms of the registration and approval of same. The subsection contains provisions on :

(a) The content of the application,

(b) The power of the minister to approve or refuse the application for registration,

(c) The termination of an association as a registration authority, and

(d) The registering of all associations appointed as registration authorities.

The minister or MEC may appoint an external specialist to review an assessment,[164] may publish implementation on listed activities or specified activities or the implementation, administration and institutional arrangements of regulations made in terms of section, [165] and may provide for consultation between competent authorities and consideration of legislative compliance requirements of other organs of state having jurisdiction[166].

The focus here is to coordinate the respective requirements of such legislation and to avoid duplication.[167] In order to avoid duplicity of authorisation authorities, the Act provides for the harmonisation of authorisation through joint exercise of power by the authority under any other law or a specific environmental management Act and the competent authority under chapter 5 of NEMA. This may be in the form of separate

[164] Section 24I
[165] Section 24J
[166] Section 24K
[167] Section 24L

authorisation or an integrated environmental authorisation. The subsection equally outlines conditions for the grant of an integrated environmental authorization.[168]

The need for environmental management programme is dealt with in subsection 24N. The Minister, Minister of minerals and energy and a MEC or any authority that is identified for this purpose may make a demand for an environmental management programme under this subsection before an application of authorisation is considered. While this provision appears discretionary in subsection (1) of the provision, the importance is emphasised under paragraph (b) wherein the demand for environmental management programme is made mandatory in situations where EIA is identified as the appropriate instrument most importantly in prospecting, mining, exploration production, and related activities on a prospecting, mining, exploration or production area. The section identifies and outlines the expected contents of the environmental management programme.[169]

When considering an application[170], the official and authority must ensure compliance with the provisions of the Act. Factors to be considered include the likelihood of pollution, environmental impact and or degradation that may be caused as a result of the decision in respect of the application. The official is equally expected to recommend appropriate measures for the protection of the environment from likely harm from the activity declared in the application[171].

Section 24 furthermore imposes mandatory payment of a prescribed fee for authorisation in prospecting, mining, exploration or production towards rehabilitation, management and closure of environmental impacts before issuance of authorisation by the minister of Minerals and Energy. This fund may be accessed for immediate remediation where the holder of an authorisation is unable to rehabilitate or manage the environmental impact in question.

[168] These include; a. compliance with the relevance provisions of the Act and other law or specific environmental management Act. b. terms of issuance and the issuing authority.
[169]In a report which is contemplated under section 24(1A); including the environmental impacts and objectives. See section 24N generally.
[170]Section 24O NEMA.
[171] See Section 24O in general; particularly subsection (1) to (5).

Holders of an old order right of environmental authorisation are expected 'to conduct such monitoring and such performance assessment of the approved environmental management programme as may be prescribed.'[172]

6.2.1.2.6 Environmental Institutions

The original provision under the Act which provided for the establishment of certain environmental institutions like the National Environmental Advisory Forum and Committee for Environmental Coordination to drive the implementation and enforcement of the Act has been repealed by the National Environmental Law Act 14 of 2009. In its place comes a provision that empowers the Minister to establish any forum or advisory committee and determine the composition and functions of such body by notice in the Gazette. The Minister is equally expected under the Act to consult with the Minister of Finance in determining the basis and extent of the remuneration and payment of expenses of any member of such forum or committee[173].

6.2.1.2.7 Duty of Care and Remediation of the Environment under NEMA

The NEMA provides under section 28 for the control of pollution of the environment. Under the section[174] a duty is imposed on polluters or prospective polluters or degraders of environment 'to take reasonable measures' to prevent occurrence, recurring or continuation of such incidence.' This duty also includes taking steps to minimise such occurrence where the activity is backed by law or where pollution is unavoidable. The following people are duty bound under the Act to take the steps mentioned above: (a) the owner of the land or premises, and (b) the person in control of land or premises or a person or a person who has a right to use the land on which the facility or the activity generating pollution is sited.[175]

In order to address pollution or degradation under this section, the Act provides for a number of measures to be taken.

[172] Section 24R NEMA
[173] Section 3A(c)
[174] See section 28(1)
[175] Section 28(2)

(1) Investigation, assessment and evaluation of the extent of the impact of the pollution in the environment.

(2) In forming and educating the employees in the affected facility about the risks of their work and ways of avoiding significant pollution or degradation of the environment.

(3) The cessation, modification or control of the acts, activity or process that are responsible for the pollution or degradation of the environment.

(4) The prevention of movement of pollutants.

(5) The elimination of sources of pollution or degradation.

(6) Remedying the impact of the pollution.[176]

The Act mandates the Director-General or a provincial head of department where the facility is located to take actions and certain measures within a specified period. Where the person does not act on time or is unable to act the minister may take all necessary measures to remedy the situation or apply to court for appropriate relief.[177] The Act empowers the Director-General or provincial head of department to recover the cost of all measures taken by the minster or the department from the affected person.[178] The power of a private person or any person to move the minister to take steps to remedy pollution is recognised under section 28(12) after a period of 30 days of notice to the Director-General or any provincial head of department. A person may apply to any competent court for an order compelling the Director-General or the provincial head of department to take the steps outlined under section 28(4) to direct the evaluation, investigation or assessment of the impact of a pollution or degradation incident, the commencement of specific reasonable measures within a given date, the diligent pursuits of the measures, and to complete of the measures before a reasonable date.

[176] See section 28(3) in general.
[177] Section 28(7) NEMA.
[178] Section 28(8)

6.2.1.2.8 Control of Emergency Incidents

The Act defines emergency situation as 'an unexpected sudden occurrence, including a major emission, fire or explosion leading to serious danger to the public or potentially serious pollution of or detriment to the environment, whether immediate or delayed'. Incidents like these are often recorded in the course of oil productions. The Act mandates a responsible person where the incident occurs to report such incidents by 'the most effective means' that is available, stating the nature of the incident, the possible risks posed, toxicity of the substances and any steps taken towards avoiding or minimising the effects on public health and the environment[179] by such facilities like refineries or others. The report may be made to the Director-General, the South African Police Services, fire prevention services, relevant provincial head of department or municipality and all persons whose health may be compromised by the incident.[180]

The situation above may be addressed by the affected official or the responsible person taking reasonable measures to contain and minimise the effects of the incidents and other measures like cleaning up or remedying the impact and assessment of the immediate and long term effect of the incident.[181] Where the responsible person is unable to act immediately, the Act empowers the relevant authority to take steps to contain and minimise the effects of the incident.[182] The responsible person may however be made to reimburse the relevant authority for all the reasonable cost incurred towards remedying the situation.[183]

The National Environmental Management Act is undoubtedly foundational to genuine environmental protection and sustainability agenda of South Africa. The innovative provisions under the Act incorporate best practices in many developed jurisdictions like the United States and European Union into the Act. The Act further instigates the making of further comprehensive legislation on specific areas of South Africa's environment like wildlife, air, water etc. The next Act is an example.

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[179] See section 30(3).
[180] Section 30(3) i – iv.
[181] Section 30(4)
[182] Section 30(8).
[183] Section 30(9).

6.2.2 The National Environmental Management: Air Quality Act no 39 of 2004

The adoption of the 1996 Constitution brought certain fundamental and structural changes in environmental governance in South Africa. Of importance is that the new democratic regime under the Constitution rendered the existing Atmospheric Pollution Prevention Act of 1965 (APPA) obsolete in terms of control of air pollution and other related issues like emission and air quality.

The National Environmental Management: Air Quality Act was promulgated in 2004, with certain provisions suspended till 2009. The suspended provisions, however, became operative on April 1, 2010. Further amendment was effected in 2009, during the period of transition from APPA regime to the current AQA regime.

The failure of APPA and the following factors initiated the emergence of the new Act:[184](a) air pollution presents a huge burden on health of the poor, (b) the social, political and economic cost of pollution is usually not borne by the polluters, (c) the atmospheric emission of ozone-depleting substances, greenhouse gases and other substances have a deleterious effect on the local and international environment, (d) the constitution recognises the need to protect and guarantee the right to environment, (e) it is the right of everyone to have the environment protected for the present and future generations, (f) it is necessary to minimise pollution through rigorous control, cleaner technologies and production practices in order to improve air quality, (g) additional legislation is necessary to strengthen the government's strategies for the protection of the environment, and (h) enhancement of the quality of ambient air is necessary in order to secure an environment that is not harmful to the health or wellbeing of people.

The key provisions of the Act are discussed below.

[184] See the preambles to the AQA of 2004, further discussion on this can be found in chapter 6 of the work.

6.2.2.1 Control of Emission

The Act contains extensive provisions on emission control as a subject. It defines emission as 'any emission or entrainment process emanating from a point, non-point or mobile sources that result in air pollution.[185]' This definition acknowledges the diverse nature of sources of emission in the environment. By providing for the establishment of a national framework for emission control, section 7 of the Act acknowledges this environmental hazard as a nationwide threat in South Africa. The section provides for the establishment of a national framework by the minister within two years after the coming into force of the Act towards 'achieving the object of the Act.'

An examination of section 2 of the Act gives insight to the purpose of the Act. These are -

(a) to the protect the environment through the provision of reasonable measures for (i) protection and enhancement of the air quality in the country, (ii) prevention of air pollution and ecological degradation, and (iii) economic and social development within the framework of ecologically sustainable development, and

(b) To give effect to the provisions of section 24(b) of the constitution towards enhancing the quality of ambient air in securing a healthy environment for the wellbeing of the people of the Republic.

6.2.2.2 General Duty of the State under the AQA

Pursuant to the above objects, and in order to secure the rights under section 24 of the Constitution, the Act is made applicable in all parts of South Africa including the Exclusive Economic Zone and continental shelf of the Republic.[186] It binds all organs of state on the national, provincial and local governmental levels. A duty is imposed on the South African state under the Act in pursuance of the environmental rights recognized under section 24 of the Constitution to:

(a) Apply the Act, using its apparatus and organs to mandatorily seek to protect, and enhance the quality of air in the Republic, and

[185] Section 1, National Environmental Management: Air Quality Act 39 of 2004.
[186] See also sections 7 and 8 of the Maritime Zones Act, 1994 (Act 15 of 1994)

(b) Pursue progressive realisation of the rights through application of the Act.[187]

Furthermore, in order to remedy the apparent failures of the old Atmospheric Pollution Prevention Act[188] to control incidences of air pollution and other related problems like release of gas emission, the Act assigns responsibilities along with the provisions of the National Environmental Management Act on environmental governance and the Constitution to different organs of the state and level of government on management of air quality. (In the old order the national sphere of government was the sole authority for air quality management under the APPA.[189])

6.2.2.3The Air Quality Act and South Africa's International Obligations

The Act in different provisions acknowledges the obligations of the Republic of South Africa to the international community under different treaties and agreements towards controlling the emission of substances that pollute the atmosphere. In the preamble, the Act acknowledges the international dimension of air pollution and provides a basis for air quality control by South Africa. The Act provides that:

> ***"...atmospheric emissions of ozone-depleting substances, greenhouse gases and other substances have deleterious effects on the environment both locally and globally..."***[190]

Additionally, section 50 of the Act empowers the minister to investigate cross boundary pollution.

[187] Section 3 NEM: Air Quality Act.
[188] Atmospheric Pollution Prevention Act 45 of 1965.
[189] See Sections 6 and 7 of the Atmospheric Pollution Prevention Act 45 of 1965.
[190] See the preambles to the National Environmental Management Act : Air Quality Act no

6.2.2.4 Relationship between the Air Quality Act and National Environmental Management Act

The National Environmental Management Act remains the framework law on environment in South Africa. Every other law regulating any aspect or environmental medium in the country is subject to the overriding influence of the NEMA. In line with this, the AQA is to be read with any applicable provisions of NEMA. The interpretation of any of its provision is to be guided by the national environmental management principles that are found under section 2 of the NEMA.[191]The implication of this is that no section of AQA can be interpreted at cross purpose with any provision of the NEMA

6.2.2.5AQA and Other Laws

Being a parliamentary statute, any conflict between the Air Quality Act and provincial legislation is to be determined by the application of the provisions of section 146 of the Constitution. Conflict with municipal law is resolved in favour of the AQA, while conflict between any subordinate legislation issued in pursuance to any provision of the AQA and an Act of parliament will, by virtue of section 6(2), be resolved in favour of the Act of parliament. The latter situation is logical, considering that an Act of parliament is primary legislation. However, in the case of conflict between subordinate legislation under AQA and a provincial law, the provision of section 146 will equally apply.[192] For harmonisation of the relevant laws, the minister is expected to regularly submit to the National Council of Provinces for approval[193] all subordinate legislation made under AQA which affect provinces.

[191] See section 5 of AQA.
[192] Section 146 applies to conflict between national and provincial legislation. Where there is a conflict between a national and provincial legislation the affected legislation is to be submitted for the approval of the National Council of Provinces. A law in this circumstance can only apply if such law has been approved by the council.
[193] See section 6 of AQA

6.2.2.6The National Framework, and Provincial and Local Standards

The Act in chapter 2 provides for the establishment of a national framework within two years by the minister through the Gazette, towards achieving the objects of the Act.[194] The framework is expected to make provision 'for monitoring and information management standards.'[195] Mandatorily, the national framework is to include mechanisms, systems and procedures to attain compliance with ambient air quality standard, and to give effect to international obligations of the country.[196] Equally, the framework is to contain national norms and standards for control of emissions from point and non-point sources, norms and standards for air quality management, air quality information management, and, any other issue to be decided by the minister.[197] In compliance with this provision, the first National Framework for Air Quality Management[198] was released in 2007.

6.2.2.7 Air Quality and Emission Standards, and the Measurement of Ambient Air Quality

Section 9 mandates the Minister to establish air quality and emission standards for the entire nation, while the MEC and the municipalities may establish air quality standards in their respective spheres. Despite the expectation of the operation of the standards in hierarchical order, the standard at the provincial and municipal level may be set to be more stringent than that set by the national sphere of government.[199]

Raising the issue of threat to public health, section 9 mandates the Minister to 'identify substances or mixtures of substances in ambient air which … in any other way, present a threat to health, wellbeing or the environment or which the minister reasonably believes present such threat.[200]' The minister is further mandated to establish national standards for ambient air quality, permissible amounts or concentration of each such substance or mixture of substances in ambient air. Equally,

[194] Section 7(1) of the AQA
[195] Kidd, Michael, above
[196] See section 7 of the AQA
[197] Section 7 of the NEMA: AQA
[198] *National Framework for Air Quality Management in the Republic of South Africa* in compliance with the provision of Section 7 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) released by the Department of Environmental Affairs and Tourism.11 September 2007
[199] But cannot be below the national standards, see section 10(2) and 11(2)
[200] Section 9(1) AQA

the Minister is given the option of establishing national standards for emissions from point, non-point or mobile sources in respect of each of those substances or mixture of substances.[201]

Pending the release of the national ambient air quality standards in 2009, the Act outlines[202] a set of air quality standards pending the establishment of air quality standards by the minister and the other two spheres of government. The 2009 ambient air quality standards were set in respect of sulphur dioxide, nitrogen dioxide, particulate matters, ozone, benzene, lead, and carbon dioxide.[203] Details of these emission standards are further discussed in chapter 6 of the thesis.

6.2.2.8 Institutions and Planning

Different institutions exist for air quality management under the Act. Additionally the national framework for air quality management and control created some bodies for effective air quality management. Some of these are discussed in chapter 6.

6.2.2.9 National Air Quality Advisory Committee

The act provides for the establishment of a national Air Quality Advisory Committee, the function of which is to advise the Minister on the Act and its implementation. The Minister is empowered to constitute the committee and determine issues like the appointment of members, their terms of office and the running of the committee.[204]

[201] See section 9(a),(b),(c) AQA.
[202] See schedule 2, AQA
[203] See Government Notice 1210 in Government Gazette 32816 of 24 December 2009./
[204] See section 13

6.2.2.10 Air Quality Officers

The Act provides for the appointment and designation of a national air quality officer by the Minister, and, similar arrangements at the provincial and municipal levels by the MEC and the municipality respectively. The function of the air quality officers is to carry out duties that are assigned to them under the AQA in a manner that is set out in the national framework on air quality and as directed by the minister. These functions are discussed in chapter 6. An important requirement for the appointments is that the appointed officer must have been the coordinating officer for matters pertaining to air quality management at the respective sphere of government.[205]

6.2.2.11 Air Quality Management

Air quality management is done by means of plans, reporting, the identification of priority areas, and the listing of activities.

(1) Air quality management plans and contents. In the exercise of their respective duties in the preparation of environmental management plans or environmental implementation plans as mandated under section 15 of NEMA, the national and provincial officers in charge of preparing the documents are mandated to integrate air quality management plans into the documents. The same approach is expected of the municipalities in the preparation of their air quality management.[206] Air quality management plans[207] at all levels are to:

(a) Give effect in respect of air quality to chapter 3 of NEMA[208] to the extent of the applicability of the Act,

(b) Improve air quality,

(c) Identify and reduce the negative impact of poor air quality on human health,

(d) Address the effects of emissions from the use of fossil fuels in residential applications, the effect of emissions from industrial, any point or non-point sources of air pollution and other sources,

[205] See section 14 AQA
[206] Section 15(2)
[207] Section 16
[208] Chapter 3 of NEMA is on procedures for cooperative governance, it provides for environmental implementation plans and management plans

(e) Implement the Republic's obligations in respect of international agreements, and

(f) Give effect to best practice in air quality management.

Furthermore, the plan is to give direction to the appropriate national department, province, and municipality on the respective air quality plans and compliance with the minister's requirements as prescribed by the minister.[209]

(2) Reporting on implementation of air quality management plans. Pursuant to the provisions of section 16(1) of the NEMA on submission of an annual report by an organ of state,[210] information on the implementation of an air quality management plan by each organ of the state must be included in the annual report. The information is to include:

(a) The initiatives of the respective organ on air quality management within the period,

(b) The level of compliance with ambient air quality standards,

(c) Measures taken by the organ to secure compliance with those standards,

(d) Compliance with any applicable priority area air quality management plans, and

(e) The organ's air quality monitoring activities.

(3) Priority areas. Where there exists the likelihood of the ambient air quality of an area being exceeded or causing serious negative impact on air quality, the minister, acting on reasonable belief, may by Gazette declare such a location a priority area, which may require air quality management action to rectify the situation.[211] This expected intervention of the minister is however subject to certain conditions namely:

(a) The impact of the negative air quality in the area,

(b) The impact on national interest, and

(c) The likelihood of contributing to air pollution in another country.

[209] See section 16(b) and (c)

[210] The submission is for the purpose of compliance with environmental implementation plans and environmental management plans.

[211] See section18

Where the area in issue extends beyond provincial boundaries, or the area falls within a province the province may request the minister to declare the area as a priority area[212]. Similarly, the MECs of two provinces may through joint action declare an area falling within those provinces a priority area.[213]

The designation of an area as a priority area is expected to be followed by the development of air quality management plans.[214] The air quality officer of the affected area (province and municipality) must prepare the plan for the area.[215] The plan must be submitted to the minister for approval within six months of the declaration, or as directed. The same principle applies in the case of a declaration of a priority area by the MEC, in the sense that the MEC must consult the national air quality officer. The air quality officer for the affected municipality has a duty to prepare the plan for the area and submit it to the MEC within six months, or as directed by the MEC.[216] Where the area to be declared priority area 'covers two or more adjoining' municipalities, the air quality officers of the municipalities must jointly follow the procedures discussed above.[217]

The above decisions are subject to compliance with section 56[218] and 57 of AQA that is effective consultation with appropriate authorities, namely all cabinet members and other spheres of government. Also, important here is the participation of the public in the process of such decision.

The Minister or the MEC is empowered to prescribe regulations for the control of an approved priority area,[219] and the regulations are expected to include issues like funding arrangements, measures to facilitate compliance with the plans, penalties, and regular review of such plans.[220]

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[212] Section 18(2) AQA
[213] This is subject to the conditions stated in Section 18(1) AQA.
[214] Section 19
[215] Section 19(1)
[216] Section 19(2) AQA
[217] Section 19(3)
[218] Section 56 is on consultative process, while section 57 is on public participation. The Act in the two sections mandates the Minister or the MEC, to consult with all relevant cabinet members whose areas of responsibility will be affected by the exercise of the power; consult the MEC or vice – versa in accordance with the spirit of cooperative governance and ensure the participation of the public. It equally outlines procedure for ensuring the participation of the public in the process.
[219] Section 20
[220] See section 20 generally.

(4) Listing of activities.

The Act mandates the Minister or the MEC to publish a list of activities which the Minister or MEC 'believes have or may have a significant detrimental effect on the environment, including the health, social conditions, economic conditions, ecological conditions or cultural heritage.'[221] The list may however be amended by the Minister or MEC when necessary, through listing of additional activities or removal of activities. As expected a list that is published by the Minister is applicable nationwide while the MEC list applies to the affected province only.[222] A notice in respect of the list must establish minimum emission standards in respect of asubstance or mixture of substance resulting from a listed activity. The following are also to be included: permissible amount, volume, emission rate or concentration of that substance or mixture of substances that may be emitted, and the manner in which measurement of such emissions must be carried out. The notice may also contain 'transitional and other special arrangements in respect of activities which are carried out at the time of their listing.' The take off date of the list is also an essential feature in the notice.[223] Once an activity is listed on the national or provincial list, it becomes illegal for and person 'without a provisional atmospheric emission licence or an atmospheric emission licence' to conduct such an activity.[224]

The mandate of the Minister in respect of listing was first exercised in 2010 with the release of a notice, namely the "National Environmental Management: Air Quality Act (39/2004) list of activities which result in atmospheric emissions which have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage".[225] The notice outlines ten categories of activities for which the promoters must obtain a permit before carrying them out. The categories are:

Category 1 - Combustion installations,

[221] Section 21(1)(a)
[222] Section 21(2)
[223] Section 21(3) NEM: AQA.
[224] Section 22 NEM: AQA.
[225] Government Notice no 248 of Government Gazette of 31 March 2010.

Category 2 - Petroleum industry, the production of gaseous and liquid fuels as well as petrol chemicals from crude or coal, gas or biomass,

Category 3 - Carbonization installations,

Category 4 - Metallurgical industry,

Category 5 - Mineral processing, storage and handling,

Category 6 - Organic chemical industry,

Category 7 - Inorganic chemical manufacturing,

Category 8 - Disposal of hazardous and general waste,

Category 9 - Pulp and paper manufacturing activities, including by-products recovery, and

Category 10 - Animal processing.

Category 2 forms the crux of this investigation. The items listed under this category are further divided into three sub-categories in the listing:

(a) Combustion installations,

(b) Storage and handling of petroleum production, and

(c) Industrial fuel recyclers.[226]

6.2.2.12 Municipalities and the Emission Licensing System

The power to license in respect of the listed activities under the Act is conferred on the metropolitan and district municipalities. The municipalities are 'mandated to perform the function of a licensing authority.'[227] This power may not be exercised under certain conditions, which are stated under the act to be: (a) where the municipality 'has delegated its function of a licensing authority to a provincial organ of state in terms of section 238[228] of the Constitution', but the municipality will still be deemed to be the licensing authority, (b) where the MEC intervenes in terms of section 139 of the Constitution if the municipality cannot or does not fulfill its obligations as a licensing authority as directed by the Act, and (c) where the municipality applies for an

[226] *Ibid.*

[227] Section 22.

[228] Under section 138 of the Constitution of the Republic of South Africa 1996, an executive organ of state in any sphere of government may delegate any power or function that is to be exercised or performed to any other executive organ of state subject to certain conditions stated under the section.

atmospheric emission licence, a provincial organ designated by the MEC would be regarded as a licensing authority for the duration.[229]

In order to obtain an atmospheric emission licence, an applicant must apply in the form required by the licensing authority. The application is to be accompanied by the prescribed fee and documentation and information.[230] On receipt of the application the licensing authority may request further information, 'conduct its own investigation on the likely effects of the proposed licence on air quality', may 'invite written comments from any organ of state which has an interest in the matter' and 'must afford the applicant the opportunity to make representations on any adverse statements or objections to the application.'[231] Importantly, the AQA emphasises the importance of the need for the applicants for atmospheric emission licence and the licensing authority to comply with the provisions of section 24 of the NEMA and 22 of the Environment Conservation Act. The two provisions apply to all applications for an atmospheric emission licence under the Act.[232]

The applicant must inform the 'relevant organs of state, interested persons and the public' about the application. This is to be conveyed through publication of a notice in 'at least two newspapers circulating in the area in which the listed activity is to be carried out.' The notice is expected to indicate (a) a reasonable period within which written representations on or objections to the application may be submitted', (b) the address for submission of such representations or objections, and (3) 'other particulars as the licensing officer may require.'[233]

Before taking any decision on the application for an atmospheric emission licence the licensing authority must consider the following factors:

(a) Any applicable minimum standards set for ambient air and point source emissions that have been determined in terms of the Act,

(b) Likely pollution from the listed activity and the effect or likely effect on the environment, including health, social conditions, economic conditions, cultural heritage and ambient air quality,

[229] Section 36 AQA
[230] Section 37 AQA
[231] Section 38 (1)
[232] Section 38 (2)
[233] Section 38(3)

(c) The best practicable environmental options available that could be taken -

(i) To prevent, control, abate or mitigate that pollution, and

(ii) To protect the environment, including health, social conditions, economic conditions, cultural heritage and ambient air quality from harm from the pollution, and

(d) section 24 of the National Environmental Management Act[234] and section 22 of the Environment Conservation Act[235] and any applicable notice issued or regulation made pursuant to those sections, any relevant tradable emission scheme, whether the applicant is a fit and proper person as contemplated in section 49, the applicant's submissions,any submissions from organs of state, interested persons and the public, and any guidelines issued by the Minister or MEC relating to the performance by a provisional atmospheric emission licence or an atmospheric emission licence must contain the following:

(a) The activity in respect of which it is issued,

(b) The premises in respect of which it is issued,

(c) The name of the person to whom it is issued,

(d) The period for which the licence is issued,

(e) The name of the licensing authority,

(f) The intervals at which the licence must be reviewed,

(g) The maximum allowed amount, volume, emission rate or concentration of pollutants that may be discharged in the atmosphere under normal working conditions and under normal start-up, maintenance and shut-down conditions,

(h) Any other operating requirements relating to atmospheric discharges, including non-point source or fugitive emissions,

(i) point source emission measurement and reporting requirements,

(j) On-site ambient air quality measurement and reporting requirements,

(k) Penalties for non-compliance,

(l) Greenhouse gas emission measurements and reporting requirements, and

[234] Act no 107 of 1989

[235] Act no 73 of 1989.

(m) Any other matters which are necessary for the protection or enforcement of air quality.[236]

In addition, a licence under the Act may specify conditions in respect of odour and noise, and require permit holders to comply with all lawful requirements of an environmental management inspector acting under NEMA.[237] A provisional atmospheric emission and atmospheric emission licence is transferable by the holder to a new owner of the activity under certain conditions which are spelt out under section 44 of the Act. The licensing authority is expected to be guided in decision on transfer of an atmospheric emission licence by all relevant matters in addition to the new applicant being a fit and proper person as envisaged under section 49 of the Act.[238] The licensing authority is mandated to 'review a provincial atmospheric emission licence or an atmospheric emission licence at the intervals specified in the licence, or when circumstances demand.' This is subject to payment of a prescribed processing fee, notice to the holder and the relevant provincial air quality officer, and a requirement for compilation and submission of an atmospheric impact report as envisaged under section 30 of AQA.[239]

The Act expectedly contains provisions and outlines procedures for the variation of provisional atmospheric emission licences and atmospheric emission licences,[240] renewal of provisional atmospheric emission licences and atmospheric emission licences, [241] and appointment of emission control officers.[242] With respect to the latter, the holder of a provisional atmospheric emission licence or an atmospheric emission licence may be required by an air quality officer to designate an emission control officer. The appointment is however subject to the size and nature of the listed activity.

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[236] See section 43(1) AQA 39 of 2004
[237] Section 43(2) AQA 39 of 2004.
[238] A fit and proper person as envisaged under section 49 here is determined by the following conditions: that is whether the person has contravened or failed to comply with AQA, APPA or any other legislation applicable to air quality; the person has held a provisional atmospheric emission licence, an atmospheric emission licence or other authority that has been suspended or revoked, the person has been a director or senior manager who is or was a director or manager of a company, a juristic person or firm that falls into the above categories; whether the management of the listed activity would not fall into the hands of technically incompetent person.
[239] Section 45 NEM: AQA no 39 of 2004
[240] Section 46 NEM: AQA no 39 of 2004
[241] Section 47NEM: AQA no 39 of 2004
[242] Section 48 NEM: AQA no 39 of 2004

6.2.2.13 Air Quality Management Plans

Following the provision for an Air Quality management plan, the Act makes it mandatory that air quality management plans must seek to implement South Africa's obligations in respect of international agreements. [243] Section 16 and 17 contain details of the content of the air quality management plan.

6.2.2.14 Controlled Emitters

The Act empowers the minister to declare any appliance of activity or any appliance which results in atmospheric emission which is a threat to public health or the environment as a controlled emitter. The declaration is simply by issuance of a notice, on the reasonable belief of the minister or the MEC.[244] However this power may only be exercised when the minister takes into account the Republic's obligations in terms of any applicable international agreements.

6.2.2.15 Controlled Fuel

Where the use of a substance or mixture of substances as fuel in a combustion process results in atmospheric emission and which through any means like 'ambient concentrations, bioaccumulation, deposition'[245] poses a threat to human health or the environment, the minister or the MEC under section 26 has the power to declare such substance as controlled fuel.

To declare a fuel controlled, as contemplated under section 26 and 27 of the Act, in attempt to control emission of gases, the minister is mandated to consider the applicable international obligations of South Africa[246] before the decision is published in the Gazette.

[243] Section 16(1)(a) of Air Quality Act no 36 of 2004.
[244] See section 23 (2) of the AQA
[245] See section 26 (1) AQA
[246] See section 26(1),(2) of the AQA

6.2.2.16 International Air Quality

In line with the Republic's obligations under international environmental agreements to safeguard the international air medium, the minister, pursuant to the provisions of section 50, may order an investigation of circumstances that may compromise international air quality in certain instances, for instance, where any activity within the borders of the Republic is capable of contributing to air pollution across the Republic's boundaries, or to air pollution that violates, or is likely to violate, an international agreement that is binding on the Republic in relation to the prevention, control or correction of pollution. If it is discovered that the environment in South Africa or another country is compromised, the minister is mandated to prescribe appropriate measures 'to prevent, control and correct the release'[247] within South Africa

6.2.2.17 Monitoring of Green house Gas Emission

The grant of a provisional atmospheric emission licence and an atmospheric emission licence is expected to include a requirement for the grantee to account for and measure the greenhouse gas emission. This is a demonstration of the country's commitment to the international crusade for eradication of greenhouse gas emission.[248]

6.2.2.18 Regulatory Power of the Minister

The minister under NEMA and AQA is empowered to make different regulations. This power includes making regulations on any matter that is 'necessary to give effect to South Africa's obligations in terms of an international agreement relating to air quality.'[249] The regulation under this situation affords the nation the opportunity to comply with international obligations and indirectly domesticate some of the ratified conventions under international law and cooperation.

[247] See section 50 of the AQA generally.
[248] See section 43(1)(l)
[249] Section 53(a)

6.2.3 The Health Act, 1977 (Act 63 of 1977)

The Health Act was enacted among other reasons 'to provide for measures for the promotion of the health of the inhabitants of the Republic'[250] of South Africa. Certain provisions of the Act are relevant for the control of gas emission and other aspects of air pollution, particularly as it constitutes a danger to the health of the people. The Act[251] empowers the minister to 'make regulations regulating, controlling, restricting or prohibiting any activity' which amounts to nuisance under the Act.

Nuisance is defined under the Act to include:

> ***"...any factory or industrial or business premises not kept in a cleanly state and free from offensive smells arising from any drain, water closet earth cables urinal or any other source, or not ventilated so as to destroy or render harmless and inoffensive as far as practicable any gases, vapours, dust or other impurities,... as to be injurious or dangerous to the health of those employed therein or there on'[252].***

This applies to a factory or industrial or business premises which cause or give rise to smells or effluvia which are offensive or which are injurious or dangerous to health. It also includes any other activity, condition or thing declared to be a nuisance by the minister in terms of the provisions of the Act.[253] The later provision gives room for inclusion of new discoveries about sources of emissions or newly identified hazardous substances among what may qualify as nuisance under the Act.

6.2.4 The Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

The Act, which became operational in 200,4 amended the Mineral and Petroleum Resources Development Act 24 of 2002. Further amendment has also been made to the Mineral and Petroleum Resources Development Amendment Act 49 of 2008 which is to become operational later.

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[250] See the title to the Health Act no 63 of 1977
[251] Section 39
[252] See chapter 1(f) Health Act no 63 of 1977
[253] Under section 39(2)

The Act made no pretence about the commitment of the South African state to democratic principles and sustainable development. One of the objects of the Act[254] (section 7) is to give effect to the environmental rights provision under section 24 of the Constitution through sustainable development of South Africa's mineral and petroleum resources. Another important object of the Act is to promote opportunities for the historically disadvantaged persons to participate and benefit from the exploitation of minerals and petroleum resources of the country.

The Minister in the Department of Energy, is given full responsibility under the Act for implementing environmental matters in terms of the National Environmental Management Act, 1998 and other related environmental legislation that affect prospecting, mining and exploration, production of mineral and petroleum resources and other incidental activities.

In recognition of NEMA as the framework environmental legislation, the Act in section 37 provides for the application of the environmental principles articulated under section 2 of NEMA to mining and petroleum resources operations. These principles are:

(a) To apply to all prospecting and mining operations, and

(b) The guidelines for the interpretation, administration and implementation of the environmental requirements of the Act.

6.2.4.1Environmental Management

The Act prohibits certain activities[255] like prospecting for or removing, mining, conducting technical cooperation operations, reconnaissance operations, exploring and producing any mineral or petroleum or commence with any related work on an area without the following:

(a) An environmental authorisation,

(b) A reconnaissance permission,

(c) A prospecting right,

(d) Permission to remove,

[254] See section 7 Minerals and Petroleum Resources Development Act 28 of 2002

[255] See section 5A MPRD Act 28 of 2002

(e) A mining right,

(f) A mining permit,

(g) A retention permit,

(h) A technical co-operation permit,

(i) A reconnaissance permit,

(j) An exploration right or production right, as the case may be, and

(k) At least 21 days' written notice to the landowner or lawful occupier of land before operation.

In amending section 16 of the Minerals and Petroleum Resources Development Act 28 of 2002, the Act replaced the requirement of the environmental management plan with a demand for environmental authorisation in mining and petroleum operations. It particularly requires environmental authorisation in the application for a prospecting right to the minister, the Act requires a simultaneous application for environmental authorization. [256] After acceptance of an application by a regional manager, the applicant is to be notified in writing to submit relevant environmental reports required under chapter 5 of NEMA Act.[257]

In subjecting the grant of a prospecting licence to the issuance of an environmental authorisation, the Act provides[258] that:

> '…the minister must within 30 days of receipt of the application from the Regional manager, grant a prospecting right if... the prospecting will not resort in unacceptable pollution, ecological degradation or damage to the environment and an environmental authorisation is issued."

6.2.4.2 Grant of Prospecting Licence

In applying for prospecting rights, mining rights and mining permits, an applicant must accompany such application with another application for environmental authorisation. The need for the application of environmental management tools is provided in section 18. The section provides for the submission of '...the relevant environmental reports as required in terms of chapter 5 of the National Environmental Management Act 1998, within 180 days from the date of the notice.' This provision

[256] Section 12
[257] Section 12
[258] Section 13

ensures the use of environmental management tools towards integrated environmental management of activities in the mining and petroleum sector.

Where land is occupied by a community, the Act provides for the intervention of the minister in order to safeguard the wellbeing, rights and interests of community members, by imposition of such conditions that are necessary to promote the rights and interests of the community, particularly community participation.

The Act accentuates the integration of the environmental principles as articulated under section 2 of the National Environmental Management Act, and in particular the principle of sustainable development to all activities under the Mining and Petroleum Resources Development Act. Furthermore the Act states that the NEMA section 2 principles shall act as guidelines to the interpretation of the MPRD[259].

6.2.4.3Environmental Disaster or Degradation

Under section 36 of the Act, the minister is mandated after consultation with the minister of Environment and Tourism to address 'ecological degradation, pollution or environmental damage or contravention of the condition of the environmental authorisation or any activity that may be harmful to health, safety or wellbeing of anyone'. This is important where the situation requires urgent measures.

As immediate measure, the holder of the relevant right or permit in terms of the Act or the holder of an environmental authorisation in terms of NEMA Act in above situation must -

(a) Investigate, evaluate, assess and report on the impact of any pollution or ecological degradation or any contravention of the conditions of the environmental authorization,

(b) Take such measures as may be specified in such directive in terms of the Act or the NEMA, and

(c) Complete such measures before a date specified in the directive.[260]

[259] See section 37.

[260] Section 36.Mineral and Petroleum Development Amendment Act 2008, Act no 49 of 2009

In circumstances where the area in issue has been alienated or transferred to another person or entity who could not be traced, the minister may order the regional manager to effect measures to address the situation in order 'to prevent pollution or environmental degradation of the affected environment or to rehabilitate dangerous health and social occurrences or to make an area safe.[261]' The cost of the operation is expected to be the responsibility of the last known holder of the permit or right or owner.[262] However where this is practically impossible or the available fund is inadequate, funds would be accessed from appropriated funds for such purpose by parliament.[263]

6.2.4.4ResourceDevelopmentforCommunityWellbeing

The Act recognises and establishes the rights of any community in resource areas to obtain a 'preferment right' to 'prospect or mine in respect of mineral and land which is registered or to be registered in the name of the community concerned.'[264] The grant of such application is subject to the conditions that:

(a) The grant shall be used to contribute towards the development and the social-upliftment of the community,

(b) A development plan must be submitted indicating the manner in which such right is going to be exercised, and

(c) The envisaged benefits of the prospecting or mining project will accrue to the community in question.

[261] Section 37(a)
[262] Section 37(b)
[263] Section 37(c)
[264] Section 74(1)

6.2.4.5The Mineral and Petroleum Resources Development Regulations[265]

The regulations were released in 2004. Chapter 2 of the regulations contains comprehensive provisions on the management of the environmental aspect of mining and petroleum operations.

In chapter 2, the provisions of the different sections cover methods of application procedures and terms of different rights and permits for different activities that are related to mineral and petroleum activities. These activities include reconnaissance permission, prospecting rights, mining rights, retention power, exploration, and production activities.

Under part 4 of chapter 2 of the regulations, emphasis is placed on the need for holders of permits and licences to avoid 'generation and production of pollution and waste… at source', and where this is unavoidable; the holder is mandated to dispose same in a 'responsible and sustainable manner.'[266]

Under section 64, a holder of permit or licence must comply with the provisions of the Mine Health and Safety Act[267] and other air quality management and control laws. By implication the provisions of the AQA apply fully to mining and petroleum activities.

6.3 The Promotion of Access to Information Act, 2 of 2000

As discussed in the previous chapter, the Constitution provides for the right of access to any information held by the State or another person.[268] The Promotion of Access to Information Act was enacted to give meaning to and secure the provisions of the Constitution in respect of the right of access to any information that is required for the exercise or protection of any rights. Some of the goals of the Act are to[269]:

(a) Foster a culture of transparency and accountability in public and private bodies by giving effect to the right of access to information, and

[265] Made by the Minister of Minerals and Energy pursuant to the Mineral and Petroleum Resources Development Act 28 of 2002
[266] See regulation 63.
[267] Act 29 of 1996
[268] See section 32 of the Constitution of the Republic of South Africa.
[269] See the preambles to the Act.

(b) Actively promote a society in which the people of South Africa have effective access to information to enable them to more fully exercise and protect all of their rights.

The request in respect of air quality may cover activities in a particular area or on listed activities by the appropriate authority.[270] The Act provides that a requester must be given access to a record of a public body.[271] This, however, is subject to the requester complying with the mandatory procedural requirements under the Act. It is equally important that the request for access to a record is not refused under any of the conditions outlined under chapter 4 of the Act.

A request for any information on air quality or related issues may be forwarded to the respective officers at the municipality, province or department of Environment and Tourism or through the Mayor, the MEC of the relevant department and the Minister. Request for information is to be made in the prescribed form,[272] and the applicant has a period of 30 days to await reply in respect of the request. Where there is refusal of the request for information, an applicant may lodge his appeal to the authority in the affected agency.

It must be emphasised that the application for access may be turned down under the following conditions stipulated in the Act:[273] protection of the privacy of a third party who is a natural person,[274] protection of certain records of the South African Revenue Service,[275] protection of commercial information of a third party,[276] protection of certain confidential information, and protection of certain other confidential information of a third party,[277] protection of the safety of individuals, and protection of property,[278] protection of police dockets in bail proceedings, and protection of law enforcement and legal proceedings,[279] protection of records privileged from production

[270] Sibusiso Shabalala Atmospheric Emission Licensing system (legal background)- A presentation at the *AEL. Implementation Workshop*, Pretoria. 23 June 2009
[271] Section 11 Promotion of Access to Information Act
[272] Section 18(1) Promotion of Access to Information Act
[273] See chapter 4 of the Promotion of Access to Information Act.
[274] Section 34 ibid
[275] Section 35 ibid
[276] Section 36 ibid
[277] Section 37 ibid
[278] Section 38 *ibid*
[279] Section 39 *ibid*

in legal proceedings, [280] in the instance of the defence, security and international relations of the Republic [281] and economic interests and financial welfare of the Republic and commercial activities of public bodies, [282] protection of research information of a third party, and protection of research information of a public body, [283] in the instance of operations of public bodies, [284] and manifestly frivolous or vexatious requests or substantial and unreasonable diversion of resources.[285]

However, despite the above, the public officer in deference to the need to promote or protect the public interest, is under obligation to disclose information upon request where the disclosure of the record would reveal evidence of a substantial contravention of, or failure to comply with the law, or an imminent and serious public safety or environmental risk, and the public interest in the disclosure of the record clearly outweigh the harm contemplated in the provision in question.

Public interest is expected to override the commercial information of a third party.[286] It is observed that the public interest clause provides a unique platform for civil society to access information on behalf of the public, particularly a poor neighbourhood like South Durban, in order to measure the volume and nature of gases that are emitted daily from the facilities in the basin.

In terms of environmental protection and air quality governance, the Promotion of Access to Information Act is an important tool in compelling disclosures of environmental information. Environmental information may be written, visual, aural, electronic or other forms. This include information on (a) state of the elements of the environment like air and atmosphere, water, soil, land etc; (b) factors such as substances , energy, noise, emissions, discharges, wastes; (c) measures like legislation, regulation, policies; (d) cost benefits and economic analyses and assumptions used within a framework; and (e) the state of the elements of the environment[287]. Environmental information remains an important tool in exercising environmental

[280] Section 40 *ibid*
[281] Section 41 *ibid*
[282] Section 42 ibid
[283] Section 43 ibid
[284] Section 44 Promotion of Access to Information Act no 2 of 2000
[285] Section 45 Promotion of Access to Information Act no 2 of 2000
[286] See section 46 Promotion of Access to Information Act. No 2 of 2000
[287] Environmental Information Regulation 2004 (UK) (made pursuant to section 2(2) of the European Communities Act 1972.

rights, particularly in monitoring the activities of likely polluters or compelling compliance.

Though South Africa has enacted different environmental statutes, most of the primary statutes on environment do not have categorical provision on disclosure of environmental information. However, the Promotion of Access to Information Act should be seen as an important tool for the citizens or their representatives in emission control in South Africa. The principles of this Act are further reflected in different statutes. Under the National Environmental Management: Air Quality Act for example applicant for Atmospheric Emission Licence is under obligation to notify the public about the application. In the course of the process of the application before the grant citizens may request for information. This request may cover information like "minutes of air quality officers' forum meetings; air quality management plan; allocated budget for air quality governance; emission inventory; ambient monitoring stations results; list of all listed activities being undertaken within the AELA jurisdiction; applications for listed activities; atmospheric emission licences and compliance monitoring inspection reports"[288].

6.4 The Promotion of Administrative Justice Act, 2000 (Act 3 of 2000)

As discussed in the previous chapter, the Constitution provides for the right of everyone 'to administrative action that is lawful, reasonable and procedurally fair, and 'that everyone whose rights have been adversely affected by administrative action has the right to be given written reasons.' The Constitution further directs that National legislation must be enacted to give effect to these rights and provide for review of administrative action by a court or, where appropriate, an independent and impartial tribunal among other provisions.[289]

The Promotion of Administrative Justice Act was enacted as constitutionally mandated legislation 'to promote an efficient administration and good governance; and create a culture of accountability, openness and transparency in the public

[288]Department of Environment Affairs, Atmospheric Emission Licence: Manual for Licensing Authorities (2010) 6

[289] See section 32, Constitution of the Republic of South Africa 1996.

administration or in the exercise of public power or the performance of a public function, by giving effect to the right to just administrative action...'.[290] It acts as a check and control on the use of governmental powers to prevent abuse.

Section 3 of the Act provides that 'any administrative action which materially and adversely affects the rights or legitimate expectations of any person must be procedurally fair.' To ensure a fair administrative procedure, and the right to procedurally fair administrative action, a person that is involved must be given:[291]

(a) Adequate notice of the nature and purpose of the proposed administrative action,

(b) A reasonable opportunity to make presentation,

(c) Adequate notice of any right of review or internal appeal, where applicable, and

(d) Adequate notice of the right to request reasons 'where the administrator is empowered by any other provision to follow a procedure which is fair but different from the provisions' above.[292]

The Act is therefore a restatement of the importance of the rights, and the commitment of the South African state, to the realisation of the objectives and aspirations of the Constitution. This is particularly pertinent in the enjoyment of the rights in the Bill of Rights which includes the right to an environment that is not harmful to their health or well-being, and to have the environment protected, for the benefit of present and future generations.

In interpreting the provisions of the Act, it is important to see it as expanding the frontiers of the constitutional rights towards their realisation. Where any administrative action affects the rights of the public, the Act empowers the administrative officer to hold a public enquiry.[293] Under the AQA, as discussed, parties are afforded the opportunity to be heard before a decision is taken.[294] The grant of Atmospheric Emission Licence (AEL) is subject to a public consultation process after an application has been submitted to the relevant authority. It is expected that a decision in respect of air quality by the accredited officer in terms of licensing will be given to give effect to the objectives of the Air Quality Act.

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[290] See the preambles to the Promotion of Administrative Justice Act 3 of 2000.(the PAJA)
[291] See section 3 (2)(b)
[292] See section 3(5)
[293] See section 4 of the PAJA Act no 3 of 2000
[294] Section 38(3) AQA

Decisions in matters under the Act are expected to be based on the documents that are submitted. The same condition is applicable in subsequent submissions and or arguments, representations or objections made in pursuance to the submission in compliance with the provisions of the appropriate and relevant legislation. Where an applicant is dissatisfied with the decision, an applicant may explore available internal mechanisms for appeal within the particular authority, or seek redress in the court of law.

6.5 The National Environment Laws Amendment Act, 2009 (Act 14 of 2009)

The Act came into force in September 2009. It is a continuation of the reform that started with the National Environmental Management Act. The Act amended certain provisions of the National Environmental Management Act, and the amended sections that are relevant to gas emission and air quality control are:

(a) A new section 28 under the Act which strengthens the provisions on the duty of care and remediation of the environment, and it specifically provides for measures for serious or significant pollution that occurred prior to the commencement of the National Environmental Management Act, which may occur and lead to pre existing contamination,

(b) Stiff penalties for certain offences under the new section 28(14) and 28 (15) of NEMA as contained in the amendment,

(c) Entitlement to access to environmental information under Section 31 of the Act, which is a clear departure from the existing provisions under subsections 1to 3 of the Act, and

(d) New penalties under an amendment to section 39 of the Air quality Act, which now prescribes penalties for convictions under section 51 of the Act as an imprisonment of 5 years or less and a fine not exceeding R5 million for the first conviction, and a fine of R10 million for a subsequent conviction and imprisonment for R10 million or both.

The new amendment gives jurisdiction to a magistrate's court to impose any penalty prescribed by the Act.

6.6 The Scheduled Trade and Occupations Bye laws of eThekwini Municipality

Promulgated in 1979, the Bylaw provides a list of activities that requires prior permit before operations within the eThekwini Municipality.

The Bye laws outlaws the erection, extension or addition to any building , plant or works for the purpose of refining operations or any of the other activities listed in the schedule to the byelaw in any premises or vehicle or elsewhere in the city, "without the written permission of the medical officer of health being sought and obtained..."[295]

Permit under the bye law is upon application and issuance of permit by the Medical officer of Health. Under the bye law the conditions for grant of permit for new developments or existing facilities to carry out emission generating activities are clearly defined. Public participation is an important component of such grant. This condition emphasis effective notice to the public about application for permit.

Violation of the conditions or terms of the grant may lead to closure of the facilities or issuance of a notice to abate the pollution

Generally, any act that is carried out contrary to the provisions of the bye law in terms of commencement of construction, extension or installation of building plants or any other facilities in respect of the scheduled trade and occupations, particularly a refining facility will amount to an offence under the bye law. The penalty under the bye law on conviction is a fine of R200 and R 400 for continuation of the activity after conviction. Another salient provision of the bye law is the provision for monitoring and auditing of the buildings or plant after the grant of permit, and also for the monitoring and auditing of existing plant prior to the promulgation of the bye law

[295] Section 1 eThekwini Scheduled Trades and Occupations Bylaw , 1979, (amended in 2005)

6.7 South African Policies on Emission Control

Attaining clean or cleaner air in South Africa is driven by a gamut of policies that are influenced by key issues like development at international levels and the Constitution of the Republic of South Africa 1996. As a major player in the international environmental politics and policy development, many of the country's legislation on environment have clear references to international agreements and developments at that level. In particular, emission control in the country is motivated by key principles and issues like sustainable development, climate change and other internationally driven initiatives. In addition, the tenets of the Constitution are clear impetus for clean air since the right to environment is sacrosanct under the Constitution. Air quality management in South Africa is further influenced by different policies developed within the municipal, provincial and national spheres of government. A few of these are discussed here.

6.7.1 The 2007 National Framework for Air Quality Management

As discussed in previous sections, the South African government has encapsulated its emission control policies under the "National Framework for Air Quality Management in the Republic of South Africa." Released in September, 2007, the National Framework for Air Quality Management was established in compliance with the provisions of section 7 of the National Environmental Management: Air Quality Act.[296] The section mandates the Minister to establish a national framework for the implementation of the provisions of the Act within two years of the take-off of the section. Accordingly, in 2007, the Minister released the National framework, with the aim that the document serves as guidelines for the achievement of the objectives of the AQA and give technical details on practical implementation of the Act. The document also provides immediate and long term plans for air quality management by the Department of Environmental Affairs. The content binds both the provincial and municipal governments on environmental issues.

[296] Act no 39 of 2004.

The national Framework is quite comprehensive and provides details on such matters as the purpose of the framework, the legislative and policy content of air quality management in South Africa, the guiding principles, scope and structure of the guidelines, the roles and responsibilities of persons in air quality management, the approach to Air quality management, tools for the implementation of the National Framework, the transition from the Atmospheric Pollution Prevention Act (APPA) regime to Air Quality Act regime, and the process for renewal of the national framework.

6.7.2 Climate Change Policies

In line with its obligations under different international agreements on environment in general and air quality and climate change, the South African government has developed and released some policies to control greenhouse gases and other climate change induced gases. These documents and measures include:

(a) The initial National Communication under the United Nations Framework Convention on Climate Change released in 2000,

(b) The National Climate Change Response Strategy 2004,

(c) The long Term Mitigation Scenarios: Strategic Options for South Africa released in 2007,

(d) The National Climate Change Response Green Paper released in 2010,

(e) The Reducing Greenhouse Gas emissions: The Carbon Tax Option (Discussion paper) released in 2010,

(f) The National Climate Change Response White Paper 2011, and

(g) The Second National Communication under the United Nations Framework Convention on Climate Change released in 2011

These policies and documents have contributed immensely to South Africa's growing jurisprudence and actions on emission control and climate change actions by governments and non-government organisations. The impact of these is reviewed in the next chapter.

6.7.3 The Green Economy Policy

In 2010 South Africa began the process of adopting a policy on green economy with the hosting of a green economy strategy summit. The report that was adopted at the end of the summit justifies the adoption of the policy by South Africa as 'a sustainable development path that is based on addressing the interdependence between economic growth, social protection and natural ecosystems.'[297]

The 2010 summit define green economy in the context of South Africa's policy as a :

> ***"…system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long term, while not exposing future generations to significant environmental risks or ecological scarcities."***

The strategy is developed around government departments with environmental functions and essential services, each of which is mandated to drive certain activities that will engender the transformation to a green economy. Under the policy seven departments are identified as crucial to the plan and given different responsibilities as follows:[298]

(a) The Department of Works to retrofit public buildings towards reduction of energy requirements and introduction of new building codes,

(b) The Department of Environmental Affairs to develop a national framework around climate change, the international obligations and strategy for climate change mitigation,

(c) The Department of Energy to coordinate the work on the integrated Resource Planning, long term energy and energy supply,

(d) The Department of Higher education to develop new skills to drive the green economy,

(e) The Department of Transport to improve and expand the mass transit system , inner-city transport and high speed rail links,

[297] DEAT Summit Report: Green Economy Summit 18-22 May 2010 p 4
[298] *ibid* p 8

(f) The National Treasury to develop of sustainable financing and risk sharing models towards a low carbon economy, and

(g) The Department of Mineral resources to promote new technologies towards minimising carbon emission and efficient use of energy towards a sustainable environment.

6.8 SUMMARY

The South African Constitution is reputed to be one of the most environment friendly constitutions. This position is informed by provisions like the environmental rights, the socio-economic rights coupled with the constitutional principles like supremacy of the constitution, cooperative governance, liberalised locus standi and others that are prominent in the constitution. The environmental mandate to the legislative arm of government and the mandate given to the National Human Rights Commission are vital tools for control of environment and by necessary implication, control of gas emission. The 1996 Constitutions of South Africa has no doubt inspired the enactment of modern legislation that are aimed at securing the rights and wellbeing of the people of the country. The relevant legislation for gas emission control have their roots in the 1996 constitution. The National Environmental Management Act (NEMA) which is the framework legislation for environmental protection in general provides the principles and structures on which environmental protection is based in South Africa. It further inspires and provides for the enactment and release of other legislation and policies, particularly the National Environmental Management: Air Quality Act which provides detailed provisions on emission control, air quality and other measures. Other relevant provisions address activities that generate emission and issues that are missing in the main statutes towards solving the challenge of gas emission. At the provincial level there has been no legislation despite the competence of the sphere to legislate on air quality issues, however there is evidence of bylaws at the local government and municipal level. Post 1996 Air quality law making in South Africa clearly reflects a clear departure from the APPA regime.

There is a practical demonstration of a determination by the state to align industrial activities and other possible sources of air pollution with the aspirations and determination of the state under the National Environmental Management Act of 2004, the National Environmental Management: Air Quality Act and other relevant statutes. This move is driven by the constitutional mandate to promote and protect the rights of the people to an environment that is not harmful to health and to promote sustainable development through responsive and purposeful legislation. In addition to the legislations, the South African government has developed different policies in response to its obligations under different international agreements on environment. The totality of these policies is giving direction to the state in its plan for a transformation to a green economy.

Key issues about these statutes and policies are raised and discussed in the next chapter.

CHAPTER 7
APPLICATION OF LEGAL FRAMEWORKS IN NIGERIA AND SOUTH AFRICA

7.1 Introduction

The need for development and growth remains a key factor affecting a state's obligation to protect human rights from both environmental degradation and gas emission in particular. Gas emission in Niger Delta and South Durban originates from oil and gas operations which provide a major source of revenue guaranteeing economic growth for the two countries. By implication, the factor of economic gain has been recognised as a limitation in the international efforts to control the emission of greenhouse gases and other pollutants that pose a threat to the global atmospheric environment. Hence the adoption of measures geared towards sustainable development becomes paramount. In the face of the impacts of these emissions, certain international agreements on air quality, like the United Nations Framework Convention on Climate Change[1] and the Montreal Protocol on Substances that Deplete the Ozone layers[2] recognise the need for economic growth of developing countries like Nigeria and South Africa.[3]

Article 3 of the UNFCCC states as follows:

> "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country parties should take the lead in combating climate change and the adverse effects thereof."[4]

As parties to the African Charter on Human and Peoples' Rights, Nigeria and South Africa are bound to protect the environmental rights or human rights of their respective populations from being violated through environmental degradation or other activities. In the same light, the communication of the African Commission in the

[1] Article 3 UNFCCC
[2] See Article 5
[3] The classification of parties to Annex 1, Annex II and Countries with Economies in Transition under the UNFCCC is recognition of the state of economic development of the different countries. This classification forms the basis of parties obligations to control greenhouse gas emission by the respective countries.
[4] *See* Article 3, UnitedNations Framework Convention on Climate Change, New York, 9 May 1992, 1771 UNTS 107 and Article 5, Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, 1522 UNTS 29.

Ogoni case acknowledges the right of the Nigerian government to harness its oil resources towards the fulfilment of the economic and social rights of Nigerians.[5]

The challenge however lies in balancing the right of countries to take measures to secure economic development with the right of the people to live in a clean and healthy environment.

Kenneth Roth[6] observes that damaging the environment is lucrative in many countries because it provides cheap money for government and self-seeking political leaders. The researcher is in agreement with this observation considering the different reports that have indicted government in Nigeria over unmitigated violations of the rights of the people and communities in the Niger Delta area by oil corporations.

In the Ogoni case[7], the African Commission identified the failure of the Nigerian government to regulate the oil corporations and other investors to prevent violations of the rights of the people as a factor in the environmental crisis in the Niger Delta. The commission held as follows:

> "Despite its obligation to protect persons against interferences in the enjoyment of their rights, the government of Nigeria facilitated the destruction of the Ogoniland. Contrary to its charter obligations and despite such internationally established principles, the Nigerian Government has given the green light to private actors, and the oil companies in particular, to devastatingly affect the well-being of the Ogonis."[8]

The position in the Ogoni case has been re-emphasised in a recent decision of the ECOWAS Court in *SERAC v President of Federal Republic of Nigeria.*[9] The ECOWAS' court identified "lack of enforcement of legislation and regulation in force by the regulatory agencies of the Federal Government of Nigeria in charge of supervision of the oil industry" as a factor for the unabated pollution from oil operation in the area.

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[5]African Commission on Human & Peoples' Rights 155/96 The Social and Economic Rights Action Center and the Centre for Economic and Social Rights v Nigeria para 54, Dated 27th May 2002.

[6] Kenneth Roth, The Dynamics of Human Rights and the Environment, Presentation at the Joan B Kroc Distinguished lecture Series, University of San Diego, and September 20 2007. Available at http://www.youtube.com/watch?v=JwNISdT86jA

[7]Above note 5

[8] Decision of the African Commission on Human and Peoples' Rights, Decision on Communication of The Social and Economic Rights Action Center and the Center for Economic and Social Rights/Nigeria (155/96), decision made at the 30th ordinary session of the African Commission of Human and Peoples' Right Banjul, 13-27 October 2001. Accessed online athttp://www1.umn.edu/humanrts/africa/comcases/155-96b.html on 18 June, 2011.

[9] Judgement no ECW/JUD/18/12, delivered on 18 December 2012.

The duty of parties under the African charter is according to De Feyter[10] "immediate" and not subject to the normal arrangement of progressive realisation that is typical of most socio- economic rights provisions. In the same light, the UN Committee on Economic, Social and Cultural Rights (ESCR Committee) in its general comment 14 clarified the obligations of parties to the International Covenant on Economic, Social and Cultural Rights under Article 12 of the covenant to include the following:

> ***"Prevention and reduction of the population's exposure to harmful substances such as "…harmful chemicals or other detrimental environmental conditions that directly or indirectly impact upon health."***[11]

What is appropriate in the circumstance is for governments to comply with their obligations and commitments by guaranteeing the security and protection of these rights and their ancillaries putting in place the necessary structures and machineries. According to SERAC,[12] this move will involve legislative measures, law enforcement mechanisms together with environmental impact assessment studies of economic or development operations on the environment and people in place.

Expressing human rights in legislation will, in agreement with Kenneth Ron[13] empower the people to enforce the rights and ultimately compel others to respect them. The constitutions of the two countries contain clear provisions on the basic and fundamental human rights. However a fundamental difference is in the presence of a clearly defined environmental right and the recognition of the socio-economic rights as distinct rights under the South African Constitution.[14]

Whereas under the Nigerian constitution, the socio-economic rights are expressed as fundamental objectives and directive principles of state policy,[15] the strongest pronouncement on environment is the provision of section 20 of the Constitution. The section provides that 'the state shall protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria.'[16]

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[10] Above
[11] Available at http://www.escr-net.org/docs/i/425238
[12] Abovenote 175
[13] Ron Kenneth, The Dynamics of Human Rights and the Environment, John B Croc Distinguished Lecture series, University of San Diego, California September 20, 2007
[14] See section24 of the Constitution of the Republic of South Africa.
[15] See chapter 2 of the Constitution of the Federal Republic of Nigeria 1999.
[16] See section 20, Constitution of the Federal Republic of Nigeria 1999.

This provision however, does not create any obligation for the government nor confer any right on the people in respect of protection from pollution or other forms of environmental degradation.

On the other hand, the incorporation of environmental rights provision under the South African constitution makes South Africa one of the few countries across the world that have clear provisions on the right to environment.[17]

Observably, the application of human rights to environmental protection is of different dimensions in the two countries. Under the South African framework, the scope of the Right to environment under the constitution is expansive and wide when taken along with the definition of the word environment under the NEMA which was enacted pursuant to the mandate under the constitution.[18] This indicates a clear intention to protect the people from the impacts of environmental degradation through an effective environmental governance system, with a clear mandate to the parliament and other role players and institutions to develop and put in place appropriate measures towards the sustainability of the natural resources in the midst of industrial and other development activities in the country.

The provisions of section 24 of the constitution on environmental rights together with other relevant provisions on human and socio-economic rights and the NEMA pervade environmental protection in the country. These provisions have laid a solid foundation for environmental protection through the application of human rights principles.

In conformity with the above view of Kenneth Roth,[19] the enactment of a right to environment in South Africa provides a reference point and standard that all role players strive to meet. The clear mandate to the parliament under section 24 (b) '...to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures...'is the dominating factor in

[17] This development can be explained by the new direction which followed the end of apartheid and the resolve of the nation to exterminate every element and vestiges of inequality which promotes environmental injustice.

[18] Section 1 National Environmental Management Act which defines environment to mean For instance the Act defines environment to mean the surroundings within which humans exist and that are made up of -
(i) the land, water and atmosphere of the earth;(ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing

[19] Above

environmental law making in South Africa. This provision has set a useful precedent in environmental management and control law.

After the passage of the NEMA in 1998, different laws had been promulgated by parliament in pursuance of NEMA. At the same time, the Department of Environment in South Africa regularly introduces measures, standards, guidelines and frameworks on different aspects of the environment. In air quality for instance, the department has developed and gazetted different measures to promote the right to environment through effective air quality management.

Buyelwa Sonjica[20]notes that 'the ultimate outcome of the efficient and effective implementation of the Air Quality Act is '...ambient air that is not harmful to health and wellbeing of all across the nation.'[21]

In the South African jurisdiction, the inclusion of other rights like the right to approach a competent court alleging that a right in the bill of rights has been infringed, [22] the right to just administrative action,[23] and the right to access to information[24] create further channels to challenge decisions that fail to promote environmental justice or which affect the right to environment as enshrined in section 24 of the constitution. For instance, section 32 is useful in equipping a member of the community or anyone with information that is in custody of the state or any other body including corporate organisations. SDCEA, relying on this provision, has consistently demanded information from the refinery operators on report and analysis of chemical compositions of the emissions from their facilities.[25]

It is submitted that in light of the above, specific provisions under section 24 and section 32 of the NEMA, the environmental rights under the South African constitution portends and remain a good instrument for control of emission of poisonous and atmospheric degrading gases and other pollutants.

[20]DEAT. Leading an Environmental Revolution Black Business Quarterly Score Card, (Second Quarter, 2010) p 12
[21] Emphasis from the author
[22] Section 38, Constitution of the Republic of South Africa
[23] Section 33,
[24] Section 32
[25]Interview with Desmond Dsaa.

Being a fundamental right under the Bill of Rights, the right to environment offers a platform for individuals[26] in South Durban in particular to challenge the continuous emission of dangerous gases to the environment by the oil corporations and other industries.

The extent of the action that is open to individuals in south Durban includes:

(a) The action to move the state or any of the organs of state to act, for example, to call for legislative review or action to challenge any legislation that is in conflict with environmental rights,

(b) The power to compel or challenge executive actions for example in approval of emission generating facilities, or to move the judiciary to act on issues that affect environmental and other rights of the people, and

(c) The action to protect the natural environment. In addition a person may initiate an action against individuals or corporate bodies[27] that are owners or promoters of polluting facilities.

The challenge, however, remains the dearth of cases on environmental rights in South Africa. Despite the broad and explicit provisions under the constitution on the right to environment, enforcement of rights under section 38 remains ineffective or underutilised as there has been no serious reliance on these provisions by aggrieved people or civil society to challenge the corporations on emissions in south Durban or any part of South Africa.

Both Dsaa[28] and Speek[29] agree on the slow take-off of litigation based on the right to the environment, or courtroom enforcement of the rights. They are of the opinion[30] that the slow take-off is linked to poverty. According to them, the burden of pollution is borne by poor communities who have little access to financial resources to hire legal practitioners, expert witnesses and to assemble evidence.

In the light of above observations, the challenge of environmental justice persists in South Durban despite the constitutional provision on the right to environment. As

[26] See Kotze LJ The South African Environment and the 1996 Constitution: Some Reflections on A Decade of Democracy and Constitutional Protection of the Environment. DIREITOS FUNDAMENTAIS JUSTICA N 1 – OUT/DEZ 2007 40.
[27] See section 8 Constitution of the Republic of South Africa.
[28] Interview conducted in SDECA April 2012.
[29] Interview conducted at Groundwork Pietermaritzburg, April, 2012.
[30] Above.

Ron[31] states, the argument may be advanced that these rights have been able to define and raise attention to the conditions of life in South Durban. For instance, SDCEA and other civil society bodies have relied on these rights in their various campaigns against gas emission by oil corporations in South Durban. To this extent, one may conclude that the right to environment in the constitution provides a platform for the people in south Durban to create awareness and challenge environmental injustice from the polluting facilities.

In Nigeria, the absence of a clearly defined right to environment in the constitution and the limitation of socio-economic issues to fundamental objectives and directive principles of state policy puts a barrier to a direct right to environment through the courts.

This situation has frustrated the local people in the Niger Delta. The result has been a constant demand for negotiation for financial compensation by the local people from the oil corporations for environmental damages, particularly in oil pollution related issues. No attention was given to remediation of the environment or the abatement by polluting corporations.

In what may be described as activism, there is now a resort to the use of the classical human rights provisions in the Bill of Rights under chapter 4 of the constitution to expand the interpretation of the rights to promote environmental and other socio-economic rights. This approach provides a platform for a description of the impact of gas emission and gas flaring, in particular on the lives of the people in the communities, their health, food, job and neighbourhood, since human rights are, according to Ron, an important analytical tool for determining the consequences of environmental degradation.[32]

In the case of *Jonah Gbemre v Shell Petroleum Development Company and Nigerian National Petroleum Corporation*,[33] the court applied the human rights principles under chapter 4 of the Nigerian Constitution. It declared that the release of gas emission through gas flaring and other polluting activities in the course of oil production in the Iwherekhan community in the Niger Delta amounted to a violation of

[31]Above note 6.
[32]Above
[33] Suit no FHC/B/CS/53/05

the right to life and to a clean environment. The court in particular agreed with the plaintiff on the negative and destructive impact of the release of gas emission in the form of gas flaring in the community. In upholding the arguments of the plaintiffs, the court held that gas flaring in the course of exploration and production of crude oil and other petroleum activities 'seriously pollutes the air, causes respiratory diseases and generally endangers and impairs the health of members of the community.' According to the court, these activities exacerbated numerous consequences of pollution that led to:

(a) Poisoning and pollution of the environment,
(b) Exposure to risk of premature death, respiratory illness, asthma and cancer,
(c) Contributing to adverse climate change,
(d) Reducing crop production and adverse impacts on food security, and
(e) Acid rain, corrosion of corrugated house roofs by the composition of the rain that falls as a result of gas flaring.

The above case came after the Ogoni case. In *the Social and Economic Rights Action Centre and the Centre for Economic and Social Rights v Nigeria*[34] before the African Commission on Human and Peoples Rights, the Ogonis complained about environmental degradation and health problems from oil operations in their land. They alleged that the Nigerian State did not monitor the operation of the multinational oil corporations. In 2001, while upholding the right of Nigeria as a sovereign state to embark on economic activities, the Commission found that the government of Nigeria violated Articles 2 (non-discriminatory enjoyment of rights), 4 (right to life), 14 (right to property), 16 (right to health), 18 (family right), 21 (right of peoples to freely dispose of their wealth and natural resources), and 24 (right of peoples to a satisfactory environment) of the African Charter on Human and Peoples Rights.

Furthermore, in the case of Nigeria, its obligation under the African Charter on Human and Peoples Rights was re-echoed by the ECOWAS court in the recent case of *SERAC v Federal Republic of Nigeria* decided in December 2012. The Court held that the

[34] Communication 155/96, http://www.cesr.org/text%20files/nigeria.PDF

different international instruments on human rights are applicable in all ECOWAS member states,[35] and held as follows:[36]

> ***"That these instruments may be invoked before the Court reposes essentially on the fact that all the Member States parties to the Revised Treaty of ECOWAS have renewed their allegiance to the said texts, within the framework of ECOWAS. Consequently, by establishing the jurisdiction of the Court, they have created a mechanism for guaranteeing and protecting human rights within the framework of ECOWAS so as to implement the human rights contained in all the international instruments they are signatory to."***

The question of the sustainability and enforcement of the recommendations of the court in Jonah Gbemireh is however a challenge that is to be determined by different factors. Seven years after the Jonah Gbemreh case, gas flaring is still reported in the Niger Delta even in the plaintiff community of Iwherekhan community.

Despite the provisions of the different international covenants and decisions of the different courts, it is sadly noted that these lofty provisions are not backed with the necessary actions. In Nigeria in particular, the government appears more committed to its polluter partners - the multinational oil corporation[37] at the risk and threat of gas emission and environmental degradation.

The government and multinational corporations are known to disregard court orders with impunity, for instance, despite the order of the court in the Gbemireh's case, the Nigerian government and Shell Petroleum have continued the illegal act of gas flaring.

The above development exposes one of the weaknesses of engaging litigation as a tool for enforcement of environmental rights through the classical fundamental human rights. Apart from disobedience by governments, as shown in the above case, the cost of sustaining such action in court can be huge and prohibitive. According to Williams[38] the cost of litigating oil related environmental cases in the Niger Delta is usually beyond the reach of ordinary people. According to him, the Jonah Gbemreh case was sponsored

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[35]In particular, the court mentioned instruments like the African Charter on Human and Peoples' Rights, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, etc. to which the Member States of ECOWAS are parties.

[36]Judgement no ECW/CCJ/JUD/18/12

[37]This partnership has only led to compromise and horse trading which sustains the corrupt political class that overlooks enforcement of rights in exchange for patronage from the corporations. Access to cheap oil money sustains the corrupt lifestyle of the political class, who treats the oil industry as a no go area in order not to "hurt the economy".

[38] Williams Chima, one of the lawyers in the Jonah Gbemreh's case and head of the legal team at Environmental Rights Action, Nigeria. Interview at ERA office Benin City Nigeria, January 2011

by Friends of the Earth International and the Environmental Rights Actions, Nigeria 'at a huge cost which ordinarily was beyond the reach of the Iwherekhan community or any other recipient party in the Niger Delta.' Successful prosecution of polluting industries will involve spending huge amounts of money to hire senior advocates,[39] pay expert witnesses and handle other logistics.

In summary, it is observed that different provisions exist under the different international regional agreements and the constitutions of the two countries together with court judgements that establish the link between the environment and human rights to compel the two countries to act. South Africa's constitutional provision on environment under the 1996 constitution stands out as a model for other countries. Despite these laws, the application of the human rights principle as a tool for environmental control against emission is still below expectations in the two countries. Relevant common factors in the two countries include; the low levels of awareness among the people about the link between a healthy environment and human rights; governments' reluctance to wield the "big stick" of sanction against the offending corporations; the high levels of poverty among the direct victims of gas emission and environmental degradation; the high cost of litigation; and the absence of adequate capacity and institutional support for victims of environmental abuse.

While South Africa has put in place appropriate legislative measures through the recognition of the right to environment and socio-economic rights, the expected growth in the environmental rights jurisprudence of the country is not yet visible, as both civil and private actions for environmental rights are not forthcoming since the adoption of the constitution.

In the case of Nigeria, the approach is far behind the development in South Africa. As noted, the government in Nigeria remains more committed to its polluter partners - the multinational oil corporations[40] than to the people and the environment.

[39] It is a practice that the oil corporations spend huge resources on their litigations. This enables them to hire the best of lawyers from the elite class of the senior advocates in Nigeria. This often lead to intimidation of the poor communities and their members in oil pollution related issues of legal practitioners

[40] This partnership has only led to compromise and horse trading which sustains the corrupt political class that overlooks enforcement of rights in exchange for patronage from the corporations. According to Olubayo Oluduro an expert in Environmental law (interview on 18 December, 2012) "Access to cheap oil money sustains the corrupt lifestyle of the political class particularly at the Federal level in Nigeria, they in turn treat the oil industry as a no go area for reform under the hypocritical claim of not hurting the economy.

The necessary legal frameworks that come with environmental and socio-economic rights is still lacking in the constitution. As a result the enthusiasm that greeted the successful attempt to entrench environmental rights through the court room in Jonah Gbemreh's case has been dampened by government and Shell Corporation's disregard of court orders.

7.2 Application of international framework measures for control of gas emission in Nigeria and South Africa

As discussed, gas emission and related air pollutants raise closely related issues like depleted air quality, climate change and stratospheric ozone depletion. The reality however, is that air quality is given more attention mostly at the national or domestic levels because of the immediate consequences and the economic implications of some of the climate change adaptation measures. While there have been different interventions at the global level to set standards and guidelines for air quality, different measures also exist under different applicable international covenants and treaties to reduce emission at the domestic level with the goal of attaining cumulative reduction globally. Nigeria and South Africa are active participants in major international treaty making on atmospheric environment among other environmental treaties.[41]

The commitment of the two countries to emission control and global atmospheric greenhouse gas control is discussed in chapter 3 particularly as signatories to different international covenants and treaties on global greenhouse gas emission control and climate change. For instance, the two countries have obligations and responsibilities under the Vienna Convention for the Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer, the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, the Marrakesh Accord, the Stockholm Convention on Persistent Organic Pollutants (POPs), and the international Bills of Rights.

[41] South Africa in particular has played leadership and prominent roles in international environmental protection initiatives, hosting the conference on sustainable development in year 2002; it assumed the presidency of the Conference of Parties to the UNFCCC and hosted the COP 17 in 2011.

The growing impact of climate change has raised the issue of emission of greenhouse gases beyond environmental sustainability to new dimensions like the serious impact on the economy, trading activities and even security in different countries across the world.[42] This development makes discussion and actions by countries on mitigation and adaptation measures for climate change inevitable at the national level, even among non-Annexure 1 nations under the Kyoto protocol.

Apart from being major emitters of greenhouse gases and emission from primary energy productions and mining operations (in the case of South Africa), both countries are particularly identified under different reports on climate change as vulnerable to the consequences of climate change.[43]

As non-Annexure 1 party countries, the two countries have no general obligations under the UNFCCC and the Kyoto protocol to the UNFCCC to reduce carbon emissions directly. The two countries however, have obligations[44] to prepare national communications or inventories of anthropogenic emissions of all greenhouse gases not regulated under the Montreal Protocol. However, the status of South Africa and Nigeria as 'countries whose economies rely heavily on income from fossil fuel production and commerce'[45] is acknowledged under the Kyoto protocol as opening such countries to the harmful consequences of the implementations of the provisions of the UNFCCC. The two countries, therefore, qualify for assistance under the Clean Development Mechanism (CDM) and other mechanisms[46] under UNFCCC and the Kyoto protocol towards diversification to non-carbon intensive sources of energy and investments.

The CDM as a mitigation measure under Kyoto protocol[47] provides opportunities for Annexure 1 countries or economies in transition to fund projects in developing

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[42] Yvo de Boer, (Foreword) Uniting for Climate Change: A Guide to the Climate Change Convention and the Kyoto Protocol, p. 5 accessed on 18 June 2011 at http://unfccc.int/resource/docs/publications/unitingonclimate_eng.pdf.

[43] See for instance Nigeria's National Adaptation Strategy and Plan of Action on Climate Change in Nigeria. Which chronicles the impact of desertification, flooding and other climate change related environmental problems in Nigeria.

[44] See pargraph 1(a) Article 4

[45] In the case of Nigeria the economy depends solely on exportation of crude 0il, while South Africa's economy relies heavily on energy production see details about this. Seeabove

[46] Joint implementation and Emission trading

[47] See Article 12 of the Kyoto Protocol to the United Nations Convention on Climate Change.

countries like South Africa and Nigeria in return for 'Certified Emissions Reductions' credits for the investment.[48]

Consequently, in compliance with different requirements under the UNFCCC and the Kyoto mechanisms, the two countries have developed and released different strategic documents, policies and guidelines[49] on emission control. These serve a dual purpose of promoting growth in the economies of the two countries as well as meeting the international obligation of developing adaptation and mitigation measures within the respective boundaries and the global reduction of greenhouse gases.

The release of South Africa's Climate change policy has been described as a confirmation of the vulnerability of the country to the impacts of climate change. According to the minister of Environment -[50]

> ***"…early impacts are being felt on agricultural production, food prices and food security, which will have disastrous social and economic consequences if we do not take bold steps to address climate change."***

South Africa's approach to climate change is dictated by two main objectives.[51]

(1) Building and sustaining South Africa's social, economic and environmental resilience and energy response capacity through effective management of the unavoidable impact of climate change.

(2) Participating in the global initiatives towards stabilising greenhouse gases (GHG) concentration.[52]

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[48]ibid

[49]In the case of Nigeria, the following documents and policy papers have been developed and some released: The National Adaptation Strategy and Plan of Action on Climate Change in Nigeria (released in November, 2011), Climate Change Policy and Response Strategy, National Biodiversity Strategy and Action Plan, First National Communication to the UNFCCC (November, 2007), The National Policy on Environment, Drought Preparedness Plan (September, 2010), National Policy on Erosion and Flood Control (September 2010), National Water Policy (2010), National Forest Policy (2010), National Health Policy (2010). In South Africa on the other hand the following strategic documents and policies have been developed and released: White Paper on the Energy Policy of the Republic of South Africa (December, 1998), The integrated Energy Plan for the Republic of South Africa (march 2003), White Paper on the Renewable Energy for the Republic of South Africa (May 2004), A National Climate Change Response Strategy for South Africa (September, 2004), Long Term Mitigation Scenarios (October, 2007), National Climate Change Response Green Paper (November, 2010), National Climate Change Response White Paper (October 2011).

[50]Hweshe Francis,SA launches climate change policy, South Africa. Info. (19 October 2011) Accessed online at http://www.southafrica.info/about/sustainable/climate-191011.htm#.UFNrVlGZeSoon 3rd September, 2012

[51] See Government of the Republic of South Africa, The National Climate Change Response Strategy White Paper (October 2011).

To realise the above, the climate change policy of the country is based on six elements.[53]

(1) Using a National GHG Emission Trajectory Range to measure outcome of all mitigation action.

(2) Defining emission reduction outcomes for each significant sector and subsector of the economy.

(3) Adopting a carbon budget approach towards a flexible and least cost mechanism for companies in relevant sector or subsector of the economy.

(4) Mandatory preparation and submission of mitigation plans on achievement of mandatory desired emission reduction outcomes by companies and other entities for which desired outcomes have been established.

(5) Sustainable job creation and other development benefits through the development and implementation of wide range and different types of mitigation policies, measures and actions.

(6) Using different types of economic instrument to support desired emission reduction outcomes.

(7) Establishing a Greenhouse Gas Inventory and a monitoring and evaluating system in support of the analysis of climate change impact.

As stated previously, in 2011 the South African government launched a new National Climate Change Response Policy.

Under the Kyoto protocol, the CDM has driven different emission reduction projects and activities in developing countries. The emission reduction targets have earned the participating countries certified emission reduction (CER) in their emission reduction targets. As at January 2013, a total of 6000 projects have been registered under the CDM in 83 developing countries.[54]

Generally, the CDM as a Kyoto tool has proven to be a good platform for technological growth and development of alternatives to fossil fuel based sources of

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[52]This according to the white paper is informed by the need to avoid "dangerous anthropogenic interference with the climate system" within a period that supports sustainable economic, social and economic development.

[53] See the South African Climate Change Response Strategy White Paper

[54]United Nations Clean Development Mechanism Climate Change, Kyoto Protocol's Clean Development Mechanism surpasses 6000 projects (CDM News Release) Bonn, 30 January 2013, available online at https://cdm.unfccc.int/press/releases/2013_01.pdf.

energy. In South Africa, though the Designated National Authority became operational in 2004,[55] and the Department of Energy was formerly designated for the purpose in 2005 [56] with a mandate to coordinate all the CDM activities in the country in fulfillment of the requirement under the Kyoto protocol. As at the end of 2011, 21 projects with capacity to reduce 3 573 780 tonne of carbon dioxide equivalent (CO_2e)/year) have been registered as the CDM projects in South Africa.[57] These projects are mostly in fuel switching,[58] hydro power,[59] cogeneration,[60] nitrous abatement,[61] methane recovery,[62] energy efficiency,[63] gas flaring,[64] renewable energy,[65] waste management,[66] and bio-fuel productions[67] to name but a few.

On the other hand, the Special Climate change unit in the Federal Ministry of Environment is the Designated National Authority in respect of the CDM activities and other climate change issues in Nigeria. In addition, a Bill for the establishment of the National Climate Change Commission is pending before the National Assembly for the harmonisation of climate change activities in the country.

A cardinal feature of the operation of the CDM mechanism in Nigeria is that it is targeted at reduction of gas flaring and also towards utilisation of gases that would have been flared or vented for energy production and use. This anti-pollution development therefore, involves the active participation of the multinational oil corporations as promoters of some of the CDM projects in the country. Nigeria's membership of the

[55] See Department of Minerals and Energy, South Africa's Designated National Authority for Clean Development Mechanism, accessed December 18, 2018 at http://worldcongress2006.iclei.org/uploads/media/C5_TYANI_Designated_National_Authority_for_CDM.pdf

[56] See Regulations for the Establishment of a Designated National Authority for the Clean Development Mechanism**,** Government Notice R721 in *Government Gazette* 27788 of 22 July 2005.

[57]South African Designated National Authority for the Clean Development Mechanism CDM Status Review (DNA Annual Report: 2011) 3

[58] For instance, the fuel switch project on the gluten 20 dryer of Tongaat Hullet Starch Pty (Ltd) Germiston Mill Project" and the "Lawley Fuel Switch Project, Rosselyn Brewery Fuel Switch Project. See South African Project Portfolio (2012)

[59] For instance the Bethlehem Hydro Project.

[60] For instance PetroSA Bio-gas- to energy Project, Emfuleni Power Project, Cogeneration from Waste Smelter Gas at Richards Bay Minerals in South Africa

[61] Sasol Nitrous Oxide Abatement Project, Omnia FertilizerLtd, Nitrous Oxide Reduction Project

[62] Nelson Mandela Bay Metropolitan's Landfill Gas Project

[63] Kuyasa Low – Cost Urban Housing Energy Project.

[64] EnviroServe Chloorkop Landfill Gas Recovery Project

[65] Sasol Limited Natural Gas renewal project,

[66] For example, Waste Heat Recovery for Electricity Generation at Ulco cement plant

[67] For example Mafikeng Bio-Diesel, Meyerton Bio-Diesel and others.

Global Gas Flaring Reduction Public Private Partnership[68] provides an important platform for harnessing the opportunities under the CDM to reduce gas flaring from oil productions. The partnership which consists of oil producing countries and some multinational oil corporations[69] promotes the CDM as a means of reducing gas flaring from oil production fields and as a platform to achieve the objectives of the Kyoto protocol. In addition, the partnership engages in capacity building in Nigeria towards promoting investment in projects that lead to the reduction of gas flaring and removal of barriers to the utilization of flared gases.[70]

As a result of the different initiatives, six CDM projects are presently on-going. These are the recovery of associated gas at Kwale,[71] the Ovade Ogharefe Gas Capture and processing Project,[72] efficient wood stoves by Development Association for Renewable Energies,[73] Municipal Solid Waste Composting at Ikorodu,[74] Save 80 Efficient woodstoves,[75] and the Asuopu-Umutu Marginal Field Gas Recovery Facility.[76] Additional projects are at present awaiting the approval of the CDM process.[77]

In summary, the following: The two countries have taken different initiatives to promote the different international agreements and measures on control of greenhouse gases and other measures that are aimed at mitigating and adapting to the impacts of climate change. Accordingly, there is evidence of the CDM projects in both countries. The challenges, however, remain the expected technological transfer and transformation

[68] Established at the World Summit on sustainable Development in 2006
[69] Established after the Conference on Sustainable Development in 2002
[70] See ICF Nigeria: Carbon Credit Development for Flare Reduction Projects Guidebook (2006) p 18
[71] Promoted by Nigeria National Petroleum Corporation (NNPC) and Nigeria Agip Oil Company (NAOC)
[72] a joint venture between the Nigerian National Petroleum Corporation and Pan Oil
[73] operated by Development Association for Renewable Energies (DARE)
[74] By Earth Care Nig LTD
[75] DARES/Atmosphair
[76] Initiated by Platform Petroleum
[77] See CDM: How Nigeria can rake in N86 billion Per year. Enviro News Nigeria. Accessed online on 18 July, 2012 at http://www.environewsnigeria.com/2012/07/31/cdm-how-nigeria-can-rake-in-n86b-yearly These projects include, "the Kanji Hydropower Rehabilitation Project, (PHCN); Displacing grid/off-grid steam and electricity generation with less carbon intensive fuels in Aba; Blended Cement Production at the Lafarge/WAPCO cement facilities; Gas Flare-out Project at Niger Delta Petroleum Ltd Oil and Gas Field; ADDAX Petroleum Development (Nigeria) Limited's Offshore Associated Gas Capture and Utilisation Project; and, INTOL-JPI Environ Management Systems' "APA Integrated Waste Management Project", "Gathering, treatment, transmission and utilisation of non-associated (NAG) and associated gas (AG) for power generation and supply to customers (including domestic customers)"(Shell); "Energy Efficient Lighting Project (CFL) for Nigeria" (BAS Consulting); "Efficient Lighting Systems Project for the Nigeria Clean Energy Access Program (NCEAP)"(CDC); Global Bio-fuel Limited's "Grid-Connected Electricity Generation from Bagasse Surplus Project; Threshold Bio fuels and Energy Company"; and others.

of the economies of the two countries. In Nigeria, despite extant efforts so far, the initiatives on gas recovery and utilisation appear not to have made any meaningful impact, One of the causes for the slow improvement remains Nigeria's energy sector, particularly in terms of electricity generation for domestic use and energy supply to the industries which should have improved as a result of the policy on gas utilisation and gas flaring reduction.[78]

In general, the expected reduction of emission of greenhouse gases from South Africa and Nigeria is not noticeable nor has it been reported. It is important to state that the two countries have not taken full advantage of the opportunities available under the CDM in terms of reduction of emission in the affected communities. In terms of registered CDM projects, South Africa has made some appreciable progress with its 21 registered projects compared with Nigeria with only 6 projects so far. The general performance is however low considering the world total of 6558.[79]

In the following section, a review of specific legislative measures applicable to environmental management and emission control is undertaken. This is towards promoting better administration of gas emission, particularly from the oil and gas industries in the two countries.

[78] As at December 2012 Nigeria generates an abysmally low 4,500MW for a population of over 120million. See Nigeria Power Generation Hits 4,500 MW, Premium Times Nigeria, December 23, 2012, available online at http://premiumtimesng.com/news/112442-nigeria-power-generation-hits-4500mw.html.

[79] Data as of 28 February, 2013, see CDM insights - intelligence about the CDM at the end of each month, available online at http://cdm.unfccc.int/Statistics/Public/CDMinsights/index.html

7.3 Compliance, Enforcement and Access to Justice in Gas Emission Cases

This section examines the measures available under the legal frameworks to compel compliance by the regulated operators in gas emission and air quality cases. The exposition involves an examination of public and private enforcement of the legislative frameworks and issue of access to justice for victims.

Government responsibilities and mandate in environmental management, and by implication emission control, are identified by Kidd[80] to include different functions like management functions, legislative functions, authorisation functions, judicial functions and others. Some of these have been highlighted in the course of the thesis. Each of these functions provides a platform for the process of compliance and enforcement of laws where there is good governance by the rule of law.[81]

A common feature of environmental legislation across the world, and in the two countries in particular, as seen in the previous chapters, is the presence of provisions that empower governments, their agencies and officials to compel compliance with environmental legislations in the regulated communities and facilities.

Apart from the State's obligation to promote wellbeing of the people, the successful public enforcement of pollution control can be attributed to different factors. Polinsky[82] identifies factors such as the complexity of the modern industrial process, the difficulty of identifying really offending pollutants in the industrial chain, and the obligation to establish the culpability of a defendant to place governments in the forefront of environmental control management.

Despite these attractions, the complimentary role of private actions as an important tool for enforcement of environmental law cannot be over emphasised, particularly in instances where the victim can easily identify the polluter.[83] Private actions in the two countries may be reinforced with active use of the access to information legislations in the two countries. The Promotion of Access to Information Act[84] in South Africa and the new Freedom of Information Act[85] in Nigeria are

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[80] Kidd Michael *Environmental Law* (second Edition), (JUTA,2011) p 266 to 267.
[81] INECE, Principles of Environmental Compliance and Enforcement Handbook (2009) p 12
[82] Polinsky Michael A, Shavell Steve: The Theory of Public Enforcement of Law in Polinsky & Shavell (eds) *Handbook of Law and Economics, Volume 1 (Elsevier,2007).*p 406.
[83] *Ibid*.
[84]Act no 2 of 2000

important tools in terms of emission control. The two statutes are aimed at securing access to public records and information in the respective countries. These instruments though with certain limitations[86] are important tools for citizens or their representatives in monitoring the process of grant of permits and licenses by government agents or to demand for information from facility owners in respect to emission control.

Public enforcement of environmental laws entails government use of regulators to control violations of environmental legislation, and rules and standards towards promoting public and private environmental values of a particular society.[87] This provides opportunity to establish and promote clearly outlined terms and a legal basis for guidance and compliance.

In each of the two countries, the various institutions promoting numerous measures constitute the mechanism for public enforcement of emission and air quality control. Equally, the private right of recourse against private wrongs is guaranteed through private prosecution, interdict (injunction), enforcement of human rights, and general civil actions.

In South Africa, the combined effect of the provisions of NEMA as the framework legislation for environmental management together with the NEM: AQA is the existence of a web of enforcement authorities which promote diverse activities[88]towards monitoring compliance and enforcement of legislation on air quality,

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[85] 2011

[86]Both statutes contain provisions on exceptions to freedom of access to information

[87] Principles of Environmental Compliance and Enforcement Handbook (International Network for Environmental Compliance and Enforcement April 2009) p. According to INECE This is possible according to in the case public values when: (a) rule of law and good governance is promoted, (b) there is fairness and strengthening of the credibility of environmental requirements; (c) protection of public health. On the other hand private values are promoted when there is reduction of business risks, whichin a multiplier effect generates and spread new ideas which may result to competitiveness and creation of more jobs and markets. See INECE *ibid*

[88] Since the promulgation of the 1996 Constitution and other legislations on environment, different environmental compliance and enforcement programmes like the followings have evolved overtime in South Africa, particularly in line with the provisions of section 31D of NEMA, these include:

a. Annual release of National Environmental Compliance and Enforcement Report (NECER) by the DEAT
b. Industrial Compliance Enforcement Programmes which according to DEAT has now moved from giving owners of facilities time to comply to an era of criminal and administrative enforcement. The new move has led to actions on the part of the industries towards meeting the standards.
c. Establishment of the Environmental Management Inspectors in pursuance to section 38 (1) D) o NEMA. The Department of Environment and Tourism is mandated under the Regulation 6(2) of the Regulations relating to Qualification Criteria, Training and Identification of, and Forms to be used by Environmental Management Inspectors (GN R494 in GG 28869 of 02 June 2006)
d. Capacity building for Environmental Management Inspectors, prosecutors and magistrates
e. Environmental crimes and incidents hotline

emission control and other forms of environmental degradation. Both NEMA[89] and the NEM:AQA identify the Department of Environment and Tourism, Provincial Departments of Environment and Municipalities as the key drivers of the implementation of air quality legislations.

These institutions compliment the Environmental Management Inspectorate (EMI) which has the statutory mandate under NEMA to monitor compliance and enforce environmental legislation[90] in the country. Equally important, the monitoring of standards in South Africa, is the role of the industry. The South African Petroleum Industry Association (SAPIA), a body of independent petroleum producers plays an important role in regulating environment in members' facilities. The association monitors compliance with emission standards through a common emission management strategy, a standardised emission reporting system protocol, and common flaring report protocol. In addition, SAPIA monitors air emission compliance through a joint monitoring mechanism and shared facilities.[91]

In Nigeria, NESREA has the statutory mandate to enforce all environmental laws, guidelines, policies, standards and regulations. This however, does not include the oil and gas industry. The responsibility for monitoring compliance and enforcement of emission control and other environment related legislation in the oil and gas industry is vested in the Department of Petroleum Resources. The Federal Ministry of Environment on the other hand monitors EIAs on specified projects. The states and the local government do not have assigned roles for control of emission from oil and gas operations. Although State Environmental Protection Agencies exist in some of the states, the agencies operate with limited powers, as discussed earlier, as a result of constitutional restraints imposed under Nigeria's unique federation.

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f. National Department Complaints and Emergency Incident Register
g. Integration of law enforcement agencies like the National Prosecution authorities and the Police in enforcement of environmental legislations.
h. Regular meetings of stakeholders like the South Africa Air Quality Governance Conference Lekgotla and the annual environmental compliance and enforcement

[89] See section 31 D of NEMA.
[90] See section 31 D of NEMA
[91] See. South African Petroleum Industry Association, Key Issues – Environment : Emission & Pollutant. Accessed 18 January 2013 at www.sapia.co.za/key-issues/environment /emissions-and-pollutants.html.

The difference here is that while the Department of Environment and Tourism in South Africa plays a vital role in enforcement activities, the same cannot be said about the equivalent institution in Nigeria (the Federal Ministry of Environment). Sadly, this body does not control emissions and environmental problems that emanate from oil operations. This constitutes one of the major sources of environmental degradation in the country.

A deliberate policy of developing the capacity of EMIs through different programmes has led to an increase in the number of personnel across South Africa. For instance, the number rose from 1076 in 2010/2011 to 1399 in 2012.[92] This increase, however, is not matched by the expected improvement in the number of inspections of industrial activities under the Industrial Compliance Enforcement Programmes by EMI and inspectors from the DEAT, provincial departments and the municipalities. A noticeable decline in inspection of industrial facilities from 2877 cases in 2010 to 2498 in 2012 and a further decline in proactive inspection from 2196 in 2010 to 1215 in 2011/12[93] was recorded. This occurred from cases of non-compliance and disregard for permits that were recorded in 2009 after different inspections of some industrial facilities by the joint team of EMI and the DEAT.[94] This decline portends a setback for enforcement, as this forecloses opportunities to detect non-compliance cases and violations of permits by operators.

The use of criminal prosecution for enforcement is a common feature, as most legislative measures prescribe penalties for non-compliance or violations of provisions of the two countries. In South Africa, regular capacity building programmes for Environmental Management Inspectors, Prosecutors and Magistrates across the country[95] have led to a rise in the use of criminal prosecution in enforcement of environmental legislation. Between 2010/11 and 2011/12 the number of convictions for environmental crime has risen from 75 to 82. While this increase may appear insignificant, however, recent convictions in the case of *State v Silicon Smelters*[96] and

[92] See National Environmental Compliance and Enforcement Report 2011 – 2012 7
[93]Ibid
[94] See National Environmental Compliance and Enforcement Report 2008 – 2009 25.
[95] See the National Environmental Compliance and Enforcement Report 2011 – 2012
[96]*State v Silicon smelters* reported in 2011-2012 National Environmental Compliance and Enforcement Report, p 29. In the case the defendant company was sentenced to a fine of R2 000 000 (two million Rand for operating a

State v Aesthetic Wastes Services Ltd [97]for offences on atmospheric emissions under the NEM:AQA clearly points to the emergence of criminal prosecution as an effective mechanism in emission control in South Africa. On the other hand in Nigeria, non-compliance with the provisions of the legislations may attract closure of facilities and criminal sanctions against the owners or management. The South African situation provides a better scenario when compared to Nigeria, where records and data on convictions in environmental matters are not readily available.

Significantly, section 31 of NEMA offers protection to whistle blowers and guarantees access to any information on the environment to any government agency. This provision is noteworthy in regard to its potential to promote access to environmental information. Equally important is the Promotion of Access to Information Act[98] it is similar to the Right to Know provisions under the United States environmental legislation. These provisions encourage the release of environmental information, particularly from sources not eager to be environmentally compliant.

The Kuala Lumpur Statement[99] emphasises the need to strengthen the operational linkages between social justice and the environment in issues such as (a) environmental impact assessment, (b) procedural principles, (c) participation, (d) access to justice, (e) balancing environmental and development considerations in judicial decision making and public prosecution, and (f) wider use of environmental audits as a means of promoting environmental sustainability. The statement reiterates the important role of the legal community in promoting the national and international drivers of sustainable development. This statement acknowledges the definite and defining roles of court in engendering sustainable development and promoting environmental justice across the world.

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facility – a silicon smelter without an atmospheric emission license contrary to the provisions of the NEM:AQA ; and additional R1 000 000 (One Million Rand) for unlawfully and intentional commission of 'an act which caused or was likely to cause significant pollution to the environment' contrary to section 28(14) of NEMA.

[97]*State v Aesthetic Wastes Services LTD,* 2011-2012 National Environmental Compliance and Enforcement Report, p 30. The accused was found guilty of contravening section 20(1) of the Environmental Conservation Act – for operating a waste disposal site without a license; and section 35(2) of the National Environmental Management: Air Quality Act (failure to take reasonable steps to prevent the emission of noxious and offensive odours). The accused was found guilty and sentenced to R200 000 suspended for five years

[98] Act no 2, 2000

[99] The United Nations Preparatory meetings for the World Congress on Justice, Governance and Law for Environmental Sustainability, Kuala Lumpur, Malaysia, on 12-13 October 2011

Addressing the issue of access to justice in gas emission or air quality brings into the fore the anthropocentric aspect of environmental protection[100] in Niger Delta and South Durban as the locations of the most affected victims of injustices from the different pollution sources. The other important aspect is the channel offered by the legal framework for addressing or eliminating the conduct or activity known to be responsible for the wrong.

The nature of the two countries as constitutional democracies, places a responsibility on the court to secure the affected rights and liberties of the people where there is uncontrolled release of emission. The court is also central in compelling compliance with available statutes towards the realisation of a healthy environment and air quality.

In addition, as emerging states, the transition from dictatorial regimes and anachronistic legal regimes like rigid application of common law principles in the two countries to modern and global liberal environmental protection regimes demands a virile, independent and efficient court system. The latter position explains the hard and difficult task of bringing and sustaining an action on environmental matters before a court and other tribunals.[101]

Legal standing (locus standi) as a principle in civil action has always been the drawback in litigation across the world. In South Africa and Nigeria, there has been no exception particularly in the pre-1996 constitution era in South Africa where rigid adherence to the principle led to failure of many cases initiated by individuals and civil societies for failure to meet the technical principle of legal standing.

However, with the 1996 Constitution in South Africa, sections 38 of the Constitution and Section 32(n) of NEMA guarantee unhindered access to the courts on human rights, environment rights and environmental issues. NEMA, in particular, provides a safeguard against the narrow common law approach on locus standi in environmental matters. With the position in South Africa, Kotze and du Plessis are of the opinion that the South African courts are left 'with little discretion' on whether to

[100] MacDonald A David (ed), *Environmental Justice in South Africa*, (UCT, 2002) 4.

[101] Even after the emergence of the new constitution in South Africa with the its liberal dispositions and clear provisions on locus standi, the courts in South Africa is yet to divorce itself totally from the imperial locus standi principle.

entertain any issue on environment and environmental rights on the ground of locus standi.'[102]

The latter provision on legal standing as provided under NEMA[103] widens the ambit of protection by giving standing to not only to individuals acting on behalf of themselves, but also to those who may approach the court on behalf of their community. It provides for instances in which anybody may wish to act on behalf or for the environment. In addition, subsection (2) offers protection to individuals who or organisations that ordinarily should be made to pay costs for a failed litigation, but are now excluded where the matter is environment related. Thus, the stage is already set for a liberalised legal standing regime in environmental cases.

While the court is yet to make a categorical pronouncement on the issue of locus standi under the 1996 constitution, the opinion of the court in *Wildlife Society of Southern Africa v Minister of Environmental Affairs and Tourism of the Republic of South Africa*[104] is instructive on what will be the position of the court in South Africa in future cases in common law. The judge in the case said that:

> "...where a statute imposes an obligation upon the state to take certain measures in order to protect the environment in the interests of the public, then a body such as the first applicant, with its main object being to promote environmental conservation in South Africa, should have locus standi at common law to apply for an order compelling the state to comply with its obligations."

In agreement with Kotze and du Plesses, it is submitted that in view of the provision of section 8[105] and section 39(2) of the constitution, any court, forum or tribunal interpreting legislation, or developing the common law or customary law is obliged to promote the values, objectives and aims entrenched in the Bill of Rights. What is important here for access to environmental justice is that application of the Bill of Rights does not have to be a direct application of section 8(1), as any competent court must now implement the common law protection on the environment in light of the Bill of Rights.

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[102]*Kotzé* L. J, *du Plessis . A,Some Brief Observations on Fifteen Years of Environmental Rights Jurisprudence in South Africa* Journal of Court Innovation 2010 3:1 165

[103] Section 32n of NEMA

[104]1996 (3) SA 1095. Also cited in Kidds, Michael, *Environmental Law* (JUTA, 2011) 285.

[105] The Application Clause

Surprisingly, individuals, the civil society and the courts in South Africa are yet to embrace the reality and the potency of the liberal provisions of the framework on environmental protection fully towards developing a South African environmental jurisprudence. The prominent nongovernmental organisations like SDCEA and Groundwork are yet to file an action to promote the environmental right as a tool to challenge release of gas emission and other pollutants in South Durban or elsewhere.

Provision for access to the courts in general matters is made under section 6(6)(c) of the Constitution[106] which vests the courts in Nigeria with the power to adjudicate over:

> ***"…any matter between persons, or between government or authority and to any person in Nigeria, and to all actions and proceedings relating thereto, for the determination of any question as to proceedings relating thereto, for the determination of any question as to civil rights and obligations of that person."***

Unlike the South African arrangement, the placement of environmental issues under the fundamental objective and directive principle in the Nigerian Constitution,[107] as discussed previously, poses a serious challenge to litigants. A potential litigant in gas emission or other environment related matters in Nigeria is faced with different challenges amongst which are (a) the non-justifiability of environmental issues as a socio-economic right in view of the provisions of section 6(6)(c) of the constitution[108] which ousts the jurisdiction of the court to entertain any issues under the directive principles, (b) the challenge of overcoming the technicality of legal standing or locus standi, and (c) the different standards that accompany applications of the common law principles to environment cases. These include establishing the causal link, funding and access to environmental information, particularly in respect of air quality in a setting where there are no state backed monitoring stations and appropriate laboratory and other services.

In the case of locus standi, one of the implications of the absence of a right to environment provision under the Nigerian constitution is that individual litigants and

[106]Constitution of the Federal Republic of Nigeria 1999.
[107]Section 20 Constitution of the Federal Republic of Nigeria 1999.
[108] Section 6(6)(c) of the Constitution of the Federal Republic of Nigeria 1999 states: The judicial powers vested in accordance with the foregoing provisions of this section – "(c) shall not, except as otherwise provided by this constitution, extend to any issue or question as to whether any act or omission by any authority or person or as to whether any law or any judicial decision is in conformity with the Fundamental Objectives and Directive Principles of State Policy set out in Chapter II of this Constitution".

the civil society are always faced with the difficult task of showing 'sufficient interests' in an action. Where there is a want of sufficient interest or standing, the court is automatically deprived of jurisdiction. In cases like*Abraham Adesanya v President of the Federal Republic of Nigeria,*[109] *Thomas and others v Olufosoye,*[110] *and Shell Petroleum Development Company Nig. Ltd v. Chief Otoko and Others*[111]the courts in Nigeria adhered strictly to the need for the plaintiffs in such cases to demonstrate sufficient interest in an action before such a party could be heard. However what appears to be the current and more liberal position on locus standi in environment related issues was taken by the Supreme Court of Nigeria in the case of *Adediran v Interland.*[112] The Supreme Court upheld the right of a private person to institute an action on a public nuisance which before the judgement was only possible upon a fiat by the Attorney-general in view of the provision of section 6(6)(d) of the constitution. The position of the Supreme Court in the above case is an indication of a welcome shift from the conservative common law approach to judicial activism.

Despite what appears to be a broad opening for access to justice through the court by the wording of section 6(6)(c) of the constitution, subject matters and geographical locations of the courts are other barricades to access to court and justice. For instance, emission from oil related cases can only be filed in the Federal High courts[113] in view of the provision of section 251 of the constitution which vests jurisdiction in oil related matters in the Federal High court exclusively.[114] Litigating in the few available Federal High courts may be burdensome for poor litigants from the interior of the mostly rough and inaccessible terrain of the Niger Delta, since the Federal High Courts are only situated in the capital cities of the states in Nigeria.

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[109] (1981) 1All NLR 1

[110] (1986)1 NWLR (pt. 18) 669

[111](1990)6 NWLR(pt.159) 694. This oil pollution related case failed on the ground that the representative in the case did not demonstrate sufficient interest together same as the people that were represented in the case.

[112] 1991 9 NWLR (pt 214) 155

[113] The Federal high courts in Nigeria are not easily accessible to the people in the Niger Delta since only one of such courts can be located in the capital cities of each state of the federation and only in the state capitals which are usually far and not easily accessible from the creeks or remote villages where oil exploration are located and poisonous gases and other pollutants are usually released.

[114]Section 251. (1) provides : *Notwithstanding anything to the contained in this Constitution and in addition to such other jurisdiction as may be conferred upon it by an Act of the National Assembly, the Federal High Court shall have and exercise jurisdiction to the exclusion of any other court in civil causes and matters –*
(n) mines and minerals (including oil fields, oil mining, geological surveys and natural gas);

The case of Jonah Gbemre discussed earlier reflects the current liberal position of the Nigerian court on access to environmental justice. Borrowing from the trend in the environmental jurisprudence of India, the Federal High Court in Nigeria upheld a representative action and declared gas flaring illegal in Iwherekhan community in the Niger Delta. The decision of the court in the case is an important precedent in the application of the fundamental rights provisions of the Constitution of the Federal Republic of Nigeria 1999 as an important tool for advancement and protection of environmental rights and other related rights.

The declaration of gas flaring as illegal in the country by the court in the court legitimizes the struggle of the people of Niger Delta against emission of poisonous gases by multinational corporations.

The introduction of a new Fundamental Rights Enforcement Procedures Rules (2009)[115] may provide a window of opportunity to overcome the numerous barriers of locus standi in environment based public interest actions that have human rights contents in Nigeria. The rule provides, in summary, that the court shall encourage and welcome public interest litigations in the human rights field and no human rights case may be dismissed or struck out for want of locus standi. Human rights activists, advocates, or groups as well as any non-governmental organisations, may institute human rights application on behalf of any potential applicant. In human rights litigation, the applicant may include any of the following:

(a) Anyone acting on his own interest,

(b) Anyone acting on behalf of another person,

(c) Anyone acting as a member of, or in the interest of a group or class of persons,

(d) Anyone acting in the public interest, and

(e) An association acting in the interest of its members or other individuals or groups.

The above is surely an impetus to public interest litigation, which is a good tool for enforcement of environmental legislation or rights in emission related cases. Public interest activists may now succeed to move Nigerian courts to apply human rights rules

[115] Signed 11 November, 2009, by the Chief Justice of the Federation of Nigeria in pursuance of section 46 (3) of the Constitution of the Federal Republic of Nigeria 1999 .

and procedures to address some of the human rights abuses of gas emission in the Niger Delta or any part of Nigeria. This will be a continuation of the trend in Jonah Gbemire's case.

The provision finally empowers public interest activists to challenge the owners of gas emitting operations on the human rights and consequences of their operations under different situations that are listed above under the rules. This is important in view of the new direction introduced by the court in the Jonah Gbemre case in which a purposeful interpretation of the human right laws and principles was followed to accommodate environmental and gas emission issues.

However, different barriers affect the implementation and enforcement of the legal provisions on emission control. These factors, which are discussed below, are socio-political, economic, weak compliance monitoring and enforcement, lack of scientific research and credible reporting, lack of modern techniques and technologies for emission control and gas utilisation, and ineffective communication.

(1) Socio-political factors, which include the absence of the will to enforce existing legislation, poverty, corruption, undue influence on the judicial process, and disunity in the communities.

In the two countries, one common factor is the apparent reluctance of the different authorities to subject the oil and gas industry to effective environmental regulation and sanctions. By implication the multinational corporations are often treated as economic messiahs or saviours in the two countries. As a result, the corporations get away with serious environmental abuses, despite reported cases of violations of existing rules and international standards particularly on human rights. In Nigeria, there has been noreported case of any proceeding against any of the oil corporations that violate individual rights by gaseous emission. This situation undermines legislation as a control mechanism.

The African commission[116] and the ECOWAS Court[117] identified Nigeria's reluctance and non-enforcement of its legislation as one of the factors responsible for the degradation of the environment by the oil corporations in the Niger Delta. Despite

[116] See the Ogoni case above
[117] *SERAP v Federal Republic of Nigeria Judgment No EWC/CCJ/JUD/18/12*

these indictments, the reluctance to subject the oil sector to rigid regulation can be inferred from government's refusal or reluctance to subject the environmental aspect of the oil industry to an independent regulatory body.

The opportunity for this came at the point of enactment of the NESREA Act in 2007, yet the government still excluded the oil and gas sector from being subject to NESREA. The agency has a mandate to enforce all environmental regulations, standards and guidelines in Nigeria. Yet the government unfortunately excluded the oil and gas sector from the control of NESREA.

Similarly, the government of Nigeria has been inconsistent in its plan to stop gas flaring in oil production in the Niger Delta or Nigeria as a whole. The government has been consistent in setting final dates for phasing out gas flaring but has not adhered to any target date.[118] In South Africa where the legal frame work is certain, most cases of non-compliance with standards and emission limits particularly against the refineries in South Durban, don't normally go to court in eThekwini Municipality. Most of the times the oil corporations offer to pay a fine instead of prosecution.[119]

The majority of the victims of gas emission in the two countries are poor, jobless and low income earners. Many victims who are low income earners or employed spend a greater percentage of their low income on treatment of different gas emission related ailments. This in turn leads to job loss and loss of income.

Low income and poverty have been two factors in the low response of the people of the two areas to take advantage of the different provisions under the legislative to challenge the activities of the frameworkcorporations responsible for the release of these gaseous and poisonous emissions. Despite the ease of litigating and because of unhindered access to environmental justice, particularly on public interest actions under the South African legal framework, the explanation for the dearth of litigations by victims of gas emission has been attributed to poverty and lack of means to prosecute such actions.

Corruption is a widespread social problem in Africa. It affects public administration and governance on the continent. The environmental sectors are not free

[118] The government has set about five dates as final date first
[119] Interview with an official of public health dept at eThekwini Municipality, April 2012.

from corruption. The immediate consequence of this is that actions which are declared illegal by law are overlooked by public officials. This means many acts put the society at risk because they go unchecked. Corruption affects environmental and air quality legislation at different stages because an uninformed and corrupt legislature that acts under the influence of an interest group may compromise the process of making a strict law to regulate emission.

Lodge, while acknowledging corruption in the former apartheid regime in South Africa, contends that the restructuring of the country which came along with democratisation has exposed the country to new forms of abuse and corruption.[120] Nigeria and South Africa are both ranked below average in the 2011 public sector corruption perception index by Transparency International.[121] The licensing process in both countries is still not insulated from political control. In Nigeria, there are reported cases of multinational corporations or chief executives of oil corporations openly or discreetly donating fund for campaigns of the ruling parties. These practices have an effect on enforcement and administration of environmental legislation so that it becomes weak and ineffective, particularly in the Niger Delta region.

In Nigeria, litigating against oil corporations is always a difficult undertaking because it is seen as a threat to the economy of the nation. The interests and rights of individuals are often overlooked in favour of the sustenance of the economy. Apart fromdifficultiesinvolved in bringing actions to court litigants are often frustrated by deliberate and undue interventions through the machinery of State. An example of this is found in the way the Iwherekhan communities were deprived of the benefits of the judgement obtained in the gas flaring case against Shell Petroleum and the Nigerian National Petroleum Corporation. After a temporary stay of execution of the judgement was granted by the court on an application by Shell, the judge in the case was mysteriously transferred before the due date for return. Shell purportedly went to a

[120] Tom Lodge. Perceptions of Corruption in the South African Housing Allocation and Delivery Programme: What It May Mean for Accessing the State *Journal of Asian and African Studies (2011) 46(5): 479-490*

[121] Whereas South Africa is ranked 64th with a score of 4.1 over 10, Nigeria's abysmal performance of 2.1 over 10 places the country at 143 positions in the ranking. See, Transparency International, Corruption Perception Index 2011. Available at http://www.transparency.org/cpi2011/results visited last on January 31 2014.

higher court to obtain a stay of execution of the date with the condition of the stay remaining unknown to date.[122]

A common observation in South Durban and Niger Delta is that different groups often operate in many communities where emission generating facilities are located. While few are genuinely committed to fighting for environmental justice, the majority operate as community development associations manipulated by the industry owners or corporations. Subsequently, the genuine campaigns for environmental justice are sabotaged, ignored or weakened. Many of the associations are funded by the corporations while the leadership of the associations are major contractors to the polluting corporations. For example, in Niger Delta, many monarchs or chiefs are co-opted as contractors to the polluting corporations.

(2) Economic factors

As emerging economies, industrialisation is a deliberate policy in the two countries. The governments of the two countries adopt different measures and policies to encourage foreign and local investors to establish industries in order to boost the economies. Many of these policies provide incentives to encourage industrial activities. As discussed previously, the fossil industries are major sources of gas emission in the two countries. Oil and gas are strategic to economic development, since oil and gas and other energy industries constitute a major component of the overall national income in both countries. In the case of Nigeria, oil production and export is the main stay of the country's economy. This dependence on oil and Nigeria's participation in joint investments with the multinational corporations has led to compromise in the enforcement of emission control and other environmental laws in the Niger Delta. Rights and interests of the people are violated without government's protection of the people. This one sided approach can no longer be a justification in any free democracy.

While Nigeria is still battling with jumpstarting its non-oil sectors of the economy,[123]Olubayo Oluduro, an environmental law scholar, argues that the long stay

[122] Petroleum, Pollution and Poverty in the Niger Delta, Amnesty International Report (2009) 78

of the military rule is responsible for Nigeria's single reliance on oil. According to him, despite the abundance of other natural resources, the development of alternative sources of revenue in Nigeria was ignored. Against this background, it can be argued that, Nigeria' reliance on oil has led to lack of technological growth and a constant spiral of domination by oil corporations who dictate what happens in the sector and self-regulation in terms of environmental protection.

A similar attitude from the government of South Africa can be seen despite the continuous exposure of the people of South Durban and other energy production centers like Secunda, Highveld to emissions. In these areas, the residents are forced by economic circumstance to put up with violation of the environment in various ways.

The protection for the petroleum industry coupled with the massive investment in coal and other energy industries in South Africa left a legacy of air pollution from South Durban refineries and other energy production centres.

These production activities which are driven by foreign investments have left the two economies at the mercy of the powerful multinationals.

(3) Weak compliance monitoring and enforcement

Effective enforcement of legislation depends on different factors such as the capacity of the enforcement agencies, resistance from different interests groups, and vigilant citizen groups. While there is no dispute about the progress in South Africa's air quality legislation and management, the attempt to devolve enforcement of environmental laws bring some challenges in terms of which body has a final say in certain issues. In addition, the complexity of environmental issues makes the task enormous for a number of the environmental management inspectors (EMIs) who have been trained so far. Closely related to this hardship is the present arrangement under which the EMIs labour under other different engagements or preoccupations in the sector. Employment conditions make the inspectorate appear as part time or volunteer workers and this factor weakens the performances of the EMIs.

[123] Thus relying totally on exportation of oil at present, this position affects Nigeria's will as a nation to impose strict rules in the exploitation of its oil deposits, particularly in controlling the hazardous activities of the oil corporations in Nigeria.

Despite the absence of direct legislationon access to environmental information in South Africa and Nigeria,this tool may still be accessed throughthe provisions of some environmental legislation and other non-environmental legislation. For instance, in South Africa,the National Environmental Management Act[124] and the National Environmental Management:Air Quality Act[125]provides fordisclosures of environmental information and data by promoters of new facilities in licensing and permit proceedings[126].Additionally,environmental information may still be accessed through reliance on the Promotion of Access to Information Act towardspromoting the human rights guaranteed under the Constitution of the Republic of South Africa 1996[127]. Thus where poisonous emission threatens any of these rights, citizens or their representatives may make request under the PAIA. Despite the exceptions under the PAIA on non-disclosures of certain information, environmental information may be obtained in respect of public interest in matters of public safety and to prevent risk to the environment[128].In Nigeria,under the EIA Act,and EGASPIN all promoters of new activities and facilities in the oil industryare required to apply for license and permit. The recent enactment of the Freedom of Information Act in Nigeria[129] provides another platform for access to environmental information in the country. Under the new Act public institutions have obligations to ensure that they keep records of their operations and activities[130]. Furthermore, citizens or the civil societymay request for information in the custody of a public institutionon environment related issues and information may not be rejected even where it falls under the exemptions under the act.This condition is applicable where disclosure of such information will be in the public interest and outweighs the injury that non-disclosure would prevent[131].In practice, access to environmental information as tool in South Africa and Nigeria is accessed by the public

[124]Above.
[125]Above.
[126] See sections 2(4)(1)&(k), 31 of National Environmental Management Act, Section 7(2)(a)(b) and (g) of the National Environmental Management: Air Quality Act, Environmental Impact Assessment Regulation 2010(GN R543in GG 3306 of 18 June 2010 and The Atmospheric Licensing Manual for Licensing Authorities above at
[127]Section 32, Constitution of the Republic of South Africa, 1996. These rights include environmental right under section 24 of the Constitution.
[128] Section 40 and section 70 Promotion of Access to Information Act no
[129] Freedom of Information Act 2011
[130] See section 2 Freedom of Information Act, 2011, which lists among others applications for permit, grant licenses or agreements as documents on which information may be sought.
[131] Section 12(2)

through annual reports, websites and responses to requests by public offices or corporations. Despite these channels the tool can be said to be underutilized or restricted by the limited scope of the relevant provisions. This is in addition to refusal of industries and government offices to disclose certain information. According to Center for Environmental Rights in 2012 a total of 66 applications were made for environmental information, many of these requests according to the Centre were ignored and in some cases accepted but later refused[132].The limited scope of the environmental legislation in this regard is acknowledged by the Centre for Environmental Rights. For instance, the Centre found that access to environmental information in licensing and permit proceedings is given under the relevant statutes to public authorities. Applicants for emission license or other permits are only obliged to submit necessary information to the approving authorities; though the public may be notified about the process. This information is not easily released by public officials, who according to the Centre use PAIA as a barrier to request for information through insistence on formal request through PAIA application requirements[133].In the case of private industries, access to environmental information is hindered through different factors like concern about costs and the burden of providing the information and records; issue of confidentiality, commercial interests and failures to respond to application for information[134].

The reaction to the above hindrances is the emergence of series of litigation by the civil society spearheaded by the Centre for Environmental Rights to compel institutions and private bodies to release such information. In *Centre for Environmental Rights v Director-General: Department of Mineral Resources: Deemed refusal of access to information about financial provision for rehabilitation under the Mineral and Petroleum Resources Development Act, 2002* (MPRDA)[135]The court ordered the Department of Mineral Resources to provide the records under the request.

In Nigeria, in the oil and gas industry permit and licenses are granted by the Department of Petroleum Resources under EGASPIN for new point emission sources subject to the

[132] Centre for Environmental Rights, Barricading the Doors February 2013 1
[133]Ibid at 2
[134] Centre for Environmental Rights
[135] Case No. 67649/2011 (North Gauteng High Court).

discretion of the Director of Petroleum Resources. While no know application has been made in respect of environmental information, the new statute is expected to promote requests for such information.

In Nigeria, several complaints of weak and inadequate enforcement of environmental law have been raised in view of the complexity of oil operations and the terrain of Niger Delta. In particular, the capacity of the Department of Petroleum Resources (DPR) to enforce legislation on the control of emission and other forms of pollution has been questioned by different bodies. According to Amnesty International,[136] the Department's staff in the Niger Delta 'often lacks the technical, financial and material resources to carry out their functions effectively. In two separate reports the UNDP[137] and the World Bank[138] identified 'inadequate personnel, funding, equipment, and logistic supports.' The World Bank found that the institution 'lacks monitoring and basic office equipment.' Importantly, the attempt at controlling emission and environmental aspect of oil operations has been ineffective in the Niger Delta because of a culture of impunity in the oil industry in Nigeria. This culture evolved from over 30 years of non-regulation of the environmental aspect of oil production until the enactment of the Associated Gas Reinjection Act in 1979.

Another factor that weakens enforcement of environmental law in Nigeria is the conflicting roles of different agencies, for instance in the administration of EIA, both the Federal Ministry of Environment and DPR are empowered to administer EIA as a tool for environmental management. The question which begs asking is which is the final authority where there is a dispute. Furthermore, DPR's dual role as enforcer of environmental laws and standards and as government's agent in promoting private sector investment in oil and gas activities is problematic. The independence and impartiality of the agency in enforcing emission and other environmental control laws is

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[136] *above* note 119

[137] UNDP, Niger Delta Human Development Report, cited in Amnesty International Report: Petroleum Poverty in the Niger Delta p 44. It is often said that the oil corporations are more equipped than the regulators. Sometime monitoring of the environment in the industry depends on the data that are generated and submitted by the oil corporations without any independent means of ascertaining the veracity of such data. Government enforcement agencies in the area cannot boast of functional and up to date laboratory in any part of the country or the Niger Delta. Important state issues some of which should circulate within government agencies are normally contracted to private contractors.

[138] Amnesty International Report citing Grevy, 1994, (quoted from World Bank, *Defining an Environmental Development Strategy for the Niger Delta*, 25 May 1995, Vol II, Industry and Energy Operations Division West Central Africa Department p55.) *opcit*at p 45.

questionable. The practice of self-monitoring by the oil corporations in the Niger Delta has been criticised by Amnesty International.[139] This becomes fatal when DPR does not have independent means of verifying claims by the corporations.

As regards the compliance monitoring of the activities of the corporations, Amnesty International reports[140] that the Nigerian government usually 'deploys untrained young graduates on low and meager salary' to monitor Oil Corporation. According to Amnesty International, this exposes the personnel to manipulations and financial inducement by the oil corporations

(4) Inadequate penalties

In both countries, the penalties under the different legal frameworks remain inadequate to deter the release of emission. In Nigeria for instance, it is more profitable for the corporations to pay the penalties for gas flaring at the current penalty rate of $4.50 for every 1000 standard cubic feet flared gas. This is not enough to deter the polluting corporations.[141]

(5) Lack of scientific research and credible reporting

Despite glaring cases of unmitigated air pollution and other forms of environmental degradation and in spite of continuous protest by youths against oil production in the Niger Delta, none of the tiers of government in Nigeria deemed it necessary to commission credible research to study the impact of air pollution on the health, socio-economic situation and ambient environment. The implication is that there is a dearth of reliable and credible scientific findings on the Niger Delta environmental crisis. The availability of such a report would act as a guide to policy makers in setting appropriate and reliable guidelines and standards on emission control legislation. This position was reiterated in a recent report which disclosed that '...uncertainty about the health impact of ambient air pollution in the region has led to environmental controversies

[139] Ibid
[140] Ibid
[141] See Gas Flaring: An Overview, Justice In Nigeria Now, (2010). Available online at http://justiceinnigerianow.org/gas-flaring

characterized by claims and counter-claims about adverse health effects.'[142] Even in the case of South Africa, the expected environmental management plans which should form the basis of environmental management and control are often not produced when due.

(6) Lack of modern techniques and technologies for emission control and gas utilisation

Despite their inherent differences, Best Available Techniques (BAT) and Best Available Demonstrated Control Technology (BADCT) adopted in South Africa and Nigeria respectively, presuppose change of process of existing technologies to new ones. This is important in order to meet the ambient air quality and other standards. Many of these technologies and processes have serious financial implications for both industries and government. For the oil industry, for instance, this may involve change of the entire process of production and installation of new plants entirely for refineries. The move in South Africa to switch to Euro-4 cleaner fuels is estimated to cost $230-million while Euro-5 is to cost $250-million.[143]

(7) Ineffective Information

The nature of gas emission and the consequences should ordinarily compel disclosure of relevant information to the public particularly about the hazards associated with the release from different facilities. Unfortunately, the government that should make laws to protect the affected communities often prevents disclosures of certain information even when not of serious security or economic risk to the state. In South Africa, despite numerous provisions on access to the environmental information under the constitution, NEMA and the PAIA, accessing 'basic environmental data and information on permit, licensing'[144] and others from both public and private holders of such information is still difficult as different frustrating conditions are often placed before applicants.

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[142] Mustapha BA, Blangiardo M, Briggs DJ, Hansell AL 2011. Traffic Air Pollution and Other Risk Factors for Respiratory Illness in School children in the Niger-Delta Region of Nigeria. Environ Health Perspect 119:1478-1482. http://dx.doi.org/10.1289/ehp.1003099. (Accessed 10-02- 2012).

[143] Van der Merwe Christy, Fuel Industry Seeks Clarity Before Investing in Cleaner Fuel Production, *Engineering News* (December 2010) accessed online on 12 February 2013 at http://www.engineeringnews.co.za/article/fuel-industry-seeks-clarity-before-investing-in-cleaner-fuel-production-2010-12-10

[144] Dina Townsend , Unlock the Door: How Greater Transparency by Public and Private Bodies can Improve the Realisation of Environmental Rights (video presentation) Centre for Environmental Rights available at http://cer.org.za/themes/transparency/unlock-the-doors/ downloaded on 14 December 2012.

Townsend disclosed that in 2012[145] out of over 600 requests for information on different aspect of the environment, 590 requests were refused. In Nigeria, apart from the issue of non-disclosure by corporations and the public departments a greater challenge lies in the non-availability of some information. This state of affairs is due to poor record keeping at government offices across the country.

7.4 Conclusion

The chapter concludes that despite the different legislative measures like constitutional principles, human and environmental rights, technological measure, access to justice, public participation, air quality management, enforcement and access to justice and others under the different legislative frameworks in the two countries, control of gas emission is still far from being realised. This conclusion is drawn from the finding in both South Durban and Niger Delta areas. Despite existing legal frameworks gas emission and other pollutants from oil operations have continued to raise issues of inequality, violation of human and environmental rights and damage to the natural environment. The thesis finds socio-economic, political, poor law review, inadequate enforcement, old and outmoded legislations, violations of human and environmental rights and others as factors hindering effective use of legislation as a tool for control of gas emission in South Africa and Nigeria.

[145] Ibid

CHAPTER 8

8.0 CONCLUSION AND RECOMMENDATION

8.1 Introduction

The thesis has examined legislation for control of gas emission in Nigeria and South Africa, in particular around oil and gas production activities.

Chapter one positioned the study in terms of specifying the background to the study, the research problem, aims and objectives, as well as the justification for the study.

Chapter two in empirical format highlights and discusses the gas emission problems in Nigeria and South Africa. For a common basis for the study, emission from primary energy production of fossil oil and gas operations in the Niger Delta in Nigeria and South Durban in South Africa are in focus. The two locations are made up of communities that are hosts to oil production facilities in the two countries. Analysis of oil and gas operations, incidents, types of gas emission in the oil industry, impacts and the challenge that these pose to the environment and environmental justice in the two jurisdictions is carried out in the chapter. The findings made in the extensive literature review and visit to the two locations is that gas emission as permanent feature of oil and gas activities raises serious issues of violations of the rights of community members and the community as whole.

In chapter three, environmental protection is identified as a universal morality which pervades different cultural practices, religious beliefs, human institutions and societies. The origin of the morality in the modern day is traced to the pioneering efforts of conservationists and environmentalists like James Audubon, Waldo Emerson, Henry Thoreau and Rachael Carson among others from the American angle. This movement metamorphosed through different ages and eras until the present age of environmental justice movement, which represented a resistance movement against discriminatory location of hazardous and polluting facilities in black homelands in the United States. The central message of the environmental justice movement is fairness and equal distribution of environmental burdens and benefits in the society.

The philosophical writings of Jurgen Habermas, in particular his theory on communicative actions are discussed in the chapter. This is delivered in terms of the emergence of environmental protection as a topic in the period of the transformation of South Africa and Nigeria from their respective dictatorial regimes. This further justified actions and campaigns of the different movements on environment. These actions promote solutions to human miseries from mismanagement of the environment. His writings aim at a good society premised 'on reason and the harmonious interaction between individuals within everyday life.' The development particularly those in the United States, inspired similar movements in places like Niger Delta in Nigeria and South Durban in South Africa, two areas that are noted for pollution from petrochemical operations which is the focus of the thesis.

Chapter four examined the international legal framework for control of air quality within the context of environmental protection, climate change and the interconnection between environment and human rights. It identified certain practices and developments like testing of nuclear weapons, production and the use of substances that deplete the ozone layers, emission of greenhouse gases as catalysts for the emergence of some international instruments for emission control. The chapter presented the security of the global environment as a responsibility of all nation states. This is against the backdrop of settled greater and pressing obligations of the developed nations under the international framework to reduce emissions of greenhouse gases and other substances that pollute the global atmosphere. An important component of the international framework is the existence of different mechanisms in aid of developing countries to comply and cope with the control measures imposed under the treaties and to promote growth. Furthermore, the chapter observed the relevance and growing engagement of the International Bill of Rights and in particular the African Charter on Human and Peoples Rights in environmental pollution and emission control. The pivotal focus of the chapter is that it served as a basis and standard for the discussion in the subsequent chapters and the conclusion.

Chapter five examined the nature and contents of constitutions as a tool for control of environmental problems. The first part introduced key constitutional principles like supremacy of the constitution, Bill of Rights, separation of powers, and

others as veritable tools in the quest for control of emission. The second part examined the Nigerian framework on environment and emission control. The Nigerian Constitution of 1999 came into being after a protracted military era. The process of its making was supervised by the military high command. The constitution provides for a constitutional democracy and recognises the different constitutional principles such as the supremacy of the constitution, and the separation of powers. While the constitution contains a Bill of Rights, the human rights provision is limited to civil and political rights. The constitution treats environment and other socio-economic rights issues as fundamental objectives and directive principles of state policies. This falls short of recognising a right to environment. An important provision is the creation of three legislative lists under the constitution, by virtue of which the power to control emission from oil operation is vested mainly in the national government.

The relevant legislation for control of gas emission in Nigeria, particularly in the Niger Delta area, consists of laws that regulate oil and gas or petroleum operations. These statutes prohibit certain activities that contribute to pollution of the environment and the atmosphere in particular by licence and permit holders in oil processing and productions. The minister or Director of the Department of Petroleum Resources wields enormous powers under the statutes, as their discretion come to play in most situations. Since these statutes predate the enactment of Nigeria's 1999 Constitution, the different constitutional and democratic principles are not reflective in the statutes. While the new NESREA Act provides for control of emission in certain activities, it clearly excludes oil and gas activities from its reach.

Chapter six followed the pattern of the analysis in chapter 5. The chapter finds the South African Constitution to be environment friendly. This position is informed by provisions like the environmental rights, the socio-economic rights coupled with the constitutional principles like supremacy of the constitution, cooperative governance, liberalised locus standi and others that are prominent in the constitution. The environmental mandate to the legislative arm of government and the mandate given to the National Human Rights Commission are vital tools for control of environment and by necessary implication, control of gas emission. The 1996 Constitution of South Africa inspired the enactment of modern legislation that is aimed at securing the rights

and wellbeing of the people of the country. The relevant legislation for gas emission control has its root in the 1996 constitution. The National Environmental Management Act (NEMA) which is the framework legislation for environmental protection in general provides the principles and structures which govern control of different environmental problems including emission. It further inspires and provides for the enactment and release of other legislation and policies, particularly the National Environmental Management: Air Quality Act which provides detailed provisions on emission control, air quality and other measures. Other relevant provisions address activities that generate emission and issues that are missing in the main statutes towards solving the challenge of gas emission. At the provincial level there has been no legislation despite the competence of the sphere to legislate on air quality issues, however there is evidence of bylaws at the local government and municipal level. Post 1996 Air quality law making in South Africa clearly reflects a clear departure from the APPA regime. The chapter observes a practical demonstration of a determination by the state to align industrial activities and other possible sources of air pollution with the aspirations and determination of the state under the National Environmental Management Act of 2004. This move is driven by the constitutional mandate to promote and protect the rights of the people to an environment that is not harmful to health and to promote sustainable development through responsive and purposeful legislation. In addition to the legislation, the South African government has developed different policies in response to its obligations under different international agreements on environment. The totality of these policies is giving direction to the state in its plan for a transformation to a green economy.

Chapter seven focused on the application of the legal frameworks to emission control in Nigeria and South Africa. It examined those legal instruments and policies put in place at the global, regional and national levels to ensure an effective control of gas emission. The chapter concludes that despite the different legislative measures like constitutional principles, human and environmental rights, technological measure, access to justice, public participation, air quality management, enforcement and access to justice and others under the different legislative frameworks in the two countries, control of gas emission is still far from being realised. This conclusion is based on the

finding in both South Durban and Niger Delta areas. Despite existing legal frameworks gas emission and other pollutants from oil operations have continued to raise issues of inequality, violation of human and environmental rights and damage to the natural environment. The thesis finds socio-economic, political, poor law review, inadequate enforcement, old and outmoded legislations, violations of human and environmental rights and others as factors hindering effective use of legislation as a tool for control of gas emission in South Africa and Nigeria.

8.2. Summary of the Findings

Based on the scope of the work and the available data, the study finds and argues that environmental protection is a moral that is common to human societies. This explains the different initiatives overtime across cultures, religions and even modern states in efforts to address the challenges of a sustainable environment

The study established that the presence of oil and gas industries in particular has placed the inhabitants of South Durban and Niger Delta under undue hazard because of exposure to gas emission. This finding is made against a background of serious socioeconomic and political observations like unequal treatment of the people of the locations, systemic poverty, ill health, violations of environmental and human rights, poor servicing of the people in the areas with gross distortions of the natural environment in the two countries.

The impacts of gas emission on locations like South Durban have been officially established through studies commissioned by the government in partnership with the civil society and educational institutions. On the other hand, there has been no officially commissioned study of the impact of gas emission or other forms of air pollution on the health of the people and the environment in Nigeria. This is in spite of complaints and protests in the Niger Delta area. As observed in the study, the inaction on the part of government in Nigeria sparked controversies. Unfortunately, government's response to the threat posed to the environment by the activities of multinational oil corporations on the exact impacts of gas emission and other air pollutants on the people and environment in Niger Delta of Nigeria has been contradictory and uncertain.

The study found that the two countries adopted differing approaches to the use of legislation as a strategy to address emission control. As highlighted earlier, South Africa's legislative provisions on gas emission control consist of clear and specific environmental statutes operating from a framework preannounced in the Constitution of the Republic of South Africa 1996. While the National Environmental Management: Air Quality Act remains the main statute with extensive national framework on air quality management and emission control, the National Environmental Management Act remains the overarching legislation for environmental protection in South Africa. In addition, South African legislative provisions apply to all spheres of National, provincial and local government sectors and bind all emission generating facilities.

On the other hand, in Nigeria, apart from the constitution, other relevant legislations are sector based addressing specific subject matters. For instance, control of gas emission from the oil and gas industry is not within the operation of the NESREA Act despite the attempt to make NESREA the main environmental law enforcement authority in Nigeria. The relevant legislation for control of emissions from the oil and gas industries are found in various different old statutes regulating petroleum operations in the country. These statutes are compounded and analysed under the Environmental Guidelines and Standards for the petroleum industries in Nigeria[1] (EGASPIN) by the Department of Petroleum Resources.

While NESREA Act[2], EIA Act and other legislations are relevant to the topic in general, the enforcement and compliance monitoring of the environmental aspect of oil operation is exclusively within the purview of the Department of Petroleum Resources to the exclusion of Nigeria's newly established National Environmental Standards Regulation Enforcement Agency (NESREA).

The study found that while the two countries have ratified different international covenants, treaties and agreements, their respective approach to implementation is quite different. South Africa's legislation on environment and air quality is driven by the constitutional provision on the right to environment and environmental sustainability together with mandates to the parliament to enact specific legislation that is relevant to

[1]First in 1991 and later in 2002
[2] Act no 25 of 2007

environmental protection and human rights in particular. Equally important here, is the constant reference to South Africa's obligations under international agreements and the need to conform to their provisions by emerging statutes. These international principles have inspired the domestication of many of the principles and obligations. For instance, the South African Constitution[3] has full provisions on socioeconomic rights[4] as contained under the International Covenant on Economic Social and Cultural Rights[5] and other international Bills of rights. This is in addition to other fundamental rights, and the constitutional provision on environmental rights[6]. Furthermore, in compliance with the international framework on control of greenhouse gases (GHG) the country has developed different policies and measures towards redirecting the economy and production from a carbon intensive economy towards a green economy under the Green Growth Path and the recently released National Climate Change Response White Paper.

In the case of Nigeria, many of its international obligations have not been integrated into the constitution or some of the legislation that is relevant to emission control. For instance, the totality of the socio economic rights together with environmental protection is treated as mere fundamental objectives with no legal weight under the Constitution of the Federal Republic of Nigeria 1999. Sadly, this situation is in contradiction to Nigeria's active participation in the making of many of the different international Bills of rights and the obligation to enforce some of them locally. In Nigeria the absence of socio economic rights provisions under the constitution constitutes a serious impediment in the struggle for environmental justice for victims of gas emission and other forms of environmental degradation and discrimination observed in Niger Delta. However, despite the fact that environmental right is not classified as a fundamental Human Rights under the 1999 Nigerian Constitution, an aggrieved party can seek for the enforcement of his environmental right under the African Charter on Human and People's Rights provisions[7]; especially taking into

[3] The Constitution of the Republic of South Africa 1996
[4]See chapter 2 of the Constitution of the Republic of South Africa 1996.
[5]Since gas emission raises different socio- economic rights issues.
[6]Section 24 Constitution of the Republic of South Africa 1996
[7]This is one of the few instances in which some of the provisions of treaties ratified by Nigeria are domesticated. See the African Charter on Human and Peoples' Rights (Ratification and Enforcement) Act, CAP. A9 L.F.N 2004

account decisions of courts in cases like ***Gani Fawehinmi v Sanni Abacha, Jonah Gbemire v Shell Petroleum & Others***

More so, unlike South Africa, where the constitution has direct bearing on the making of new legislation on emission control and environmental protection, emission control and environmental protection in Nigeria is remote and not direct under the Nigerian constitution as there is no direct mention of environmental protection nor any direct mandate given to parliament to make specific legislation on environmental protection. Many of the relevant legislations on emission and air quality management and control in Nigeria's oil industry predate the 1999 Constitution[8] and have not been brought into conformity with the principles of the constitution many years after. The Petroleum Act which applies mostly to environment and gas emission control in Niger Delta was enacted in 1968. Efforts to amend it have so far been unsuccessful.

The study further found that gas flaring which is a major source of emission is a common occurrence in the oil and gas industries in the two countries. Comparatively, the flaring in South Durban is minimal as it is confined to oil refineries. On the other hand, flaring in Nigeria occurs in both crude oil productions and also in refineries. Flaring takes place in spite of the unlawfulness of the practice under Nigeria's weak legal framework. Curiously, the minister and the director have a wide discretion over vital environmental issues like gas flaring under the Petroleum Act in Nigeria. This unregulated power is prone to abuse and undue influence. The power is not known to have been exercised strictly in favour of control, particularly in Nigeria where records of official conducts are kept secret. This situation has consistently led to reported cases of flaring by oil corporations without certificates or approval from the minister as directed under the law in Nigeria.

The study found a disparity in the two countries' approach to law review and law making particularly on gas emission and environment in general. The Constitution of the Republic of South Africa is more proactive in inspiring and propelling enactment of modern environmental legislation and law review[9]. The recognition of environmental

[8]For instance, the Petroleum Act which is the main Legislation on environmental control in the oil industry was enacted in 1968.

[9] Section 24 specifically mandates the National Parliament to prevent, pollution, promote conservation and secure sustainable development pollution and ecological degradation

rights and right to the environment together with a mandate to parliament to enact legislations to secure the right to environment inspires regular law review towards effective legislation for environmental protection and control. This development has transformed the legal framework by the introduction of more comprehensive and up-to-date legislative framework of international standards that is based on Best Available Techniques. The introduction of the NEM: AQA,[10] air quality management and emission control in South Africa has taken a proactive dimension. The Act's objective is premised on pollution prevention and reduction of emission through the integrated air quality management system. Curiously, the opportunity provided for air quality and environmental control under section 24 of the Constitution of the Republic of South Africa on the right to environment has been underutilized in terms of citizens suits by individuals and the civil society.

In Nigeria, law review is slow and drags unnecessarily over a long period. This slow pace of legal reform is responsible for the absence of modern and contemporary legislation on emission control. For instance an attempt at a review of legislation regulating the Petroleum industry law has been running for about four years with no appreciable progress at the National Assembly. The continuous application of old and outmoded legislation not directly enacted for the purpose of air quality management and compromised techniques have not been able to mitigate the situation. There is no direct legislation or single comprehensive legislation on air quality management and control in Nigeria like the NEM: AQA in South Africa despite compelling cases of air pollution and gas emission all over the country, particularly from oil operations in the Niger Delta. Regrettably, control of gas emission in the oil industry Nigeria remains under the manipulative self regulation system by which the claims of the multi-national oil corporations are free from independent verification due to lack of modern technologies and manpower by DPR, the regulatory body in Nigeria.

The study also found that there exist clearly marked areas of control and operations for the spheres or tiers of government and government departments under the constitution in South Africa. In South Africa, whereas environmental protection is on the concurrent legislative list, the constitution based cooperative environmental

[10] Act no 39 of 2004

governance system still promotes interdependence, collaboration and coordination of environmental issues and in particular air quality management among government departments and the three spheres of government in South Africa. In Nigeria, however, the "federal might principle" or the "principle of covering the field" has over centralised management of the environment and air quality issues. The major pieces of legislations are federal laws with no room for enforcement or collaboration between the federal and the other levels of government. This situation accounts for the high level of non-enforcement of emission control and other environmental laws in the Niger Delta. The reason is that the federal agencies mostly lack the requisite human and material resources to effectively monitor or enforce the legislations.

The study further found evidence of 'unequal protection and enforcement of laws' in the two countries. While environmental legislations and others like planning laws are strictly enforced in urban areas, particularly in areas inhabited by the elites, areas like the Niger Delta and South Durban are inhabited by a poor and vulnerable class of citizens who do not have such 'privilege'. As a consequence cases of regular violations of the rights of the people through different forms of environmental degradation by oil industries and others are common. The study found that the fallout of this is that the people in the two areas are exposed to serious health risks and hazards, for it is normal in Niger Delta and South Durban to see oil facilities, pipelines and gas emission equipments running close to residential homes.

Further, the study found that while legislation remains an important tool for control of gas emission, the different legal frameworks at international and domestic levels on gas emission control have not produced the expected results in both Nigeria and South Africa. This situation may be attributed to numerous barriers like poor funding or poor budgetary allocation, lack of or inadequate law review, lack of skilled and adequate personnel, weak and conflicting enforcement authorities, lack of information, lack of and use of poor monitoring equipments.

There is a clear lack or weak political will to act in terms of holding polluters who are mostly multi-national corporations accountable in the two countries. Other factors like poverty; corruption; violation of different forms of human rights; poor

implementation of international agreements on climate change and emission control; constant conflict between communities and oil corporations; failure of litigation and denial of access to the court process and justice; weak or uninformed public participation and underutilisation of gases and unmitigated flaring of gases that could be converted to other use even within the immediate community are serious barriers to emission control.

The suggestions to address these issues are raised in the latter part of this chapter in the form of recommendations for reform.

8.3 Suggestion and Recommendations for Control

In view of the discussion and findings made so far, the following points are recommended as measures to enhance the applications of legislations for control of gas emission.

- *Awareness, manpower development and institutional capacity building*

A common factor in access to justice in gas emission, air quality or environmental cases in general in the two countries is the vulnerability of the victims who are poor and low income earners. This situation presupposes availability of legal assistance, representation or public interest actions. Comparatively, available data projects that the South African framework offers a better platform at least for anybody, to challenge release of gas emission or compel the government to prevent or hold non state actors responsible for air pollution or gas emission

To effectively activate the different principles for access to justice under the two constitutions, factors like an enlightened or informed public, an activist or environmentally informed court system and unhindered access to court become imperative.

While some of the factors listed above may not be directly legislated, some will demand purposeful legislation through review of the laws of the two countries. In order words, what many years of intense litigation could not achieve in

respect of locus standi may be achieved through purposeful legislation in Nigeria as evidenced by the South African provisions on locus standi in human rights and environmental issues under the NEMA Act.

The legal framework in South Africa is unpretentious about opening up the gates to the courts or tribunals on environmental justice. However in order to take full advantage of the legal provisions, the mandate of the Human Rights Commission and the Legal Aid Boards or Council in the two countries should be enlarged to include representation of victims of gas emission and other environmental degradation activities. Against the background of the impact of gas emission and polluted environment on human lives, it is suggested that it is high time that legal representation presently offered by few civil society organisations should be supported and fully integrated into the services of the National Human Rights Commission and Legal Aid organisations in both countries.

- *Making Human Rights Work for Emission control*

One of the major issues identified by the study in the two countries is how to make other actors[11] to account for their activities in the environment, particularly as it affects human rights.

Making the human right principle work will entail a clear message from the state 'as the go between the people and the other actors' that there is no short cut to respect for law and fundamental rights. The best medium to do this is the constitution. The Nigerian constitution needs amendment to specifically recognise the Right to Environment and the different socioeconomic rights which, as noted, are easily violated by gas emission and other forms of environmental degradation from industrial activities.

Where the primacy of human rights in any activity is recognised, then it will not be a continuation of the "business as usual approach". Making these actors account to the state and the people will abate the present impunity with which corporations and the states get away with environmental injustice which violates

[11]Other actors in this case include the polluters who have been identified in these countries to include mostly the multinational corporations and the other state backed corporations.

people's rights. This goal is attainable through the integration of the human rights principles into business and operations of companies or organisations operating in the two countries. In this manner, a human rights impact assessment programme is recommended by way of legislation as part of conditions for permits and licensing of industrial and oil and gas activities. Human Rights Impact Assessment will involve "measuring the impact of policies, programmes, projects and interventions on human rights"[12].

The introduction of Human Rights Impact Assessment in the two countries has a potential to provide evidence for activists who will draw attention to the rights of the vulnerable, poor and the weak in the community, compel duty holders to act, promote and encourage the participation of the affected members of the communities in policy formulation[13] and ultimately promote awareness of human rights in both countries.

Governments in South Africa and Nigeria must go beyond making human rights part of the legal framework; they should take steps to make human rights work. Profit making by multinational corporations and increased national income can no longer trump the greater good of sustainable environment and the right to a healthy environment.

- *Enforcement*

Empowerment of communities, citizens and the public for participation in decision making and enforcement

Since communities are at the centre of the impacts of the activities of corporations or industries, it is recommended that legislation be introduced in the two countries that will empower communities and their representatives to be involved in decision - making on key issues affecting them. For instance surrounding communities should be able to hire experts and their representatives to scrutinise and approve such application rather than the present arrangement in Nigeria which is subject to the

[12] Gostin Lawrence, Mann Jonathan M., Gostin Larry, Towards the Development of a Human Rights Impact Assessment for the Formulation and Evaluation of Public Health Policies Vol 1 (1994) *Health and Human Rights*, 58-80 cited in Harrison James, Measuring Human Rights: Reflections on the Practice of Human Rights Impact Assessment and Lessons for the Future, University of Warwick School of Law Legal Studies Research Paper No. 2010-26 4.

[13] See Harrison James ibid

discretion of a single minister. This same arrangement is recommended for compliance monitoring and enforcement. The involvement of citizens in compliance monitoring and enforcement of emission control methods may be in the form of "tracking industrial emission" and independent monitoring of data and reports by the facility owners. As a measure to prevent non disclosure, communities should be handed a copy of permit or licences in respect of any new activity that may generate gas emission or any other environmental hazard in their neighbourhood. Such a community capacity building is possible through appropriate legal provisions and special funding by both countries.

- *Increased Budgetary Allocation for Environmental Management and Control*

  Being a social service, environmental management and control rests on government funding. In view of the findings of this thesis on lack of many requisite equipment, personnel and logistics for effective compliance monitoring and enforcement the following recommendation begs mention: Governments of the two countries are recommended to increase budgetary allocations for environmental management and emission control in particular in order to address the numerous challenges already raised above.

- *Elevation of Right to Environment to a Justiciable Right and empowerment of the people to enjoy the right.*

  In order to demonstrate the importance of the necessity to end gas flaring and the problems associated with environmental pollution in Nigeria government should make efforts to amend the constitution in order to incorporate the right to environment as presently contained in the South African Constitution and those of other progressive countries across the world. The passage of such law will assist and empower affected communities to protect themselves and the environment from gas flaring and associated environmental hazards, and to seek redress for same. This will also provide a channel to end the present unchecked human suffering presently associated with pollution from oil and other industrial activities in the country.

- *Proper Management of Intervention Funds*

In Nigeria, different agencies have been established by both federal and state governments to manage special intervention funds for the development of the Niger Delta in view of the environmental damages from oil production in the region. Reports indicate cases of misappropriation of funds at both federal and state level. Unfortunately environmental issues are not given proper attention in the allocation of funding. While it is appropriate to promote infrastructural development of the affected areas, the issue of environmental remediation should equally be addressed with such funds. However, in view of the hazardous nature of gas emission and the different social issues associated with it, it is proposed that government in the two countries establish a special fund in part funded from a levy from emission prone facilities. The fund will be used to address the immediate consequences of emission in communities. This may address issues like immediate treatment of victims, relief to members of communities in emergency, operation or activities to remediate the affected environment pending the application of the polluter pay principle which is in force in the two countries.

- *Law review and amendment of legislations to reflect new practices and realities*

One of the salutary qualities of a legislation system is the flexibility to reflect and incorporate new practices in response to changing conditions of life. It is proposed that legislation be introduced to reflect the following:

Comprehensive legislation on alternate sources of energy to fossil or renewable energy that will go beyond policy to make use of excess gas by industries and oil corporations to utilise by industries locally and for commercial purposes. In this case, there is need for the two countries to enact strong legislations on provision of subsidies to attract investors to consider cheaper sources of energy for industries and private consumers. This may be included in national legislation on climate change towards taking further advantage of the opportunities under the Kyoto protocol particularly the Clean Development Mechanisms.

Legal provision should be made for mandatory calculation of emitted carbon and other gases by industries and oil corporations through measuring of actual combustion efficiency.

The two countries should through legislation establish an emission management fund[14] to be administered jointly by the minster at the national government and provincial or state representatives and representatives of the civil society. The fund is recommended to be dedicated to reducing emission of certain specified gases, promoting demonstration and use of technologies for the following, (a) gas emission reduction; (b) capturing and storage of gases, (c) alternative energy and renewable energy, and (d) climate change related programmes.

The Nigerian legislative framework on gas emission control is in urgent need of review in order to effect appropriate changes that will bring the legislations in line with the realities in the country, international standard and practices. This recommendation is premised on the fact that nearly all the legislations in the oil and gas industry which regulates gas emission and other environmental aspect of the industry were enacted long before the 1999 constitutions. In the course of writing the thesis, the researcher found that certain provisions of key legislations in the oil and gas industry in Nigeria have become irrelevant with time. This situation could be addressed through:

- New comprehensive framework legislation on environmental management like the NEMA in South Africa
- New air quality legislation that is as comprehensive as NEM: AQA in South Africa or the Clean Air Act in the United States or United Kingdom. This would be made applicable across industries and other sectors with provisions for standardisation to suit the needs of each industry. The new legislation should identify the different types of emission and list their dangers and potential harm on the people.

[14]Similar provision can be found under section 10 of CLIMATE CHANGE AND EMISSIONS MANAGEMENT ACT Statutes of Alberta, 2003. Alberta is reputed with having some of the best legislations on emission control.

- Immediate passage of a new Petroleum Industry Bill[15] that will ensure that the environmental aspect of oil production in Nigeria is regulated and controlled. For instance the new bill should include zero tolerance provisions against gas flaring with no option for the polluter to pay as it flares.
- Establishment of a new Environmental management agency like the US Environmental Protection Agency that will be independent of government and political influence and able to make policies to harmonise environmental protection activities in all the sectors within the country.
- A strict legislation on gas flaring with clear provision on enforcement of gas utilisation plan for excess gas that must have been submitted prior to permit for commencement of construction and commencement of operations by industries. In particular, industries must be made to generate energy for use from the said excess gas for their operations and, where applicable, the immediate communities.
- Strict penalties for offending companies or individuals like total closure until compliance or jail terms for directors or any management staff found to be directly involved in the offence.

- *Conflict resolution*

In the light of the finding in the thesis it is recommended that constant conflict over release of gaseous and other pollutants to the environment may be addressed through some structural changes in the conflict resolution mechanisms in both countries as stated below:

- Establishment of independent environmental appeal boards

  In order to reduce undue litigation and address core environmental issues in environmental disputes, the establishment of an appeal board is recommended. It would be composed of independent experts on environmental issues to handle

[15]The bill has suffered many postponements since its presentation for debate at the national Assembly due to different intrigues and political and tribal issues that pervades decision making in Nigeria.

appeal against decisions of government officials and review decisions on issues like grant of permit, licenses and others is recommended.

- Adoption of environmental conflict resolution or alternative dispute resolution mechanisms

  The failure of litigation to address persistent conflict on gas emission and general environmental problems in the two countries, particularly in the Niger Delta may be addressed by the adoption of ADR mechanism as a tool for conflict resolution between communities, corporations and even government. ADR is not recommended as a catch all alternative but as a supplement to the judicial process. It is argued that ADR will solve problems of the high cost of litigation and the attendant frustration[16] moneyless communities face against multinational corporations in the Niger Delta and the possibility of miscarriage of environmental justice by a judiciary still inexperienced in the jurisprudence of environmental control.

- *Establishment of green or environmental court*

  Establishment of green or environmental courts as court of first instance with full jurisdiction to handle environment related cases in both countries. Such courts will not only lead to the emergence of highly skilled and dedicated judges to handle environment related matters, but will create awareness and increase the consciousness of the society about environmental control. In addition, it is expected that these courts will facilitate development of an environmental jurisprudence in both countries providing channel for speedy dispensation of justice in environment related cases.

- *Diversification of the economy and means of production in the two countries*

  Nigeria's monoculture economy which rests solely on oil production needs to be diversified. While oil production for the export market has provided a huge source of national income, the human suffering associated with disadvantage from over reliance on oil can be reversed when alternative sectors of the economy are developed. The governments should also take advantage of the

[16] Jeffery Michael, Craig Donna *Application of Environmental Conflict Resolution to Public Interest Issues in Water Disputes*. International Journal of Rural Law and Policy (2011 Special Edition)2

opportunities under different international agreements to move into non carbon intensive energy means of production. The adoption of the Green growth path by South Africa is a case in point. It is projected to generate many jobs while steering the economy from carbon intensity.

- *Establishment of climate change authorities or agencies*

  The challenge of gas emission as discussed in the work goes beyond national territories. National governments now have assigned responsibilities and benefits towards adaptation and mitigation measures for climate change. It is suggested that the two countries quicken efforts towards establishing separate climate change agencies to coordinate international and national initiatives on climate change.

- *Enhancement of Collaboration between National, Sub national Governments and other Interest Groups*

  While recommending the South African cooperative governance system as a model for Nigeria, there is no doubt that the sub national levels of governance are closer to the communities that are victims of gas emission. While the national government continues to make policy on environment, states and local governments in Nigeria should be empowered under the law to be involved in monitoring and enforcement of compliance and even make stricter rules above a benchmark to be set in a national law. This arrangement takes care of immediate actions since law making at the state or provincial parliament is usually faster than the recourse to the national parliament for amendment.

  Furthermore, an improvement on the South African model in terms of environmental protection and emission control discussed above is further recommended for the two countries in line with the resolutions of the Rio+20 United Nations Conference on Sustainable Development. The resolution[17] acknowledges the importance of "a broad alliance of people, governments, civil

[17] Resolution 13, United Nations General Assembly Resolution no 66/288 adopted on 11 September, 2012. Downloaded on 18 January 2013 at
http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/476/10/PDF/N1147610.pdf?OpenElement

society and the private sector all working together in order to achieve the drastic measures and actions needed for sustainable development". The nature of gas emission and environmental problems in the two countries so far demand the integration of sub national tiers of government, the civil societies, the nongovernmental organisations, institutions of higher learning and communities into this "broad alliance[18]" .These stake holders "can contribute to decision making, planning, and implementation of policies[19]" that can effectively control gas emission and other environmental problems towards achieving sustainable development which promotes respect for the different rights of the people and eradicate poverty.

Finally, in light of the findings in this investigation the conclusions of the four main hypotheses are as follow:

8.4 Hypothesis One

Efficient international frameworks exist to control emission as noted extensively in Chapter four; the study confirmed the existence of an international framework for control of gas emission. For reasons identified infra, while the two countries are parties or have adopted some of these agreements, control of emission has not been efficient in the two countries.

8.5 Hypothesis Two

Efficient national frameworks and policies exist in Nigeria to control emission efficient national frameworks and policies exist in Nigeria to control emission. However the national framework and policies on emission control and environmental protection in general remain inefficient in Nigeria. Most of the statutes predate the 1999 constitution of Nigeria but lack footage in constitutional principles and alliance with global trends in environmental protection and emission control adherence. This finding is discussed at length in Chapter five and seven of this thesis.

[18] Ibid
[19] Ibid

8.6 Hypothesis Three

Efficient national frameworks and policies exist in SA to control emission.

The researcher found that South Africa has put in place a modern standard air quality and emission control national framework. This framework is driven by a world acclaimed environmental rights provisions and other environmentally friendly provisions in the Constitution. Though it may be too early to conclude on the efficiency of the framework, control of gas emission remains a serious problem in the country

8.7 Hypothesis Four

The frameworks are applied effectively in each country

The researcher found that both countries have adopted disparate approaches to the application of the international and national framework for emission control. In South Africa, there is a successful integration of some of the international agreements into domestic legislation on air quality and emission control through new legislation and policies. On the other hand, the slow process of law review and other factors tend to hamper direct integration of the international framework into the national framework in Nigeria.

The above findings have been fully discussed in the thesis.

In summary, the researcher fully recommends capacity building, proactive enforcement and implementation of the gas emission control framework in South Africa. In Nigeria, there must be purposeful law review that will bring the legislation on emission control in line with the Constitution of the Federal Republic of Nigeria 1999, global trends and some of the laudable provisions under the South African framework.

8.8 General Conclusion

The study has presented gas emission as a serious environmental problem in South Africa and Nigeria, using South Durban and Niger Delta as case study of the impact of gas emission from primary energy production particularly oil and gas operations from the two countries. The challenge of environmental protection has been taken at the international levels through different international initiatives which formally began with the Stockholm conference of 1972. Thus, the writer argues that South Africa and Nigeria like other nations have obligations to protect the environment and the people from the dangerous gas emissions from industrial activities within their respective borders. This obligation is taken beyond the realm of morality to legal obligations to full participation in the different international agreements on air quality, atmospheric emission and climate change. In addition, the constitutions of the two countries have enacted clear provisions on need to protect the wellbeing and welfare of their respective people.

The two countries have taken initiatives through different pieces of legislation to address the challenge of environmental management and control. However, the problem of gas emission and poor air quality management from industrial activities in the two countries still persist importantly from oil and gas production activities in Niger Delta and South Durban.

As was seen, the emission situation in the two countries is not due to total absence of legislation, but can be attributed to failure or inadequate enforcement on the part of South Africa, undue rhetoric together with inadequate or weak legislation in the case of Nigeria. These factors are generally tied to the perceived need by the leaderships of the countries to protect the economic growth of the countries. This consideration weakens the will of the two governments to make or enforce emission control laws against strong multinational corporations that are usually behind emission generating activities.

In order to address these challenges, governments in the two countries need to renew their commitment particularly as regards protecting the well beings of the people. Furthermore, while affirming the indispensability of legislation as a tool for control of emission and other environmental challenges, it is imperative to emphasise the need to

harness the advantages of other instruments particularly the economic instruments for control of emission.

AS discussed in chapter 1, the study was limited to gas emission from oil and gas operations in South Durban and Niger Delta. It is noted that other related issues that affect the atmospheric environment in the oil and gas industry were not addressed in the study. It is suggested that further research in these areas would not only complement this study but broaden the emerging African legal scholarship and literature on environmental protection.

It is expected that the findings of this research will contribute to policy formulation in the two countries particularly in Nigeria where there is an urgent need for law review. By the same token the challenge of enforcement of environmental provision is expected to receive the attention of stakeholders in South Africa.

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