

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Oil currently supplies about 53% of the world's energy.¹ Hence, most countries depend on oil and would go to great lengths to acquire an oil production capability or to be assured access to free flow of oil. However, one major problem associated with this dependence, (which is likely to continue until a more economical resources is discovered or the world oil wells run dry), is that the inability of governments and their agencies to control and prevent environmental pollution arising from the production, distribution and consumption of oil. Hence, oil spillages and gas flaring had adversely affected land resources, air resources and water resources. These have drawn the attention of both the national, regional and international government on the need for environmental regulation of oil production, distribution and consumption in order to control, reduce or prevent pollution arising from oil activities and its damaging effects on the environment.

Consequent upon this, the UN Conference on the Human Environment emphasized the fact that:

A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference, we can do massive and

¹ See FE Nlerum, 'Reflections on Participation Regimes in Nigeria's Oil Sector', (2007 – 2010) 5, *Nigerian Current Law Review*, 145; Shell, *World Energy Supplies Projections*, (1995-2050); BE Bafor, 'Economic and Social Constraints to Harnessing the Potentials of the Upstream Sector of the Nigerian Petroleum Industry' in IA Ayua & DA Guobadia (eds), *Political Reform and Economic Recovery in Nigeria* (Lagos: N.I.A.L.S, 2001) p. 560; World Resources Institute, *World Resources* (New York: Oxford University Press, 1996 - 97).

irreversible harm to the earthly environment on which our life and well being depends.²

Countries, Regional bodies and International organizations have promulgated/created environmental laws and regulatory bodies to control or prevent oil pollution and ameliorate the consequent devastating effect on the environment. The fundamental question is: how far have these environmental laws and regulatory bodies being able to control or prevent oil pollution and/or ameliorate the consequent devastating effect on the environment? In answer to this question, it is clear that, while some countries like the United States have succeeded in controlling or preventing oil pollution as well as ameliorate the consequent effect on the environment whenever it does occur, in others, oil pollution and its consequent environmental degradation is on the increase, as is the case in Nigeria.

Hence, this study is aimed at carrying out a comparative study of the environmental laws regulating oil pollution in Nigeria and the United States of America, in order to find out their comparative advantages. Moreover, this study would highlight areas and methods to be adopted, borrowing leave from the United States, so that Nigeria can benefit from the success story of the United States of America in controlling or preventing oil pollution in its country. Thus, the study has recommended review of existing policy, laws, rules, regulations and executive orders and their better enforcement.

1.2 **Statement of the Problem**

A major cause of environmental pollution in Nigeria today is the activities of the oil industries who have left a trail of woeful tales in their contact with the environment, that one

² See Declaration of the UN conference on the Human Environment held in Stockholm (1972) UN Doc.A/Conf.48/14 at 2.

would readily ask if the activities of the oil industry are regulated by basic principles of law and to what extent these laws have been enforced and complied with. These activities have impacted on land, water, air and lives of the people. Moreover, the number of registered oil pollution in Nigeria is increasing by the day. However, the environmental laws regulating oil pollution in the United States of America, also a major player in the oil industries, have succeeded in preventing or controlling oil pollution, as well as ameliorating its consequent effects whenever it does occur.

Thus, the study would address the following research questions:

- (a) What are the legal issues regarding the environmental laws regulating oil pollution in Nigeria and the United States of America?
- (b) What are the available legislative and institutional framework and enforcement strategies in Nigeria and United States of America for regulating oil pollution?
- (c) What are the factors responsible for the success in the United States of America's oil pollution regulation efforts?
- (d) What are the factors affecting the effectiveness of environmental laws regulating oil pollution in Nigeria?
- (e) What lessons can Nigeria learn from United States of America in order to achieve effective control or prevention of oil pollution?

1.3 **Purpose of the Study**

The main purpose of this study is to carry out a comparative analysis of the environmental laws regulating oil pollution in the International, United States and Nigeria.

Specifically, the aims of this study are as follows:

- (a) To evaluate oil pollution incidence and their impact on the environment, as well as the Environmental impact assessment regime in the international, United States and Nigeria.

- (b) To compare the laws and regulatory bodies regulating oil pollution, the legal regimes on restoration of impacted environment as well as on penalties for violation of environmental laws in the International and the United States of America with that of Nigeria in order to see the lessons that Nigeria can learn from USA's regulation of oil pollution.
- (c) To make recommendations based on research findings on how to strengthen the environmental policies, rules, regulations, executive orders and laws of oil pollution in Nigeria.

1.4 **Scope of the Study**

The scope of this study covers a comparative analysis of the environmental laws regulating oil pollution in United States of America and Nigeria, plus other countries. However, for a better understanding of this comparison, the concept of environmental law, the impact of oil pollution on the environment, as well as the environmental laws for regulating oil pollution of land resources, water resources and air resources in the International, United States of America and Nigeria shall be discussed. Furthermore, the administrative mechanism for environmental control of oil pollution with respect to prevention and preparedness for oil pollution and response and clean up, as well as the legal framework for environmental restoration in the International, United States of America shall be highlighted. Thereafter, the legal regime for penalties for violation of environmental laws in the International, United States of America and Nigeria shall be discussed. These discussions are necessary to enable us ascertain the comparative advantages of the United States of America's legal regimes and the lesson that Nigeria can learn from them.

1.5 Significance of the Study

Oil has been said to be the World's largest traded commodity, accounting for almost half of World Sea borne trade³ and supplying 53% of World's energy. Moreover, United States is an active player in the oil industry notwithstanding that its demand exceeds its production. Oil supplies approximately 40% of the energy needs of USA.⁴ In Nigeria, oil assumed a prime position since 1970 and has since then accounted for about 93% of government export revenue and national earnings.⁵ Nigeria is the highest producer of oil in Africa and the 8th largest exporter of oil in the World.⁶

All activities of the oil industries are fraught with environmental consequence resulting in dire consequences for the environment. Thus, the concern of every nation of the world is to prevent or control oil pollution and both USA and Nigerian governments have put in place legal frameworks to regulate oil pollution in their countries.

It is clear that while the United States of America's laws have succeeded in controlling or preventing oil pollution as well as ameliorate the consequent effect on the environment whenever it does occur, in Nigeria, oil pollution and its consequent environmental degradation is on the increase. In fact, in Nigeria, oil pollution of air, water and land is emerging as a serious threat to human health, biodiversity, climate change, ecology and economy of the Niger Delta area. There is nothing that portrays our government's reactionary approach to national problems than the present environmental pollution caused by perennial oil spills, gas flaring and so on from the activities of multinationals oil companies working in the Niger Delta and there is a strong feeling

³ G Gauci, *Oil Production at Sea: Civil Liability and Compensation for Damages*, (England: John Wiley & Sons Ltd, 1997) p.1.

⁴ JL Ramseur, 'Oil Spills in U.S. Coastal Waters: Background and Governance', (USA: Congressional Research Service, January 11, 2012) RL33705 *CRS Report for Congress*, 1.

⁵ See Central Bank of Nigeria, (2004), *Statistical Bulletin*, 15.

⁶ W Michaels, *Curse of the Black Gold: 50 Years of Oil in the Niger Delta*, (New York: Power House Books, 2008) p.40.

in the region that the degree and rate of degradation are pushing the delta towards ecological disaster.⁷ This raises the question whether the activities of oil industry in Nigeria are regulated by basic principles of law and to what extent these laws have been enforced and complied.

Thus the choice of this study is timely and important. It attempts to carry out a comparative analysis of the environmental laws regulating oil pollution in United States and Nigeria, in order to find out the comparative advantages of the environmental laws of oil pollution of the International, USA and Nigeria in order to determine the factors responsible for the success in the USA's pollution regulation efforts and factors affecting the effectiveness of environmental laws regulating oil pollution in Nigeria; to see the lessons that Nigeria can learn from USA in order to achieve effective control or prevention of oil pollution; and to make suggestions for strengthening the environmental policies and laws of oil pollution in Nigeria. This study is important as these jurisdictions depend heavily on oil as a source of energy and/or revenue.

1.6 Methodology

In this study, the doctrinal research method shall be employed. Further, the approach shall be a combination of comparative, analytical, library based and historical record review. These approaches are necessitated by the desire to take a look at the historical evolution of as well as the current position of environmental law of oil pollution in the International, United States of America and Nigeria and to compare them. Accordingly, the primary sources of gathering data shall include Statutes, case laws and agencies obtainable in Nigerian and the United States of America as well as International and Regional Treaties, Conventions and Protocols relating to environmental law of oil Pollution. Meanwhile, law text books, case law,

⁷ UNDP, *Niger Delta Human Development Report*, (Abuja: United Nations Development Programme, 2006), p. 229.

articles, journals (published and unpublished), magazines, news items, periodical, documentaries and internet materials in this area shall be the secondary source of data.

1.7 Literature Review

The issue of oil pollution is a global phenomenon with its attendant environmental consequences. Its importance has propelled lawyers and non lawyers alike to write books and articles on the subject.

Olanrewaju Fagbohun⁸ wrote a comparative review on the law of oil pollution and environmental restoration. The work gave an account of the impacts of oil pollution arising from onshore, offshore exploration and production installations, the laws and principles relating to environmental restoration of impacts of oil pollution. In particular, the work examined the existing legal and policy frameworks for compensation as it relates to environmental restoration in Nigeria and how far they have gone in achieving their goals. It also made a review of framework for environmental restoration in 16 selected jurisdictions (including the United States of America) that significantly engage in oil exploration and are confronted with the challenge of environmental restoration of impacts of oil pollution. Thus, the work focuses on environmental restoration in the area of oil pollution. It did not undertake a study into all the areas covered within the scope of this dissertation, such as: the legal frameworks and administrative mechanisms for the environmental control of oil pollution, and the legal regimes on penalties for violation of environmental laws. Moreover, having been written over seven years ago, the work cannot be said to reflect current developments in environmental restoration in the area of oil pollution in United States of America and Nigeria.

⁸ O Fagbohun, *The Law of Oil Pollution and Environmental Restoration: A Comparative Review*, (Nigeria: Odade Publishers, 2010).

Omorogbe⁹ focused on the oil industry in Nigeria, and discussed ownership of oil and gas industries, downstream oil and gas law, environmental issues like oil spillages in the Niger Delta and other topical issues in the petroleum industry, such as acquisition of technology, indigenous oil companies and dispute issues, as well as taxation in the upstream sector. On the other hand, Ebirim & Ndukile¹⁰ gave a critical analysis of the Nigerian law on oil pollution but did not include institutions like the Director of Petroleum Resources, Niger Delta Development Commission and National Oil Spill Detection and Response Agency.

Eze and Eze¹¹ discussed the laws for the prevention of oil and gas pollution in Nigeria, in order to ascertain their adequacy or otherwise. They focused on the legal framework (both national and international) for the prevention and control of oil and gas pollution in Nigeria and common law principles for environmental restoration as well as did a survey of the legal framework for control of oil and gas pollution from selected jurisdiction in order to show that three categories of oil and gas pollution control regimes exist in the world, to wit: countries that do not have laws at all like Congo, Equatorial Guinea and Cameroun; countries that have ineffective and poorly¹¹ enforced laws like Nigeria, Saudi Arabia, Angola and Iraq; and countries that have effective laws like Canada, United Kingdom and United States of America. They did not discuss the legal regime for oil pollution penalties and dealt only with the common law aspect of environmental restoration.

Oyende K,¹² in a recent book gave an overview of oil pollution law and governance in Nigeria, with emphasis on the theoretical basis for approaches used in preventing oil pollution, international treaties on oil pollution and obligations arising from them, effectiveness of the laws

⁹ Y Omorogbe, *Oil and Gas Law in Nigeria*, (Nigeria: Malthouse Press, 2001).

¹⁰ O Ebirim & CN Ndukile, *Nigerian Law on Oil Pollution*, (Ibadan, Spectrum Books Ltd, 2008).

¹¹ TC Eze & UG Eze, *The Law for the Prevention of Oil and Gas Pollution in Nigeria*, (Enugu: Ebenezer Productions Nig. Ltd, 2015).

¹² K Oyende, *Oil Pollution Law and Governance in Nigeria*, (Ibadan, Stirling Hordon, 2017).

to tackle oil spill in Nigeria, issues surrounding oil pollution in the inland waters of Nigeria, and oil pollution regulation in the jurisdiction of the United States of America and South Africa.

Further, Nnadozie K,¹³ examined the relationship between the oil and gas industry and the environment in Nigeria and the legal framework governing this relationship. The work gave a brief overview of the balance between these aspects and explores the legal regime used to maintain or account for that balance. It discussed the current state of the regulatory approaches and management tools, their effectiveness and effect on the industry and finally attempted to highlight a new theme for petroleum environmental regulation and possible direction for future legal development especially within the regional and international context.

Lowe *et al*¹⁴ wrote on contracts and transfers by oil and gas lessees in the United States of America, and included environmental law materials in a chapter. Also, in his book¹⁵ Lowe John S, covered such topics as the nature, protection, and conveyance of oil and gas rights, leasing and taxation in the United States.

Eze and Eze¹⁶ considered the efficiency or otherwise of the statutory framework relevant to environmental protection in the Nigerian oil and gas sector, and other countries, to wit: Canada, United Kingdom, United States of America, Saudi Arabia, Iraq, Angola, Equatorial Guinea, Congo Brazzaville, Cameroun and Chad. Further, Ekhat¹⁷ focused on the laws regulating oil and gas industry in Nigeria, as well as statutory compensation and Environmental Impact Assessment in the oil and gas industry. The work argued that unless there is a

¹³ K Nnadozie, 'Environmental Regulation of the Oil and Gas Industry in Nigeria', in Chaytor & Gray (eds), *International Environmental Law and Policy in Africa*, (New York: Springer Science & Business Media, 2013) pp. 103 – 129.

¹⁴ JS Lowe *et al*, *Cases and Materials on Oil and Gas Law* (American Casebook Series: West Academic Publishing, 2012).

¹⁵ JS Lowe, *Oil and Gas Law in a Nutshell*, (6th edn, USA: West Academic Publishing, 2014).

¹⁶ AG Eze & TC Eze, 'A Survey of the Legal Framework for the Control of Oil & Gas Pollution from Some Selected Countries'(2014) 31 *Journal of Law, Policy & Globalization*, 1 – 9.

¹⁷ EO Ekhat, 'Public Regulation of the Oil and Gas Industry in Nigeria: An Evaluation', (2016) 21 (1) *Annual Survey of International and Comparative Law*, 43 – 91.

paradigmatic shift from state oriented or public regulatory framework in the oil and gas sector in Nigeria, the fundamental ills and malaise affecting the industry will not abate. Ezeibe¹⁸ presented a detailed and critical review of the legislative and institutional framework of environmental protection and pollution control in the oil and gas sector in Nigeria. However, with respect to oil pollution penalties, the work discussed only NOSDRA Act penalties.

Williams' article¹⁹ focused on various methods applied by the different states in the United States of America to conserve oil and gas and discussed the steps taken by regulatory agencies to regulate the flaring of gas in some states.

Literature review showed that there is no research that have been conducted to do a comparative analysis of the environmental laws regulating oil pollution in Nigeria and the United States of America in order to discover their comparative advantages and lessons that Nigeria can learn from USA. This study will bridge that gap and serve to be immensely beneficial to the oil pollution jurisprudence in both jurisdiction.

1.8 **Organisational Layout**

As a matter of convenience, the study has been broken down into seven (7) chapters. Chapter 1 deals with the general introduction to the study. In this Chapter, the researcher gives the background to the study, statement of the problem, purpose of the study, scope of the study, significance of the study, methodology, literature review and organizational layout of the study.

Thereafter, Chapter 2 provides the definition and clarifications of the fundamental concepts on which the study is based. These include among others the definition of environment and how it is affected by human activities, concept of environmental protection and its

¹⁸ KK Ezeibe, 'The Legislative and Institutional Framework of Environmental Protection in the Oil and Gas Sector in Nigeria: A Review', (2011) 2 *Nnamdi Azikiwe University Journal of International Law*, 39 – 76.

¹⁹ HR Williams, 'Conservation of Oil and Gas', (1952) 62(7) *Harvard Law Review*, 1155 – 1183.

relationship with sustainable development and human rights; meaning, nature and importance of oil, its exploration in global history and the Nigerian Oil Industry; and finally, meaning, types, causes and effects of pollution. It also discusses the global perspective on Environmental pollution, the meaning of Environmental Law and its categories - International Environmental Law and National Environmental Law. The study highlights under International Environmental Law: the sources, principles, compliance and enforcement of Multilateral Environmental Agreements as well as the Global Environmental Facility, while under National Environmental Law: the sources, prerequisite for effective National Environmental Law as well as implementation of International Environmental Law at the national level.

Chapter 3 examines the impacts of oil pollution on the environment. Accordingly, the incidents of oil pollution – oil spillage and gas flaring and impact of oil pollution on the environment, to wit: land resources, air resources and water resources would be highlighted. It also discusses environmental impact assessment at the international, United States and Nigeria as well as oil pollution and human rights violation.

Chapter 4 considers environmental law regulating oil pollution. Under this chapter, environmental laws for the protection of land resources, air resources and water resources in the international, USA and Nigeria were discussed. This chapter also highlights the regional framework for the protection of water resources from oil pollution.

Thereafter, Chapter 5 appraises the administrative mechanism for environmental control of oil pollution and restoration of impacted areas. Consequently, it deals with regulatory bodies for the prevention and preparedness for oil pollution and institutional framework for oil pollution response and cleanup respectively at the international, USA and Nigeria. With respect to restoration of impacted sites, it considers the concept of environmental restoration, categories of restoration, legal framework for regulating environmental restoration under international law,

United States Law and Nigerian Law. It concludes with the analysis of the common law principle on environmental restoration and judicial attitudes to environmental claims.

In Chapter 6, the legal regime for oil pollution fines and penalties for violation of environmental law was discussed. Consequently, it deals with factors affecting fines and penalties, jurisdictional issues for ships, the changing scene of oil pollution prosecution, legal framework for criminal fines and penalties respectively in the United States and Nigeria, enforcement of criminal liability in United States and Nigeria as well as legal frameworks for civil penalties in the United States and Nigeria respectively.

Chapter 7 is the concluding chapter. It summarizes the entire discussion made in the body of the work by way of conclusion and brings out major recommendations for necessary reforms involving policy transfer and lesson drawing.

CHAPTER TWO

DEFINITION AND CONCEPTUAL CLARIFICATIONS

2.1 Definition of Environment

Generally, the term environment means ecology, the air, water, minerals, organisms, and all other external factors surrounding and affecting a given organism at a given time.²⁰ It is the complex of physical, chemical, and biological factors/processes which sustain life. In fact, the environment has been described as the totality of the 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.²¹ According to the World Bank, environment is the natural and social conditions surrounding all mankind and including future generation.²²

In the context of environmental law, according to US Code, the term 'environment' consists of navigable, ocean, surface and ground waters, land surface or subsurface strata, or ambient air.²³ Furthermore, in Nigeria, environment is defined as including water, air, land and all plants and human beings and or animals living therein and the inter relationships which exist among these or any of them.²⁴ Also, from the context of the Nigerian Constitution, environment consists of the water, forest and wildlife, all layers of the atmosphere, all organic and in-organic matter and living organisms and the interacting nature system that includes their components.²⁵

²⁰ BA Garner, *Black's Law Dictionary*, (8th edn, St. Paul's Minn, United States of America: West Publishing Co. 2004) p.534.

²¹ *Ibid.*

²² See World Bank, *Environmental Assessment Source Book*, (Washington D.C.: World Bank Tech. Pap., 1991) p. 139.

²³ See The Comprehensive Environmental Response, Compensation and Liability Act, US Code, Title 42 Chapter 103 sub chapter 1 at Section 9601(8)(A)&(B).

²⁴ See The National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007, S. 37.

²⁵ Constitution of the Federal Republic of Nigeria, 1999 as amended, S. 20.

The European Union defines environment as consisting of ‘all or any, of the following media, namely, the air, water and land; and the medium of air includes the air within buildings and the air within other natural or man-made structures above or below ground’.²⁶ For the purpose of this work, environment means the totality of the air resources, water resources, and land resources.

2.1.1 Human Activities and the Environment

When God created what we conceived to be the environment, He saw it was good, and He gave man charge to conquer, dominate and replenish that environment. Thus, the environment given to man was in a good state, and it was given to man not to destroy, pollute or degrade. Man since creation has depended on the environment to provide him with means of sustenance, to wit: air to breath, food to eat, water to drink, and other natural resources to advance the quality of his life. This interdependence of man and the earth’s ecosystem is obviously fundamental to human existence. Thus, the United Nation observed that ‘man is both creature and molders’ of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth.²⁷

Consequently, man must maintain a harmonious and healthy relationship with the environment as to do otherwise would be disastrous for his continued existence. He must maintain his environment at a level that would sustain his life. The reason is that the natural ecosystem structures and functions produce goods and services that benefit man. They produce the air we breathe, filter the water we drink, and recycle the nutrients that allow all things to grow. In fact, the environment’s goods and services are fundamental to human activity. For

²⁶ See The UK Environmental Protection Act (EPA) 1990, S. 1.

²⁷ See Preamble to the Report of the United Nations Conference on Human Development and Environment, paragraph 1.

instance, farmers, foresters, fishers and many others harvest nature's bounty (goods), while others make a living transforming and selling these goods, while the services provide social and health benefits like education and recreation opportunities.

However, in man's quest to conquer and dominate the environment, the environment was altered. Human activities are responsible for most of the losses of biodiversity throughout the world. Impacts from human activity on land and in the water can influence the environment profoundly. For instance, climate change, ocean acidification, permafrost melting, habitat loss, air pollution, and contaminants can have serious impacts on the ecosystem structure and functions and alter their provision of the goods and services, and man has not been able to fashion a cure to equal the level of devastation.

The environment has been a victim of human exploitation. At the beginning of man's development, the quest was primarily for man's survival and realization of the three basic needs of man, that is, food, clothing and shelter. With further development and technological advancement, the environment was greatly affected, more so, when oil was discovered. The oil industry has caused the most threat to the environment – with the attendant pollution from its production, transportation and consumption through oil spillages, oil well blow out and gas flaring. Thus, it is an obvious fact that any change in the social and economic welfare of man would inevitably have an impact, positive or negative, on the environment. Realizing the importance of the environment to human existence, and the effect of human activity to the environment, there is need for informed decision making to properly address the protection, restoration and sustainable use of the environment for the benefit of the present and future generation.

2.1.2 Concept of Environmental Protection

Environmental protection is a practice of protecting the natural environment from harm or degradation on individual, organisational or governmental levels for the benefit of both the natural environment and humans.²⁸ In other words, it means taking an action or relinquishing from an action that facilitates reservation or restoration of the natural balance of the environment. The environment has been degraded either permanently or temporary as a result of pressure of population increase, development in technology and industrial advancements. This is because, as population increases, demand for natural resources also increases and so also the consequent pollution.

Thus, degradation of land resources, air resources or water resources had continued to generate conflicts among various communities in various regions of the world. This brought about the need to appropriately manage and protect the environment. For instance, urbanization has resulted in pollution activities leading to deforestation and loss of biodiversity, while industrialization has resulted in massive churning out of greenhouse gases, hazardous wastes and radioactive chemicals.

Consequently, the need for environmental protection has been recognized and governments have begun placing restraints on activities that cause environmental degradation. Since the 1960s,²⁹ activity of environmental movements has created awareness of the various environmental issues. Environmental protection does not merely mean prevention of pollution and clean up, but include ensuring that businesses continue to improve their manufacturing practices in a way to reduce their pollutant, cut cost and improve productivity. Thus, the

²⁸ N Haluzan, *Environmental Protection – Definition and Key Issues* (Wikimedia Foundations Inc., 2010) <http://en.wikipedia.org/wiki/Environmental_protection> accessed on 9th September 2014.

²⁹ *Ibid.*

objectives of environmental protection are conservation of natural resources, preservation of the existing natural environment and where possible, reparation of damage and reversion of trends.

The three interwoven factors that influence environmental protection are environmental legislation, ethics and education. Each of these factors plays its part in influencing national-level environmental decisions and personal level environmental values and behaviours. For environmental protection to become a reality, it is important for societies to develop each of these areas that, together, will inform and drive environmental decisions.³⁰

There have been three approaches to environmental protection, to wit:

(a) **Voluntary Environmental Agreements**

In developed nations, these agreements provide a platform for companies to be recognized as moving beyond the minimum regulatory standards and therefore support the development of best practice in environmental protection.³¹ However, in most developing countries, they are commonly used to remedy significant levels of non-compliance with mandatory regulations, which in other hand, helps to build environmental management capacity. The disadvantages associated with them is inability of the developing countries to baseline data, targets, monitoring and reporting systems that would enable them to evaluate the effectiveness of their use.

(b) **Ecosystem Approach**

The purpose of this approach is to consider the complex interrelationship of an entire ecosystem in decision making rather than simply responding to specific issues and challenges. Here, a broad range of stakeholders are involved in the planning and decision making processes.

³⁰ U Solomon, 'A Detailed look at the Three Disciplines, Environmental Ethics, Law and Education to determine which plays the most Critical Role in Environmental Enhancement and Protection' (2010) 12(6) *Environment, Development and Sustainability*, 1069-1080.

³¹ P Karamanos, 'Voluntary Environmental Agreements: Evolution and Definition of a New Environmental Policy Approach' (2001) 44(1) *Journal of Environmental Planning and Management*, 67-84.

For instance, all relevant governmental departments, representatives of industry, environmental groups and the community would be involved, and this leads to exchange of information, development of conflict resolution strategies and improved regional conservation.

(c) **International Environmental Agreements**

Here, attempts are made by countries to develop agreements that are signed by multiple governments to prevent damage or manage the impacts of human activities on natural resources. These are concerning a specific environmental matter, like climate, oceans, rivers and air pollution. These international environmental agreements are most times agreements in principle and used as codes of conduct, although sometimes, they may be legally binding, having implications when not followed. These agreements have a long history with some multinational agreements being in place from as early as 1910 in Europe, America and Africa.³²

The benefits of environmental protection cannot be over-emphasized. They include among others, the minimization of decay of natural and social environment; reduction of poverty; reduction of disharmony and conflict in communities; industrial and technological growth; and rational use of natural resources.

Discussion on environmental protection often focuses on the role of government, legislation and law enforcement, but in its broad sense, environmental protection may be seen to be the responsibility of all the people and not simply that of government. Moreover, many constitutions acknowledge the fundamental right to environmental protection and many international treaties acknowledges the right to live in healthy environment. Also, many countries have organizations and agencies devoted to environmental protection. There are international environmental protection organizations, like the United Nations Environmental

³² RB Mitchell, 'International Environmental Agreements: A Survey of Their Features, Formation, and Effects' (2003) 28(1543-5938) *Annual Review of Environment and Resources*, pp. 429-461.

Programme. These agencies are seen by most people as being of prime importance in establishing and maintaining basic standards that protect both the environment and the people interacting with it.

2.1.2.1 Environmental Protection and Sustainable Development

The fact that the existence of man is dependent on the sustainability of his environment cannot be over-emphasized. Having realized the impact of human activities aimed at development on the environment, there was need for global shift from development to sustainable development, since there is a close link between environmental protection and sustainable development. Thus, in 1985, World Commission on Environment and Development established The Experts Group on Environmental Law to prepare a report on legal principles for environmental protection and sustainable development, and proposals for accelerating the development of relevant international law, for consideration by the World Commission on Environment and Development. One of its terms of reference was to give special attention to rules and legal principles that would be in place before 2000 to support environmental protection and sustainable development.³³ The Commission emphasized that sustainable development is vital to the well-being of humanity, not only today but in the context of future generation.

Thus, in the Earth Summit held in Rio in 1992, it was concluded that the economic, social and environmental concerns are inescapably interlinked to world development and pledged to eradicate environmental problems, and reduce poverty through integrated efforts and global cooperation.³⁴ In line with the foregoing, it was also agreed that in order to achieve sustainable

³³ MT Okorodudu-Fabara, *Law of Environmental Protection*, (Nigeria: Caltop Publications (Nigeria) Limited, 1998) P. 63.

³⁴ The United Nations Rio Declaration on Environment and Development, Principles 5 and 7.

development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.³⁵

What is sustainable development? Sustainable development has been used in a broad perspective that includes the overall development of man without any distinction. Sustainable development has been variously defined. In international law, sustainable development refers to ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’.³⁶ The report also emphasized that over exploitation of resources may compel human societies to compromise their ability to meet the essential needs of their people in the future, and called on all countries to adopt the objective of sustainable development as the overriding goal and test of national policy and international cooperation. In like vein, in the 2002 World Summit on Sustainable Development (WSSD) Plan of Implementation,³⁷ nations are called upon to promote sustainable development at the national level by enacting and enforcing clear and effective laws that supports sustainable development.

In the context of state actions and policy measure, it refers to the state’s efforts to achieve progress (development) qualified by the condition that such efforts should be possible to maintain over a long term (sustainable).³⁸ Thus in Nigeria, the goal of the National Policy on the environment is to achieve sustainable development. Moreover, the policy adopts the notion that refers to sustainable development as the judicious and planned use of natural resources for equitable development to meet the needs of the present generation without jeopardizing that of the future generations.³⁹

³⁵ *Ibid*, Principle 4.

³⁶ The United Nations World Commission on Environment and Development, *Our Common Future*, (Oxford University Press, 1987), p. xi.

³⁷ See *Ibid*, Agenda 21.

³⁸ HC Bugge & C Voigt, *Sustainable Development in International and National Law* (Netherlands: Europa Law Publishing, 2008) p.88.

³⁹ See Nigerian National Policy on the Environment (1989), Art. 1.

Flowing from the foregoing, it is clear that sustainable development advocates for the adoption of developmental policies that protects the environment from degradation. It also emphasizes a comprehensive and integrated approach to economic and social development processes through the judicious and thoughtful use of the environment in a way that it will be maintained for coming generations.⁴⁰ Hence, the International Court of Justice noted that the concept of sustainable development expresses the need to reconcile economic development with protection of the environment.⁴¹ Thus, the right to healthy environment is linked to the right to sustainable development,⁴² and peace, development and environmental protection are interdependent and indivisible.⁴³ Hence, the use of our environment today must not diminish its usefulness tomorrow.

The three dimensions of sustainable development are: the social dimension, economic dimension and environmental dimension. For the purposes of this work we are concerned with the environmental dimension. Here, sustainable development entails the use of the environment and its elements in such a way as preserves its capacity to serve future generation. Thus, the present generation should, in meeting their own needs, not compromise the ability of the future generation to meet their own needs. Moreover, human beings are at the centre of concerns for sustainable development and are entitled to a healthy and productive life in harmony with nature.⁴⁴ This therefore calls for a duty of environmental protection by all man, which includes a duty to prevent, reduce and control pollution of the environment from all sources, including oil production, distribution and consumption.

⁴⁰ T. Kuokkanen, *International Law and The Environment*, (United Kingdom: Kluwer Law International, 2002) p. xxi at 333.

⁴¹ See *Gabcikovo-Nagymaros Case (Hungary v. Slovakia)*, ICJ Report, 1997, paragraph 140.

⁴² African Charter on Human and People's Rights, Art. 24.

⁴³ United Nations Rio Declaration on Environment and Development, 1992, principle 25.

⁴⁴ *Ibid*, Principle 1.

2.1.2.2 Environmental Protection and Human Rights

The global need for effective protection of the environment has been evident for some time and there has been the search for an effective instrument to possibly stop or slow down the destruction of the environment. The predominant legal approaches being adopted for environmental protection have been based on regulations imposing duties. However, there is an emerging legal approach based on each man's right to a quality of environment that permits a life of dignity and well-being.⁴⁵ By this declaration,⁴⁶ it is clear that man's environment (natural and man-made) is essential to his well-being and enjoyment of basic human rights, including the right to life. This recognized the links between environmental protection and human rights. Thus, human rights guaranteed in national, regional and international human rights instruments have been increasingly used as an effective instrument for environmental protection.

There are three main approaches to the interrelationship between environmental protection and human rights. The first approach understands environmental protection as a precondition to the enjoyment of internationally guaranteed human rights especially the rights to life and health. Thus, environmental protection became an instrument in an effort to secure the effective universal enjoyment of human rights and those who pollute the environment, not only commit crime against the environment, but also violate human rights.⁴⁷ Consequently, human rights monitoring bodies, and international, regional and national courts have severally recognized poor environment as a major factor in human rights violation. For instance, the ICJ stated thus:

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

⁴⁵ United Nations Stockholm Declaration on the Human Environment, 1972, principle 1.

⁴⁶ *Ibid.*

⁴⁷ This is the approach adopted in United Nations Stockholm Declaration on the Human Environment, 1972.

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 Declaration and other human rights instruments.⁴⁸

Furthermore, the right to health under article 12 of the International Covenant on Economic, Social and Cultural Rights has been said to extend to the underlying determinants of health, which includes a healthy environment, and states' obligations in relation to this right extends to prevention and reduction of its population's exposure to detrimental environmental conditions that would directly or indirectly impact upon their health.⁴⁹ This approach implies that human rights obligations of states should include the duty to ensure the level of environmental protection necessary to allow the full exercise of protected rights.

On the other hand, the second approach sees certain human rights as elements to achieving environmental protection, with the protection of human health being the principal aim. This approach views the link between environmental protection and human rights in terms of procedure, and adopts procedural rights contained in human rights instruments in environmental protection instruments to enhance environmental decision making and enforcement. Thus, the human rights procedure which states that access to information, public participation and access to effective judicial and administrative proceedings, including redress and remedy, should be guaranteed because environmental issues are best handled with the participation of all concerned

⁴⁸ See *Gabčíkovo-Nagymaros Project (Hungary v Slovakia)*, 1997 ICJ Rep 7 (separate opinion of Justice Weeramantry), p. 4.

⁴⁹ Committee on Economic, Social and Cultural Rights, 'General Comment No. 14: The Right to the Highest Attainable Standard of Health (Article 12 of the International Covenant on Economic, Social and Cultural Rights)', *UN Doc E/C.12/2000/4*, 11 August 2000, paragraphs 4 and 15.

citizens, at the relevant level.⁵⁰ This approach implies that human rights must be implemented in order to ensure environmental protection.

The third and most recent approach sees environmental protection and human rights in terms of substantive law, and views the right to the environment (in a limited form) as an independent human right. Thus, the right of all people to a general satisfactory environment favourable to their development, widely known as the right to a healthy environment was guaranteed in the African Charter on Human and Peoples' Rights.⁵¹ According to the African Commission on Human and Peoples' Rights, this Article 24 imposes clear obligations on state government to take reasonable and other measures to prevent pollution and ecological degradation, to promote conservation, and to secure an ecologically sustainable development and use of natural resources.⁵² Thus, this approach sees the right to certain quality (safe, favourable, decent, balanced, healthy, etc) of environment as a human right in itself. Currently, only regional international treaties and national instruments recognize this right and no international convention has recognized such a right.

Nigeria is a signatory to these international and regional instruments that recognized the need to use human rights as an effective instrument for environmental protection. In addition, under the Nigerian Constitution,⁵³ it undertakes to protect and improve the environment and safeguard the water, air and land, forest and wild life of Nigeria. Thus, Nigerian government is legally bound by both international and regional treaties and its own constitution to provide for a

⁵⁰ See United Nations Rio Declaration on Environment and Development, 1992, principle 10.

⁵¹ See African Charter on Human and Peoples' Rights, Art.24; see also the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, Art. 11(1).

⁵² See African Commission on Human and Peoples' Rights, *Decision on Communication of The Social and Economic Rights Action Center (SERAC) and the Center for Economic and Social Rights (CESR) v Nigeria* (155/96), para 54. The decision was adopted at the 30th ordinary session of the African Commission of Human and Peoples' Rights, Banjul, 13-27 October 2001 (SERAC and CESR v Nigeria), <<http://www1.umn.edu/humanrts/africa/comcases/155-96b.html>> accessed on 9th September 2014.

⁵³ See Constitution of the Federal Republic of Nigeria, 1999 as amended 2011, S. 20. However, this section is within the fundamental objectives and directive principles of state policy, which is not justiciable.

healthy environment to its population. How far it has fared in this obligation would be discussed later in this work.

2.2 Meaning of Oil

Oil is any kind of petroleum, liquid hydrocarbons, or petroleum products or any fraction or residues there from, including, but not limited to, crude oil, bunker fuel, gasoline, diesel fuel, aviation fuel, oil sludge, oil refuse, oil mixed with waste, and liquid distillates from unprocessed natural gas.⁵⁴ In the United States,⁵⁵ oil means ‘oil of any kind or in any form, including petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil, but does not include any substance which is specifically listed or designated as a hazardous substance.....’⁵⁶ Furthermore, in Nigeria, oil is defined as ‘oil of any description and includes spirit produced from oil of any description and also includes coal tar, and any power conferred by any provision of this Act to prescribe descriptions of oil for purposes of that provision shall be construed accordingly.’⁵⁷ It is submitted that the inclusion of coal tar in Nigerian definition of ‘oil’ is unnecessarily complicated. Consequently the definition of oil by California Code shall be adopted for the purposes of this thesis.

This definition referred to oil as including petroleum, thus it is necessary to know the meaning of petroleum. Petroleum (commonly called hydrocarbon) is a compound that compose of hydrogen and carbon and may exist in gaseous, liquid or solid form. Petroleum in liquid form is referred to a crude oil, in gaseous form is natural gas, while in solid form, it could either be

⁵⁴ See Chapter 7.4 – *Oil Spill Response and Contingency Planning*, West’s Annotated California Code, Government Code, Vol. 32B, 1997 Cumulative Pocket Part.

⁵⁵ See Oil Pollution Act of 1990 (33 U.S.C. 2701), Sec. 1001(23).

⁵⁶ For list of substance designated as hazardous, see Comprehensive Environmental Response, Compensation, and Liability Act, (42 U.S.C. 9601), Sec. 101(14) (A) to (F).

⁵⁷ See Oil in Navigable Waters Act, Cap. 06, LFN 2004, S. 20.

coal, shale, tar sands or bitumen.⁵⁸ Petroleum is any liquid, solid hydrocarbon or combustible gas existing in a natural condition in the earth's crust and includes any such liquid or solid hydrocarbon or combustible gas, which gas has, in any manner been returned to such natural condition; but does not include coal, bituminous shale or other stratified deposits from, which oil can be obtained by destructive distillation or as arising from a marsh or other surface deposit.⁵⁹ Ideally, petroleum consists of crude oil and natural gas, and is mostly used to produce fuel oil and gasoline (petrol) as energy sources. It is clear from the foregoing that oil and petroleum are used interchangeably.

Consequently, oil in this work refers to oil and natural gas, otherwise called petroleum in some instances.

2.2.1 Nature and Importance of Oil

Oil is formed from organic matter in marine sediment. Microscopic organisms such as single-celled algae settle to the sea floor and accumulate in marine mud. This organic matter may partially decompose, using up the dissolved oxygen in the sediment. As soon as the oxygen is used up, decay stops and the remaining organic matter is preserved. Continued burial subjects the organic matter to higher temperatures and pressures, which cause physical and chemical changes in the organic compounds. These changes produce tiny droplets of oil and natural gas. As muddy sediments compact, the oil and gas are squeezed out and move into more porous and permeable sandy layers. The conditions necessary for the formation of oil and gas, that is, where oxygen is not present are found in a highly restrictive environment such as in a closed basin like the bottom

⁵⁸ Y. Omorogbe, *Oil and Gas Law in Nigeria* (Nigeria: Malthouse Press Ltd, 2001) p.1.

⁵⁹ Mineral and Petroleum Resources Development Act, No. 28, 2002, South Africa, S. 1.

of the Black Sea.⁶⁰ Thus, it is believed that oil consists of remains of incompletely decayed tiny plant and animal remains buried under thick layers of rock millions of years ago. These tiny animals and plants are called plankton.⁶¹

Oil has been known and used by man since about 500 BC, when the first oil well was dug in Shush. However, the first modern commercial drilling and production of oil started in the USA in 1859.⁶² In 1930s, oil began to compete with coal as a source of energy for the industries of the world, and by the ending of 1960s, it took over from coal as the world predominant energy source.⁶³ Wide variety of oil exist, ranging from light volatile liquids or gases that condense into liquids as the atmospheric pressure increases to heavy mixtures that have to be warmed before they can flow. Moreover, oil differs in colour – from green, yellow to brown or black. The economic value depends on the gravity and quality of the oil.⁶⁴

Among the leading producers of oil are Saudi Arabia, Russia, the United States (Chiefly Texas, California, Louisiana, Alaska, Oklahoma and Kansas), Iran, China, Norway, Mexico, Venezuela, Iraq, Great Britain, the United Arab Emirates, Nigeria and Kuwait. The largest known reserves are in the Middle East.⁶⁵

The importance of oil cannot be overemphasized. It is the world's major energy source, and consequently, a major player in the world economy. The oil industry is the backbone of both the American and Nigerian Economy. What happens in the industry reverberates throughout the entire economy of these two nations. The reason is that the industry makes significant economic contribution as both employer and purchaser of these countries' goods and services. In the USA

⁶⁰Oil – Earth Science Australia, *The Origin of Oil and Gas* <<http://www.earthsci.org/mineral/oil.html>> assessed on 17th September 2014.

⁶¹ *Ibid.*

⁶²When Col. Edwin L Drake, working for Pennsylvania Rock Oil Company Sunk a well in Pennsylvania

⁶³ See Y Omorogbe, *op cit.* pp. 3 – 4.

⁶⁴ B Tavern, *An Introduction to the Regulation of the Petroleum Industry: Laws, Contracts and Conventions*, (Kluwer Law International, 1994) p. 1.

⁶⁵ Oil – Earth Science Australia, *loc cit.*

in 2009, the oil industry supported a total value added to the national economy of more than \$1 trillion or 7.7 percent of the U.S gross domestic product,⁶⁶ and in 2010, it delivered \$476 billion to the U.S. economy.⁶⁷ Likewise, in Nigeria, oil accounts for more than 90 percent of the nation's total foreign exchange earnings and more than 70 percent of the revenue base of the government, and every successive government depends on oil revenue to finance its governmental programmes and projects.⁶⁸

Furthermore, oil is a building block of uncountable vital products. It is also used to produce natural gas, kerosene, lubricating oil, paraffin wax, naphtha and asphalt.⁶⁹ Furthermore, oil is a source of raw material for a wide variety of derivative products such as pharmaceuticals, solvents, fertilizers, pesticides, plastics, ink, soap, electricity, etc.⁷⁰ which plays important roles in man's daily lives. Most industries of the world depend on oil for its operations.

Oil is very important to man's wellbeing. The oil industry creates jobs, stimulates the economy of the world through investment in energy development and fuel man's modern way of life in addition to being source of raw materials for several goods.

2.2.2 Oil Exploration in Global History

Today, oil is utterly crucial to man's society. Man now enjoys a lifestyle that the generations before him could barely dream of. Man has spent a long time getting this far, and oil exploration and usage has a long history, dating back to about 40,000 years ago until today.

⁶⁶ Answers, *Why is Oil and Natural Gas Important*, <http://www.answers.com/categories/science_energy.fossil.fuels> accessed on 17th September 2014.

⁶⁷ American Petroleum Institute, 'The People of America's Oil and Natural Gas Industry' (2014) *Energy Tomorrow* <www.energytomorrow.org/economy> accessed on 17th September 2014.

⁶⁸ BE Okogu, 'The Oil Sector and the Future of the Nigerian Currency: Perspective Planning Against Instability' (1991) 15:1 *OPEC Rev.* 13 at 14.

⁶⁹ Wikipedia, *Petroleum: Wikipedia Definition*, (Wikimedia Foundations Inc., 2009) <<http://en.wikipedia.org/wiki/petroleum>>, accessed on 10th September 2014, p. 6.

⁷⁰ *Ibid.*

In ancient history, natural bitumen was found on stone tools from Neanderthal sites in Syria at about 40,000 years ago and by 3000BC, the Indus community of Mehrgarh used natural occurring bitumen to waterproof crop baskets. Around 625BC, asphalt was used as a material to build road in Babylon. The earliest oil wells were drilled in China around 347AD with depths of up to 240m, using basic drill-bits attached to bamboo poles. The oil found was burnt to evaporate brine to get salt.⁷¹ There was an increased economic extraction of oil from the Caspian region around the 9th to 10th century, and then, Persian chemists first distilled kerosene for lighting on an artisanal scale. Similar distillation became available in Western Europe by the 12th century.⁷² In 1632, natural oil springs were found in New York, and in 1790 Nathania Carey skimmed oil from natural seeps near Titusville, Pennsylvania, delivering it to customers on horseback.⁷³

The modern age of oil exploration started in 1846 when Abraham Gessner developed a process to refine liquid fuel from coal, bitumen and oil shale. The resulting fuel and kerosene burned more cleanly and was less expensive than whale oil. In 1853, Ignacy Lukasiewicz, a polish pharmacist improved Abraham Gesner's earlier refining method to produce clear kerosene from seep petroleum. He opened the first world's first modern 'oil mine' at Bobrka, near krosno and two years later, first industrial refinery in the world at Ulaszowice near Jasio. The first modern commercial oil well was in Poland in 1853, followed by that in Romania in 1857. Both oil wells were hand dug, and Romania is actually the first country in the world to have its crude oil output recorded in international statistics at 275 tonnes. In 1861, first modern Russian refinery was built in the oil fields at Baku and Baku produced about 90% of the world's oil.⁷⁴

⁷¹ C Hugh, (ed), *Encyclopedia Britannica* (11th edn, United States of America, Cambridge University Press, 1911) <www.britannica.com>, accessed on 24th September 2014.

⁷² JP Riva Jr. & GI Atwater, 'Petroleum', *Encyclopedia Britannica*, <www.britannica.com> accessed on 24th September 2014.

⁷³ Asphaltum, *Stoddart's Encyclopedia Americana*, (9th edn., United States of America, University of Michigan, 1883) pp. 344 - 345.

⁷⁴ World Digital Library, 'Titusville, Pennsylvania, 1896' <www.wdl.org> accessed on 16th July 2014.

The first oil well in North America was drilled in 1858 by James Miller Williams in Oil Springs, Ontario (named for its natural oil seep). The first US Oil well is more famous. It was drilled (not dug) by Edwin Drake, using a steam engine to reach a total depth of 21m at Oil Creek (also named for its natural oil seep) in Pennsylvania in 1859 and by 1860, Gessner and his competitors had built 40 kerosene plants across the United States.⁷⁵ In 1861, America's oil production was 2.1million barrels a year. In 1870, the average American or British citizen used between 2.2 to 2.5 tonnes of oil equivalent per year.⁷⁶ In 1870, standard oil was incorporated in Ohio. It absolved its competitors and dominated the northeastern United States. In 1892, the Royal Dutch Petroleum Company was formed. It later merged with Shell Transport and Trading Company to create Royal Dutch Shell. By 1895, petroleum oil was just 7 cents a gallon. U.S oil production in 1900 was 174,000 barrels a day.⁷⁷

At the dawn of the 20th century energy had become cheaper, with ever more applications for its use. No longer was mankind limited by what could be achieved by manual labour, horse drawn power or the force of the wind. Science and technology, with the help of first coal, and then petroleum, had changed the world. Man's standard of living today is the result of, and utterly dependent upon, man's ability to find, extract, and use oil. During the late 19th century, with the improvement in science and technology, especially the invention of automobiles, brought about the need for greater use of the newly available refined rock-oil.

In 1885, oil was discovered in Sumatra by Royal Dutch. The first well was drilled in Los Angeles in 1893, and in 1895, extraction of bitumen from bituminous sand using hot water at

⁷⁵ JS Gordon, '10 Moments That Made American Business', (February/March 2007), *American Heritage*, <www.americaheritage.com> accessed on 19th July 2014.

⁷⁶ This is approximately the same as modern Haiti or Senegal, countries that were among the very lowest energy consumers in the world in 2003.

⁷⁷ RW Ford, *A History of the Chemical Industry in Lambton County* (Canada: Canadian Society for Chemical Engineering, 1988) p.5.

Carpenteria, California was commenced. In 1884, Edward Butler constructed the first gasoline internal combustion engine and was the first to use the word petrol. In 1896, Henry Ford's first motor car was invented. By 1900, 8000 automobiles registered in the United States.⁷⁸

In 1908, oil was discovered in Persia, Anglo Persian Oil Company was also formed, later renamed BP. In 1910, the first oil discovery was made in Mexico at Tampico on the Gulf Coast, and in the same year, US Congress authorized legislation to set aside land as Naval Petroleum Reserves.⁷⁹ Between 1914 and 1918 was the First World War took place. During the conflict, control of oil supply really mattered because oil was needed for tanks, ships and planes. The first exploration discovery to use seismic was made in 1924 in Texas or Mexico. Oil was discovered in Bahrain in 1932. The oil was drilled with the help of Standard Oil. In 1933, Standard Oil (later became Chevron) created a subsidiary called California Arabian Standard Oil Company (later became Saudi Aramco). Today, Saudi Aramco is by far, the world's largest oil company. In 1934, the first floating drilling rig was reported in the Caspian Sea and in 1935, Texas company introduced the first submersible drilling barge which was used in the estuaries (Lake Pelto) Louisiana. In 1938, Oil was discovered in Kuwait and Saudi Arabia. The world's 2nd largest producing field today Burgan Kuwait was discovered in 1938, while the largest oil producing field in the world, Ghawar, Saudi Arabia was discovered in 1948. In 1956, oil was discovered in Algeria and Nigeria. In 1959, Natural gas was discovered in Groningen field, Netherlands.

In 1960, the Organisation of Petroleum Exporting Countries (OPEC)⁸⁰ was founded in Baghdad – Saudi Arabia. In 1967, the first commercial production of the largest oil resources in the world at Fort McMurray, Alberta, Canada began. Oil was discovered on North Slope of

⁷⁸ JS Gordon, *loc cit.*

⁷⁹ Energy Information Administration (EIA), '*Petroleum Timeline* <www.eia.doe.gov> accessed on 19th September 2014.

⁸⁰ Member countries of OPEC are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela.

Alaska. In 1969, the Santa Barbara Oil spill occurred and oil was discovered in North Sea and in 1975, the first oil production from North Sea was carried out.⁸¹ The top three oil producing countries are Saudi Arabia, Russia, and the United States.⁸²

Coal remained the world's foremost fuel until mid 1950s, almost 90 years after the first commercial extraction of rock-oil. Between 1980 and 2005, oil demand grew from 60mmbd to 85mmbd. Much of the rise was the result of the developing world. China's oil consumption increased yearly since 2002 and in 2010, China became the world's single largest user of oil. The impact of oil on global economy are that we no longer rely on slavery or feudal serfdom, and most work today is not the product of human labour, but of machines. All these machines require energy and that energy is dominantly oil.⁸³ Thus, today, about 90% of vehicular fuel needs are met by oil.⁸⁴ Oil's worth as a portable, dense energy source powering the vast majority of vehicles and as the base of many industrial chemicals makes it one of the World's most important commodities.

2.2.3 The Nigerian Oil Industry

Legislation governing the exploration of oil in Nigeria existed before oil was discovered. The first legislation was the Petroleum Ordinance of 1889, followed by the Mineral Regulation (Oil) Ordinance of 1907. Meanwhile, the discovery of oil in Nigeria dates back to the early 20th Century, around 1906 when German Bitumen Company under took exploration of oil around

⁸¹ Information obtained from Geo-Help, 'World History of Oil and Gas', The Virtual Geology Department, *Providing Information and Services to the Canadian and World Wide Oil and Gas Industry: History of the World Petroleum Industry (Key Dates)* <www.geohelp.net/world.html> accessed on 19th September 2014.

⁸² Wikipedia, *List of Countries by Oil Production*, (Wikimedia Foundations Inc., 2014) <www.en.wikipedia.org/wiki/list_or_countries_by_oil_production> accessed on 19th September 2014; also Central Intelligence Agency (CIA), 'Country Comparison: Crude oil – Production', *The World Factbook* <www.cia.gov/library/publications/the-world-factbook/fields/2241.html> accessed on 19th September 2014.

⁸³ View from the Mountain, *The Fuel of Tomorrow*, May 1, 2013 at 16:38 <www.grandemotte.wordpress.com/peak-oil> accessed 18th September 2014.

⁸⁴ Wikipedia, *History of the Petroleum Industry*, (Wikimedia Foundations Inc., 2014) <http://en.wikipedia.org/wiki/History_of_the_petroleum_industry> accessed on 19th September 2014.

Okitipupa in the present Ondo State under a six years prospecting rights. The company was not successful and left Nigeria at the outbreak of World War 1.⁸⁵ This company did not come back after the World War 1.⁸⁶ The British government gave the next concession⁸⁷ to explore oil throughout Nigeria to Anglo-Dutch Consortium, Shell D' Arcy⁸⁸ between 1937 and 1938. After drilling about fifteen wells, the company made first commercial discovery of oil in Oloibiri in the present day Bayelsa State in 1956, while the first shipment of oil left the shores of Nigeria on February 17, 1958.⁸⁹ In the absence of competitors, Shell BP was able to leisurely explore and select choice acreage. It retained 15,000 square miles of the original concession area and returned the remaining to Nigerian Government. The success of Shell BP spurred other companies, and between 1958 and 1960 exploration rights were extended to other companies of various nationalities, to wit: Mobil,⁹⁰ Gulf (now Chevron), Saraf (now Elf), Texaco, Tenneco,⁹¹ Agip, Philip, Esso and Amoseas (Texaco/Chevron).⁹²

In 1969, the Petroleum Act was promulgated. It repealed the existing petroleum Legislation. The Act laid down the legal framework for the regulation of the oil industry in Nigeria. Under the Petroleum Act, ownership of oil is vested exclusively in the Federal Government and interested persons can only acquire participatory interest.⁹³ The participatory interests were granted through licences and leases, such as Oil Exploration Licence (OEL), Oil

⁸⁵ G Etikerentse, *Nigerian Petroleum Law* (2nd edn, Nigeria: Dredew Publishers, 2004) p. 54; LA Atsegbua, *Nigerian Petroleum Law – The Acquisition of Oil Rights in Nigeria* (Benin city: Renstine Nig. Ltd, 1993) p. 5.

⁸⁶ See Ayodele-Akaakar, 'Oil and Gas – The Issue of Ownership and The Nigerian Situation' (1997) 2 *FJRSB*, 70.

⁸⁷ This concession covered the whole Nigeria, that is, 357,000 square miles.

⁸⁸ This company is an affiliate of Shell Petroleum Company and British Petroleum Company, otherwise known as Shell-BP.

⁸⁹ J Oke, 'Oil Discovery at Oloibiri', *The Guardian*, Sunday, July 30, 2006, 26.

⁹⁰ Mobil was awarded Sokoto Basin, the Benue Trough and fringes of the Niger Delta to explore in 1958.

⁹¹ Tenneco, an American Company was granted a concession along the Western Coast.

⁹² Y Omorogbe, *op cit*, p.17. The oil companies operating in Nigeria presently include Shell Petroleum Development Company of Nigeria, Chevron Nigeria Ltd, Mobil Producing Nigeria, Agip Oil Company, Agip Energy and Natural Resources Ltd, Nigus Petroleum, Ashalnd Oil, Elf Nigeria Services Ltd and Dubril Oil company Ltd.

⁹³ See The Constitution of the Federal Republic of Nigeria 1999, Cap. C23 LFN 2004, as amended, S. 44(3); and Petroleum Act, Cap P.10 LFN 2004, S. 1.

Prospecting Licence (OPL) and Oil Mining Lease (OML).⁹⁴ These rights were granted only to companies incorporated in Nigeria for oil exploration and exploitation upon the fulfillment of certain requirements.⁹⁵ The features of the participatory regime include Joint Venture Agreement (JVA),⁹⁶ Production Sharing Contract (PSC),⁹⁷ and service contract.⁹⁸ Apart from the Petroleum Act, several other legislations directly regulate the Nigerian Oil Industry. These regulations include the Oil Pipelines Act 1956, Petroleum Profits Tax Act 1959, Oil Terminal Dues Act, Oil in Navigable Waters Act, The Environmental Impact Assessment Act, and Associated Gas Re-Injection Act etc. These legislations regulating oil exploration in Nigeria shall be discussed under the topic where they are necessary in this work.

In 1971, two significant events happened in the oil industry. The Nigerian National Oil Corporation (NNOC), the predecessor of the Nigerian National Petroleum Corporation (NNPC)⁹⁹ was formed in April, while Nigeria joined OPEC in July. In 1972, Nigerian Government

⁹⁴ Petroleum Act, Cap. P 10, LFN 2004, S. 2.

⁹⁵ These requirements are stipulated in the Petroleum Act and The Nigerian Oil and Gas Industry Content Development Act 2010. They include submission of a map evidence of the area in which the application is sought, evidence of financial status and technical competence of the applicant, details of work which the applicant is prepared to undertake or programme for carrying out any working obligations imposed, the data upon which it is prepared to begin operations after the grant to which the applicant relates and details of a specific scheme for the recruitment and training of Nigerians. For the detailed requirements, See Petroleum Act, 1st Schedule and the Nigerian Oil and Gas Industry Content Development Act 2010.

⁹⁶ This is a contractual arrangement used by the oil producing country to acquire participation interest in the concession granted to oil companies. The joint venture arrangement is defined by the Oil mining Lease, the Participation Agreement and the Joint Operating Agreement. The joint venture concessions are operated through a fixed system under the Mineral Ordinance and Petroleum Act. For detailed discussions on this, See M Taylor and S Tyne, *Joint Operating Agreements* (London: Longman, 1992) p. 20.

⁹⁷ This was pioneered in Indonesia in 1967. It was introduced through Memorandum of Understanding (MOU) and granted on the basis of individually negotiated agreements. The features are that the oil company operates at its sole risk and expenses under the control of the oil producing country, oil company is entitled to recover its cost out of the oil produced, the balance, i.e the profit is divided between the oil company and the oil producing country in a predetermined percentage and the oil company's income is liable to taxation. For example, NNPC and Ashland Oil (Nigeria) Limited's PSC in 1973. See Etikerentse, *op cit*, p. 88.

⁹⁸ This sort of agreement is used to avoid the disadvantages of PSC. It can be Risk – Service, Pure – Service or Technical Assistance Agreement. In Risk Service Agreement, the International Oil Company bears the risk of exploration. The IOC brings money and technical expertise. It only recovers its money from the sale of the concession of oil production. For the other two types of contract, it is a simple contract of work. The government bears the risk, the contractor performs its agreed duties and are paid for it.

⁹⁹ In 1977, NNOC and the Federal Ministry of Mines and Power were merged, and the merger resulted in the creation of NNPC.

assigned all areas in the country that are not covered by any existing licenses or leases, as well as all concession areas held by oil companies that may be surrendered. Further, in 1983, the Nigerian Government initiated a policy that oil concessions would no more be granted to any person, and that application for such grant would no longer be entertained. However, this policy was not translated to legislation.¹⁰⁰

Oil production got to a peak in 1979 with Nigeria producing 2.3 million barrels per day. However, in 1980s, due to the oil glut, prices of oil fell and oil exploration reduced greatly. It picked around the 1990s and currently, Nigeria is the world's sixth largest producer of oil with proven oil reserves estimated to be in excess of 21 billion barrels.¹⁰¹

The discovery of oil in Nigeria could be said to be both a blessing and a curse. It became a blessing in that it became the chief source of revenue generation, and thus, the main stay of Nigerian economy. On the other hand, it is a curse in that activities in the oil industry have destroyed the Niger Delta¹⁰² environment and left it desolate. In Nigeria, oil is dominant in the Niger Delta area, and the predominant traditional occupation of the Niger – Delta is fishing and agriculture. They had fertile landscape and abundant natural water that helped these occupations to thrive. When the colonial administration introduced forestry, the people of the Niger Delta also embraced it and it became a third occupation for them. The people were surviving on these occupations that accounted for about 44 percent of the people's source of employment.¹⁰³ However, the situation changed with the discovery of oil and oil related wealth, which brought environmental degradation, starvation, disease and death and consequently caused a total change to the way of life of the people of Niger Delta.

¹⁰⁰ Y Omorogbe, *op cit*, p. 18.

¹⁰¹ *Ibid.*

¹⁰² This is the area in Nigeria where oil is dominant. It consists of 9 states with about 185 local governments. The states are Abia, Akwa – Ibom, Bayelsa, Cross Rivers, Delta, Edo, Imo, Ondo and Rivers.

¹⁰³ UNDP Nigeria, 'Niger Delta Human Development Report', 2006, p. 21.

2.3 Definition of Pollution

Generally, pollution is the harmful effect on the environment of by-product of human activity, principally industrial and agricultural processes. Pollution has been defined in alternative concepts, both as a physical damage and as a man made alteration of the environment (that is activity oriented). At the international level, several conventions have defined pollution. According to United Nations Conventions, pollution is the introduction by man, directly or indirectly, of substances or energy into the environment¹⁰⁴ resulting in deleterious effects as to endanger the environment or interfere with other legitimate uses of the environment.¹⁰⁵ World Health Organisation on the other hand stated that pollution occurs when the environment is altered in composition or condition directly or indirectly as a result of activities of man so that it becomes less suitable for some or all of the uses for which it would be suitable in its natural state.¹⁰⁶ According to United Kingdom, pollution is the release into any environmental medium from any process of substances which are capable of causing harm to man or any other living organisms supported by the environment.¹⁰⁷

In the national arena, pollution has been expressed as a man made or man induced alteration of the chemical, physical, biological, and radiological integrity of water, land or air beyond acceptable limits. It is the presence in water, land or air of enough harmful or objectionable material to damage the water, air or land quality.¹⁰⁸ Pollution has also been defined

¹⁰⁴ Environment here refers to land, air and water.

¹⁰⁵ See United Nations Convention on the Law of the Sea (UNCLOS); United Nations Convention on Long Range Transboundary Air Pollution, 1979, Article 1.

¹⁰⁶ CS Ola, *Town and Country Planning and Environmental Laws in Nigeria* (Ibadan: OUP, Jericho, 1984) p. 155.

¹⁰⁷ See United Kingdom Environmental Protection Act, 1990, S. 1(3).

¹⁰⁸ U.S Federal Water Pollution Control Act, Amendments, 1972 (The Clean Water Act); Nigerian National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, Section 37.

as the presence of matter or energy whose nature, location or quality produces undesired environmental effect.¹⁰⁹

Hence pollution is the process of making air, water, and land dirty; the state of being dirty, what is annoying or harmful to the environment. It is the addition to air, water or land of any material that usually found there or that is in excess of normal amount. It is a relative concept because, although almost no substance exists in pure state, it is only when the impurities rise above a certain level that it becomes dangerous and harmful. In conclusion, pollution is a fact of life. Generally, one way or the other, every human or non-human life is affected by pollution.¹¹⁰ It is the existence of physical agent which if found in excess quantity alters the quality of the environment adversely. In fact, pollution is the primary target of environmental law.

2.3.1 Types and Causes of Pollution

There are three major types of pollution, to wit: air, land, and water pollutions, and a minor type known as noise pollution.

(a) Air Pollution

This is the release of substances into the air by human activities, which is of such concentration as to cause harmful effects to the environment. According to Atsegbua, air pollution is ‘the upsetting of the natural arrangement of different gases in the air. It is the accumulation of substances in the air, in sufficient concentrations to produce measurable effects on man, plants and animals. It involves the erosion of harmful substances into the atmosphere, which cause danger to any living things’.¹¹¹ Thus, air pollution is the presence of foreign bodies

¹⁰⁹ Nigeria National Water Quality Standards, 1991.

¹¹⁰ RM Stapleton (ed), *Pollution A to Z*, (Volume 2, USA: Macmillan Reference; Thomson/Gale, 2003) p. 101. Given the Gravity of risk around oil pollution, it assumes a position of significance on which any analysis of impact or effects of its impact can be considered.

¹¹¹ L Atsegbua et al, ‘*Environmental Law In Nigeria: Theory and Practice*’ (Nigeria, Ababa Press Ltd: 2003) p. 75.

in the air which is highly injurious to the environment. Such foreign body can be gases or solids produced in burning natural fuels, chemicals and some industrial process and in nuclear explosions.

Air pollution comes from both human made and natural sources.¹¹² Such human made sources includes pollutants from combustion, construction, mining, agriculture and warfare. Thus, motor vehicle emissions are one of the leading causes of air pollution. Other principal sources include chemical plants, coal-fired power plants, oil refineries, petrochemical plants, nuclear waste disposal activity, nuclear plant malfunction, incinerators, large livestock farms, metal production factories, plastic factories and other heavy industries. Moreover, clear felling and burning of natural vegetation, spraying of pesticides and herbicides results in agricultural air pollution.

(b) Land Pollution

This is the degradation or destruction of earth's surface and soil, directly or indirectly as a result of human activities and their misuse of land resources. Such human activities include dumping of harmful waste materials such as chemical input that are dangerous to vegetation and agricultural production. For instance, use of insecticides and pesticides, which absorbs the nitrogen compounds from the soil, making it unfit for plants to derive nutrition from.

Land pollution equally includes anything laid in land which automatically impairs its arability, yield or cultivability, such as land mines, booby traps and other similar devices. Land pollution lessens the quality and/or productivity of the land as an ideal place for agriculture, forestation, construction, etc. It is also cause by the deposition of solid or liquid waste materials (especially industrial waste) on land or underground in a manner that can contaminate the soil

¹¹²Conserve Energy Future: Be Green. Stay Green
<<http://environment.nationalgeographic.com/environment/global-warming/pollution-overview/>> accessed on 3rd February 2015.

and groundwater, threaten public health, and cause slightly conditions and nuisances. Other sources of land pollution also include mining and deforestation; these exploit the land and lead to soil erosion.

(c) **Water Pollution**

Water pollution is the process of altering the properties of any water which renders it unfit or less fit for the purpose it is used, be it artificial or natural. The alteration may take the form of changes in the physical, biological or chemical properties of the water. The alteration may also take the form of discharge of liquids, gaseous or solid substance into the water. Thus, once water bodies are contaminated by human activities, in such a way that is harmful and injurious to organisms and plants that lives in the water, such water is said to be polluted. Water pollution can be classified as pollution by putrescible,¹¹³ heated effluents, toxic materials¹¹⁴, and inert materials¹¹⁵ or by radioactive elements.

Water pollution occurs due to several factors, such as dumping of industrial wastes into rivers and other water bodies, spraying of insecticides, pesticides,¹¹⁶ eutrophication¹¹⁷ and oil spills.

(d) **Noise Pollution**

This is the disturbing or excessive noise that may harm the activity or balance of human or animal life. Sound becomes unwanted when it either interferes with normal activities such as sleeping, conversation, or disrupts or diminishes one's quality of life. The source of most outdoor noise worldwide is mainly caused by machines and transportation systems, motor

¹¹³ This is pollution by foul smelling and rotting of organic materials by bacteria materials such as waste from human and canaries. The decomposition uses large quantity of oxygen from water.

¹¹⁴ Toxic materials like heavy metals, mercury, pesticides when deposited in water are poisonous when consumed or contacted by aquatic animals and plants, depending on the quantity consumed.

¹¹⁵ Such inert materials include sewage and organic wastes, which de-oxygenate water.

¹¹⁶ When pesticides like DDT are sprayed on plants, it pollutes the ground water system.

¹¹⁷ This occurs due to daily activities like washing clothes, utensils near lakes, ponds or rivers; this forces detergents to go into water which blocks sunlight from penetrating, thus reducing oxygen and making it inhabitable.

vehicles, aircraft, and trains. Outdoor noise is summarized by the word environmental noise.¹¹⁸ Poor urban planning may give rise to noise pollution, since side-by-side industrial and residential buildings can result in noise pollution in the residential areas. Indoor noise can be caused by machines, building activities and music performances, especially in some workplaces. Thus, Nigerian government recognizing the adverse effect of noise pollution empowered NESREA¹¹⁹ to make regulations on noise emission, control and abatement in order to preserve and maintain public health.

2.3.2 Effects of Pollution

The effects of pollution on the environment are enormous. However, the discussions would be on the effects as it relates to environmental degradation, human health, global warming, ozone layer depletion and infertile land.¹²⁰

With respect to environmental degradation, it is worthy to note that, except for noise pollution, environment is the first casualty of pollution whether in the air or water. Pollution destroys crops and damage the quality and productivity of soil used for farming. Pollution also causes contamination of water. It kills fish and other water bodies, their food sources as well as damages their ability to reproduce. Thus, pollution causes deterioration of the environment through depletion of resources such as air, water and soil, the destruction of the ecosystems and the extinction of wildlife.

Furthermore, pollution has led to several health problems to both human beings and animals exposed to it. For instance, chronic exposure to noise may cause noise induced hearing loss. Noise-induced hearing loss can be caused by outside or inside noise. Noise pollution also

¹¹⁸ Wikipedia, *Noise Pollution*, (Wikimedia Foundations Inc., 2015) <http://www.en.m.wikipedia.org/wiki/Noise_pollution> accessed on 2nd February 2015.

¹¹⁹ National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007, Section 22.

¹²⁰ See generally, *Conserve Energy Future*, *loc cit*.

leads to stress and sleep disturbance. Air pollution leads to several respiratory problems including asthma or lung cancer, chest pain, congestion, throat inflammation, cardiovascular effects in humans. Moreover, water pollution may pose skin related problems like skin irritations and rashes. Pollution has also been known to have resulted in a rise in blood pressure, and an increase in stress and vasoconstriction, and an increased incidence of coronary artery disease. In animals, noise can increase the risk of death by altering predator or prey detection and avoidance, interfere with reproduction and navigation, and contribute to permanent hearing loss.

As greenhouse gases particularly CO₂ increase, they lead to global warming, by leading to melting of polar ice caps which increases the sea level and pose danger for the people living near coastal areas. When new industries are set up, new vehicles come on the roads and trees are cut to make way for new homes, CO₂ is directly or indirectly increased in the environment.

On the other hand, in the course of human activities, chemicals are released into the atmosphere and this contributed to the depletion of ozone layer. Meanwhile, ozone layer is the thin shield high up in the sky that stops ultra violet rays from reaching the earth. Further, due to constant use of insecticides and pesticides, the soil may become infertile. Moreover, various chemicals produced from industrial waste also affect the quality of the soil. The result is that plants may not be able to grow properly¹²¹.

In conclusion, pollution not only affects humans but also plants, vegetables, forests, animals, etc, hence the need to control it because human life, nature and wildlife are precious gifts to mankind.

2.4 Global Perspective on Environmental Pollution

¹²¹ See Wikipedia, *Pollution*, (Wikimedia Foundations Inc., 2015) <<http://en.wikipedia.org/w/index.php?title=Pollution>> accessed on 3rd February 2015.

The environment is a key determinant of human health, and exposures to toxic chemicals, physical factors and pollutants all have a direct impact on the quality of life, the burden of disease, and the outcome of longevity. In the developing world, population growth with urban crowding, the introduction of many environmental pollutants and toxic exposures and lack of clear policies to control pollution have accentuated the negative impact that these environmental factors can have as causative factors of disease in humans.

Currently, there is a greater international awareness of the dangers posed by continued deterioration of the environment, which is mainly caused by pollution. The fact that global pollution is on the increase at an alarming rate is not in question as the evidence is available for all to see. Thus, the phrases “global warming” “drought” and “climate change” are now common place in our lexicon that no one can pretend not to know about them and the dire consequences that they portends if serious and urgent actions are not taken to stop their menace. In fact, there has been a warning of increase in global hunger as a result of global warming and low investment in agriculture continues to take their toll on the environment.¹²² Consequent upon these, leading industrialized nations of world like the United States, China, Japan and the European Union have strengthened their municipal laws in order to combat pollution. Also in the international sphere, there has been an active fight against pollution.¹²³ However, these efforts are mostly on how to reduce industrial emissions, which contribute adversely to environmental pollution.

2.5 Meaning of Environmental Law

¹²² See International Aid Organization OXFAM report, *loc cit*.

¹²³ For instance, the Kyoto Protocol to the United Nations Convention on climate Change, which came into existence in 1997. Also in 2009, the United Nations meet in Mexico to find solutions to the problems of environmental pollution, but no agreement was reached on limits to be placed on industrial emission.

Environmental Law has been defined as a body of laws, which is a system of complex and interlocking statutes, common law, treaties, conventions, regulations and policies which seek to protect the natural environment which may be affected, impacted or endangered by human activities.¹²⁴ It is a broad category of laws that include laws that specifically address environmental issues and more general laws that have a direct impact on Environmental issues. Hence, while some environmental laws regulate the quantity and nature of impacts of human activities, for instance, setting allowable levels of pollution or requiring permits for potentially harmful activities; others are preventive in nature and seek to assess the possible impacts before the human activities can occur.

According to Ola C. S, Environmental Law covers the whole universe including not only human beings but also plants, animals, forests, shrubs, refuse, bacteria and insects. He went on to state that like other laws, it is a system of rules of social control aimed at achieving certain goals relating to the environment and the universe and securing obedience to them.¹²⁵ On the other hand, Amokaye G.O. stated that the term Environmental Law encompasses the subject matters of many important international agreements and municipal laws, regulations, standards and institutional framework for the equitable and sustainable use of the natural resources.¹²⁶

Hence, Environmental Law can be said to be the law governing the control of the effects of human activities on the physical environment in the overall interest of the public. It is a body of law that contains elements to control the human impact on the Earth and on public health. It is put in place to mitigate or prevent the threatening environmental problems that emanate from human activities in their quest for economic growth and development.

¹²⁴ UNEP, *Environmental Law Definitions* <www.unep.org/> accessed on 4th February 2015.

¹²⁵ CS Ola, *Town and Country Planning a Law in Nigeria*, (Ibadan: OUP, Jericho, 1984) pp. 150-154.

¹²⁶ GO Amokaye, *Environmental Law and Practice in Nigeria*, (Lagos: University of Lagos Press, 2004) p. 3.

Early examples of legal enactments designed to consciously preserve the environment for its own sake or human enjoyment are found throughout history. In the Common law, the primary protection was found in the law of nuisance, but this only allowed for private actions or injunctions if there was harm to land.¹²⁷ This was found to be inadequate in dealing with major environmental threats to common resources and laws were made to handle individual circumstances. For instance the Clean Air Act of 1956.

Environmental Law as a separate and distinct body of law arose in the 1960s when the major industrial economies of the world accumulated impressive sets of environmental laws, however, their implementation were woeful. In recent years, environmental law has been seen as a means of promoting sustainable development. Moreover, such policy concepts as polluter pays principle, precautionary principle, public participation, environmental justice has informed many environmental law reforms in recent times.

2.5.1 Categories of Environmental Law

Environmental Law can be categorized into two, to wit: International Environmental Law and National Environmental Law. The relationship between the two is on the basis of the purposes for which they are created and also the scope that each covers. International Environmental Law is developed by states to set standards at the international level, as well as provide obligations for states, including regulating their behavior in international relations with respect to matters involving the environment. On the other hand, national environmental law

¹²⁷ See *Aldred's case* (1610) 9 Co Rep 57b; (1610)77 ER 816; *R. V. Stephens* (1866) LR 1 QB 702; *Rylands v. Fletcher* (1868) UKHL 1 respectively for claims for smell pig sties, strict liability against dumping of rubbish and damage from exploding dam.

applies within a specific state and regulates the relations of the citizens among themselves and with the government of the state.

National Environmental Laws are adopted by an individual country. Although they may have international impacts, to wit, affect international activities and non-national parties, but they are generally not considered as international law. On the other hand, international environmental law concerns agreement among different countries. It is part of public international law.

2.5.2 Concepts of International Environmental Law

International Environmental Law is a subset of International Law. It is a field of international law regulating the behavior of states and international organizations with respect to the environment. The core domains for international regulation include management of the world's oceans and fisheries, the polar ice caps, and the regulation of carbon and other particulate emissions into the atmosphere.¹²⁸

Most International Environmental Law is incorporated in Multilateral Environmental Agreements (MEAs). The development of environmental law during the past three decades has led to the emergence of an increasing number of principles, concepts and norms that are now binding rules of international law. These principles and concepts play an important role because international environmental law originated and developed in a piecemeal fashion, not in a structured orderly way. Most international environmental law is an ad hoc response to environmental threats and challenges. Hence, apart from the UNEP programme of environmental

¹²⁸ See P Sands, *Principles of International Environmental Law* (2nd edn, United Kingdom: Cambridge University Press, 2003) pp. 18 - 19.

law,¹²⁹ there are many international arenas and international instruments dealing with specific environmental problems.

Consequently, these concepts, principles and norms are repeated or referred to in many different treaties or non-binding instruments. The frequent inclusion of these principles, concepts and norms in international legal instruments reinforces them and together with state practice, they contribute to the creation of global framework for International Environmental Law.

The comprehension of the modern and evolving International Environmental Law and its different facets, need not only knowledge of treaty law, but also the translation of principles and concepts into legally binding rules and instruments. The legal status of International Environmental Law principles and concepts is varied and may be subject to disagreement among states. Some concepts are firmly established in International Law while others are emerging and only in the process of gaining acceptance, especially the more recent ones.

Finally, global and regional environmental issues are increasingly the subject of International Law. Debates over environmental concerns implicate core principles of International Law and have been the subject of numerous International agreements and declarations.

2.5.2.1 Sources of International Environmental Law

Environmental Law is a collective term describing the network of treaties, statutes, regulations and common and customary laws addressing the effects of human activity on the natural environment. There are several sources of international environmental law. The Statute of International Court of Justice (ICJ) stipulated the sources of international law that the Court

¹²⁹ The first was in 1982, when UNEP agreed on its first ten year programme of environmental law, referred to as Montevideo programme 1, and thereafter, for each subsequent ten years: programme II in 1993 and programme III in 2001.

can rely on in determining issues brought for its decisions. These sources are international conventions (treaties), customary state practice, general principles of law common to many states, judicial decisions, and legal scholarship.¹³⁰

These sources are regarded as the authoritative sources of International Law and therefore, also of international environmental law. These sources are stated in order of practical hierarchy. Thus, the relevant treaty provisions applicable between the states with respect to the dispute must first be applied. If there is no such treaty provision applicable, then, the rules of customary international law shall apply. However, where there is no treaty provision and customary rules application to the dispute, then the general principles of law recognized by civilized nations would be relied on. Judicial decisions and writings of highly qualified jurists may be applied in determining the dispute as a subsidiary means. In practice, the ICJ had relied on multiple sources¹³¹.

Treaties are the strongest and most binding type because it represents consensual agreements between the states that sign them. A treaty is an international agreement concluded between states in a written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation.¹³² Thus, treaty is a generic word which encompasses among others, the terms convention, agreement, treaty, pact, protocol, charter, statute, covenant, declaration, engagement, Accord, exchange of notes, *Modus Vivendi*, and Memorandum of Understanding. Treaty may be bilateral or unilateral, and sometimes have its own rules of enforcement.¹³³ The main international treaties concerning the environment are: the 1972 UN Conference on the Human Environment, which

¹³⁰ See ICJ Statute, Article 38.

¹³¹ See L Kurukulasuriya & NA Robinson, *Training Manual on International Environmental Law*, (2nd edn, United Nations Environmental Programme (UNEP), 2006) pp. 1 - 2.

¹³² Vienna Convention on the Law of Treaties, 1969, Article 2(1)(a).

¹³³ L Kurukulasuriya & NA Robinson, *op cit*, p. 3.

produced the 1972 Stockholm Declaration; 1992 United Nations Conference on Environment and Development (UNCED), which produced the Rio Declaration; 1997 Kyoto Protocol that entered into force on February 16, 2005; and 2002 World Earth Summit on sustainable development.¹³⁴

Customary International Law is difficult to ascertain, as it is created by the actual actions/practice of states, when they demonstrate that those states believe that acting otherwise would be illegal. Thus, the state practice should be consistent with the rule of constant and uniform usage and exist because of the belief that such practice is required by law. Although rules of Customary International Law are not written down, it is still as legally binding on states as treaty law.¹³⁵

Two specific terms associated with Customary International Law are the doctrine of soft law and peremptory norm. The term soft law is used to refer to any international instrument, other than treaty, which contains principles, norms, standards or other statements that stipulate expected behavior. Soft law influence individual states to respect certain norms or incorporate them into national law, but is not itself enforceable. On the other hand, hard law denotes international laws that are binding and enforceable itself, therefore, a treaty that is legally binding can be considered to represent hard law. Most International Environmental Law concerns general principles agreed upon among nations, which oblige the states to adopt implementing legislation. They are not usually enforceable on their own in court. On the other hand, the second term peremptory norm (*jus cogens*) refers to norms in international law that cannot be overruled except by a subsequent peremptory norm. They are norms of the highest

¹³⁴ *Ibid*, p. 23

¹³⁵ *North Sea Continental Shelf Cases*, ICJ Reps, 1969, p. 3 at 44.

order and takes precedence over treaty law. Examples of such norms include prohibition of genocide or torture or use of force and the ban on slavery.¹³⁶

The third source of International Environmental Law is general principles of law recognized by civilized nations. This source of International Environmental Law is based on the theory of natural law which argues that laws are a reflection of the instinctual belief that some acts are right while other acts are wrong. These principles are certain legal beliefs and practices that are common to all developed legal systems. There is no universally agreed upon set of general principles and concepts and they usually include both principles of the international legal system as well as those common to the major national legal systems of the world. The ICJ sometimes analyse principles of domestic law in order to develop an appropriate rule of international law. For instance, the fact that the principles of good faith (the concept that everyone intends to comply with agreements they make), is valued by most states and adopted in their domestic judicial systems indicates that the principle may be considered a standard of international law.¹³⁷

The last two sources: judicial decisions and legal scholarship are considered subsidiary means for the determination of Rules of Law. Thus, these sources are not themselves international law, but help to prove the existence of a particular rule of international law. Especially influential are the judicial decisions of the ICJ and national courts. Other international courts include the International Tribunal for the Law of the Sea (ITLOS), the European Court of Justice, European Court of Human Rights and other regional treaty tribunals. On the other hand, legal scholarship is not really authoritative in itself, but may describe rule of law that are widely followed around the world. Thus, articles and books by law professors can be consulted to find

¹³⁶ L Kurukulasuriya & NA Robinson, *op cit*, p. 8.

¹³⁷ G Robertson, *Crimes Against Humanity, the Struggle for Global Justice*, (Rev. Edn. New York: The New Press, 2002) p. 92.

out what international law is. Major source of highly qualified publicists is the International Law Commission (ILC), established by the United Nations General Assembly in 1947 to promote the progressive development of international law and its codification. Most of the ILC's work involves preparation of drafts on topics of International Law.¹³⁸

Other possible sources of International Environmental Law exists, such include acts of international or regional organizations, Resolution of United Nations Security Council and the United Nations General Assembly, and Regulations, Decisions and Directives of the European Union, among others. Also the Decisions of Conference of the Parties to a Multilateral Environmental Agreement and conference declarations or statements may contribute to the development of international environmental law.¹³⁹

2.5.2.2 Principles of International Environmental Law

The principles of International Environmental Law are legal norms generally accepted, as evidenced in a number of ways like international agreements, national legislation, domestic and international judicial decisions, and scholarly writings. These principles play important role in international environmental law as a result of the origin and development of international environmental law.

The important principles of International Environmental Law are established in the 1972 Stockholm Declaration and 1992 Rio Declaration. Both Declarations have preambles and a total of 53 principles.¹⁴⁰ However, this work shall be discussing the 11 principles derived from these two declarations and more recent developments,¹⁴¹ to wit: Sustainable Development, Integration and Interdependence; Inter-Generational and Intra-Generational Equity; Responsibility for

¹³⁸ L Kurukulasuriya & NA Robinson, *op cit*, p. 9.

¹³⁹ *Ibid.*

¹⁴⁰ Stockholm Declaration has a total of 26 principles, while Rio Declaration has a total of 27 principles.

¹⁴¹ See L Kurukulasuriya & NA Robinson, *op cit*, Chap. 3.

Transboundary Harm; Transparency, Public Participation and Access to Information and Remedies; Cooperation, and Common but Differentiated Responsibilities; Precaution; Prevention; Polluter Pays Principle; Access and Benefit Sharing regarding Natural Resources; Common Heritage and Common Concern of Humankind; and Good Governance.

(a) **Sustainable Development, Integration and Interdependence**¹⁴²

The term sustainable development was defined by the United Nations Environment Programme as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs.¹⁴³ Sustainable Development is considered together with the concepts of integration¹⁴⁴ and interdependence.¹⁴⁵ Both Principles 4 and 25 of Rio Declaration agrees that development and environmental protection are interdependent and indivisible. Thus, environmental protection must constitute an integral part of development process if sustainable development is to be achieved.

Furthermore, Environmental Impact Assessment (EIA) has become one of the effective and practical ways of supporting implementation of sustainable development and its integrative aspect. Therefore, Laws mandating environmental impact assessment and requiring or encouraging developments to minimize environmental impacts may be assessed against this principle.

The importance of Sustainable Development as a core concept of International Environmental Law can be seen in its discussion in the 1972 United Nations Conference on the Human Environment (Stockholm Conference), 1983 World Commission on Environment and Development (WCED) (Brundtland Commission), 1992 UN Earth Summit (resulted in Rio

¹⁴² See Rio Declaration, Principles 4 and 25.

¹⁴³ *Ibid*, Principle 3; Brundtland Commission on Environment and Development Report of 1987, Our Common Future, Agenda 21.

¹⁴⁴ This means that development cannot be considered in isolation from sustainability.

¹⁴⁵ Interdependence on the other hand shows that social and economic development and environmental protection are interdependent.

Declaration), 2002 World Summit on Sustainable Development (Earth Summit 2002) and the 2012 United Nations Conference on Sustainable Development (Earth Summit 2012 or Rio+20).¹⁴⁶

(b) Inter-Generational and Intra-Generational Equity

This principle refers both to the right of future generations to enjoy a fair level of the common heritage (inter-generational) as well as the right of all people within the current generation to fair access to the current generation's own entitlement to the Earth's natural resources (intra-generational). Therefore, the present generation is considered to be under an obligation to manage the earth in a manner that will not jeopardize the aesthetic and economic welfare of the generations that follow. They must undertake to pass on to future generations an environment as viable as the one they inherited from the previous generation. Moreover, some national courts have referred to the right of future generation and held, considering the concept of inter-generational responsibility that every generation has a responsibility to the next to preserve that rhythm and harmony necessary for the full enjoyment of a balanced and healthful ecology.¹⁴⁷ This principle is reflected in laws on Pollution control and resource management.

(c) Responsibility for Transboundary Harm

In International Law context, this denotes obligations on the part of a state to protect its own environment and to prevent damage to neighbouring environments. Thus, the state has the sovereign right to exploit their own resources in accordance with their own environmental law and development policies, as well as the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond

¹⁴⁶ Wikipedia, *Environmental Law*, (Wikimedia Foundations Inc., 2015) <www.epa.gov/international/regions/Africa/> accessed on 10th February 2015.

¹⁴⁷ An example is *Minors Oposa's case (Philippines – Oposa et. Al. v. Fulgencio S. Factoran, Jr. et al.)* G.R. No. 101083, (July 30, 1993) where the Supreme Court of the Republic of the Philippines held that the petitioners could file a class suit, for others of their generation and for the succeeding generations.

the limits of national jurisdiction.¹⁴⁸ This principle has been considered to be a potential limitation on the rights of the sovereign state by UNEP¹⁴⁹ and is manifested in laws that act to limit externalities imposed upon human health and the environment.

(d) Transparency, Public Participation and Access to Information and Remedies

According to Principle 10 of Rio Declaration,¹⁵⁰ 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. Consequently, states shall facilitate and encourage public awareness and participation by making information widely available as well as provide effective access to judicial and administrative proceedings, including redress and remedy.

Public participation and transparency has been identified as conditions that are essential for accountable governments. Thus, the states are required to effectively protect the citizen's right to hold and express opinions, seek, receive and impart ideas as well as right of access to appropriate information held by government and industrial concerns on economic and social policies relating to sustainable use of natural resources and the protection of the environment. In doing this, the state should not impose undue financial burdens upon the applicants seeking to exercise these rights and should also adequately protect the privacy and business confidentialities of concerned industries.¹⁵¹

¹⁴⁸ See Stockholm Declaration of 1972, Principle 21; Rio Declaration, Principle 2.

¹⁴⁹ L Kurukulasuriya & NA Robinson, *op cit*, pp. 24 – 28.

¹⁵⁰ See also United Nations Framework Convention on Climate Change, 1992, Article 4(1)(i).

¹⁵¹ L Kurukulasuriya & NA Robinson, *op cit*, p. 28.

This principle is reflected in environmental impact assessment, laws requiring publication and access to relevant environmental data and administrative procedure.¹⁵²

(e) **Cooperation, and Common but Differentiated Responsibilities**

This principle has two arms. According to the first arm, states have duty to cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. By the second arm, the states, in view of the different contributions to global environmental degradation, have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.¹⁵³ This means that all countries have a shared responsibility to protect the global environment, but the richer countries have a special responsibility to undertake and pay for preventive and remedial action.

(f) **Precaution (also Precautionary Principle or Precautionary Approach)**

One of the most commonly encountered principles of international environmental law. This principle imposes a duty on states to foresee and assess environmental risks; to warn potential victims of such risks; and to behave in ways that mitigate such risks. Further, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.¹⁵⁴ Thus, the states should take precautionary measures to anticipate, prevent or minimize the causes of environmental pollution.

(g) **Prevention**

¹⁵² *Ibid.*

¹⁵³ Rio Declaration 1992, Principle 7.

¹⁵⁴ *Ibid.*, Principle 15; Climate Change Convention of 1992, Principle 3(3).

This concept is complex due to the number and diversity of legal instruments in which it occurs. It is clear that the objective of most international environmental instruments is to prevent environmental harm, notwithstanding where the harm is to occur: pollution of the sea, inland waters, atmosphere, soil or protection of human life and living resources. Consequently, the concept is considered as an overarching aim that gives rise to a multitude of legal mechanisms. The application of the concept can be seen in instruments dealing with prior assessment of environmental harm, licensing or authorization that set out the conditions for operation and the consequences for violation of the condition, the adoption of strategies and policies relating to emission limits and other product or process standard and specifying the use of best available techniques.¹⁵⁵

(h) **Polluter Pays Principle**

By this concept, polluters should internalize the costs of their pollution, control it at its source, and pay for its effects, including remediation or clean up, rather than forcing other states or future generations to bear such costs. This concept is designed to internalize environmental externalities.¹⁵⁶ The states should take those actions necessary to ensure that polluters and users of natural resources bear the full environmental and social costs of their activities.

(i) **Access and Benefit Sharing regarding Natural Resources**

By this concept, indigenous people and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. Therefore, states should recognize and duly support these indigenous communities/people's identity, culture and interests and enable them effectively participate in the

¹⁵⁵ L Kurukulasuriya & NA Robinson, *op cit*, p. 33.

¹⁵⁶ See Rio Declaration, Principle 16.

achievement of sustainable development.¹⁵⁷ The indigenous and local communities rely on natural resources¹⁵⁸ for their livelihood and most times, existence, as a result of which they relate to these resources in a sustainable way. Consequently, these communities and indigenous people should have the right to participate in decision making processes relating to these natural resources.

(j) Common Heritage and Common Concern of Humankind

This concept is of two aspects. According to the first aspect, the resources of the outer space, celestial bodies and the sea bed, ocean floor and subsoil beyond the limits of national jurisdiction are regarded as the common heritage of human kind, and should be shared by all nations. Moreover, the second aspect states that the protection, preservation and enhancement of natural environment, especially the proper management of the climate system, biological diversity and fauna and flora of the Earth, are generally recognized as the common concern of human kind.¹⁵⁹ Thus, states and other actors should not cause harm with regards to issues of common heritage and should share responsibility for addressing issues of common concerns such as environmental problems besetting the biosphere.

(k) Good Governance

This concept implies that the civic society has the right to good governance by states as well as international organisation and that non state actors (business enterprises and NGOs) should be subject to internal democratic governance and effective accountability.¹⁶⁰ Further, this concept requires the full respect for the principles of Rio Declaration on Environment and Development. Thus, good governance requires corporate social responsibility and socially

¹⁵⁷ *Ibid*, Principle 22.

¹⁵⁸ Such natural resources include forests, high deserts, wetlands, waterways, and fisheries.

¹⁵⁹ See L Kurukulasuriya & NA Robinson, *op cit*, p. 36.

¹⁶⁰ *Ibid*; See also Millennium Development Goals on Developing a Global Partnership for Development, Target 21, Goal 8.

responsible investment as conditions for the existence of a sustainable global market that would achieve an equitable distribution of wealth among and within communities.

2.5.2.3 Compliance and Enforcement of Multilateral Environmental Agreements¹⁶¹

By UNEP estimate, there are over 500 MEAs in force. Out of this number, 323 are regional in scope. Further, about 60 per cent of these MEAs were established after the 1972 United Nations Conference for the Human Environment in Stockholm (UNCHE).¹⁶² The MEAs, being multilateral treaties are subject to the Vienna Convention on the Law of Treaties.¹⁶³

There are forums where international environmental disputes can be adjudicated, like the national courts, the International Court of Justice, and International Arbitration Panels. However, the MEAs mostly established institutional arrangements which are increasingly elaborate and have ventured into the field of International Institutional Law.¹⁶⁴ Thus, the compliance¹⁶⁵ and enforcement¹⁶⁶ mechanisms in the MEAs have slowly replaced the classic dispute settlement procedures and their importance is growing. These mechanisms, though unique to the treaties that created them, are also remarkably similar and overlap for some MEAs. However, in most cases, compliance with international agreements takes place at the national level.

¹⁶¹ Multilateral Environmental Agreement (MEA) is a broad term that relates to any legally binding international instrument through which national governments commit to achieving specific environmental goals.

¹⁶² International Environmental Governance: Multilateral Environmental Agreements, doc. UNEP/IGM/1/INF (6th April 2001), para. 4.

¹⁶³ Vienna Convention on the Law of Treaties, 1155 UNTS 331, 8 ILM 679 (1969), which entered into force on 27th January 1980.

¹⁶⁴ R Churchill & G Ulfstein, 'Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law' (2000) *American JIL*, 623 – 659.

¹⁶⁵ Compliance means the fulfillment by contracting parties of their obligations under a multilateral environmental agreement and any amendments to the multilateral environmental agreement. See Intergovernmental Working Group of Experts on the Development of Guidelines on Compliance and Enforcement of Multilateral Environmental Agreements, Doc. UNEP(DEPI)/MEAs/WG/1/2 (20 September 2001); Governing Council of the UNEP, Global Ministerial Environmental Forum, Implementation of Decisions Adopted by the Governing Council at Its Twenty-First Session, UNEP/GCSS.VII/4/Add.2 (23 November 2001); See also UNEP Guidelines on compliance with and Enforcement of Multilateral Environmental Agreements, UNEP/SS.VII (4 February 2002).

¹⁶⁶ Enforcement means the range of procedures and actions employed by a state, its competent authorities, and agencies to ensure that organizations or persons, potentially failing to comply with environmental agreements, can be brought or returned into compliance and/or punished through civil, administrative, or criminal actions. See *ibid*.

It is important to note that compliance with and enforcement of MEAs is often more difficult to achieve than is the case for some other international treaties. This is because MEA rules require government to alter the behaviors and actions by private agents rather than by government authorities.¹⁶⁷ Moreover, compliance with MEA requires identifying roles and responsibilities of the key players and effectively coordinating the government structure. In ensuring compliance in some MEAs, due to the technical nature of items being protected under it, competency, expertise or equipment may also be required. These measures involve costs and require each party's ability and willingness to invest resources in these areas or use the facilities provided under the MEA to facilitate compliance.

As a result of the foregoing, attention is shifting from treaty-making which preoccupied the international community since 1970s to compliance and enforcement and implementation of existing treaties.

Compliance efforts can take a wide range of methods, which includes education, technical assistance, subsidies and other forms of financial assistance or incentives, voluntary compliance programme, administrative enforcement, civil judicial enforcement and criminal enforcement.

(a) **Importance of Compliance and Enforcement**

The existing gap between the increasing numbers of international, regional and national legal instruments to protect the environment at the levels and the continuous decrease of environmental quality and deterioration of natural resource base around the world is perhaps one of the largest contradictions of this age.¹⁶⁸ The reason is that all countries, which have signed

¹⁶⁷ This is unlike other international treaties on for instance arms control or human rights. See generally RB Mitchell, 'Compliance Theory: An Overview' in J Cameron *et al* (eds), *Improving Compliance with International Environmental Law* (London: Earthscan Press, 1996) p. 19.

¹⁶⁸ TE Crossen, *Multilateral Environmental Agreements and the Compliance Continuum*, (University of Calgary: Berkeley Electronic Press, 2003), Bepress Legal Series, Paper 36

and ratified a MEA have the duty to comply with and enforce the rules of the MEA according to the principle of *pacta sunt servanda*,¹⁶⁹ but in practice, there is widespread non-compliance and non-enforcement with respect to many MEAs. Hence serious concern has arisen with respect to compliance of states with commitments agreed on under MEAs.

The effectiveness of any international agreement ultimately depends on the extent to which members comply with their obligations under such agreement. Consequently, the reason for the emphasis at the international level on issues relating to compliance and enforcement of MEAs is as a result of the need to ensure implementation of MEAs, the proliferation of MEAs, the emergence of environmental violations or offences as well as crimes emanating from violations of existing environmental conventions.

From the foregoing, it is clear that compliance and enforcement play a vital role in achieving the benefits offered by environmental laws and regulations. Effective compliance and enforcement can protect the environment, public health and safety, deter violations of law and encourage improved performance by the regulated community.

In fact, a good compliance and enforcement programme also reinforces the credibility of environmental protection efforts and the legal system that supports them and ensures fairness for those who willingly comply with environmental requirements. Thus, an effective compliance and enforcement programme must be designed to respond swiftly and thoroughly to environmental violations. However, in most treaties, the enforcement programmes deter environmental violations before they occur.

(b) Institutional Arrangement and Mechanism for Implementation

As stated before, most MEAs established institutions to facilitate their implementation. These strong institutional arrangements of MEAs have increasingly become recognized over

¹⁶⁹ Literally meaning – Agreements must be kept.

time as crucial to their effectiveness. These institutions are: Conference of the Parties also referred to as the Meeting of the Parties, Convention Secretariats, and Advisory Bodies. Other innovations applied are reporting, monitoring and verification mechanism, financial mechanism and non compliance mechanism.¹⁷⁰

(i) Conferences/Meetings of the Parties

MEAs establish an organ on which all states parties are represented. Such plenary organ is usually called the Conference of Parties (COP), but it may also be called Meetings of the Parties (MOP) or the Executive Bureau. By whatever name called, it represents the primary decision making body for any given MEA. It usually meets ones in a year to take decisions, although it may meet less frequently. However, at every of its meetings, the representatives of all member parties are invited to attend.

The COP/MOP in addition to other duties,¹⁷¹ supervises parties' implementation of and compliance with MEA, and also decides on consequences of non compliance. Most MEAs assign a general supervisory role to the COP/MOP with regards to monitoring and facilitating state parties' implementation of and compliance with their substantive obligation under

¹⁷⁰ See L Kurukulasuriya & NA Robinson, *op cit*, p. 41.

¹⁷¹ The COP acts in relation to internal matters, by establishing subsidiary bodies, deciding on arrangements for meetings, adopting rules of procedure for itself and the subsidiary bodies as well as provides guidance to those bodies and the secretariat. Examples of such subsidiary bodies include the Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA) made for the Convention on Biological Diversity (CBD), which makes recommendation to CBD. Another one is Subsidiary Body for Implementation (SBI) and Subsidiary Body for Scientific and Technological Advice (SBSTA) made for the Climate Change Convention. These subsidiary bodies are open to participation by all parties and makes recommendation to the conventions. The COP also contributes to the development of new substantive obligations by amending MEAs or by adopting protocols. The COP also acts at the external level by adopting arrangements with international organizations and states.

MEAs.¹⁷² To facilitate their undertaking this duty, most MEAs require the parties to report on their implementation of the agreement¹⁷³.

(ii) **Convention secretariat**

Most MEAs also establish or designate Convention Secretariats to provide services to the COP, the subsidiary bodies and the state parties in the implementation and development of cooperation under the agreement. In fact, the MEAs clearly spell out the functions of the secretariat. Usually, the secretariat do such functions as conducting studies, preparing draft decisions for COP and Subsidiary bodies, assisting state parties and receiving reports on implementation of commitments. It also prepares and convenes COPs as well as disseminates information among state parties. While some MEAs designate a permanent secretariat and some establish an interim secretariat and leave final decision to COPs,¹⁷⁴ most MEAs generally locate and make use of secretariats in existing Intergovernmental Organizations.¹⁷⁵

(iii) **Subsidiary Bodies**

Some MEAs established specific subsidiary bodies for itself. However, some other MEAs gave power to COP to subsequently establish such subsidiary bodies. The subsidiary bodies are normally established for a specific purpose and are of three major types.

¹⁷² See Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), Article XI(3); Convention on the Conservation of Migratory Species of Wild Animals(Bonn Convention), Article VII(5); Convention on the Control of Transboundary Movements Of Hazardous Wastes and Their Disposal (Basel Convention), Article 15(5); Climate Change Convention, Article 7(2); Biodiversity Convention, Article 23(4); etc.

¹⁷³ See for example Montreal Protocol, Article 7 which requires parties to provide report of their annual production, importation and exportation of controlled substances; Basel Convention, Article 13 – requires annual reports on transboundary movements of hazardous waste.

¹⁷⁴ This is the method used in the Vienna Convention, Montreal Protocol, the Climate Change Conventions and the Biodiversity Convention.

¹⁷⁵ For instance, while the Climate Change Convention uses the United Nations, CITES, the Basal and Biodiversity Conventions use the UNEP and so on.

The first type is advisory,¹⁷⁶ the second type of subsidiary body is concerned with financial assistance and transfer of technology,¹⁷⁷ while the third type is responsible for implementation and compliance.¹⁷⁸ In some cases, subsidiary body may be established for a purpose other than for any of these three purposes.¹⁷⁹ Where the subsidiary body concerned with implementation and compliance, its function would involve looking into claims of violations of the MEA.

It is believed that the combination of regulatory and supervisory functions in the hands of international institutions is of importance in making international agreements more effective in their operation and in securing a high level of compliance.

(iv) **Reporting, monitoring and verification mechanism**

Most MEAs contain provisions for reporting, monitoring and verification of information obtained on compliance. These provisions require state parties to report periodically (as specified by the MEA) on the measures they have taken to implement the MEA in question. This reporting system is a means of monitoring implementation and also verifying if the MEA is being implemented.

Further, monitoring involves the collection of data which can be used to assess compliance with an MEA. As a state party to an MEA collects data, it would be easy for it to identify compliance problems and proffer solutions. Verification on the other hand involves checking the accuracy of data and technical information in a state party's report in order to ascertain whether that party is in compliance with the MEA or not and the degree and frequency of compliance or non-compliance.

¹⁷⁶ An example is the Subsidiary Body for Scientific and Technological Advice of the Climate change Convention. Another example is the Scientific Council of the Bonn Convention.

¹⁷⁷ This is the type created by Article 10 of Montreal Protocol which created a mechanism that provides financial and technical cooperation, including multilateral fund operated by an Executive Committee.

¹⁷⁸ Example is the Implementation Committees of the Montreal Protocol (Art. 8). Another example is the subsidiary body for Implementation (SBI) under the Climate Change Convention (Art. 10).

¹⁷⁹ An instance is the Ad Hoc Group on the Berlin Mandate formed by COP of the Climate Change Convention that worked to pave way for the adoption of the Kyoto Protocol.

Hence, these provisions help to promote compliance with MEA by creating and increasing public awareness of requirements of such MEA. Finally, funding and technical assistance for reporting is available to developing countries and countries with economies in transition.

(v) **Financial Mechanism**

Certain measures required to be undertaken in complying with MEAs like compliance competency, expertise and equipments involve costs and require each state party's ability and willingness to invest resources in these measures or to use facilities developed under the MEA to facilitate its implementation. Consequently, most MEAs have provided for some form of financial mechanism to assist governments to implement or meet their international obligations under them. Some MEAs have also established financial rules by outlining rules that govern the different financial mechanisms developed in them.

The financial mechanisms take the form of Trust Funds,¹⁸⁰ Global Environmental Facilities (GEF)¹⁸¹ and Funds.¹⁸² Through financial mechanism, mostly parties from developing countries and the Least Developed Countries have received financial assistance in preparation of national programmes of implementation as well as to cover incremental costs that they would have incurred in the implementation of pertinent MEAs.

(vi) **Non Compliance Mechanism**

This is a procedure that assists state parties with compliance problems and address instances of non compliance. This mechanism recognizes that non compliance may be as a result of institutional or resources incapacity, and not an outright disregard for MEA rules.

¹⁸⁰ Example is the type developed under the framework of Regional Seas Convention negotiated under the auspices of UNEP. Contributions come from the parties to those conventions.

¹⁸¹ This is the form used by the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC).

¹⁸² See for instance, the Multilateral Environmental Fund of the Montreal Protocol available to the parties of the United Nations' Vienna Convention on the Protection of the Ozone Layer.

Usually, there is an Implementation or Compliance Committee that administers the non compliance mechanism. The committee usually consists of members who served in individual capacity and not as representatives of any specific state party. However, the selections most consider geographical distributions of state parties. Further, the committee may be established by the MEA or by a decision of the COP.

Notice of a state party's alleged non compliance can be given to the committee by the member itself, the COP, other state parties (rarely) and very often, the secretariats. The committee would review and assesses the non compliance, make findings and decisions on sanctions. Thereafter, it would make recommendations to the COP to take final decisions on the matter.¹⁸³

Generally, response to non compliance when identified takes the form of non-coercive means of helping to bring the party concerned into compliance, especially where non-compliance is due to lack of capacity. This is otherwise called facilitative response.¹⁸⁴ However, where non compliance is due to lack of will, it may be coercive¹⁸⁵. Hence, response measures depend on reason for non compliance, and can include incentives, assistance and/or sanctions.

Non compliance mechanism is a beneficial mechanism which provides a means of identifying noncompliance at an early state and form appropriate responses. It is also non adversarial and helps to maintain relationships among state parties. It assists defaulting parties and adopts a collective approach to solving the problems of non compliance.

¹⁸³ See generally for instance, the Montreal Protocol; Koyoto Protocol etc.

¹⁸⁴ This includes technical and financial assistance, for instant trainings and workshops; technology transfer and exchange of information mechanisms to address issues relating to lack of materials and know-how, as well as financial provisions to address resource constraints.

¹⁸⁵ This may include warnings and penalties. Such penalties may include publishing information on non compliance, otherwise called naming and shaming, suspension of MEA rights and trade sanctions.

2.5.3 The Global Environment Facility (GEF)

GEF was established in October 1991 as a \$1 billion pilot program in the World Bank to assist in the protection of the global environment and to promote sustainable development of the environment. Thus, it is an international financing facility that provides grant and funding to developing countries and countries with economies in transition, to undertake projects that would benefit the environment within the context of sustainable development. The GEF provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer and persistent organic pollutants.

In 1992, at the Rio Earth Summit, GEF was moved out of the World Bank System to become a permanent separate institution. This restructuring enhanced the involvement of developing countries in the decision making process and implementation of projects. However, World Bank has continued to serve as Trustee of the GEF Trust Fund and provided administrative services to it.¹⁸⁶ Currently, GEF operates on the basis of collaboration and partnership among three implementing Agencies, to wit: The United Nations Development Programme (UNDP); the United Nations Environment Programme (UNEP) and the World Bank.

GEF is governed by two bodies, which are the GEF Assembly, made up of representatives of all member countries and the GEF Council, which is the main governing body that undertakes responsibility for developing, adopting and evaluating GEF programs. Moreover, there is the GEF Secretariat, based in Washington D.C that serves and reports to the Assembly and the Council. It coordinates the formulation of projects, oversees implementation and makes certain that operational strategy and policies are followed. There is also the GEF Scientific and

¹⁸⁶ See GEF Secretariat, *What Is GEF*, (Global Environment Facility, 2013) <www.thegef.org/gef/whatisgef> accessed on 8th May 2015.

Technical Advisory Panel (STAP). This Panel provides scientific and technical guidance to GEF.¹⁸⁷

Member states of United Nations or any of its specialized agencies are eligible to participate in GEF, upon depositing an instrument of participation with the GEF Secretariat. Currently, there are 183 participants.¹⁸⁸

Since 1991, GEF has achieved a strong track record with developing countries and countries with economies in transition by providing \$12.5 billion in grants and leveraging \$58 billion in co-financing for over 3,690 projects in over 165 countries.¹⁸⁹ It has also made more than 20,000 small grants directly to civil society and community based organizations to the total of \$653.2 million through its Small Grants Programme (SGP).¹⁹⁰

Hence, GEF is the largest public funder of projects to improve the global environment.¹⁹¹

2.5.3.1 The Environmental Initiative on the New Partnership for Africa's Development (NEPAD)

The Environmental Initiative on the New Partnership for Africa's Development (NEPAD) is one of the UNEP/GEF projects that seek to develop regional frameworks for cooperation on environmental protection and management. The Action Plan for NEPAD environmental initiative was made between 2001 and 2003 and in July 2003, in Maputo, Mozambique, the African Union adopted it. The African Ministerial Conference of Environment

¹⁸⁷ *Ibid.*

¹⁸⁸ *Ibid.*

¹⁸⁹ *Ibid.*, <www.thegef.org/gef/gef_projects_funding> accessed on 8th May 2015.

¹⁹⁰ *Ibid.*

¹⁹¹ Wikipedia, *Global Environment Facility*, (Wikimedia Foundation Inc. 2015), <www.wikipedia.org> accessed on 8th May 2015.

(AMCEN) guided the development and adoption of the action plan. The plan was prepared with financial support from GEF.¹⁹²

The overall aims of the Action Plan was to complement relevant African Processes and work programme toward improving environmental conditions in Africa and build Africa's capacity to implement regional and international environmental agreements. The action plan is organized into clusters of programmatic and project activities to be implemented over an initial period of 10 years covering combating land degradation, drought and desertification, wetlands, invasive species, marine and coastal resources, cross-border conservation of natural resources, climate change and cross-cutting issues.¹⁹³

The Strategic Plan to Build Africa's Capacity to Implement Global and Regional Environmental Conventions was also adopted as part of the action plan. The plan is organized around clusters of activities and processes that will be implemented over a five-year period. The activities include human resources development, public education and awareness raising, strengthening institutions and improving coordination, supporting the development of information systems and related environmental assessments, mobilizing and strengthening the role of the scientific and technical communities and promoting South-South cooperation and sharing of experience.¹⁹⁴

NEPAD has AU Summit of Heads of State and Government as the highest authority of the implementation process. The AU Heads of State and Government has an Implementation Committee (HSGIC) that reports annually to the Summit. The Committee, through its Steering Committee oversees projects and programme development. The NEPAD Secretariat situated in

¹⁹² International Institute for Sustainable Development (IISD), *Environmental Initiative and Action Plan of the New Partnership for Africa's Development (NEPAD)*, (African Regional Coverage (ARC) Project: 2015), <www.africasd.iisd.org_institutions> accessed on 9th May 2015.

¹⁹³ *Ibid.*

¹⁹⁴ *Ibid.*

South Africa coordinates the implementation of projects and programmes approved by the HSGIC.¹⁹⁵

In terms of overall NEPAD strategy, implementation is the responsibility of national governments, Regional Economic Communities (RECs) and AU organs. However, national governments and RECs have been slow in building the institutional capacity they need in order to lead the implementation. Furthermore, they have not integrated the NEPAD objectives and priority indicative plans into their national development plans and strategies. Moreover, the NEPAD secretariat is in limbo as its role in the implementation phase has not been agreed with the AU Commission. There is also lack of clarity about its funding. In fact NEPAD remains an abstraction because people do not know what it is doing and its achievements were not made known to the public.¹⁹⁶ Consequently, one cannot actually pinpoint the things that NEPAD has done with respect to the Action Plan on the environmental initiative. Hence, there is need to develop strategies to increase public awareness about the functions of NEPAD.

2.5.4 The Concept of National Environmental Law

National Environmental Law is those rules at the state level that protect the environment. Thus, they consist of legislations, regulations, standards, institutions, administrations developed by a state to control activities that are damaging the environment of that state. It is laws adopted by the government of an individual state. In the United States of America, the National Environmental Laws include federal and state legislation, judicial decisions, Agency regulations

¹⁹⁵See generally Environment on the Action Plan – NEPAD <www.nepad.org/system/files/Environment/ActionPlan> accessed on 8th May 2015.

¹⁹⁶ See UN Regional Coordination Mechanism, *Challenges and Prospects in the Implementation of NEPAD*, (RCM-Africa: 2007), pp. 28 – 40; Ibrahim Mayaki, *In 10 Years, NEPAD Has Achieved A Lot*, (African Renewal: 2011), <www.un.org/africarenewal/magazine.deceember-2011/-10-years-nepad-has-achieved-a-lot> accessed on 10th May 2015.

and executive order.¹⁹⁷ Also, in Nigeria, the National Environmental Laws consist mainly of federal and state legislations, received English Laws, rules, regulations and standards.¹⁹⁸

These national laws may have international impacts. For instance, a foreign manufacturer whose defective product injures a person living in the United States may be held liable for the resultant damages under U.S. Law.¹⁹⁹ The fact that National Environmental Laws affect international activities does not make them become international laws rather these effects are seen as extra territorial applications of national laws.

2.5.4.1 Sources of National Environmental Law

The sources of National Environmental Laws are various and depend mostly on the legal approach adopted by the state in managing its environment. Consequently, the sources of national environmental law would include: the national constitution, Legislations (Sectoral laws, framework environmental laws, comprehensive codification of environmental laws, penal codes), common law/case law, and international environmental legal instruments.

The National constitution of a state would be a source of environmental law when it provides for environmental rights for the citizens.²⁰⁰ Usually, the constitution would provide that the citizens have the right to an environment adequate for their health and well being.

Further, another source of National Environmental Law is Legislation. Several types of legislations can be made relating to environmental management. Certain legislations address specific areas of the environment and human activity. This type is otherwise known as sectoral

¹⁹⁷ Global Change Instruction Program, 'What is International Environmental Law'? *In Understanding Global Change: Earth Science and Human Impacts* <[www.DEF_OF_ENVIRONMENTAL_LAW.pdf](#)> accessed on 7th September 2014, p. 1.

¹⁹⁸ Environmental Rights Action/Friends of the Earth Nigeria and Oilwatch Nigeria, *Making Policies Work: Between Environmental Policies and Environmental Protection*, (Oilwatch, Nigeria: 2012) pp. 2 - 3

¹⁹⁹ Global Change Instruction Program, *op cit*, p. 1

²⁰⁰ Examples abound such as Constitution of the Federal Republic of Nigeria 1999 (as amended), Section 20; Constitution of the Republic of Ghana 1992, Chapter 6, Article 16(7); India Constitution Act (as amended in 1976), Article 48A and 51A(g).

law. Such specific areas may be water, air, land, energy, forest, marine environment or wildlife.²⁰¹ In some nations, they have the framework environmental legislation, which is a single law that provides the legal and institutional framework for environmental management, while some other nations have a comprehensive codification of environmental laws.²⁰² The framework legislation lays down the basic principles without any attempt at codification.

Another aspect of legislation is penal codes, which though not specifically intended to address environmental law, establish liabilities for environmental related issues. An example is where a criminal legislation prohibits pollution or other crimes involving odour, noise or other noxious substance.

Common/case law is another source of National Environmental Law. These are laws made by the courts. The decisions of a court in an environmental issue can form a precedent to be followed in later cases. Examples of laws which have been developed by the courts include trespass, negligence and nuisance.

Finally, most nations are signatories to International Environmental Instruments. In the course of implementing International Environmental Instruments, National Environmental Laws are created as a reflection of the international norms or commitments.

2.5.4.2 Prerequisites for Effective National Environmental law

²⁰¹ In Nigeria, Sectoral Environmental Laws are used. Hence, we have the Land Use Act, the Petroleum Act, the Minerals Act etc, each dealing with a specific aspect of the environmental management. Also in India, they have individual legislation for protection of water, air, wildlife etc. like the Wild Life Protection Act 1972, the Water (Prevention and Control of Pollution) Act 1974, and The Forest (Conservation) Act, 1980.

²⁰² An example is the Australian Environment Protection and Biodiversity Conservation Act 1999 which set up legal framework to protect and manage national and international flora, fauna, ecological communities and heritage places; it also protect world heritage properties, national heritage properties, wetlands of international important, nationally threatened species and ecological communities, migratory species, Commonwealth marine areas, Great Barrier Reef Marine Part, and the environment surrounding nuclear activities.

For a National Environmental Law to be effective, it must make provisions for: an adequate regulation and institutional regime; role of case law and for implementation, enforcement and compliance. Therefore, a National Environmental Law must be clear, even-handed, implementable and enforceable. Environmental information should be shared with the public, and stakeholders should have an opportunity to participate in the decision making process.

Moreover, the roles and lines of authority for environmental protection should be clear, coordinated and designed to produce efficient and non-duplicative programme and delivery. Finally, environmental decision makers should be held accountable for their decision and those affected by violation of the law should have access to environmental dispute resolution mechanisms that are fair and responsive.²⁰³

2.5.4.3 Implementation of International Environmental Law at the National Level

Implementation of MEAs is increasingly becoming an important part of national environmental law. Once a state has ratified an MEA, the state implements it at the domestic level by adopting appropriate domestic measures to meet its obligations under the MEA. It would be difficult to enforce an MEA in a national court where the state has not implemented the MEA. Implementation means to promulgate and enact relevant laws, regulations, policies and other measures and initiatives necessary for the parties to meet their obligations under and achieve compliance with an MEA.

Two approaches exist with respect to state implementation of international environmental law at the national level. The first approach is the monist. According to this approach, an MEA

²⁰³ See generally S Fulton & A Benjamin, *Effective National Environmental Governance – A Key to Sustainable Development*, (U.S Environmental Protection Agency Working Draft) <www.inece.org/conference/9/papers/Fulton-Benjamin_US-Brazil_Final.pdf> accessed on 12th May 2015.

upon being ratified is automatically incorporated into the supreme law of the land. In this case, the legislative assembly of the particular state party is bypassed.²⁰⁴ However, by the dualist approach, the state party requires that the legislature approves the MEA before it can enter into domestic legal force or that the legislature enacts implementing legislation.²⁰⁵

In the United States of America, international conventions have played an important role in creating external networks for governing oil spills. In fact, International Environmental Treaties when signed by the United States are on the same level as federal law, and signatory parties must implement domestic legislation to reflect the agreement.²⁰⁶ This mechanism helps to engineer a number of federal laws governing oil spills.²⁰⁷ However, in Nigeria, International Environmental Treaties signed by Nigeria shall only have the force of law to the extent to which it has been enacted into law by the National Assembly. Thus, it is only when the Nigerian Federal legislatures makes a law implementing such treaty that it becomes applicable in Nigeria.²⁰⁸ Accordingly, Nigeria has implemented several International Environmental Treaties.²⁰⁹ However, the effect of the domestic application of these treaties in oil pollution governance in Nigeria is yet to be seen.

²⁰⁴ Most countries do not practice this as it tends to undermine a country's democratically accountable law making procedures.

²⁰⁵ This is the case in most civil law countries. Their constitution specifies that treaties have domestic legal effect under these conditions. For Instance are East Timor, Germany, Japan, Russia, Netherland. For most common law countries, their Constitutions are silent as to the domestic legal effect of treaties, although their legal practice is to require implementing legislation before a treaty is transformed into domestic law.

²⁰⁶ If a treaty is considered "self executing", domestic legislation implementing the treaty is not necessary. For more details on these issues, see MJ Garcia, 'International Law and Agreements: Their Effect on U.S. Law' (USA: Congressional Research Service, January 26, 2010) RL 32528 *CRS Report* for Congress; see also P.L. 93-248, 33 U.S.C. 1471, et seq. <<http://www.gpoaccess.gov/index.html>> accessed on 8th May 2015.

²⁰⁷ An instance is the Intervention on the High Sea Act of 1974. The key international conventions that played a role in developing standards for oil spill governance in the U.S are the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties 1969 (the Intervention Convention) and the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78). For more information, see <www.imo.org> accessed on 8th May 2015.

²⁰⁸ See Constitution of the Federal Republic of Nigeria, 1999 (as amended 2010), Section 12.

²⁰⁹ Instances are the International Convention for the Prevention of Pollution of the Sea by Oil, 1954; and International Convention for the Safety of Life at Sea, 2004.

A comprehensive approach to implementation of MEA encompasses not only legislative action, but also executive action, judicial decisions, civil society involvement and business sector engagement. First, implementation would be effected by the executive arm of the government where it requires that domestic policy or budgetary accommodations be made. Second, the judiciary play an important role in implementation of MEA by the judges referring to MEAs to guide their interpretation of domestic laws when the need arise. Third, the Civil Society plays a role in the implementation of MEAs through exchange of information, such as consultations in planning processes, receiving objections concerning proposals, complaints concerning governmental performance or intelligence concerning environmental breaches.²¹⁰

Finally, the business sector contributes to effective implementation of environmental standards especially those involved in pollution control, clean energy and material recycling. However, the business sector does not initiate process to implement but rather tries to meet or exceed environmental performance standards set by the state. Sometimes the state may set up economic tools like price signals, tax breaks, investment incentives, cost efficiencies and other economic opportunities to encourage the business sector reaching the standards.

Thus, implementation refers to the various measures undertaking by a state party to comply with an MEA, by adopting domestic implementation measures, enforcing those measures and reporting on implementation measures. Implementation measures include adopting or modifying policies, programmes, plans, legislation, committing resources and developing administrative institutions/bodies.

International environmental law as contained in MEAs is becoming an important part of the global legal order and its integrity and utility rely on national practice. It is clear that MEAs

²¹⁰ See generally, GL Rose, *National and Global Environmental Laws: Dichotomy and Interlinkages as Examined Through The Implementation of Multilateral Environmental Agreements*, (UNEP: 2011), pp. 7 – 9; DJ Harris, *Cases and Materials on International Law*, (6th edn, London: Sweet and Maxwell, 2004) pp. 12 -13.

are of little value unless they are adequately implemented at the national level hence the implementation of MEAs at the national level is of great concern to the nations of the world. Consequently, in assuming obligations in an MEA to be implemented at the national level, the state party to an MEA is expected to take measures to implement the MEA and, in the course of implementation, to make use of facilities provided by the MEA to facilitate the process of implementation at the national level. These facilities may include provision for technical assistance in developing and strengthening of legislation, adoption of compliance and enforcement policies, undertaking administrative action, planning (action plans, inventories, strategies) capacity building, financial assistance and technology transfer.²¹¹

It is clear from the foregoing that building a reliable structure for International Environmental Law requires solid foundations in National Environmental Law. Consequently, there is need for standard practice with respect to national institutional processes, international compliance processes, and review of legal measures for MEA implementation. Once this is done, it is believed that the structures for International Environmental Law would be become strong.

²¹¹ L Kurukulasuriya & NA Robinson, *op cit*, p. 40.

CHAPTER THREE

IMPACT OF OIL POLLUTION ON THE ENVIRONMENT

3.1 Introduction

Oil is very fundamental to all economic development. Apart from being a source of energy, oil also form the basis for the production of several other product by most industries. It is also clear that oil prospecting activities has contributed greatly to the pollution and degradation of the global environment.

Both the environment and oil are of various compositions and comprises of various properties. Hence, the impact of oil pollution on the environment will depend on the composition and properties of that type of oil, climate and season, local geography, the biological and physical characteristics of the areas, relative sensitivity of species and biological communities and the type of clean up response adopted.

Of all the environmental contaminants, oil pollution is the most devastating. The effect of oil pollution includes the destruction of farmlands, vegetation, location of fields, oil pipelines, terrestrial and marine life, as well as health hazards and economic loss.

3.2 Incidents of Oil Pollution

It is an indisputable fact that every stage of the activity of the oil industry – exploration, exploitation, refining and manufacturing, storage, transportation and use – is fraught with environmental consequences which often transcend local and regional boundaries.²¹¹ However, oil pollution basically occurs in either of two ways, to wit: oil spillage and gas flaring.

3.2.1 Oil Spillage

This is the most common and controversial of all the environmental incidents of oil exploitation. Oil spill is an uncontrolled releases of any product relating to oil production, including crude oil, chemicals, or waste caused by equipment failure, operation mishaps, human error, or intentional damage to facility.²¹¹ Oil spillage can be grouped into four categories, to wit natural seeps, oil extraction/production, oil transportation and oil consumption.

3.2.1.1 Natural Seep

This is the release of oil through geologic openings on the ocean floor. Well known natural seeps are found in the Gulf of Mexico and off the coast of Southern California regions with extensive oil exploration and production.²¹¹ The majority of oil in US waters comes from natural seeps. Moreover, seeps are released in large volumes of oil every year, but because the release is relatively slow, the surrounding ecosystem can adapt to it²¹¹. Moreover, oil seepages from exposed oil sands along the Athabasca River were long known to indigenous peoples, who used the seeping petroleum to caulk their canoes.²¹¹

The magnitude of natural seeps is such that natural oil seeps may be the single most important source of oil that enters the ocean, exceeding each of the various sources of crude oil that enter the ocean through its exploitation by humankind.²¹¹ Worldwide, natural seepage totals from about 4.2 million barrels to as much as 14 million barrels annually.²¹¹

3.2.1.2 Oil Extraction/Production

Oil extraction/production processes involve seismic survey, exploration and appraisal, development, production and abandonment. All of these processes impact the environment in

their own way. However, the success or failure of any of the process, determines how environmental pollution would be avoided or reduced. On the other hand, the factors that determine the success or failure of any of the process include the techniques and equipment used, the effects of the winds, currents, tides etc, the particular characteristics of the local environment, and a range of human factors such as the skill, care and training of those involved in the process.²¹¹

Thus, during extraction/production of oil, deliberate or intentional oil pollution may result from installations for exploration and exploitation of sea-bed oil, such as disposal into the waters of domestic and industrial refuse and relatively small amounts of wastes from drilling (such as drilling fluid, mud and cuttings; produce waters and effluents).²¹¹

Environmental problems and impacts tend to increase and build up as the project progresses, from the initial visibility and acoustic issues at the exploration phase, accident spills and blow-out at the developmental stage, and to operational discharge and emissions such as gas flaring during the production period.²¹¹

Pollution may also occur from drilling accidents - platform blow-outs. The most typical causes of blowouts include equipment failure, personnel mistakes, and extreme natural impacts such as seismic activity, ice fields, hurricanes and so on.²¹¹ Drilling accidents have very severe consequences and can only compete with tanker oil spill. To mention but a few, the largest and most recent platform blowout so far was the Deepwater Horizon Oil spill (otherwise called the BP oil spill or Macondo blowout) which took place on April 20, 2010 in the Gulf of Mexico and spilt 5,000,000 barrels. The initial efforts to cap the well were not successful and for 87 days oil spewed unabated into the Gulf.²¹¹ In year 2010 alone, six oil spills were seen in the United States of America.²¹¹

The next was the Ixtoc I accident off the Mexican Coast in 1979 – 1980. For about nine months the well could not be capped and it spilt about 3,500,000 barrels of oil. Also, the Ekofisk Bravo Platform experienced an 8 day oil and gas blowout in 1977 during a production well work over and spilt 202,381 barrels of oil. In Nigeria, the Funiwa 5 blowout in 1980 polluted the Niger Delta for 14 days. It was followed by fire and the eventual bridging of the well. It spilt 200,000 barrels of oil. Moreover, the Hasbah Platform Well 6 in the Persian Gulf blew out in 1980 for 8 days and spilt 100,000 barrels of oil.²¹¹ Finally, the Alpha Well 21 Platform A in the Santa Barbara Channel in the Pacific blowout lasted for 11 days and spilt about 100,000 barrels of oil.²¹¹

3.2.1.3 Oil Transportation

Generally, oil is transported through oil tankers - tank ships and trucks, tank barges, railroad and pipelines. Oil pollution has resulted from each of these modes of transporting oil.

Spillages by tankers can occur during the loading of oil into the tankers, discharge of ballast water and storage displacement water and tanker accidents.²¹¹

When tankers instead of pipelines are the main means of oil transportation, underwater reservoirs were used for storage of oil. There were incidents of oil pollution from underwater storage tanks especially during tanker loading operations and under severe weather conditions. However, after the spill of 1,200 tons of crude oil in 1988 from an underwater storage tank during a storm in the North Sea, some countries introduced restrictions on installing underwater storage tanks near the shore.²¹¹

The main cause of tanker accidents that lead to large spill of oil include running aground and into shore reefs, collision with other vessels, and fire and explosions of the cargo. The

amount of oil spilled during tanker accidents in 1989 and in 1990 were 114,000 and 45,000 tons respectively, but the total oil pollution caused by marine oil transportation was 500,000 tons a year.²¹¹

The world witnessed the first biggest oil spill through the grounding of *Torrey Canyon* in the English channel in 1967, which spilled 120,000 tons of oil that caused heavy pollution of the French and British shores with serious ecological and fisheries consequences. This accident was followed by a number of other tanker accidents, to name but a few, the Amoco Cadiz in 1978 spilled 222,000 tons of oil; the Exxon Valdez that ground in Prince William Sound, Alaska, spilled approximately 40,000 tons of oil; the Maltese - registered tanker Erika broke into two and spilled approximately 30,884 tons of fuel oil and polluted over 400 kilometers French Coast; the Prestige broke into two and sunk West of Vigo – Spain and spilled approximately 63,000 tons of heavy fuel oil; and in 1993, the Braer spilled 85,000 tons of oil.²¹¹

Pipeline can become either a source of small and long term leakage or an abrupt (even explosive) blowout of hydrocarbon near the bottom. This depends on the cause and nature of the damage to the pipeline. The nature of pipeline damage can be cracks, or ruptures. The cause of pipeline damage can range from material defects and pipe corrosion to ground erosion, tectonic movements on the bottom, and encountering ship anchors and bottom trawls. Thus, pipeline can continuously leak oil for a long time, but when a pipeline ruptures, it causes a large acute spill.²¹¹

The best known examples of large spill occurred in 1994, when a pipeline rupture in Usinsk area Russia led to the spill of more than 100,000 tons of oil.²¹¹ Also, in 2000, large oil spill occurred in Guanabara Bay, off the Brazilian coast, and about 1,300 tons of oil was released into the sea. In 1998, a pipeline broke in Nigeria and spilled 14,300 tons of oil.²¹¹

According to annual International Oil Spill Statistics report for 1999, a total of 32 million gallons of oil were spilled into the water or onto land in 257 accidents. Of those incidents, 11 were spills from tankers, account for about 6.6 million gallons, 25 were from barges and other kinds of vessels, such as freighters, totaling about 1.5 million gallons, while 18 were from trucks or railroad trains, accounting for half a million gallons. The largest number of spills was from accidents involving pipelines or fixed facilities. There were 131 pipeline spills, totaling about 18.8 million gallons and 66 spills from fixed facilities (storage tanks) account for 4.7 million gallons.²¹¹

In the United States of America, tank ships and tank barges respectively spill an average of 3,600 and 5,400 barrels of oil annually. On the other hand, tanker trucks spills an average of 9,200 barrels of oil, while railroads and pipelines spill an average of 1,400 and 77,000 barrels of oil annually respectively²¹¹.

3.2.1.4 Oil Consumption

Refined oil products are used in a wide variety of applications, including fuels for transportation, heating, manufacturing, and electricity production. Thus, most of oil pollution through human behavior falls into this category. It is broad in scope and includes mostly land-based sources, operational discharges from commercial vessels and recreational craft, and atmospheric depositions of petroleum hydrocarbons.

Further, oil pollution in this category includes municipal wastewaters, non-refinery industrial discharge, refinery discharges, land based runoff, river discharges and ocean dumping, and petroleum combustion.

As already stated oil pollution in this category is broad in scope and cannot be assessed worldwide and in totality. However, in the United States of America, to mention but a few of oil pollution incident caused by oil consumption, gas stations and truck stops, residential home heating tanks, motor vehicles that use oil as fuel and Aircrafts respectively spill an average of 814 barrels, 498 barrels, 2,000 barrels, and 4,000 barrels of oil annually, but the oil often go to pavements and other substrates, reducing the direct impacts to waterways.²¹¹ In Nigeria, there is no statistics of oil pollution caused by oil consumption.

3.2.1.5 Nigerian Factors Relating to Oil Spillage

Niger Delta has suffered for decades from oil spills which occur both on land and offshore. Oil spill happens so frequently in the Niger Delta that the amount of oil spilt since oil production began in 1958 is not known with any certainty. Thus, different entities have different reports on oil spillage in Nigeria. According to Shell Petroleum Development Company (SPDC), the oil spilt in Nigeria between 1989 and 1994 were about 7,350 barrels of oil per year in an average of 221 spills incidents per year.²¹¹ Moreover, the Nigerian Department of Petroleum Resources (DPR) reported that from the reports given to them by the oil industries, there were about 4,835 oil spill incidents with a loss of 1.8 million barrels of oil between 1976 and 1996.²¹¹ On the other hand, UNDP reported that more than 6,800 spill incidents were recorded between 1976 and 2001, resulting to the spillage of about 3 million barrels of oil.²¹¹

The reasons why oil spills happen so frequently in the Niger Delta has be said to be: corrosions from oil pipes, poor maintenance of infrastructure, human error, deliberate vandalism or theft, processing at refineries. Consequently, I shall discuss these factors under the following

sub-heads, to wit: well blowout, equipment failure, abandoned oil facility, artisanal refining, improper industrial waste disposal and sabotage.

(a) **Well Blowout**

There have been several incidents of well blowout of poorly maintained oil wells in the Niger Delta. In 1975, Shell BP spilt 600,000 barrels of oil in the Forcados Terminal. Also, Texaco oil well blowout spilt 200,000 barrels of crude oil in 1980. Between 1997 and 1998, more than 900,000 barrels of oil were spilled as a result of the rupturing in Escravos Terminal in Delta State. Recently in 2012, there was another blowout at the Chevron's Funiwa Field, 10 kilometers offshore.²¹¹

(b) **Equipment Failure**

Corrosion has been a major problem with oil infrastructure in the Niger Delta. Moreover, the infrastructures are old and many pipes are above ground. Some pipes are rusty, some reportedly forty years old. SPDC acknowledged in 1995 that its infrastructures needed work and that corrosion was responsible for 50 percent of oil spills.²¹¹ The equipments are poorly maintained by the oil companies. Thus in May and December 2001, pressure surge valve of Exxon Mobil and SPDC opened due to equipment failure, causing Qua Iboe terminal Tank Farm spill and Umudike II spill in Ohaji Egbema Local Government of Imo State.²¹¹

Moreover, oil spills and pipeline fires are regular features in Nigeria and official estimates are that there are at least 300 incidents each year.²¹¹

(c) **Abandoned Oil Facility**

Oil companies in the Niger Delta are in the habit of abandoning the facilities installed after operation in a particular well. This has also resulted in oil pollution in the Niger Delta. For

instance, SPDC when they were forced out of Ogoniland, left some containers which contents were not known lying around.²¹¹

(d) **Artisanal Refining**

This is where the oil is refined through local and crude means by the use of metal drums to boil the crude oil and collect the fumes in tanks through pipes welded together. This process of refining oil brings out smoke and sometimes leads to fire out brake.

(e) **Improper Industrial Waste Disposal**

The oil industries in Nigeria dispose their waste without regard to its effect on the environment and human beings. For instance, hundreds big bags of 1 cubic metre reinforcement plastic bags of oil mixed with gray clay containing small rock fragments with seeping forming puddles in the ground and leaching into the soil were tipped in Okan Oyaa, Eleme Local Government Area.²¹¹

Clearing of oil spillages is not properly carried out in most cases. The remaining crude oil is set on fire, in which case forests and rivers are set ablaze.²¹¹

(F) **Sabotage**

Sabotage, vandalism of oil infrastructure and theft of oil are serious problems in the Niger Delta. However, the scale of the problem is not ascertained. Consequently, while sabotage as an oil spillage factor accounts for 3% of the total oil spills worldwide, it accounts for about 33% of oil spills in Nigeria.²¹¹

The incidents of oil pollution as a result of sabotage are so numerous. To mention but a few, in 2001, several kilometers of the Trans Niger Pipeline were excavated and cut in sizable lengths for onward transportation to buyers. This spilt oil at B-Dere and K-Dere communities in

Gokana Local Government Area of River State. In the same year, another ¾ inch plug belonging to Exxon Mobil were removed which led to Qua Iboe terminal spill in Mkpanak.²¹¹

The Nigerian law absolves oil companies of liability to pay compensation if oil pollution is as a result of sabotage. Since the scale cannot be ascertained, oil companies have also attributed oil spillages to act of sabotage to avoid being liable to pay compensation. Consequently, Communities and many NGOs strongly disagree over the number of spills that are attributed to sabotage and accused companies of designating controllable spills as sabotage in order to avoid liability for compensation.²¹¹

In conclusion, it has been seen that within four years, 1976 to 1980, there were 784 oil spills resulting in loss of 1,336,875 barrels of oil.²¹¹ In fact, the United Nations' Human Development Report of the Niger Delta, among several alarming declarations on the state of the region's environment asserts that *there is a strong feeling in the region that the degree and rate of degradation are pushing the delta towards ecological disaster.*²¹¹ Notwithstanding the volume of oil spillage in Nigeria, the government seems to be doing nothing and it is believed that as there continued to be new discoveries of oil reservoirs, with its consequent increase in oil production, more oil spills could be expected.

3.2.2. Gas Flaring

Some of the richest deposits of oil sit together with deposits of natural gas. Gas flaring is the burning off of natural gas associated with crude oil when it is brought to the surface in place where there is no infrastructure to make use of it. Gas flaring wastes natural gas as well as add significant carbon dioxide emissions to the atmosphere. Further, flaring combustion is typically incomplete, and this releases substantial amount of soot and carbon monoxide, which contributes

to air pollution problems.²¹¹ There have been over 250 identified toxins released from flaring which include carcinogens such as benzopyrene, benzene, carbon disulphide (CS₂), carbonyl sulphide (CO_s) and toluene; metals such as mercury, arsenic and chromium; sour gas with H₂S and SO₂; Nitrogen oxides (NO_x); Carbon dioxide (CO₂); and methane (CH₄) which contributes to the greenhouse gases.²¹¹

In 1960s and 70s, worthless gas was continuously flared at oil wells from Texas to Saudi Arabia. At its peak, about 110 million metrics tones of carbon dioxide were pumped into the atmosphere each year.²¹¹ However, since the realization of the potential economic values of gas, the practice of flaring gas has largely reduced. Moreover, the pressure to reduce gas flaring has increase upon the realization of the negative impact of gas flaring, which emits CO₂ that drives climate change.

Globally, the volume of gas flared between 1996 – 2006 ranges between 150 – 170 billion cubic meters (BCM). During this period, Nigeria's contribution to the total volume is approximately 24.1 BCM of gas, while U.S. flared 2.8 BCM. In fact, gas flaring is of common place in Nigeria²¹¹ and Nigeria is the second largest offending country, after Russia with respect to volume of gas flared.²¹¹ However, according to World Bank Report, it has been estimated that the total emission of carbon dioxide (CO₂) from gas flaring in Nigeria amounts to about 35 million tons per year and that Nigeria flares the highest amount of gas in the world.²¹¹

In Nigeria, an estimated 40% of gas produced is burned off – about 2.5 billion standard cubic feet per day. The percentage of gas flared in Nigeria, which is about 3 times the OPEC average, is about 16 times the world average.²¹¹ The worst aspect of it is that there is close proximity of gas flare to residential areas, forests, and waterways, thereby making life unbearable to human beings, terrestrial and aquatic animals. At the mouth of the canal, from

which the open sea is visible from the Awoye Community, the distant gas flare illuminates Chevron's Parabe Platform, which is nine kilometers away, and the Ewan Platform about two kilometers.²¹¹

In the world, gas lost to flaring could meet one third of the European Union's natural gas needs each year.²¹¹ The World Bank estimated that over 150 billion cubic metres of natural gas are flared or vented annually, an amount worth approximately of US\$30.6 billion, equivalent to 25% of United States gas consumption or 30% of European Union gas Consumption per year.²¹¹ Moreover, experts have reported that eliminating gas flaring globally would curb more CO2 emissions than all projects currently registered under the Kyoto Protocol's Clean Development Mechanism.²¹¹

3.3 Impact of Oil Pollution on the Environment

Oil pollution often results in both immediate and long term environmental damage. Some of the environmental damage caused by oil pollution can last for decades after the pollution has occurred. In fact, oil pollution has disastrous impacts on the environment.

The overall impact of oil pollution on the environment can be summarized as quoted in Greenpeace International with respect to the Niger Delta as follows:

We witnessed the slow poisoning of the waters of this country and the destruction of vegetation and agricultural land by oil spills which occur during petroleum operations. But since the inception of the oil industry in Nigeria more than twenty five years ago, there has been no concerned and effective effort on the part of the government, let alone the oil operators, to control environmental problems associated with the industry...We don't have pipe

borne water here, our only source of drinking water is the surrounding stream and creeks, but we can no longer drink the water because it has been polluted.

Everywhere you go, you see dead fishes and layers of crude oil.²¹¹

These impacts shall be discussed under the following sub-headings, to wit: impact on land resources, impact on air resources and impact on water resources.

3.3.1 Impact of Oil Pollution on Land Resources

Land resources is the most important to man because of its support for major terrestrial life and a source of many natural resources that sustain man. Any misuse of land has a harmful impact on the environment and co-existence of man. Oil pollution has affected land resources in the following way: loss of mangrove forest, biodiversity depletion and land degradation; impairment of human health and loss of human lives; agricultural/economic effect and displacement of communities.

3.3.1.1 Loss of Mangrove Forest, Biodiversity Depletion and Land Degradation

Oil pollution causes devastating and sometimes irreversible damage to wetland ecology, wildlife and biodiversity, most of which have been accorded legal protections in national and international law.²¹¹ Drill cuttings, drilling mud, fluids used to stimulate production of oil, chemicals injected to control corrosion or to separate oil from water, and general industrial waste poured on land causes degradation, depletion of the biodiversity as well as loss of mangrove forest. Oil spilled coats everything it touches and becomes an unwelcome but long-term part of every ecosystem it enters. It coats and clings to every rock and grain of sand it touches. Moreover, if oil washes into coastal marshes, mangrove forests or other wetlands, fibrous plants

and grasses absorb the oil, which can damage plants and make the whole area unsuitable as wildlife habitat. If oil waste reaches the shoreline or coast, it interacts with sediments such as beach sand, gravel, rocks and boulders, vegetation and terrestrial habitats both wildlife and humans. It causes erosion as well as contamination.²¹¹

Construction of access roads to the oil well cite has resulted in deforestation and cutting through mangrove forests, and sometimes, blocking the natural flow of water which results in flooding and waterlog on one side of the road, making plants on that side die of asphyxiation and on the other side of lack of water.²¹¹

According to World Bank Report in 1995, a study of metal concentrations near the Warri Refinery found elevated level in both soil and plants. The combination of metals and other air pollutants from the refinery complex may mean air pollution as well as waste water, is impacting human and ecosystem health.²¹¹ In fact, the rainforest, which previously occupied 7,400 km² has disappeared. Moreover, an estimated 5-10% of Nigerian mangrove ecosystems have been wiped out by oil pollution which acidifies the soils, thus halting cellular respiration and starving plant roots of oxygen.²¹¹

3.3.1.2 Impairment of Human Health and Loss of Human Lives

Environmental impact of oil pollution is often negative because it is toxic to almost all forms of life. Oil is a mixture of many different kinds of organic compounds, many of which are high toxic and cancer causing. Benzene is present in oil and is known to cause leukaemia in human; it lowers the white blood cell count in human which leaves the person exposed to and more susceptible to infections.²¹¹ Benzene exposure in mere parts per billion (ppb) range has been linked to terminal leukemia, Hodgkins lymphoma and other blood and immune system

diseases within 5 – 15 years of exposure. Particulates of soot which remains due to incomplete combustion when oil is burnt blacken humans' and other animals' lungs and causes heart problems or death. Soot is also cancer causing.²¹¹ Crude oil and petroleum distillates cause birth defects.²¹¹

Oil pollution affects human health and well-being. Residents of oil producing areas at times have to cope with drinking, cooking and bathing with water and eating fish that contains residual oil even many years after clean up. There is also the lasting health effect of chemical dispersants used during clean-up.²¹¹ They also inhale dangerous substance and chemicals from gas flaring.

Many residents of Niger Delta have complained of asthma, breathing difficulties and pain, headaches, nausea, and throat irritation as well as chronic bronchitis.²¹¹ Over 3,000 inhabitants of the Niger Delta have died from drinking contaminated water.²¹¹ Further, in Jesse Village fire hazard which occurred in 1998, 2000 people were feared dead instantly and about same numbers survived with various degrees of injuries.²¹¹ World Bank Information on the adverse effect of particulate matter suggests that gas flaring from Bayelsa alone would likely cause on a yearly basis, 49 premature deaths, 4960 respiratory illness among children and 120 asthma attacks.²¹¹

Moreover, oil pollution has led to loss of lives of oil workers and residents of oil producing area. To mention but a few, 11 BP workers were killed in the Deepwater Horizon oil spill that occurred in 2010.²¹¹ In the Occidental Piper Alpha platform destruction by explosion and fire in 1988, 167 workers were killed in the blaze. Likewise, in 2005, when a support vessel collided with Mumbai High North platform, a riser was ruptured and this caused a major fire that destroyed the platform. 22 workers lost their lives.²¹¹

According to World Health Organisation global estimates, about 2.5 million deaths each year results from indoor exposure to particulate matter resulting from oil pollution in rural and urban areas in developing countries representing 4-5 % of the 50-60 million global deaths that occur annually.²¹¹

3.3.1.3 Agricultural/Economic Effect

Most residents of oil producing areas have farming and fishing as their occupation due to the ecosystem within their community. Oil pollution has altered the composition of the ecosystem and the soil irreversibly. This has affected fertility of the soil for growing crops as well as physically and chemically altered the natural habitats. Many forests and agricultural land have been damaged. Cash and subsistent crops have had more than a fair share of defoliation as a result of oil pollution and attendant toxicity of the soil. Thus, the food chain has been partially truncated by hybrid crops that are a caricature of their former selves. Thus, yam tubers have become unusually small and even sweet varieties of yam have become everything but sweet.²¹¹

Oil is acutely lethal to fish – that is, it kills fish quickly at a concentration of 4000 parts per million (ppm) (0.4%).²¹¹ Studies in the Niger Delta have shown that some species of fish have migrated and others have become virtually extinct as a result of oil pollution. Oil pollution on the other hand could lead to retardation of vegetation growth for a period of time, and in extreme cases, to destruction of vegetation.²¹¹

Studies of the Niger Delta have shown that a year's supply of food is often destroyed by only a minor oil spillage, debilitating the farmers and their families who depend on the land for their livelihood. Further, oil pollution taints coastal environments which cause death of fish and consequently decline in local fishing production.²¹¹

Thus, oil pollution leads to loss of income and means of subsistence for individuals and companies in the commercial farming, fishing, shrimp, and oyster industries. In fact, in the Oyakamo Oil pipeline spillage which caused fire disaster rendered the soil unfit for cultivation and polluted about 360 km of salt marshes as reported by Royal Society of London in 1982.²¹¹

Moreover, oil pollution impacts grossly on the economics of a nation, in terms of loss of funds and revenue which it could have realized if it had the oil that was spilled or it has conserved the gas instead of flaring same. When oil spills, it affects the amount of oil available for use, this is loss of finance. Also, money is spent to carry out clean-up. For instance, oil companies in Nigeria flare an estimate of 2.5 billion cubic feet of gas every day and this action amounts to the loss of revenue estimated at 2.5 billion US dollars yearly.²¹¹ Nobody benefits from the energy this flared gas contains, yet the local communities leaving around the gas flares rely on wood and candle for light with such useful energy being wasted.²¹¹ Also in the Deepwater Horizon oil spill, BP committed to provide 500 million US dollars for independent research on ecosystem assessment, impacts and recovery efforts.²¹¹

3.3.1.4 Displacement of Communities and Loss of Property

Sometimes, oil pollution damages residential and commercial properties located along the coastal zones and small islands offshore where it occurred. Further, properties can be damaged by toxic chemicals and oil dispersants used to aid clean –up of the oil spilled. This has resulted in forced displacements and relocation of individuals in the affected area. For instance, over 200,000 inhabitant of the Niger Delta have been forcefully displaced from their homes due to oil pollution.²¹¹

3.3.2 Impact of Oil Pollution on Air Resources

Air resources refer to earth's atmosphere. It is a mixture of gasses surrounding the earth. This is the key part of all living creatures on earth, as all existing animals and plants in both lands and waters breathe in air²¹¹. Oil pollution can annihilate the atmosphere. Oil pollution increases the air temperature while relative humidity of the air decreases. Oil pollution impacts the atmosphere by endangering energy through combustion.²¹¹ When fossil fuels are burned, sulfur, nitrogen, and carbon combine with oxygen to form compounds known as oxides²¹¹.

The consequences of oil pollution on the atmosphere cannot be overemphasized. Apart from modifying the global climate, threatening the health of human beings, upsetting the global ecosystem, it causes such environmental problems as: acid rain, green house effect/global warming, climatic change and depletion of the ozone layer.

3.3.2.1 Acid Rain

When fossil fuels are burnt, sulfur, nitrogen, and carbon combine with oxygen to form compounds known as oxides. High temperatures created by the combustion of petroleum causes nitrogen gas in the surrounding air to oxidize, creating nitrous oxides. Nitrous oxides, along with sulfur dioxide from the sulfur in the oil, combine with water (vapour) in the atmosphere to create acid rain. These acid containing water vapors (acid rain) enter the water cycle and can subsequently harm the biological quality of forests, soils, lakes and streams.²¹¹

Acid rain causes many problems, such as increase in acidity of soil with dead trees and acidified lakes with dead fish. Coral reefs in the World's oceans are killed by acidic water caused by acid rain. Damage to buildings status, human respiratory diseases, induce release of aluminum ions from soil particles, and corrode marble and metals. Thus, it leads to the increased corrosion

of machinery and structures and to the slow destruction of archaeological structures like the marble ruins in Rome and Greece.²¹¹

According to the US government (EPA), gas flares contribute to acid rain and villagers complain of the rain corroding their building roof.²¹¹ Acid rain not only deprives people of drinkable rain water and stuns growth as was found in Eket and other Communities of Akwa Ibom State of Nigeria, it is also affecting people's homes.²¹¹ The zinc roofing which formerly lasted for years are now destroyed just under 10 years by acid rain.²¹¹

3.3.2.2 Green House Effect and Global Warming

Greenhouse gases absorb solar heat radiated from the earth's surface and retain this heat, keeping the earth warm and habitable for living organisms. When greenhouse gases retain the radiant energy (heat) provided to Earth by the Sun, the process is known as the greenhouse effect. Greenhouse gases occur naturally and without them the planet would be too cold to sustain life. However, oil pollution has added more and more of these gases into the atmosphere. For instance, carbon dioxide²¹¹ which is a powerful greenhouse gas, which have risen by 35% since 1750, largely from the burning of fossil fuels such as coal, oil and natural gas. With more greenhouse gases in the mix, the atmosphere acts like a thickening blanket and traps more heat.²¹¹

The increase in greenhouse gases has led some scientists to predict a global warming²¹¹ scenario that could cause numerous environmental problems, including disrupted weather patterns and polar ice cap melting, alter disease pattern by increasing the spread of epidemics etc.²¹¹

United States is the biggest contributor to greenhouse gas. The results of global warming could prove catastrophic to our environment. The World would experience a decrease in biodiversity, coastal lands underwater due to the glaciers melting in the Polar Regions, severe droughts and floods due to the disruption of the water cycle. Entire ecosystems could be altered as the range of distribution of plants and animal species change. Economically, the costs to society are enormous. Diseases would increase in diseases like malaria, yellow fever and cholera. Crop yield would increase in some region while it would decrease in other regions at same rate.²¹¹

According to the Intergovernmental Panel on Climate Change (IPCC)²¹¹, in its 3rd assembly report in 2001, stated that global average surface temperature increased by about 0.6 degree centigrade over the 20th century, that it was 66-90% confident that most of the observed warming over the second half of the century was due to increase of greenhouse gas concentration. It projected that from 1990 – 2100, the temperature would increase by 1.4 – 5.8 degree centigrade; sea levels would rise by 0.09 – 0.88 metres due to thermal expansion and loss of mass from glaciers and ice caps.

Sir John Houghton, formal co-chair of IPCC Scientific Assembly Working Group and Chief Executive of United Kingdom's Meteorological Office said in July 2003 that the impact of global warming are such that there are no hesitation in describing it as a weapon of mass destruction.

Consequently, in 1992, the Earth Summit in Rio agreed to cap industrial emissions of carbon dioxide and other greenhouse gas. However, United States did not agree to do anything from the earth summit.²¹¹

3.3.2.3 Climatic Change

This is where there is a measurable increase in the average temperature of Earth's atmosphere, oceans, and landmasses. When humans burn large amounts of petroleum, it creates large amounts of CO₂ (carbon dioxide) gas that traps heat in the earth's atmosphere. Scientists believe Earth is currently facing a period of rapid warming brought about by rising levels of heat-trapping gases known as greenhouse gases in the atmosphere.²¹¹

About 80% of CO₂ emissions are from the energy sector, 75% from burning fossil fuels. According to World Bank, by 2002, flaring in Nigeria has contributed more greenhouse gases to the earth atmosphere than all other sources in sub-Sahara Africa combined.²¹¹ This is an unnecessary contribution to climate change. Gas flaring contributes to climate change which has serious implications to Nigerians and the rest of the world.

Climatic change attracted virtually no public or political attention until early 1980s when it became increasingly clear that warming from greenhouse gases was a serious concern and scientists and scientific organizations began to persuade governments to pay attention to climate problems. It was in 1988 that climate change was brought on the political agenda.²¹¹ In January 2004, the UK Government Chief Scientist said that climate change is the most severe problem we are facing today, more serious than the threat of terrorism. Climate change is particularly serious for developing countries, and Africa as a continent is regarded as high vulnerable with limited ability to adapt.²¹¹

3.3.3. Impact of Oil Pollution on Water Resources

Water resources refer to waters and aquatic resources. Oil pollution can damage ecosystems, including plants and animals and contaminate water for drinking and other purposes.

The damage caused to the marine environment by oil pollution cannot be calculated. Moreover, the adverse impact of pollution is not secluded to the incident causing the pollution but can also result from steps taken to mitigate the damage. However, the impact of oil pollution on water resources would be discussed under two subheads, to wit: death of marine animals and depletion of ecosystem as well as the economic impact.

3.3.3.1 Death of Marine Animals and Depletion of Ecosystem

Once oil is discharged into the sea, it becomes exposed to weathering which causes physical and chemical changes.²¹¹ The process include among others, release of chemical component into the sea water. This release can be lethal to marine life and the marine environment. The presence of oil in water column of a stream channel alters the chemistry of that water body. Toxicity of oil components increases mortality and thus the decline in population of the affected species.²¹¹

Fish²¹¹ are affected by oil pollution through the intake of oil and contaminated prey, through the intake of contaminated oil compounds through the gills, through effects on fish eggs and larval survival and through ecological changes. The fish may become more vulnerable to disease, including fin rot, reduction in external bacterial flora, reduction in the rate of tissue repair or regeneration and increase parasitism.²¹¹ Mammals²¹¹ as well as seabirds which come in contact with oil will die due to the fur coat losing its insulating quality and the adverse effect upon the digestive, the nerve and the circulatory systems. Also, seals and reptiles are vulnerable because their need to surface in order to breathe and to leave the water to breed.²¹¹

Marine bacteria and phytoplankton are also affected by oil pollution. Phytoplankton is at the bottom of the marine food chain and creates the basis of all life in the sea by its

photosynthesis and enormous decrease of their growth rate has been noted after a spill. Further, evidence shows that oil spill can upset the entire invertebrate populations and that the impact of oil on snails, crabs and soft shell clams has been visible 6 to 8 years after an incident.²¹¹ Oil pollution interferes with the reproductive process of coral reefs;²¹¹ affects mangroves by blocking the opening of the air breathing roots of mangrove trees or interfering with their salt balance, causing leaves to drop and trees to die as well as inhibiting recolonisation by mangrove seedlings.²¹¹ When under water explosions occur, it kills small dolphins and seals.²¹¹ The use of explosive cutting to remove production installations create shock waves that harm or kill marine creature.²¹¹

In the Torrey Canyon incident of 18th arch 1967, the aerial bombardment of the remaining 40,000 tons of oil on board the vessel to burn it off resulted in the death of over 15,000 seabirds and threatened the livelihoods of many of the local people.²¹¹ Also, in 1976 spill killed more than 60,000 long-tailed ducks wintering in the Baltic Sea and attracted to the seemingly calm water surface created by the oil slick. In 1977, a collision between two oil tankers off the waters of South Africa polluted 47 African Penguins. The Apollo Sea sinking of 1994 impacted about 10,000 penguins. In 2000, the Treasure sank and oiled 20,000 penguins and 20,000 penguins were prevented from becoming oiled by removing them off their breeding colonies on Dassen and Robben Island.²¹¹

The 1989 Exxon Valdez oil spill was catastrophic. According to BBC News, the oil killed over 250,000 seabirds, 2,800 sea otters, 250 bald eagles, 300 harbor seals and 22 killer whales as well as countless herring and salmon.²¹¹ The British Petroleum (BP) oil spill of 2010 was more catastrophic. According to Time, thousands of dead invertebrates like starfish and coral were found. Unfortunately, these species play an important role in the ecosystems to which they

belong, thereby impacting many other marine populations. Similarly, many dolphin offspring were found dead along the Gulf Coast. Oyster beds were also devastated by the oil spill. In fact, it would take ten years for the population to reach its former size.²¹¹ Through November 1, 2010, Wildlife responders had collected 8,183 birds, 1,144 sea turtles and 109 marine mammals affected by the Deepwater Horizon Oil spill - dead or alive. However, given the effect of hiding, scavenging, sinking, decomposition and sheer size of the search area, many more specimens were not intercepted.²¹¹

3.3.3.2. **Economic Impact**

Oil pollution leads to loss of income and means of subsistence for individuals and companies in the commercial fishing, shrimp and oyster industries. It affects fishermen and women, charter boat operators, owners of hotels, tourist management agencies, rental property owners, and other businesses in coastal resort areas.

For instance, the Deepwater Horizon oil spill took place on April 20, 2010. As at 9th July 2011, about 491 miles (790 km) of coastline in Louisiana, Mississippi, Alabama and Florida had been and remained contaminated by the spill, shutting down the local fishing industry and fouling marshes and the beaches it touched.²¹¹ Consequently, BP announced a \$20 billion escrow fund that would be used to compensate businesses and workers in Louisiana, Mississippi, Alabama, Florida and Texas, whose financial livelihood suffered as a result of the oil spill. As at November 23, 2010, that is 8 weeks of operation, the independently administered Gulf Coast Claims Facility has paid out more than \$2billion to approximately 127,000 claimants.²¹¹

3.4 **Environmental Impact Assessment**

This is the formal process used to predict the environmental consequences (positive or negative) of a plan, policy, program or project prior to the decision to move forward with the proposed action.

Formal impact assessments may be governed by rules of administrative procedure regarding public participation and documentation of decision making, and may be subject to judicial review. It may also propose measures to adjust impacts to acceptable levels or to investigate new technological solutions. The three main functions that Environmental impact assessment performs are that it integrates environmental issues into planning and decision-making; it anticipates and minimizes environmental damage; and it brings about public participation in decision making and environmental conservation. Thus, EIA ensures that potential problems are foreseen and addressed at an early stage of the projects planning and design. Moreover, by using EIA, both environmental and economic benefits can be achieved, such as reduced cost and time of project implementation and design, avoided treatment/clean-up costs and impacts of laws and regulation.

The United States passed the first Environmental Impact Assessment related legislation in 1969. Thereafter, more than 100 countries have adopted some form of Environmental Impact Assessment legislation and policy.²¹¹

The fundamental components of an EIA would necessarily involve eight stages, which are: screening; scoping; assessment and evaluation of impacts and development of alternatives; reporting the environmental impact statement (EIA) or EIA report; review of the environmental impact statement; decision-making; and monitoring, compliance, enforcement and environmental auditing.

3.4.1 International Framework for Environmental Impact Assessment

The conservation ideas that gave rise to EIA are central of International Environmental Law. EIA concepts are supported at the international level. Thus, in 1987, the UN issued the goals and principles for EIA and in 1989, World Bank issued its environmental assessment directives and have screened funded projects to determine their potential domestic, trans-boundary and global environmental impacts.²¹¹

The two major frameworks on EIA in international environmental law are: Convention on Environmental Impact Assessment in a Trans-boundary Context and the Protocol on Strategic Environmental Assessment.

3.4.1.1. Convention on Environmental Impact Assessment in a Trans-boundary Context, 1991

At a seminar on EIA held in Warsaw, this convention (otherwise known as Espoo convention) was initiated. It is a regional convention of the United Nations Economic Commission for Europe, but is open for signatures to all members of the United Nations. The most comprehensive international agreement on EIA, the Espoo Convention entered into force in 1997 and as at November 2005, it has 41 parties.²¹¹

In line with its objective of creating EIA based mechanisms to effectively monitor and control trans-boundary pollution, its Article 2(1) provides that the parties shall either individually or jointly take all appropriate and effective measures to prevent, reduce and control significant adverse trans-boundary environmental impact from proposed activities. The parties are under obligation to assess the environmental impact of certain development activities listed in Annex 1²¹¹ early in the decision making process.

Furthermore, the parties are to notify and consult each other on all major projects under consideration, which are likely to have a significant trans-boundary environmental impact. The procedure to be adopted must allow for public participation and preparation of an EIA especially by citizens of the affected party.

The EIA must contain certain information such as the proposed activity and its purpose; reasonable alternative; likely environmental impact; available mitigation measures; predictive methods, underlying assumptions and relevant environmental data relied on in the development of the EIA; gaps in knowledge encountered in the development; monitoring and management plans as well as plans for post-project assessment; and non technical summary.²¹¹ However, the convention does not have a compliance mechanism.

3.4.1.2 Protocol on Strategic Environmental Assessment, 2003

Strategic Environment Assessment (SEA) is the evaluation of the likely environmental, including health, effects, which comprises the determination of the scope of an environmental report and its preparation, and consultations, and the taking into account of the environmental report and the results of the public participation and consultations in a plan or programme.²¹¹ According to Thievel, Strategic Environmental Assessment is the formalized, systematic and comprehensive process of evaluating the environmental impacts of a policy, plan or programme and its alternatives, including the preparation of a written report on the findings of that evaluation, and using the findings in publicly accountable decision-making.²¹¹

The Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Trans-boundary Context (2003 known as SEA Protocol) was initiated at the 2nd MOP of Espoo Convention held in February 2001. It was adopted in 2003

and is open to adoption by all members of the United Nations. It has not yet entered into force and activities under it are decided by the Meeting of Signatories.²¹¹

The SEA Protocol requires state parties to evaluate environmental consequences of their official draft development plans and programme. It does not extend to their policies.²¹¹ However, it places emphasis on human health effects and requires extensive public participation²¹¹ in governmental decision making. Further, the decisions on plans and programmes must take due account of the conclusions of any EIA, comments of public, health and environmental officials and affected parties.

The protocol seeks to mitigate the effects of trans-boundary pollution, but focuses on parties' domestic plans and programmes.

3.4.2 United States Law Regulating Environmental Impact Assessment

In the United States of America, environmental impact assessment is dealt with in the National Environmental Policy Act of 1969.

3.4.2.1 National Environmental Policy Act 1969

This Act, signed into law on January 1, 1970, established a policy of environmental impact assessment (EIA) for federal agency actions, federally funded activities.²¹¹ It applies to only federal actions, licences/permits and financial assistance. It does not apply to actions that do not have federal involvement.²¹¹ Environmental Impact Assessment in the U.S. is also known as environmental review or simply the NEPA process.

EIA is the principal and innovative feature of the Act and it must be prepared for every recommendation or report on proposals for legislation and other major federal actions

significantly affecting the quality of the human environment.²¹¹ The Act also established the Council on Environmental Quality that promulgated regulations to codify its requirements.²¹¹

The EIA process in the U.S starts at the earliest possible time with other planning in order to ensure that planning and decisions reflect environmental values, to avoid delays later in the process and head off potential conflicts.²¹¹ Further, the process starts with an Environmental Assessment (EA), which is done to determine if there is need for an Environmental Impact Statement (EIS). Once it is decided to prepare EIS, the Agency must notify the public of such intent before the beginning of the scoping process. Affected/interested agencies and persons would be invited to participate.²¹¹ The scoping process would follow and thereafter, the draft EIS is prepared and released for public and concerned government agencies' comments.²¹¹ The final EIS is then produced, after which there can be additional review. The record of the decision must be published in the Federal Register.²¹¹

The NEPA does not prohibit the Federal Government or its licensees/permittees from harming the environment, and it does not specify any penalty if the environmental impact assessment turns out to be inaccurate.

3.4.3 Framework for Environmental Impact Assessment in Nigeria

In Nigeria, there are three independent EIA systems in operation. They are the Petroleum Act of 1969, the Town and Country Planning Act of 1992 and the Environmental Impact Assessment Act of 1992. However, the principal legislation that governs EIA practice in Nigeria is the Environmental impact Assessment Act.

3.4.3.1 Nigerian Environmental Impact Assessment Act, 1992

The Environmental Impact Assessment Act²¹¹ came into force on 10th December 1992. It was made to set out the general principles, procedure and methods to enable prior consideration of environmental impact assessment on certain public or private projects that may likely or to a significant extent affect the environment before a decision is taken on such projects.²¹¹

The Act made it mandatory for EIA to be conducted for projects listed in category 1,²¹¹ which are likely to have significant effects on the environment. Petroleum is included in this category. Thus, EIA must be made in respect of oil and gas fields' development; construction of off-shore pipelines in excess of 50 Km; construction of oil and gas separation, processing, handling, and storage facilities; construction of oil refineries; and construction of product depots for storage of petrol, gas or diesel within 3km of residential or commercial or industrial area.²¹¹

The EIA process starts with the submission of the project proposal to the agency - the Nigerian Environmental Protection Agency.²¹¹ The Agency conducts an initial environmental examination (IEE) or a preliminary assessment of the information obtained to determine whether the project is likely to have a significant effect on the environment.²¹¹ Meanwhile, the general public should be informed via newspapers and local municipalities so that they can express their views on the proposed project, which views should be considered by the agency while forming its opinion.²¹¹ Thereafter, the EIA study would commence with an extensive scoping process to determine the spatial and temporary dimensions of environmental effects. The agency ensures that a detailed baseline studies is carried out to determine the environmental conditions prior to project implementation.²¹¹ Then, a detailed mandatory study report is prepared, and sent to the agency.²¹¹ Upon receiving the study report, a public notice shall be published by the agency with respect to date and place where it would be available for their input.²¹¹ The agency may also refer the study report to Council²¹¹ for a referral to mediation or a panel's review if this is

necessary. Thereafter, decision is made by the agency and authorization/approval is given where appropriate by issuing Environmental Impact Statement along with a certificate.²¹¹ By virtue of Sections 6 to 11 of the Act, before a decision is reached one way or the other, opportunity must be given to government agencies, members of the public and experts to make comments on the environmental impact assessment of the proposed activity or project.

The Act made provision for monitoring and auditing or what is called follow up. Where the approval specified that the project is to be executed under supervision, the agency would supervise and monitor the project throughout its phase and possibly, commissioning. It also created legal liability for contravention of any provision.²¹¹

In the oil sector, there is confusion as a result of multiple regulators. The Department of Petroleum Resources (DPR)²¹¹ and the State Environmental Protection Agencies also have enabling instruments which permits them to conduct EIA without limitation. However, it is submitted that the apex regulator under the EIA Act is the Agency and DPR cannot usurp their responsibility. Moreover, the State Environmental Protection Agencies are subordinate to the Agency and should merely monitor the process for and on behalf of the Agency.

In conclusion, the legal framework for EIA in Nigeria is quite comprehensive. The Act sought to assess the likely or potential environmental impacts of proposed activities, including their direct or indirect, cumulative, short term and long term effects, and to identify the measures available to mitigate adverse environmental impacts of proposed activities, and assessment of those measures. However, the provisions of the Act are not appropriately executed.

3.5 Oil Pollution and Human Rights Violation

It is clear from the above enumerated impacts of oil pollution on land resources, air resources and water resources, that by virtue of these impacts, oil pollution violates peoples' fundamental human rights. The human rights that an oil pollution incident would violate with respect to an individual depend on how it affects the life and livelihood of such person.

Human rights promotion and protection is well recognized and formalized globally. Hence, several international, regional and national instruments abound which seek to protect human rights. On the international levels, we have the Universal Declaration of Human Rights (1948 Universal Declaration), the International Covenant on Civil and Political Rights (ICCPR 1966), and the International Covenant on Economic, Social and Cultural Rights (ICESCR 1966).²¹¹ The regional human rights instruments include The European Convention on Human Rights (1950 ECHR), the American Convention on Human Rights (1969 American Convention), the American Declaration of the Rights and Duties of Man (1948 American Declaration) and the African Charter on Human and Peoples' Rights (1981 African Charter). States also have their own national human rights instruments.²¹¹

The rights which are hampered by environmental degradation are the right to life; the right to health and decent environment; the right to food and water; the right to work and to an adequate standard of living; and the right to use and enjoy property and to respect for private and family life and home.

(a) **Right to Life**

Oil pollution has impacted on peoples' right to life which is protected by several human rights instruments.²¹¹ The right to life is a supreme human right from which no derogation is permitted, even in times of war or public emergency.²¹¹ Evidence as discussed above shows that several persons have lost their lives as a result of oil pollution. In fact, major oil spills lead to loss

of lives of oil workers and residents of oil producing areas. For instance, 11 BP workers lost their lives during the 2010 Deepwater Horizon blowout, so also other oil pollution incidents already discussed.

(b) **Right to Health and Decent Environment**

As already discussed, oil pollution affects human health and well-being. It also fouls the environment. The right to health²¹¹ encompasses the right of every individual to enjoy the best attainable standard of physical and mental health. In order to achieve the full realization of the right to health, states must take steps to improve all aspects of environmental and industrial hygiene.²¹¹ Article 11 of the European Social Charter enjoins members to, as much as possible remove the causes of ill health. Evidence has shown that oil pollution has made persons exposed to the oil to have several ailments ranging from nausea, asthma, breathing difficulties, throat irritation, chronic bronchitis, etc to cancer. Thus, oil pollution has violated peoples' right to health and healthy environment. In fact, in the Nigerian case of *Jonab Gbemre v. Shell Petroleum Development Company Nigeria Ltd and Ors*²¹¹, the Federal High Court held that gas flaring and oil spillage by Shell in the course of their oil exploration and production activities in the applicant's community were violations of the fundamental right to a healthy environment and dignity of human persons.

(c) **Right to Food and Water**

According to Article 24 of the UN Convention on the Right of the Child, state parties are to combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and

risks of environmental pollution. Moreover, Article 11 of ICESCR imposes an obligation on state parties to ensure the availability and accessibility of food.

The Right to food and water requires that governments should not destroy or contaminate food or water sources. It connotes that food and water should be free from adverse substances.²¹¹ However, oil pollution contaminates food and water system on which people rely for feeding and drinking. In fact, it pollutes water bodies, destroys farm land and crops, damages fisheries, birds and other animals that comes in contact with the spilt oil.

(d) **Right to Work and to an Adequate Standard of Living**

States are under obligations to recognize the right of everybody to the opportunity to gain their living by work which they freely choose or accept and to take appropriate steps to safeguard this right.²¹¹ Moreover, everyone has a right to an adequate standard of living and to the continuous improvement of living condition, for the health and well being of himself and of his family.²¹¹ This is also known as the right to subsistence.

It is clear that oil pollution leads to loss of income and means of livelihood for individuals and companies in the fishing, shrimp, and oyster business, as well as charter boat operators, owners of hotels, tourist management agencies, to mention but a few. This it is submitted is a violation of their rights to work and to an adequate standard of living.

(e) **Right to Use and Enjoy Property, and to Respect for Private and Family Life and Home**

The right to use and enjoy property, recognized in several human rights instruments²¹¹, is one recognized in John Locke's famous human rights tripod of *'life, liberty and possession'*.²¹¹ This right to the use and exclusive possession of property is closely related to the right to respect for private and family life and home.

It is clear that oil pollution results in loss of property and damage to property. In fact, some communities and families have been displaced from their homes as a result of oil pollution. Consequently, the African Court on Human Rights in the case of *SERAC V. Nigeria*²¹¹ found that the Nigerian Government violated the right of property of the Ogoni people in the Niger Delta Area by condoning and facilitating the operations of oil corporations in Ogoniland. It went further to hold that the destruction of housing and forceful eviction of residents from their homes was a violation of the implied right to housing, including protection from forced eviction, which is derived from the express rights to property, health and family.

In conclusion, oil pollution impact also results in the violation of the fundamental rights of the people that comes in contact with the incident. Thus, in 2002, the African Commission found that despite Nigeria's obligation under the African Charter to protect persons against interferences in the enjoyment of their rights have violated these rights by facilitating the destruction of the Ogoniland by private actors and oil companies. The rights found violated by Nigerian government are: the right to non-discrimination (Art 2), the right to respect for life and the integrity of person (Art 4), the right to property (Art 14), the right to health (Art 16), the right to protection of the family unit (Art 18(1)), the right of peoples to freely dispose of their wealth and natural resources (Art 21), the right to food, the right to housing, and the right to a general satisfactory environment favourable to their development (Art 24).²¹¹

CHAPTER FOUR

ENVIRONMENTAL LAWS REGULATING OIL POLLUTION OF LAND, AIR AND

WATER RESOURCES

4.1 Frameworks for the Protection of Land Resources under Environmental Law

Many environmental laws exist which protect land resources from oil pollution. This shall be discussed under three major subheadings, which are: International environmental regime for the regulation of oil pollution of land resources; United States' laws regulating the protection of land resources from oil pollution; and lastly, environmental regime for protecting land resources from oil pollution in Nigeria.

4.1.1 International Environmental Regimes Regulating Oil Pollution of Land Resources

There is no specific international treaty that deals specifically with the protection of land resources from oil pollution. However, there are two treaties that protect some aspects of land resources (which are susceptible to oil pollution) from destruction by whatever means, which includes oil pollution. These treaties are: the Convention on Wetlands of International Importance especially as Waterfowl Habitat and the Convention on Biological Diversity.

4.1.1.1 Convention on Wetlands of International Importance Especially as Waterfowl Habitat, (Ramsar Convention), 1971

Ramsar Convention, which was concluded in 1971, entered into force in 1975 and has 146 member states as at October 2005. It was the first convention that recognized that wetlands are among the most productive sources of ecological support on earth.²¹¹ The purpose of the

Convention is to stop the loss of wetlands and to promote their conservation and wise use as a means to achieving sustainable development.²¹¹

Wetlands are defined as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters.²¹¹ According to the Convention, five major wetland types generally recognized are Marine (coastal wetlands including coastal lagoons, rocky shores and coral reefs); Estuarine (including deltas, tidal marshes and mangrove swamps); Lacustrine (wetlands associated with lakes); Riverine (wetlands along rivers and streams); and Palustrine (marshes, swamps and bogs).

The convention obligates each state party to designate at least one wetland to be included in the list of wetlands of international importance (Ramsar List). The wetland should be selected on the basis of its international biological, ecological, botanical or hydrological significance. The list currently includes 1469 designated sites covering an area of some 126,289,246 hectares.²¹¹

Furthermore, the state parties are to ensure that the ecological character of the wetlands in the convention list (Ramsar List²¹¹) is maintained.²¹¹ They are to formulate and implement plans to promote the conservation of wetlands in the list and as far as possible the wise use of wetlands in their territory as well as report to the Ramsar Bureau on the status of their listed wetlands.²¹¹ The state parties are also encouraged to establish National Wetland Committees²¹¹ consisting of relevant government institutions at central and state levels to deal with protected areas, and to cooperate with each other in implementing the Convention, especially for wetland that extends across the territories of more than one state. State parties also contribute to its budget, a percentage related to its contribution of the United Nations' budget.²¹¹

The Ramsar Convention has a CoP²¹¹ and a Secretariat (Ramsar Bureau) situated in Switzerland. In 1990, the CoP established a fund known as Ramsar Small Grants Fund for Wetland Conservation and Wise Use, which provides financial support for wetlands conservation activities to developing states.²¹¹

Wetlands are among the most complex and productive ecosystems in the world, comparable to rainforest and coral reefs. Consequently, protecting wetland habitats is essential for maintaining global and national biodiversity.

4.1.1.2 **Convention on Biological Diversity (CBD), 1992**

The CBD, initiated in 1989 by UNEP Governing Council was adopted in 1992 and opened for signature during the 1992 United Nations Conference on Environment and Development in Rio de Janeiro.²¹¹ The Convention is a more comprehensive and global approach necessary to address the continuing loss of biological diversity, since others before it addressed specific aspects and components of biodiversity. It took a holistic ecosystem based approach to the conservation and sustainable use of biological diversity.

According to Article 1²¹¹ of CBD, the three main objectives of the convention is the conservation of biological diversity; the sustainable use of the components of biological diversity; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

Consequently, the convention affirmed the sovereign right of states over their own biological resources. It described the status of biological diversity as a common concern of

human kind.²¹¹ However, the convention obligates the state parties to conserve and sustainably use their biological diversity to the benefit of the present and future generations; and to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction.²¹¹

According to Article 6, state parties shall develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity as well as endeavour to integrate the conservation and sustainable use of biological diversity into relevant sector or cross-sector plans, strategies, programmes and policies. Consequently, over 100 countries have developed National Biodiversity Strategies and Action Plans (NBSAPS).²¹¹ State parties are to identify and monitor components of biodiversity important for conservation and sustainable use.²¹¹

Finally, the convention made provisions for the *in-situ* and *ex-situ* conservation of biological diversity. While the *in-situ*²¹¹ conservation has to do with conservation of the ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings; the *ex-situ*²¹¹ conservation relates to conservation of components of biological diversity outside their natural habitats.²¹¹

4.1.2 USA Laws Regulating the Protection of Land Resources from Oil Pollution

In United States, the governing framework for oil pollution consists of a combination of the federal, state and international authority. The laws that regulate the prevention of oil spill onshore are basically the Oil Pollution Act and the Pipeline Statutes,²¹¹ which includes the Hazardous Liquid Pipeline Act of 1979, the Pipeline Safety Improvement Act of 2002, and the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006.

4.1.2.1 **Oil Pollution Act, 1990**

The Act,²¹¹ enacted after the Exxon Valdez Spill, strengthened EPA's ability to prevent and respond to catastrophic oil spills. It requires oil storage facilities²¹¹ and vessels to submit to the Federal government plans detailing how they will respond to large discharges.²¹¹ EPA has published regulations for above ground storage facilities.

The Act made the above provisions for both offshore and onshore facility. It went on to define onshore facilities as any facility (including but not limited to motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land.²¹¹

4.1.2.2 **Hazardous Liquid Pipeline Act of 1979²¹¹**

This Act is one of the two principal²¹¹ early Acts establishing the Federal role in pipeline safety in the United States. It granted the Transportation Secretary the primary authority to regulate key aspects of interstate pipeline safety: design, construction, operation and maintenance, and spill response planning.²¹¹ The Department of Transport (DOT) regulates various issues regarding oil spills from pipelines through the Office of Pipeline Safety (OPS) within the Pipelines and Hazardous Materials Safety Administration (PHMSA).²¹¹

Meanwhile, U.S pipeline network is extensive and recent estimate indicates that there are over 33,000 miles of pipelines in the Gulf of Mexico only. This is apart from U.S. inland pipelines mostly concentrated in the Gulf States.²¹¹

According to the Act, hazardous liquid means petroleum or a petroleum product and any other substance that the Secretary of Transportation decides may pose an unreasonable risk to

life or property when transported by a hazardous liquid pipeline facility in a liquid state, except for liquefied natural gas.²¹¹ The Act seeks to provide adequate protection against risks to life and property posed by pipeline transportation and pipeline facilities by improving the regulatory enforcement authority of the Secretary of Transportation.

It mandated the Secretary to prescribe minimum safety standards for pipeline transportation and for pipeline facilities. The standard may apply to the design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipeline facilities and only qualified individuals shall operate and maintain pipeline facilities.²¹¹

Moreover, the Secretary shall prescribe minimum standards requiring an operator of a pipeline facility to maintain: information related to operating the facility and to make the information available to the Secretary and any appropriate state official determined by the Secretary; as well as an inventory with appropriate information about the types of pipe used for the transportation, including the material's history and the leak history of the pipe.²¹¹

In addition, the operators of pipeline facility shall, prior to excavation and other damage prevention activities, carry out a continuing program to educate the public on the use of a one-call notification system on the possible hazards associated with unintended releases from the pipeline facility, physical indications that a release has occurred, steps to take for public safety in such situation and how to report such event.²¹¹

Finally, the Act protects an employee who provides information relating to violation of an order, standard or regulation under this law or any other federal law. It also provides for grants (not exceeding \$50,000 for a single recipient) for technical assistance²¹¹ to local

communities or groups of individuals relating to the safety of pipeline facilities in local communities, other than facilities regulated under Public Law.²¹¹

4.1.2.3 Pipeline Safety Improvement Act of 2002²¹¹

The Act, which was signed into law on December 12, 2002, amended the Hazardous Liquid Pipeline Act, 1979. The Act strengthened federal pipeline safety programmes, state oversight role on interstate pipeline transportation,²¹¹ and public education regarding pipeline safety.²¹¹ It further encouraged one call excavation notification programme and allows states to enforce one call programme requirements.²¹¹ The Act expands criminal responsibility for pipeline damages to cases where damage was not caused knowingly and willfully.²¹¹ The Act made a provision to end federal-state pipeline oversight partnerships where states did not comply with federal requirement.²¹¹

In line with the former Act, it streamlined the permitting process for emergency pipeline restoration by establishing an interagency committee.²¹¹ In addition, it strengthened the provisions for public education, grants for community pipeline safety studies, protects whistle blowers and other employee as well as the National pipeline mapping system.²¹¹ Finally, the Act requires DOT to study ways to limit pipeline safety risks from population encroachment and ways to preserve environmental resources in pipeline rights-of-way.²¹¹

4.1.2.4 Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006²¹¹

This Act was signed by the President on December 29, 2006. Its purpose is to improve pipeline safety and security practices, and to reauthorize the Federal Office of Pipeline Safety, relevant governing body in terms of pipeline spills under the DOT.²¹¹ Thus, the Office of Pipeline Safety (OPS), which is part of the Department of Transport (DOT) implements

provisions concerning pipeline design, construction, operation and maintenance, and spill response planning.

The main provisions of the Act address pipeline damage prevention,²¹¹ integrity management,²¹¹ corrosion control,²¹¹ and enforcement transparency.²¹¹ It created a national focus on pipeline damage prevention through grants to states for improving damage prevention programmes.²¹¹ Consequently, the Act mandated the secretary to review the adequacy of federal pipeline safety regulations with respect to internal corrosion control, and to increase transparency of enforcement actions by issuing monthly summaries, including violation and penalty information as well as a mechanism for pipeline operators to make response information available to the public.

4.1.3 Nigerian Environmental Laws for the Protection of Land Resources from Oil Pollution

In Nigeria, the legislations that intend to protect land resources from oil pollution are the Petroleum Act and the Petroleum (Drilling and Production) Regulations, 1969 made under it.

4.1.3.1 Petroleum Act, 1969

This Act, which was promulgated to provide for the exploration of petroleum from the territorial waters and the continental shelf of Nigeria, vests the ownership of oil and all revenue from oil on the State. It did not directly deal with prevention of oil pollution. However, Section 9 gives the Minister of Petroleum power to make regulations regulating the construction, maintenance and operation of installations used in relation to licences and leases granted under the Act and operations carried on under the Act.²¹¹

4.1.3.2 Petroleum (Drilling and Production) Regulations, 1969

This Regulation was made by the Minister under the powers conferred on him by Section 9 of the Petroleum Act. It regulates all the activities in the oil industry from application for an oil mining lease or licence to the operations and activities of a licensee or lessee. The Regulation specifically made provisions for the regulation of oil pollution of land resources in the following cases:

First, Regulation 15(1)(f)(ii) requires that upon termination, cessation or completion of work, all excavations done in the course of search for, digging and getting gravel, sand, clay and stone in a leased area shall be filled in or leveled out and left by the licensee or lessee as far as may be reasonably practicable and to the satisfaction of the Director of Petroleum Resources, in their original condition and, if so required, fenced or otherwise safeguarded.

Second, Regulation 36(2) mandates a licensee/lessee who intends to abandon a borehole or existing well, unless the Director of Petroleum Resources permits in writing, to ensure that the borehole or existing well is securely plugged so as to prevent ingress and egress of water into and from any portion/s of the strata bored through and shall be dealt with in strict accordance with an abandonment programme approved or agreed to by the Director of Petroleum Resources.

Third, Regulation 37, apart from the general provision requiring licensee and lessee to maintain all apparatus, appliances, boreholes and wells in use in his operations in good repair and condition, and to carry out his operations in proper and workmanlike manner in accordance with regulations, methods and practices accepted by the Director of Petroleum Resources as good oil practice; specifically mandates the licensee and lessee to take steps to cause as little damage as possible to the surface of the relevant area and to trees, crops, buildings, structures and other property thereon.²¹¹

Fourth, by Regulation 41, a licensee/lessee shall drain all waste oil, brine and sludge or refuse from all storage vessels, boreholes and wells into proper receptacles constructed in compliance with safety regulations made under the Petroleum Act or any other applicable regulations and shall dispose thereof in a manner approved by the Director of Petroleum Resources or as approved by any other applicable regulations.

The effects of these regulations are to check the excesses of the oil industries in Nigeria and thereby avert possible damage to the land and its resources. However, the implementation of these regulations leaves more to be desired, as same is left at the discretion of the Director of Petroleum Resources.

4.1.3.3 **Oil Pipeline Act, 1965**²¹¹

The Act was promulgated to provide for licences to be granted for the establishment and maintenance of pipelines incidental and supplementary to oilfields and oil mining.²¹¹ It empowers the Minister to grant Permit to Survey (PTS) of a proposed route to determine its suitability or otherwise for the desired pipeline from the project operational standpoint. However, the Act did not make provision for reference to environmental impact assessment or environmental protection. It made provision for compensation to be paid by the holder of a licence to a person whose interest has been affected by the exercise of the right conferred by the licence.²¹¹

4.1.3.4 **Oil and Gas Pipelines Regulations, S.I. 14, 1995**

The Regulation gave detailed requirements, guidelines and standards for the grant of a permit to survey a pipeline route and a licence to construct and operate a pipeline. The

Regulation specified detailed technical guidelines and standards to govern the design of an oil pipeline, the construction of pipeline and the design for the relocation, replacement and upgrading of an existing pipeline. The Regulation makes provision for the Department of Petroleum Resources to approve pre-operational guidelines for the operation and maintenance of the pipeline which shall contain a written emergency plans in the event of systems failure, accidents or other emergencies and procedures for prompt and expedient remedial action for the protection of life, property, the environment and adequate training of safety personnel for the handling of emergencies.²¹¹

The Regulation also sets out procedure to be followed, the specifications required and other matters that shall be taken into consideration in the construction of a new pipeline or in the replacement of an existing ones; guidelines and procedure for environmental protections as well as means of conducting on completion of construction of the pipeline, inspection and pressure tests to be conducted in order to ensure the protection of life, property and the general environment of the pipelines.²¹¹

4.2 Environmental Laws that Protect Air Resources from Oil Pollution

There are many environmental laws in the International, United States of America and Nigeria that protects air resources from oil pollution.

4.2.1 International Environmental Laws that Regulate Oil Pollution of Air Resources

Basically, the Framework Convention on Climatic Change, New York of 1992 and its Kyoto Protocol are the International environmental law that protects the Air Resources from oil pollution.

4.2.1.1 **Framework Convention on Climatic Change (UNFCCC), New York, 1992**

The Framework Convention on Climatic Change was made in order to tackle the negative effects of climatic change by stabilizing green house gas concentration at a level that allows ecosystems to adapt naturally to climate change so that food production is not threatened while enabling sustainable economic development.²¹¹ Thus, it requires member parties to be guided by the principles of inter-generational equity, precautionary approach, right to sustainable development and the principles of common but differentiated responsibilities as contained in the Rio Declaration on Environment and Development and Agenda 21.²¹¹

The convention further requires parties to make commitment with respect to establishment of national inventories of green house gas emissions and sinks, sustainable management of forests, oceans and ecosystem as well as integration of climate change considerations in their states' social, economic and environmental policies. The industrialized parties are further required to adopt national policies and measures to mitigate the negative effects of climate change by limiting the emission of green house gases and protecting its sinks.²¹¹ The parties are also required to deliver reports covering the ongoing implementation of their policies and measure and their projected green gas emission level.²¹¹

The COP to the convention supervises the implementation of the convention and meets regularly. They also receive advice from the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Supplementary Body for Implementation (SBI) on the state of science and technical knowledge and recommendation on policy and implementation issues respectively.²¹¹ The convention also made provisions for transfer of environmental technologies

by developed state parties to developing state parties as well as transfer of funds on a grant or concessional basis to enable them implement the provisions of the Convention.²¹¹

4.2.1.2 Kyoto Protocol on the Convention on Climatic Change, 1997

This Protocol was agreed upon on December 11, 1997 at a meeting of the UNFCCC in Kyoto, Japan and entered into force on 16th February 2005.²¹¹ It was created as an effort to force action on the international community, and is based on the principle of common but differentiated responsibilities. Thus, it applies to industrialized nations only, and excluded developing countries, including India and China. Under the Protocol, the industrialized nations agreed to cut their green house gas emissions to a certain percentage below 1990 levels. These total cuts in emissions would have to be accomplished by the target period of 2008 – 2012.²¹¹

4.2.2 USA Laws that Regulate Oil Pollution in Relation to Air Resources

The Clean Air Act of 1963 is the major law that regulates oil pollution of air resources in the United States of America. However, it should be recalled that Oil Pollution Act of 1990 is generally concerned with regulation of oil pollution in the United States.

4.2.2.1 Clean Air Act, 1963²¹¹

The Clean Air Act which is the principal statute addressing air quality concerns was first enacted in 1955, with major revisions in 1970, 1977 and 1990.²¹¹ It authorized a national program to address air pollution and authorized research into techniques to minimize air pollution.

The Act requires the Environmental Protection Agency to establish minimum national standards for air quality (National Ambient Air Quality Standards) for several types of air pollutants, which must be designed to protect public health and welfare with an adequate margin of safety, and assigns primary responsibility to the states to ensure compliance with the standards. Thus, it requires states to adopt plans known as State Implementation Plans (SIPs) and submit them to EPA to ensure that they are adequate to meet statutory requirements,²¹¹ and EPA is to impose sanctions in areas which fail to submit a SIP, fail to submit an adequate SIP, or fail to implement a SIP: unless the state corrects such failures. Federal Implementation Plan may be imposed if state fails to submit or implement an adequate SIP.

It also required EPA to review the scientific data upon which the standards are based, and revise the standards if necessary, every five years.²¹¹ The EPA has taken more than five years in reviewing and revising the standards.

Areas not meeting the standards, referred to as nonattainment areas are required to implement specified air pollution control measures.²¹¹ Further, no federal permits or financial assistance may be granted for activities that do not conform to a SIP in this area. The Act establishes federal standards for mobile sources of air pollution for sources of 188 hazardous air pollutants,²¹¹ and establishes a programme for protecting public health and the environment from exposure to toxic air pollutants.²¹¹ It also establishes a federal standard for the emissions that cause acid rain.²¹¹ It establishes a comprehensive permit system for all major sources of air pollution.²¹¹ It also addresses the prevention of pollution in areas with clean air²¹¹ and protection of the stratospheric ozone layer.²¹¹

Finally, the Act covers enforcement mechanisms.²¹¹ It establishes federal authority to issue agency and court orders requiring compliance and to impose penalties for violations of the

Act. It authorizes EPA to require sources to submit reports, monitor emissions, and certifies compliance with the Act's requirements and authorizes EPA personnel to conduct inspections. It is enforced primarily by states and local governments who issues most permits, monitor compliance and conduct the majority of inspections. The Federal government functions as a backstop with authority to review state actions, while EPA may act independently or may file its own enforcement action in cases where it concludes that a state's response was inadequate.²¹¹

The Act also provides for citizen suits both against persons, including corporation and government agencies alleged to have violated emissions standards or permit requirements and against EPA in cases where it failed to perform an action that is not discretionary under the Act. Citizen groups have often used this provision to compel the Administrator to promulgate regulations required by the Statute.²¹¹

The Act seeks to protect human health and the environment from emissions that pollute ambient, or outdoor, air. It is designed to control air pollution on a national level. It is the most influential modern environmental laws and one of the most comprehensive air quality laws in the world.²¹¹

4.2.3 Nigerian Laws that Regulate the Protection of Air Resources from Oil Pollution

Regulation 43 of the Petroleum (Drilling and Production) Regulations requires licensee/lessee to submit to the Minister any feasibility programme proposal that he may have for the utilization of any natural gas, whether associated with oil or not, which has been discovered in the relevant area, not later than five years after commencement of production from the relevant area. This provision merely assumed a studied approach to the problem as it neither prohibit nor prescribe penalty for gas flaring.

However, the two laws that specifically addressed oil pollution of the Air Resources in Nigeria are the Associated Gas Re-Injection, 1979 and Associated Gas Re-Injection (Continued Flaring of Gas) Regulation, 1984.

4.2.3.1 **Associated Gas Re-Injection Act 1979**

This Act²¹¹ was promulgated in order to address the problem of oil pollution of air resources as a result of gas flaring in Nigeria.

First, the Act mandates every oil company in Nigeria to submit to the Minister not later than 1st October 1980, a detailed programme and plans for either the implementation of programme relating to the re-injection of all produced associated gas or schemes for viable utilization of all produced associated gas.²¹¹

Second, according to the Act, no company engaged in the production of oil or gas shall after 1st January 1984, flare gas produced in association with oil without the written permission of the Minister. Where the Minister is satisfied after 1st January 1984 that utilization or re-injection of the produced gas is not appropriate or feasible in a particular field or fields, he may issue a certificate in that respect, specifying such terms or conditions as he may at his discretion choose to impose, for the continued flaring of gas in the particular field or fields; or permitting the company to continue to flare for a fee in such sum as the Minister may from time to time prescribe for every 28.317 standard cubic metre (SCM) of gas flared.²¹¹

The Act made contravention of this provision, an offence punishable by forfeiture of concession to the particular field or fields as well as an order by the Minister withholding all or part of any entitlements of the offender towards the cost of completion or implementation of a desirable re-injection scheme or the repair or restoration of any reservoir in the fields in

accordance with good oil field practice.²¹¹ The fine prescribed was US\$0.063 per standard cubic feet of gas flared. This fine was increased by government in January 1998 to US\$0.125 per standard cubic feet.²¹¹

It is submitted that the Act took away with the left hand what it granted with the right hand, as it made a lee way for oil companies not to stop gas flare when it gave the Minister discretion to issue certificate to a company to continue to flare gas as well as when it allowed companies to flare gas on payment of a paltry fee of US\$0.125 per standard cubic feet of gas flared. This fee it is submitted is too meager as oil polluters would rather pay the penalty than stop flaring gas. This is evident that the Act is not serious in stopping gas flare as oil companies have exploited these provisions to the detriment of the objectives of the Act. Thus, it is recommended that this Act should be amended to remove the option given to oil polluters to pay fine and continue flaring. In fact, there should be absolute prohibition of gas flaring in Nigeria.

Furthermore, it is clear from all indications that this Act could not be implemented and the Federal Government have kept putting off the date to cease gas flaring from 1984 to date and there seem no serious effort on ground both in terms of legislation and enforcement procedure to put an end to gas flaring in Nigeria.

4.2.3.2 Associated Gas Re-Injection (Continued Flaring of Gas) Regulation, 1984

This subsidiary legislation to the Associated Gas Re-Injection Act is patently, environmental unfriendly. It goes further to show lack of seriousness of the government to end gas flaring.

According to this Regulation,²¹¹ the Minister may issue certificate for the continued flaring of gas after the deadline of 1st January 1984 where:

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- (a) More than 75% of the produced gas is effectively utilized or conserved – here, the certificate would authorize the flaring of 25% of produced gas irremediably into the environment notwithstanding the effect.
 - (b) The produced gas contains more than 15% impurities, such as NO₂, H₂S, CO₂ etc, which render the gas unsuitable for industrial purpose – the oil company can flare the impure gas 100%.
 - (c) An on-going utilization programme is interrupted by equipment failure; provided that such failures are not considered too frequent by the Minister and that the period of any one interruption is not more than three months - 100% gas flare is allowed here, but whether the company would stop work and seek certification or continue work while waiting for the certification is not clear by the Regulation.
 - (d) The ratio of the volume of gas produced per day to distance of the oil field from the nearest gas line or possible utilization point is less than 50,000 SCF/km. Provided that the gas to oil ratio of the field is less than 3,500 SCF/bbl, and that it is not technically advisable to re-inject the gas in that field.
 - (e) The Minister in appropriate cases as he may deem fit, orders the production of oil from a field that does not satisfy any of the conditions specified in these Regulations – this considers only the economic value to the oil company and not the effect on the environment.

In fact, in the case of *Gbemre v. Shell Petroleum Development Co. Nig. Ltd & Ors*,²¹¹ the Federal High Court held that the provisions of Section 3(2) of the Associated Gas Re-Injection Act and Regulation 1 of the Associated Gas Re-Injection (Continued Flaring of Gas) Regulations 1984, under which the continued flaring of gas in Nigeria may be allowed are inconsistent with

the Applicant's right to life and dignity of human person enshrined in Section 33(1) and 34(1) of the Constitution and Articles 4, 16 and 24 of the African Charter on Human and Peoples' Right (Ratification and Enforcement) Act and are therefore unconstitutional, null and void by virtue of Section 1(3) of the same Constitution.

From the foregoing, it is obvious that there is really lack of will by the Federal government of Nigeria to stop gas flaring by the oil industry due to the fact that oil is the backbone of the Nigerian economy.²¹¹

4.3 Environmental Laws Protecting Water Resources from Oil Pollution

A significant proportion of the world's oil is produced offshore and is subsequently transported by pipelines, both onshore and offshore or by ships in sea. Consequently, there are several environmental laws that protect the water resources from oil pollution.

4.3.1 International Frameworks that Protect Water Resources from Oil Pollution

According to the Stockholm Declaration,²¹¹ states shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea. Thus, it is the duty of States to protect the marine environment.

Oil pollution of the water resources is usually analyzed according to the identified sources producing the pollution. Consequently, international regulation of oil pollution of water resources would be dealt with under the Law of the Sea and the Marine Environment; regulation of land based and Vessel-based sources of marine pollution; as well as regulation of dumping of wastes at sea.

4.3.1.1 **The Law of the Sea 1958/1982 and the Marine Environment**

(a) **The 1958 Convention on the High Seas**

This is a treaty meant to codify rules of international law relating to the seas was made in Geneva. The Convention, which applies to all parts of the sea, excluding the territorial sea or internal waters of a state mandated parties to draw up regulations to prevent pollution of the sea by the discharge of oil from ships or pipelines or resulting from the exploitation and exploration of the sea bed and its subsoil, taking into account, existing treaty provisions on the subject.²¹¹ This Convention, which entered into force in 1962 has its provisions relating to environmental protection criticized as being vague.

(b) **The United Nations Convention on the Law of the Sea, 1982 (UNCLOS)**

UNCLOS represents the desires of the states to bring about more effective control of pollution of water resources. It established the international legal order of the oceans, and as far as environmental protection is concerned which is contained mainly in Part XII, it establishes material rules concerning environmental standards as well as enforcement provisions dealing with pollution of the marine environment. In fact, it sets out a broad framework for comprehensive measures to control marine pollution.

By the Convention, the states are under obligations to protect and preserve the marine environment;²¹¹ to take all measures necessary to prevent, reduce and control pollution of the marine environment using the best practicable means at their disposal and in accordance with their capabilities and not to cause damage by pollution to other states and their environment or areas not within their jurisdiction.²¹¹ The Convention which preserved the sovereign rights of states to exploit their own natural resources²¹¹ also imposes a duty on the states not to transfer

pollution from one type to another or from one area to another.²¹¹ It further requires states to immediately notify others deemed likely to be affected by any form of threatening pollution, cooperate in scientific research and information exchange necessary to establish appropriate scientific criteria for formulation of rules to protect the environment as well as provide scientific and technical assistance to developing states to enhance their capacity to protect the marine environment, specifically including the preparation of environmental assessments and assistance in minimizing the effects of major pollution incidents.²¹¹

The Convention provides for enforcement through investigation of violations, criminal proceedings against offenders, imposition of monetary penalties against offenders and so many other sanctions and remedies. It also makes parties who breach its provisions liable for pollution damages under international law as well as provides that its provisions should be implemented without prejudice to other obligations imposed under other treaties relating to the marine environment.²¹¹

The convention entered into force on 16th November 1994 and can easily pass as a codification of several of the existing international laws, rules, treaties, guidelines and standards relating to the protection of the marine environment.

4.3.1.2 Regulation of Land Based Source of Marine Pollution

Vast majority of pollution of water resources comes from land-based sources. However, international management of land-based sources of marine pollution lends itself more to regional approaches than to global ones. Consequently, in 1974, the first regional regimes for land based source of marine pollution were adopted. They are the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki convention) and the Convention for the

Prevention of Marine Pollution from Land – Based Sources (Paris Convention), which covers the Northeast Atlantic Seas. In 1992, each was revised and updated.²¹¹ Three regions also have protocols on land-based sources of Marine pollution.²¹¹

The Regional Conventions and Protocols adopt similar definitions and regulatory approaches to land-based sources of marine pollution. Consequently, discussions on the regulation of land based sources of oil pollution of water resources would be based on the Convention for the Prevention of Marine pollution from Land-Based Sources.

(a) **Convention for the Prevention of Marine Pollution from Land-Based Sources (The Paris Convention), 1974**

Generally, pollution from land-based sources is pollution of the maritime area through water courses, pipelines and fixed structures.²¹¹ It deals mainly with indirect emissions into the sea. The emissions are controlled on the basis of lists contained in Parts I, II and III of Annex A, with different regime for each list. Oil pollution falls within Part I.²¹¹

In the Convention, the parties undertake to take all possible steps to prevent pollution of the sea; eliminate the pollution of the maritime area²¹¹ from substances listed in Part I, as well as to adopt and implement programs/measures, individually and jointly, to combat, forestall, reduce, or eliminate marine pollution from land-bases sources.²¹¹ Such programmes/measures, which shall contain time-limits for their completion and shall include specific regulations or standards governing the quality of the environment, discharges into the maritime area and the composition and use of substances and products, must take into account the latest technical developments.²¹¹

In 1998, the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) entered into force. It combines, updates and replaced both this Convention and OSLO Convention for the Prevention of Marine Pollution by Dumping from Ship and Aircraft 1972. It is currently the legislative instrument regulating environmental protection in the North East Atlantic.²¹¹

4.3.1.3 Regulation of Vessel – Based Sources of Marine Pollution

The International Maritime Organisation (IMO) addressed vessel - based marine pollution. It did this through three conventions, namely: Convention for the Prevention of Pollution of the Sea by Oil (OILPOL), 1954; Convention for the Prevention of Pollution from Ships (MARPOL), 1973; and Convention for the Prevention of Marine Pollution by Dumping from Ship and Aircraft, 1972.

(a) Convention for the Prevention of Pollution of the Sea by Oil (OILPOL), 1954 as amended 1962 - 1964

This Convention, adopted in 1954 and amended a number of times was mainly to regulate the discharge of oily water from ships and tankers engaged in transportation of oil.²¹¹ It left out other issues concerning marine pollution, like measures to avoid tanker accidents and safety at sea, compensation to those who suffers damages as a result of oil pollution, and so on.

Consequently, in 1973, IMO adopted the International Convention for the Prevention of Pollution from Ships (MARPOL), which incorporated and supersedes this Convention.

(b) Convention for the Prevention of Pollution from Ships, (MARPOL) 1973/78²¹¹

This Convention came as a result of IMO's efforts to develop more comprehensive measures to protect water resources from oil and other pollutions. It is the main international

convention covering prevention of pollution of the marine environment by ships. By Article 3, the Convention applies to ships flying or entitled to fly the flag of a party, except warships, naval auxiliary and/or ships owned or operated by a state and used only on government non-commercial services.

The Convention has six annexes dealing on different types of pollution by ship,²¹¹ except dumping. Annex I, deals with prevention of pollution by oil and sets out rules for controlling oil pollution and it incorporated OILPOL. Annex I includes regulations aimed at preventing and minimizing oil pollution from both accidental discharge and routine operations of ships.

It specifies tanker design features that are intended to minimize oil discharge into the ocean during ship operations and in case of accidents. Thus, it contains mandatory requirements for new oil tankers to have double hulls and a phase-in schedule for existing tankers on double hulls.²¹¹ Moreover, since main source of oil pollution by ship is by discharging ballast waters and oil residues from their cargo tanks, oil tankers above a certain size is to have completely segregated ballast tanks of sufficient capacity, or is to apply a crude oil washing system for the tanks which will be ballasted or is to dedicate certain tanks to the carriage of ballast water only. For oil tankers under 20,000 dead weight (dwt), discharge of ballast must be monitored through approved oil content meters so that the amount of oil discharged to the sea is limited to 60 litres per mile.²¹¹ It also provided for reception facilities for oil wastes on land, treatment of this waste and their ultimate disposal.²¹¹

The discharge of oil is completely prohibited in special areas considered vulnerable to pollution and due to technical oceanographic, ecological reasons, and the particular character of traffic in those areas, it further requires special mandatory methods for the prevention of oil pollution in these areas.²¹¹ Moreover, it laid down mechanisms to check the sea worthiness of a

ship by providing for several certificates to be kept by a ship on board with respect to pollution and safety compliance. Thus, a ship is required to keep International Oil Pollution Certificate 1973 (IOPC) among other certificates; as well as Oil Record Book²¹¹ on board. The Convention also introduces a system of communication between states.

The Convention²¹¹ requires states to create and enforce appropriate national laws implementing it. State parties are responsible for vessels registered under their respective nationalities. Thus, such parties should inspect such ships to ensure its compliance status before issuing it with certificate authorizing operation in oil transportation. Further, parties should carry out inspection of all foreign ships entering their territorial waters and all ships in their ports to determine whether they have discharged harmful substances into their territorial waters or any other place and whether they have compliance certificate respectively.

In fact, the control of oil pollution of water resources from ships is achieved under Annex I of MARPOL, which not only acknowledged the importance of OILPOL but effectively supersedes it.²¹¹

4.3.1.4 Regulation of Dumping of Wastes at Sea

Dumping is the deliberate disposal of wastes from ships, aircraft and other vessels and offshore installations²¹¹, as well as the disposal of the ships, aircraft, vessels or offshore installations themselves. The international law regulating the dumping of wastes at sea is the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.

(a) Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters, 1972-1978

This Convention, also known as the London Convention establishes global rules and standards for dumping. It applies to all sea.²¹¹ The contracting parties undertook to individually or collectively, promote the control of all sources of pollution of water resources as well as pledge to prevent the pollution of water resources by dumping of wastes and other matters at sea worldwide.²¹¹

There are two categories of wastes and other matters²¹¹ in the Convention, depending on their effect on the marine environment. Annex I contains substances categorized as black list, which includes oil. The parties are prohibited from dumping hazardous wastes and substances listed in Annex I into the sea, and no permit can be granted in respect of these substances.²¹¹ However, this prohibition does not apply in case of force majeure caused by stress of weather or in any case of danger to human life or real threat to vessels, aircraft, or other structures at sea, where dumping appears to be the only way of averting the danger/threat and the damage from the dumping will be less than would otherwise occur.²¹¹

The parties are mandated to apply the measures required to implement the Convention and to prevent and punish conducts that contravenes the Convention. The parties also agreed to cooperate in the development of procedures for the effective application of the Convention on the high seas and for the reporting of vessels and aircrafts observed dumping in contravention of the Convention.²¹¹

According to Article XII, the parties pledge to promote measures to protect the water resources against pollution caused by hydrocarbons, including oil and their wastes.

4.3.2 Regional Frameworks Protecting Water Resources from Oil Pollution

There are several regional conventions dealing with oil pollution of certain regional seas or waters, most of which requires parties to take appropriate steps to prevent and control oil pollution arising from the exploration and exploitation of their seabed mineral resources. However, discussions under this sub heading will be on two regional conventions: The Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention), 1983 and the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention), 1981.

4.3.2.1 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention), 1983

This Convention is comprehensive in scope, with the main purpose of preventing, reducing, and controlling pollution of the area covered by it as well as ensuring sound management of the environment.²¹¹ It is supported by three protocols,²¹¹ which facilitates its effective implementation.

The Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region entered into force in October 1986. It requires parties to take measures to prevent and remedy oil spills as well as help others to respond to oil spill incidents. It also makes provision for information exchange and prompt notification of oil spill.²¹¹

Under the Convention, parties must adopt measures for the prevention, reduction and control of pollution from ships, dumping, sea-bed activities, airborne and land-based sources and activities.²¹¹ Moreover,²¹¹ the parties are required to develop contingency plans for responding to pollution emergencies or threats and environmental guidelines for development of major

projects; as well as cooperate in scientific research and monitoring and in the establishment of rules and procedures in conformity with international law regarding liability and compensation for pollution damages.²¹¹

4.3.2.2 Convention for Co-operation in the Protection and Development of Marine and Coastal Environment of the West and Central African Region, (Abidjan Convention), 1981

This Convention, signed in 1981, came into effect on 5th August 1984.²¹¹ The convention applies (the Convention Area) to the marine environment, coastal zones and related inland waters within the jurisdiction of the contracting parties of the West and Central African Region.²¹¹ Under the Convention, the parties are required to take measures to prevent, reduce, combat and control pollution of the Convention area from ships, aircraft, land-based sources, activities relating to exploration and exploitation of the sea-bed and atmospheric sources.²¹¹

Further, the parties are to cooperate in dealing with pollution emergencies in the Convention Areas; and in exchanging data and other scientific information; develop technical and other guideline regarding environmental impact assessment of their developmental projects; as well as establish rules and procedures for the determination of liability and adequate compensation for pollution of the Convention area.²¹¹ Finally, the Convention is dependent on donor funds and United Nations support to fully operate. It is focused primarily on collaborative partnership to promote and sustain development in the convention area.

4.3.3 Legal Regimes in the USA for the Protection of Water Resources from Oil Pollution

The legal framework for oil pollution in the United States is a combination of Federal, State and International authorities.²¹¹ However, the International authorities have already been discussed, hence, only the Federal and State laws shall be discussed.

4.3.3.1 Federal Laws before the Exxon Valdez Spill of 1989

The Exxon Valdez Spill occurred in 1989. Before that spill, the several federal legislations on oil pollution are:

(a) **Clean Water Act of 1972**²¹¹

This is the basic framework that regulated oil pollution. All other laws supplemented it. It established requirements for oil pollution reporting, response and liability and a fund maintained by federal appropriations which could be used for cleanup and natural resources restoration.²¹¹

(b) **Deepwater Port Act of 1974**²¹¹

This Act focused on oil spills and liability issues in deepwater ports. It also established the Deepwater Port Fund financed by a per gallon tax on oil transferred at deepwater ports to provide prompt cleanup and compensation for damages that are above liability limits.

(c) **Trans-Alaska Pipeline Authorization Act, 1973**²¹¹

This regulates oil pollution and liability issues with respect to Trans-Alaska Pipeline System. It also created a fund financed through a lessee fee.

(d) **Outer Continental Shelf Lands Act Amendments, 1978**²¹¹

This Act establishes rules for oil extraction facilities in offshore waters. It also created the Offshore Pollution Fund financed by a per-gallon fee on produced oil, as well as a liability structure.

None of the above laws comprehensively covered oil spill. The inadequacies of these laws were clearly evident in the handling of the Exxon Valdez spill. Consequently, Congress decided to enact a unified law that would specifically address oil pollution to the water ways and coastlines of the United States.

4.3.3.2 Oil Pollution Act, 1990

The end result was the enactment of the Oil Pollution Act on August 18, 1990.²¹¹ It is the first comprehensive law that specifically addressed oil pollution of the United States' water resources. It consolidated all the existing federal oil pollution laws under one program, expanded the existing liability provision in the Clean Water Act and created new requirements with respect to oil pollution prevention and response. The OPA applies to the navigable waters of the US, including the exclusive economic Zone up to 200 miles from the baseline.²¹¹

The four major themes of OPA are pollution prevention, federalization, the idea that the polluter pays, and anti-preemption.²¹¹ The Act mandated comprehensive oil pollution liability, compensation, prevention and response requirements. It created regime in which new requirements in a series of different areas were developed. These areas include: vessel construction, crew manning and licensing, contingency planning, enhanced response capabilities, and increased penalties. Thus, it set forth increased safety standards and requirements for oil tankers.²¹¹

The Act strengthened and clarified the Federal Government's role in oil spill response and clean up.²¹¹ It expanded the role of National Contingency Plan by establishing a multi-layered planning and response system to improve preparedness and response to oil spills, as well as requiring U.S. tank vessels, offshore and certain onshore facilities to have approved oil spill

response plans.²¹¹ The Act also requires new vessels carrying oil and operating in US waters to have double hulls and older vessels to have a retrofitted by 2015; expanded the scope of damages for which an oil spiller could be liable and provided statutory authorization necessary to put the Oil Spill Liability Trust Fund (OSLTF) in motion for federal funding of oil spill removal costs and damages.²¹¹ The Act further requires that vessels and offshore facilities maintain evidence of financial responsibility, for instance, insurance.²¹¹

Finally, more than 30 rules have been promulgated in the course of implementing OPA. These rules are with respect to increased liability limits, contingency response plans and double hull tank vessel requirements.²¹¹ Some of these rules are Guidelines for conducting natural resource damage assessment; procedures for States to request payments from the OSLTF for oil spill removal costs; claims procedures for uncompensated removal costs or damages from oil spills; procedures for the establishment and maintenance of evidence of vessel financial responsibility; and the National Oil and Hazardous Substance Pollution Contingency Plan.²¹¹

Hence, it is clear that OPA is the basic legislation regulation oil pollution in the United States.

4.3.3.3 Other USA Federal Laws that Regulate Oil Pollution

Apart from OPA, there are other federal laws that have some provisions dealing with oil pollution of water resources. Many of these provisions were in place before OPA. These laws include:

(a) **Clean Water Act**

This is the major law regulating oil pollution of water resources in the United States before the OPA. Consequently, many of its provisions are still applicable. These include the

provision that prohibits the discharge of oil or hazardous substance into U.S. navigable waters; and the provisions stipulating various penalties for non compliance and violations.²¹¹

(b) **Outer Continental Shelf Lands Act (OCSLA)**

Sections of the Regulation made under this Act, which address oil spill prevention and response by requiring that various equipment and procedures be in place at offshore facilities are still applicable.²¹¹ The Act was amended in 1978 in response to the 1969 Santa Barbara Oil Spill and designed to remedy its inattention to the government's obligations to protect these public lands from environmental harm.²¹¹

(c) **Pipeline Statutes**

These include the Hazardous Liquid Pipeline Act, 1979 and the Pipeline Safety Improvement Act. These laws have been discussed under regulation of oil pollution of land resources. Most inland pipelines are in the coastal area and the pipeline statutes would apply where oil spill from the pipeline reaches waterways that empty into coastal waters.

(d) **Vessel Statutes**

These laws include the Ports and Waterways Safety Act, 1972; Act to Prevent Pollution from Ships, 1980; and Port and Tanker Safety Act, 1978.²¹¹ These federal laws indirectly regulate oil pollution of the water resources by making provisions for such things as vessel design standards, navigation to reduce vessel collision and control of oil discharge at sea.

The Act to Prevent Pollution from Ships (APPS) is a law that implements the provisions of MARPOL and the annexes to which the United States is a party. The Act applies to all U.S. flagged ships anywhere in the world and to all foreign-flagged vessels operating in navigable waters of the U.S. or while at port under U.S. Jurisdiction. The U.S Coast Guards has the

responsibility to prescribe and enforce regulations to implement the Act in these waters,²¹¹ and it has separate and distinct regulatory mechanism from Clean Water Act and other Federal Laws.²¹¹

4.3.3.4 USA States' Laws that Regulate Oil Pollution

The OPA did not pre-empt the authority of the US states from imposing addition liability with respect to oil pollution within their state or any removal activities in connection thereto. The OPA did not modify the obligations or liabilities of any person under any state's law.²¹¹ Moreover, the Act preserved the state funds for costs and damages relating to oil pollution. Thus, the OPA gave the states freedom to legislate on oil pollution.

All the 24 US coastal states have enacted oil spill laws, many of which provided strict, unlimited liability for clean-up and removal costs. In *Nat'l Shipping Co. of Saudi Arabia v. United States*,²¹¹ the court held that the OPA clearly pre-empts maritime law as to recovery of clean-up expenses and the cost of compensating injured persons, so as to allow the states impose liability upon oil polluters above the liability imposed through OPA and thereby give states power to force polluters to clean up completely oil spills and to compensate the victims of oil spill even if their liability for remediation is limited under OPA.

Finally, the Courts have held to be pre-empted State laws which attempted to govern oil tanker design, size and movement/navigation; and personnel requirement, qualification and training on oil tankers.²¹¹ However, there is no comprehensive list of things pre-empted from state regulation, thus the line between federal and state laws shall continue to be tested.

4.3.4 Nigerian Laws that Protect Water Resources from Oil Pollution

The local legislations that relate to oil pollution of water resources include: the Petroleum Act, Oil in Navigable Waters Act, Oil Terminal Dues Act and Oil Pipeline Act.

4.3.4.1 **Petroleum Act, 1969 and Petroleum (Drilling and Production) Regulation**

According, Section 9(1)(b)(iii),²¹¹ the Minister of Petroleum may make regulations in relation to licences and leases granted under the Act and operations carried on there under for the prevention of pollution of water courses and the atmosphere.

In the exercise of above power, the Minister made several regulations intended to protect water resources from oil pollution.

First, the licensee or lessee is mandated to 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, water courses, 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 any such pollution occurs or has occurred, shall take prompt steps to control and, if possible, end it.²¹¹

Moreover, a licensee or lessee shall not cut or take a protected tree except with the consent of the state authority and on payment of the appropriate fees and royalties.²¹¹ The regulations also protected objects of veneration and a licensee or lessee mandated not to injure or destroy such objects, except with the permission of the state authority.²¹¹ From the wordings of these regulations, the power to determine a protected tree or a venerated object lies in the Governor of the State.

From the foregoing, it is clear that the Minister of Petroleum Resources made elaborate provisions for the handling of oil products to avoid pollution of water resources and the

atmosphere, and that strict compliance with them would engender safe handling of oil production and thereby prevent oil pollution. However, the spate of oil pollution in the Nigerian Niger Delta shows that this regulation seems to be honoured more in breach than in compliance. Moreover, the regulation did not make direct and explicit provisions on the prevention of oil pollution of water resources and the atmosphere.

4.3.4.2 **Oil in Navigable Waters Act, 1968**²¹¹

This Act is the principal law that protects water resources from oil pollution in Nigeria. It domesticated the International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL), 1954 to 1962²¹¹ and made detailed provisions for the prevention of oil pollution of water courses and the sea.

It is an elaborate law, which aims at reducing the incidence of pollution of the world's high seas generally and of Nigerian waters in particular. The Schedule to the Act designated the prohibited sea areas. They are all sea area within fifty miles from land and outside the territorial waters of Nigeria and also other sea areas within fifty miles²¹¹ from the nearest land. The other seas are Pacific Ocean, North Atlantic Ocean, North Sea and Baltic Sea; Black Sea and Sea of Azor; Red Sea; Persian Gulf; Arabian Sea, Bay of Bengal and Indian Ocean and Australia.²¹¹

The Act prohibits the discharge of crude oil, fuel and lubricating oil, heavy diesel oil or any mixture containing not less than 100 parts of oil from a Nigerian ship into a prohibited sea area as specified under the Act. If this prohibition is contravened, the owner or master of the ship shall be guilty of an offence.²¹¹ The Minister of Transport has the power to prescribe other oil that should be affected by the prohibition after considering the provisions of subsequent Conventions prohibiting pollution of sea by oil, as well as power to exclude from operation of

the prohibition absolutely or subject to any prescribed conditions of some classes of ships or description of oil or mixtures in prescribed circumstances or in relation to particular areas of the sea.²¹¹

Further, the Section 3 of the Act extensively prohibited pollution of water courses either from activities going on - on land, from an apparatus through which oil is transferred (for example pipeline) or from a vessel and made contravention a criminal offence.

Finally, the Act empowers the Minister to make regulations requiring Nigerian ships to be fitted with pollution prevention equipments as may be prescribed and any Nigerian ship or foreign owned ship operating within Nigeria territorial waters that fails to install such equipments has committed an offence under the Act.²¹¹ Consequent upon this mandate, the Minister for Transport made the Oil in Navigable Waters Regulation 1968, which made specific provisions relating to equipment to be installed by ships operating in Nigerian waterways. These provisions though not having environmental protection as the basis of the regulation would have achieved such purpose if strictly adhered to; but it is suggested that a distinct legislation or regulation or provision in the already existing law should be made to protect the environment.

4.3.4.3 Oil Terminal Dues Act, 1965²¹¹

According to the Supreme Court in the case of *Texaco Panama Inc. V. S.P.D.C. Ltd*,²¹¹ the purpose of the Act is for the levying and payment of terminal dues on any ship evacuating oil at any terminal in any port in Nigeria, and in respect of any services provided at these ports. Thus, the main purpose of the Act was to raise revenue for the government. However, the Act made the provisions of Section 3 of the Oil in Navigable Waters Act applicable in any area within which oil terminal is situated, even if it is situated outside the limits of the territorial

waters of Nigeria. It therefore prohibits the discharge of oil and mixtures containing oil into the territorial waters of Nigeria from any pipeline, vessel or apparatus used for transferring oil to any vessel or as a result of any operation for evacuating oil.²¹¹

4.3.4.4 **Merchant Shipping Act, 2007**

This Act makes provisions with respect to shipping and the registration, licensing and marking of ships in Nigeria. It also contains provisions regulating the carriage of dangerous goods by ship and prevention of pollution from ship.

In fact, with respect to the prevention of oil pollution of water resources, the Act domesticated several international conventions for the protection of water resources from pollutions from ships²¹¹ and made them applicable in Nigeria on its commencement on 28th May 2007.²¹¹ These international Conventions include: International Convention for the Prevention of Pollution from Ships, 1973/1978 and the Annexes thereto; Convention Relating to Intervention on the High Seas in Cases of Threatened Oil Pollution Casualties, 1969; International Convention on Prevention of Marine Pollution by Dumping of Wastes and Other Matters, 1972; International Convention on Oil Pollution Preparedness, Response and Co operation, 1990; International Convention on Civil Liability for Oil Pollution Damage 1992; Convention on Limitation of Liability for Maritime Claims, 1976 and the 1996 Protocol thereto; Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 and its Protocol of 1992; Basel Convention on the Control of Trans boundary Movements of Wastes and their Disposal, 1989; and any International Agreement or Convention to which Nigeria is a party and which relates to the prevention, reduction or control of pollution of the water resources by ships.²¹¹

Finally, the Act provides that the Minister of Transport shall have the responsibility for preventing pollution of water resources from ships, including making orders to give effect to the provisions of any Convention in this respect.²¹¹

CHAPTER FIVE

ADMINISTRATIVE AND LEGAL MECHANISM FOR ENVIRONMENTAL CONTROL ON POLLUTION AND RESTORATION OF IMPACTED AREAS

5.1 Introduction

The bodies that regulate oil pollution are distinguished on the basis of their works. Consequently, the discussion of this chapter would be based on two major classes of bodies, to wit: bodies responsible for prevention and preparedness for oil pollution and bodies responsible for oil pollution response and clean up.

5.2 Regulatory Bodies for the Prevention and Preparedness for Oil Pollution

The regulatory bodies are responsible for the prevention of oil from polluting the land, air and water resources, as well as to ensure that they are prepared for oil pollution incidents. While prevention duties involve assessing whether facilities or vessels have the necessary equipments in place, preparedness involves oversight tasks like evaluating facilities and vessels response plans and developing and maintaining contingency plan at all levels. The bodies shall be discussed under the International, United States and Nigeria.

5.2.1 International Organisations Involved in the Prevention and Preparedness for Oil Pollution

The International Bodies responsible for oil Pollution prevention and preparedness are the United Nations Environmental Protection Agency, the International Maritime Organisation and the Oil Companies International Marine Forum.

5.2.1.1 The United Nations Environmental Programme (UNEP)

This is an agency of the United Nations, established in 1972. It has the responsibility of being a catalyst, an advocate, educator, and a facilitator in the promotion of sustainable development viz-a-viz, use of the environment. It coordinates the United Nations' environmental activities by: developing international and national environmental instruments; assessing global, regional and national environmental trends and conditions; encouraging new civil sector partnerships; facilitating transfer of knowledge and technology for sustainable development and strengthening institutions to better protect the environment. Finally, it jointly established various regional agreements with International Maritime Organisation in order to foster cooperation among nations to manage major oil spills.²¹¹

5.2.1.2 The International Maritime Organisation

Intergovernmental Maritime Consultative Organisation (IMCO) was in 1948 established as a global specialized agency of the United Nations. In 1982, the name was changed to International Maritime Organization (IMO).²¹¹ It has the responsibility for the safety and security of shipping and the prevention of marine pollution by ships. It has a membership of 168 States and 3 Associates Members. It consists of an Assembly, a Council and five main committees which include the Marine Environment Protection Committee.²¹¹

One of its aims is to encourage the general adoption of the highest standards in matters concerning maritime safety, efficiency of navigation and prevention and control of marine pollution from ships.²¹¹ Consequently, it develops and maintains regulatory framework for a safe, secure, efficient, environmentally sound and sustainable international shipping industry which covers ship design, construction, manning, operation and disposal.

Further, it formulates and promotes new conventions, as well as updates existing ones relating to maritime safety, prevention of marine pollution and liability and compensation for damages caused by pollution. With respect to oil pollution, it promoted the negotiation and adoption of MARPOL 73/78; International Convention on Civil Liability for Oil Pollution Damage (Civil Liability Convention 1969), amended in 1992; International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Fund Convention 1971), amended in 1992); International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) 1990 and other conventions, which though did not directly regulate oil pollution have positive effect on its prevention in one way or the other.²¹¹

In order to achieve its aims, IMO works in cooperation with the United Nations Agencies, state parties, the shipping and oil industries. Hence, it served as a key partner and enabler of US international and interagency efforts to establish Maritime Domain Awareness.²¹¹

5.2.1.3 Oil Companies International Marine Forum (OCIMF)

This forum was formed in London on 8th April 1970 as oil industry's response to increasing public concern about marine pollution by oil after the Torrey Canyon incident. It is a voluntary association of oil companies with interest in shipment and terminalling crude oil, oil products, petrochemicals and gas.²¹¹ In 1971, it was granted consultative status at the IMO and had since then, continued to present oil industry views at IMO meetings. Currently, its membership comprises 94 companies worldwide.²¹¹

The mission of the forum is to be the foremost authority on the safe and environmentally responsible operation of oil tankers, terminals, and offshore support vessels, promoting continuous improvement in standards of design and operation. Consequently, it made its

professional expertise widely available to IMO, regional, governmental and inter-governmental bodies on discussion relating to tanker safety, environmental liability and carriage of heavy grades of oil. It also advises its members on international and regional legislative activities as they develop.

5.2.2 USA Federal Agencies Involved with Prevention and Preparedness for Oil Pollution

Incidents

In the United States, the body that has the jurisdiction to handle the duties with respect to oil pollution prevention and preparedness is determined by the potential sources of the pollution, such as vessels, facilities and pipelines. The bodies that handle oil pollution prevention and preparedness are the Federal Government, Environmental Protection Agency, United States Coast Guard, Department of Transportation, and Department of Interior.

5.2.2.1 The Federal Government

The Federal Government is the owners of the place that it leases out to private investors for drilling purposes. Consequently, it bears the ultimate responsibility for what happens in its property. It has the responsibility to protect public health, safety and interests while allowing access to its resources through its regulatory authority. In undertaking this duty, it exercises significant oversight functions. It sets safety guidelines for rig operation and conduct inspections to enforce its rules.²¹¹

5.2.2.2 Environmental Protection Agency (EPA)

EPA was established on 2nd December 1970²¹¹ in order to consolidate in one agency,²¹¹ a variety of federal research, monitoring, standard-setting and enforcement²¹¹ activities to ensure environmental protection.²¹¹ Its basic mission is to protect human health and the environment.²¹¹

It also ensures compliance with the environmental laws passed by Congress, state legislatures and tribal governments. EPA implements environmental laws by writing regulations and enforcing them. It published regulations for the above ground storage facilities, and in its early years, it placed about 1500 rulemaking notices in the Federal Register yearly. It also sets national standards that states and tribes enforce through their own regulation and when they fail to meet such standards, it helps them. It also helps companies to understand the requirements.²¹¹ The EPA delegates some of these duties relating to permits, monitoring and enforcement to the US States and the tribal government.

Further more, the EPA has its headquarters in Washington D.C, regional offices for each of its 10 regions²¹¹ and 27 laboratories. Most of its staff are engineers, scientists and environmental protection specialists. It conducts environmental assessment, research and education and cooperates with industries and all levels of government in undertaking voluntary pollution prevention programs. It also makes grants and other assistance agreements with states and nonprofit organizations for environmental programs.

One of EPA's top priorities is to prevent, prepare for and respond to oil spills that occur in and around inland waters of the US. EPA's oil spill prevention program includes the Spill Prevention, Control and Countermeasures (SPCC) Rules.²¹¹ Following the Floreffee, Pennsylvania Oil Spill in 1988, EPA formed the SPCC task force to examine federal regulations governing oil spills from above ground storage tanks. Consequent upon the Task force's

recommendation, the EPA amended the SPCC requirements for Oil Pollution Prevention Regulation in 2002.²¹¹

The Rules set forth requirements for the prevention of, preparedness for, and response to oil discharges at specific non-transportation related facilities.²¹¹ Thus, the Rules help facilities²¹¹ to prevent discharge of oil into navigable waters or adjoining shorelines and to contain discharge of oil. It requires facilities to develop and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans and establishes procedures, methods and equipment requirements.²¹¹ In relation to oil spill preventions, the facility owner is expected to use containers suitable for the oil stored, provide overfill prevention for oil storage containers as well as periodically inspect and test pipes and containers, among others. Further with respect to preparing and implementing an SPCC Plan, the owner must develop and implement an SPCC Plan that would describe oil handling operations; spill prevention practices, discharge or drainage controls; and the personal, equipment and resources at the facility that are used to prevent oil spills from reaching navigable waters or adjoining shorelines.²¹¹

Moreover, the SPCC requires facility owners and operators at approximately 4,400 facilities are also required to prepare facility response plans (FRPs) addressing response actions for discharges of oil that present the potential for substantial environmental harm. EPA uses the information in the FRPs to develop Area Contingency Plans (ACPs) under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Thus, the elements that an SPCC plan must describe include operating procedures to prevent oil spills; control measures installed to prevent oil spills from entering navigable waters or adjoining shorelines; as well as countermeasures installed to contain, cleanup and mitigate the effects of an oil spill that has impacted navigable waters or adjoining shorelines.²¹¹

Finally, EPA conducts oil spill prevention, preparedness, compliance assistance and enforcement activities associated with more than 640,000 non-transportation related oil storage facilities through its spill prevention program.²¹¹

5.2.2.3 United States Coast Guard (USCG)

The U.S. Coast Guard was established in 1790 as both a military²¹¹ and a law enforcement service. It is a military, multi-mission, maritime service within the Department of Homeland Security (DHS)²¹¹ and one of U.S.'s five armed services. The Coast Guard has roles in maritime homeland security, maritime law enforcement (MLE), Search and Rescue (SAR), marine environmental protection (MEP), the maintenance of river, intra-coastal and off shore aids to navigation (ATON). Under its missions,²¹¹ it has three basic roles which are maritime safety, maritime security and maritime stewardship. These three basic roles are further divided into eleven statutory missions, divided into homeland security mission and non-homeland security mission. However, three of these eleven statutory missions necessary for prevention and preparedness for oil pollution are marine environmental protection; marine safety; and maritime law enforcement.

The five areas of emphasis in the Marine Environmental Protection (MEP) mission of the U.S. Coast are: prevention – the Coast Guard tries to stop pollution before it occurs by regulating training, equipment and procedures; enforcement – it provides both civil and criminal penalties for illegal acts; surveillance – U.S Coast Guards protect the marine environment by conducting inspection over flights and vessel boarding, harbor patrols, transfer monitoring and facility inspections; response – it undertakes cleanup and impact limitation of an oil or chemical discharge; and in-house abatement – it ensures that its vessels and facilities comply with federal

pollution laws and regulations.²¹¹ Moreover, the coast guard prevention activities include the development of standards and regulations. It makes regulations for oil tankers.²¹¹

With respect to marine safety, the U.S. Coast Guard conducts marine inspection, marine investigation, waterways management, port safety, and merchant mariner credentialing. This mission is the largest mission performed by the Prevention Department at Coast Guard Sectors. The Coast Guard conducts two types of marine inspection of vessels,²¹¹ for safety and security. Inspection for safety systems include among several others, hull inspection to ensure seaworthiness of vessel and pollution prevention inspection to ensure compliance with international regulations and domestic laws. On the other hand, with respect to inspection for security, the U.S. Coast Guard verifies security related documents and certificates, as well as ensure that appropriate training drills and exercises are being conducted and that the required on board security procedures are in place.

Further, in its waterways management, it provides access to safe, secure, efficient and environmentally sound waterways system by providing marine safety information to the public, processing marine event permits and bridging administration and marine transportation system services. Under the port safety mission, U.S. Coast Guard is concerned with preventing accidental damage to ports, facilities and ships so as to protect the environment and facilitate commerce. Its major activities under this mission include pollution prevention, pollution investigation, contingency planning, facility and container inspection, and explosive cargo loading supervision. Finally, it is responsible for evaluating, certifying and credentialing U.S. merchant mariners, and issues them with Merchant Mariner Credential.

With respect to maritime law enforcement, the US Coast Guard is the US primary maritime law enforcement service. Consequently, it enforces federal laws, international treaties

and other agreements relating to high seas and in waters under US jurisdiction. It has the power to board any vessel subject to U. S. Jurisdiction to make inspections, searches, inquiries and arrests.²¹¹ Thus, it has the duty to protect the public, the environment and the U.S. economic and security interest in the maritime region – international waters, America’s coasts, ports and inland waters. The scope of its responsibilities covers both Arctic and Antarctic regions.²¹¹

5.2.2.4 **Department of Transportation (DOT)**

The Department of Transport is a federal Cabinet Department of the US government governed by the US Secretary of Transportation and concerned with transportation. It is responsible for planning and coordinating federal transportation projects, geared towards having the transportation system contribute to the nation’s economic growth. It also sets safety regulations for all major modes of transportation.²¹¹ It has thirteen agencies. However, the agencies that have to do with oil pollution are the Maritime Administration (MARAD) and the Pipeline and Hazardous Materials Safety Administration (PHMSA).²¹¹

The maritime industry has various environmental rules, regulations and requirements which deal with air and water quality, hazardous waste disposal, and aquatic species protection, and which must be comply with. Therefore, safety in the maritime industry requires that standards should be set at both the international and national level in order to ensure that environment is protected. These standards need to be consistent and uniform. MARAD plays a key role here. It also works with the ship building industry in order to find solutions to environmental problems associated with construction and design of ships.

Thus, the Maritime Administration promotes the development and maintenance of an adequate, well balanced merchant marine as well as ensures that the US enjoys adequate ship

building and repair services, efficient ports, effective intermodal water and land transportation systems.²¹¹ On the other hand, the Pipeline and Hazardous Materials Safety Administration (PHMSA) is responsible for implementing the provisions of Oil Pollution Act as it relates to onshore oil pipelines. It has the duty to ensure that there is a decrease of likelihood of pipeline spills; diminution of the environmental consequences of spills; and the swift and well planned responses to spill.

The PHMSA has a pipeline safety program, the whole purpose of which is to protect people and the environment. The Program is comprehensive and has several elements in order to ensure that pipeline operators are able to protect the environment from major oil spills. The program includes effective risk management, regulatory compliance, and a strong, balanced Federal-State partnership.²¹¹

PHMSA also made regulations regulating design, construction, operation, maintenance, and emergency response efforts of the pipelines to ensure safe hazardous liquid transportation. Thus, in accordance with the Omnibus Transportation Employee Testing Act of 1991, the Pipeline & Hazardous Materials Safety Administration (PHMSA) established drug and alcohol testing regulations for operators and employees working in the pipeline industry to ensure that the pipelines are operated in a safe and responsible manner.²¹¹

Further, PHMSA requires operators of any onshore oil pipeline(s) that can reasonably be expected to cause significant or substantial harm to the environment to submit to it, two copies of the Facility Response Plan (FRP).²¹¹

The PHMSA oversees the safety of over 800,000 daily shipments of hazardous materials in US and 64 percent of the US' energy that is transported by pipelines.²¹¹ It is solely concerned about safety and works hard to eliminate transportation related deaths and injuries in hazardous

materials and pipeline transportation and promotes transportation solutions that enhance communities and protect the natural environment.

5.2.2.5 Department of Interior (DOI)

It is a cabinet level agency of the Federal government that focuses on conservation and use of federal lands. Its mission and vision is to use sound science to manage and sustain America's lands, water, wildlife and energy resources, while honouring America's responsibilities to tribal nations and advocating for America's Island communities. The Department has been in existence for over 150 years.²¹¹ The Department through the Secretary implements the Outer Continental Shelf Lands Act.

The DOI has about 12 key offices divided into three subheads – Conservation and Commercial Exploitation; Native Americans and others. However, the office that is important to oil pollution prevention and preparedness is the Minerals Management Service (MMS).

Minerals Management Service (MMS) – this manages the natural gas, oil and other mineral resources in the U.S. Outer Continental Shelf, Federal and American Indian to enhance public and trust benefits, promote responsible use and realize a fair value. Thus, it receives revenues from government leases on Outer Continental Shelf and onshore mineral leases on Federal and Native American lands to private oil and gas companies.²¹¹

However, after the Deepwater Horizon oil spill, the investigation of the Inspector General revealed that there are perceived conflict of interest and poor regulatory oversight by staff of MMS.²¹¹ Consequently, the Secretary of Interior in May 19, 2010 split the MMS into three new agencies: the Bureau of Ocean Energy Management; the Bureau of Safety and Environmental Enforcement; and the Office of Natural Resources Revenue.²¹¹ During the period of the

reorganization, the MMS was temporary renamed the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) and formally dissolved on October 1, 2011.

With respect to oil pollution prevention and preparedness, two bodies that are necessary are the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement, which were created on October 1, 2011.

Bureau of Ocean Energy Management (BOEM) – this Bureau is responsible for managing environmentally and economically responsible development of the nation’s offshore resources. Its functions include Offshore Leasing, Resource Evaluation, Review and Administration of Oil and Gas Exploration and Development Plans, Renewable Energy Development, Economic Analysis, National Environmental Policy Act (NEPA) Analysis and Environmental Studies.²¹¹

Bureau of Safety and Environmental Enforcement (BSEE) – its mission is to promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement. Consequently, it is responsible for safety and environmental oversight of offshore oil and gas operations, including permitting and inspections of offshore oil and gas operations. It also monitors development and enforcement of safety environmental regulations, permitting offshore exploration, development and production, inspections, offshore regulatory programs, oil spill response and newly formed training and environmental compliance programs.²¹¹

It has a program and several divisions, among which are the Office of Offshore Regulatory Program (OORP), Oil Spill Response Division (OSRP), Oil Spill Preparedness Division (OSPD), and Environmental Compliance Division (ECD).

With respect to prevention and preparedness for oil pollution, the Offshore Regulatory Programme develops standards and regulations to enhance operational safety and environmental protection for the exploration and development of offshore oil and natural gas on the U.S Outer Continental Shelf (OCS).

The Oil Spill Response division develops standards and guidelines for offshore operators' Oil Spill Response Plans (OSRP) through internal and external reviews of industry OSRPs to ensure compliance with regulatory requirements and coordination of oil spill drill activities. The division also plays a critical role in the review and creation of policy, guidance, direction and oversight activities related to the agency's oil spill response. The division oversees the Unannounced Oil Spill Drill program and works closely with the sister agencies like the U.S. Coast Guard and Environmental Protection Agency to continually enhance response technologies and capabilities.²¹¹

Moreover, the Oil Spill Preparedness Division (OSPD) is responsible for regulations, policies, standards, guidance, and oversight of oil spill preparedness and oil spill research for BSEE. It therefore reviews and approves oil spill response plans; conducts Government initiated unannounced table top and/or deployment exercises; performs response equipment verifications; and exercises enforcement authority with respect to oil spill preparedness.²¹¹ It manages the National Oil Spill Response Research and funds new research to advance the understanding and efficiencies of mechanical and alternative oil spill response technology as well as monitors the execution and effectiveness of the overall oil spill preparedness activity.²¹¹

On the other hand, the Environmental Enforcement Division is a federal offshore energy regulatory programme that focuses on compliance by operators with all applicable environmental regulations and ensuring that operators keep the promises they made at the time they obtained

the leases, submit their plans and apply for their permits.²¹¹ Hence, it ensures that safety and pollution-prevention requirements of the regulations are met.

Where an operator is found guilty of a safety or environmental requirement, a citation is issued requiring the operator to fix it within 14 days. If the operator defaults, BSEE may call for the particular well components, production component, or the entire complex to be shut in. Where checklist requirements for specific installations or procedure are not complied with, other enforcement actions that may be given includes written warnings or shut-ins of platforms, zones (wells), equipment or pipelines.²¹¹

5.2.3 The Nigerian Institutions Responsible for Prevention and Preparedness for Oil Pollution

In Nigeria, the formative years of institutions for the regulation of the environment were characterized by the absence of a clear scientific criteria and standard on toxic wastes and pollution control levels.²¹¹ The institutions that are responsible for oil pollution prevention and preparedness are the Federal Ministry of Petroleum Resources, Department of Petroleum Resources, the Federal Ministry of Environment, the Nigerian Maritime Administration and Safety Agency and the Niger Delta Development Commission (NDDC).

5.2.3.1 The Federal Ministry of Petroleum Resources

This ministry has several duties, but the one important to oil pollution prevention and preparedness is that it has the duty to monitor and control environmental pollution associated with oil and gas operations and the administration and enforcement of environmental protection statutes and statutory provisions affecting such operations. For the effective discharge of this

duty, the ministry has to liaise with the Department of Petroleum Resources and other agencies.²¹¹ It mainly performs oversight functions that ensure that oil pollution is reduced. However, whenever oil pollution occurs, it mandates the agency responsible and the company that caused the oil pollution to clear the pollution.

5.2.3.2 Department of Petroleum Resources (DPR)

This department is the technical, supervisory and enforcement arm of the Federal Ministry of Petroleum Resources. The DPR, which is the first agency, established to supervise and regulate petroleum industry has several duties.²¹¹ The ones bordering on oil pollution prevention and preparedness are its duty to: ensure that the activities of all the companies engaged in petroleum operations are conducted in accordance with all applicable laws and regulations in its capacity as the government agency for the enforcement of the Petroleum Act and the Oil Pipelines Act and regulations made under them; and monitoring and control of environmental pollution associated with oil and gas operations.

In order to carry out its duty of controlling and monitoring of oil pollution, it requires up to date facilities and equipment like laboratories and vessels, but it does not have and this has led it to rely on the oil companies for the equipment, facilities and information for its operations. Consequently, it has not been able to achieve much in the area of controlling and monitoring oil pollution.

Moreover, in carrying out this duty, it has issued interim guidelines for effective monitoring, handling, treatment and disposal of effluents, oil spills and chemicals, drill cuttings by oil operators. It also provided for tentative allowable limits of waste discharge into fresh water, coastal water and offshore areas.²¹¹ The Environmental Guidelines and Standards for the

Petroleum Industry in Nigeria (EGASPIN) is aimed to establish: guidelines and standards for environmental quality control, taking into account existing local conditions and planned monitoring programme; a comprehensive integrated document on pollution abatement technology for operators and other interested persons; and a standardized environmental pollution abatement and monitoring procedures including the analytical methods for various parameters.²¹¹

Worthy of note is the facts that while the Nigerian National Petroleum Corporation (NNPC), is the commercial arm of the government with respect to the oil industry, regulation of pollution arising from all the activities of the oil industry lies with DPR.

5.2.3.3 Federal Ministry of Environment

Established in 1999 by the Chief Olusegun Obasanjo's regime, the ministry has the function of ensuring the effective coordination of all environmental matters. It has, among other functions, the primary duty to protect and improve the water, air, land, forest and wildlife of Nigeria as required in the Constitution.²¹¹ Moreover, it also approves all projects in the oil industry that requires EIA before the project can commence.

Further, The Ministry has the duty to assess the level of environmental damage, design and implement restoration and rejuvenation measures, as well as bring out additional measures to halt further degradation of the environment. Thus, it is to ensure the sustainable use of the environment.

The Ministry has several departments. However, the one that performs actions related to oil pollution prevention and preparedness are the Oil and Gas Control Unit of the DPR and the Environmental Assessment Division.²¹¹

The Ministry organizes regular meeting of the National Council on Environment with States Environmental Ministries and Agencies where they discuss topical environmental issues and produce policy direction. Moreover, in carrying out its duties, the Ministry uses the Revised National Policy on Environment, 1999 and the National Agenda 21 relating to several areas of environmental concerns and brings out strategies to address them.²¹¹

It is expected that with the Ministry's regulatory and supervisory powers and effective working conditions, it would achieve the desired pollution free environment, but this is not the case as it is not properly administered.

5.2.3.4 The Nigerian Maritime Administration and Safety Agency (NIMASA)

This Agency is created by the Nigerian Maritime Administration and Safety Agency Act²¹¹ for the purpose of among other things, regulating and promoting maritime safety, security and to protect the maritime environment.²¹¹ Among its several duties, it has the duties with respect to oil pollution prevention and preparedness, of establishing maritime training and safety standards with respect to construction of ships and navigation; undertake inspection, provide search and rescue service; carry out air and coastal surveillance; receive and remove wrecks; provide directions and ensure compliance with vessel security measures; control and prevent marine pollution, as well as provide maritime security.²¹¹ Further, NIMASA can make regulations with respect to oil pollution of the marine environment,²¹¹ which regulations may include safety measures for oil tankers and oil drilling in the maritime zone. NIMASA also in conjunction with the Nigerian Navy established a Maritime Guard Command (MGC) that assists it in ensuring that operators comply with the NIMASA Act, the Merchant Shipping Act and the

Inland Shipping Act (Cabotage) 2003. The MGC supports in managing pollution control problems as well as in search and rescue operations.²¹¹

5.2.3.5 Niger Delta Development Commission (NDDC)

This Commission is a Federal Government agency established in 2000²¹¹ with the sole mandate of developing the Niger Delta region of Nigeria. In undertaking this mandate, the NDDC also tackles ecological and environmental problems that arise from the exploration of oil minerals in the Niger Delta region and advises the Federal Government and the member states on the prevention and control of oil pollution. It also liaises with the various oil prospecting and producing companies on all matters of pollution prevention and control.²¹¹

5.2.3.6 Nigerian Meteorological Agency (NMA)

This Agency is established by the Nigerian Meteorological Agency (Establishment) Act²¹¹ as a parastatal in the Federal Ministry of Aviation. It has with respect to oil pollution prevention and preparedness, the duty to issue weather forecasts for the safe operation of aircrafts, ocean going vessels and oil rigs. It also provides weather services in marine, environmental pollution and bio-meteorology for climatic and human health activities, proffer advice to the Federal and State Governments on seismological activities, as well as monitor meteorological components of environmental pollution and ozone concentration.²¹¹

5.2.4 Contingency Planning for Oil Pollution

The most crucial aspect of dealing with any emergency is to be prepared and this applies to oil pollution. Thus, it has been widely accepted that contingency planning for oil pollution

leads to a more effective and efficient response to oil pollution incidents. Article 3 of the Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC), 1990, calls on all authorities, governments or operators in charge of vessels, offshore units, seaports and oil handling facilities to have oil pollution contingency plans. Hence, there are several levels of oil pollution contingency planning, such as international contingency plan,²¹¹ National Contingency Plan, local contingency plan, individual oil operator's contingency plan.²¹¹

Notwithstanding the level of contingency plan concerned, a good contingency plan should outline appropriate response strategies with the aim of reducing ecological, economic and social damage, subsequent compensation claims, as well as identifies appropriate resources and expertise.²¹¹ Thus, it should identify the lines of authority and their responsibilities, established proper reporting and communication procedures and describes an action plan²¹¹ to be implemented in the event of an oil pollution incident.

It must also contain all the necessary information required to effectively control and clean up oil pollution as well as reflect the current state-of-the-art clean up procedures and methods. It should also contain an inventory of resources available for undertaking the response and a description of training programs for the responders. The plan should be updated annually.²¹¹

However, it is important to remember that the timing, size and location of oil spill incidents are unpredictable. Therefore, it is advisable that any response plan should be flexible enough to cope with the uncertainties in oil pollution incidents. Further, the plan must be prepared to cater for lengthy tactical response as well as include all the constituents that may be affected by oil pollution.

5.2.4.1 Tiered Oil Pollution Contingency Planning

It is trite that the response that oil pollution requires is dependent on the size of the spill, the type of oil and its proximity to a response resource. In order to plan for various ranges of oil spill sizes, the government and companies follow a concept known as tiered response planning. This concept is a tactical and cost wise method that allows for the correct level of equipment and resources to be available in the appropriate locations.²¹¹ There are basically three tiers of contingency plan. They are:

Tier 1 Contingency Plan – This is prepared for small local spills occurring due to normal operations. It is established at individual ports and oil handling facilities by making equipment and personnel available to respond immediately to an on-site incident. Such on-site incidents include rupture of oil transfer hoses and tank overloading or valve leakage. It is designed to deal effectively with small operational oil pollutions.

Tier 2 Contingency Plan – This is established for medium spills which are beyond the scope of Tier 1 response capabilities that may occur at the company's facility or within public or multi-user facilities where the company has limited control over events. Examples include oil spills in ports or harbors, creeks or coastal waters, near shore exploration and production, pipelines, and tank failures among others.

In this case, response resources are pooled together by the government²¹¹ or other local users/operators of facilities that run similar risks into a mutual aid facility. The plan should stipulate the response capability, the roles and responsibilities of the various parties, communication path, scope of the plan, method of reimbursement and procedure to escalate into a Tier 3 plan.

Tier 3 Contingency Plan – It is concerned with major oil spills where the operating company may not have any capability to deploy resources immediately and government takes the leading role. It usually consists of a plan drawn by a government to protect its national interest. It requires the mobilization of all available national resources, and in some cases, regional and international response systems to quickly and effectively handle the spill.

It forms most of the National Contingency Plan headed by an appropriate national agency or government department. The National Contingency Plan must clearly specify the lead authority to manage the incident and define roles and responsibilities, as well as the organizational relationship of the participants, whether public or private.²¹¹

5.2.4.2 National Contingency Plan

In preparing a National Contingency Plan, the state should identify the number of levels that its national system of response requires, and each level of response identified would need a corresponding contingency plan. However, there should be a minimum of two response levels for each state, to wit: a national level that requires a national contingency plan and a local area²¹¹ that would address responses to the geographical subdivisions. Each local area identified would need a facility, seaport or local oil pollution contingency plan which covers a single port or locality.

Apart from the above two, a state that is large may need an area response level, which would be an intermediate response level between its local and the national organisations. Moreover, other entities that may be a source of oil pollution should also have a response system and develop a corresponding oil pollution contingency plan. These other entities include vessels,²¹¹ offshore units, seaports, and oil handling facilities.

Each state party to the OPRC should have a national oil pollution contingency plan. However, the states that are important in this work are the United States and Nigeria.

(a) **United States - National Oil and Hazardous Substances Pollution Contingency Plan, 1994**

More commonly called the National Contingency Plan (NCP), the National Oil and Hazardous Substances Pollution Contingency Plan is the US blueprint for responding to oil spill incidents. It establishes the National Response System (NRS) that contains the federal government's framework and operative requirements for responding to oil spill and release of Hazardous substance. It stipulated the national response capability, by providing the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants.²¹¹ In fact, the three activities performed under the NCP are preparedness planning and coordination for response to a discharge of oil or release of a hazardous substance, pollutant or contaminant; notification and communications; and response operations at the scene of a discharge or release.

The NCP is authorized by multiple federal statutes and codified in federal regulations which have the force of law and are binding and enforceable. The first NCP was developed in 1968 in response to the massive oil spills from the oil tanker *Torrey Canyon*. It was amended severally²¹¹ by EPA²¹¹ with the final amendment in 1994 so as to incorporate the provisions of the Oil Pollution Act, 1990 in order to ensure the efficient response to oil pollution incident. The NCP applies to discharges of oil into or on the navigable waters of the U.S, on the adjoining shorelines, the waters of the contiguous zone, into waters of the exclusive economic zone, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the U.S as well as releases into the environment of hazardous substances, and

pollutants or contaminants which may present an imminent and substantial danger to public health or welfare of the U.S.²¹¹

The NRS consists of a coordinated framework organized in multiple tiers at the national, regional and local,²¹¹ which consists of the National Response Team (NRT), Regional Response Teams (RRTs), Area Committees (ACs) and Federal On-scene Coordinator. Thus, it establishes the National Response Team (NRT) and describes the role of each of the NRT agencies;²¹¹ defines the composition, roles and responsibilities of the Regional Response Teams (RRT) and Area Committee;²¹¹ and establishes the general responsibilities of Federal On-Scene Coordinators within the National Response System.²¹¹ The NCP made the NRT responsible for: the elaboration, revision and coordination of the NCP; national response and preparedness planning; coordination of regional planning; and provision of policy guidance and support to the RRTs.

The NCP identifies the interaction among Federal agencies, state and local governments, industry and other private parties during an emergency involving oil incident. The Federal agencies should plan for emergencies and develop procedures for addressing oil discharges and releases of hazardous substances, pollutants, or contaminants; coordinate their planning, preparedness, and response activities with one another; coordinate their planning, preparedness, and response activities with affected states, local governments, and private entities; and make available those facilities or resources that may be useful in a response situation, consistent with the agency authorities and capabilities.²¹¹

Thus in the United States, there is National Contingency Plan (NCP); Regional Contingency Plan (RPC); Area Contingency Plan (ACP); Vessel Contingency Plan and Facility Contingency Plan.²¹¹ Apart from these contingency plans under the national response system,

the State Emergency Response Commission and the Local Committees also prepare a State Emergency Response Plan and Local Emergency Response Plan respectively.

The RCPs are developed by the Regional Response Team for each Federal region, Alaska, Oceania in the Pacific and Caribbean in line with the requirement of the NCP. Its aim is to coordinate timely and effective response by various federal agencies and other organizations to the discharge of oil or release of hazardous substances, pollutants, or contaminants. Consequently, the RCPs include information on all useful facilities and resources in the region, from government, commercial, academic, and other sources. The RCPs follow the format of the NCP and are coordinated with the state Emergency Response Plans, ACPs and Local Emergency Response Plans. They should also provide guidance to the OSC in obtaining assistance within a region for incidents beyond a local plan's scope, as well as identify the demarcation between the inland and coastal zones as agreed by the EPA and USCG.²¹¹

On the other hand, ACP is prepared by the AC. It is to be implemented in conjunction with the NCP and RCP and should be integrated and compatible with all appropriate response plans.²¹¹ It is developed in each USCG port areas in order to coordinate the activities of all parties during spill incidents of all sizes, ranging from a most probable to a worst case discharge.²¹¹ The ACPs should contain a description of the area covered with special economic or environmental areas that might be damaged by a discharge; responsibilities of an owner or operator or federal, state, and local agencies in removing the discharge, and in mitigating or preventing substantial threat of a discharge as well as list of equipments and personnel available to them; how the plan is integrated into other plans; and a Fish and Wildlife and Sensitive Environments Plan for effective protection, rescue and rehabilitation of fish and wildlife resource and habitant. The EPA is responsible for development of inland ACP.²¹¹

Further, in line with OPA 1990, Vessel Response Plans and Facility Response Plans are prepared by owner or operator of tank vessels, offshore facilities and certain onshore facilities,²¹¹ and submitted to relevant federal agency.²¹¹ Vessels and facilities are prohibited from handling, storing or transporting oil if they do not have a plan approved by the appropriate agency.²¹¹ The Plans are for responding to the maximum extent practicable to a worst case discharge and to a substantial threat of such a discharge of oil or hazardous substance. Consequently, the Plans must be consistent with the requirements of NCP and ACPs; identify qualified individuals that have full authority to implement removal actions; require immediate communications between that individual and the appropriate federal official; identify and ensure available of private personnel and equipment necessary to remove and to mitigate or prevent the discharge; describe the training, equipment testing, periodic unannounced drills and response actions of persons on the vessel to be carried out under the plan to mitigate or prevent a substantial threat of a discharge; and also be updated periodically and resubmitted for approval of significant change.²¹¹

Finally, in line with the OPA 90 and response plan regulations there are periodic exercises and drills to ensure that the Contingency Plans of the NRS will be well executed during an actual oil spill. This is done under the Preparedness for Response Exercise Program (PREP) developed by the USCG. Under PREP, plans are regularly tested through notification, tabletop, equipment deployment, and government initiated unannounced exercises. The routine testing of plans, relationships, and notifications ensures preparedness to respond to oil pollution incidents.

(b) **Nigeria – National Oil Spill Contingency Plan (NOSCP), 2009²¹¹**

In order to tackle the menace of oil pollution in Nigeria, the Federal government and other stake holders after series of deliberation, approved NOSCP in 2003. This was later backed

by an Act²¹¹ in 2006 and further revised in 2009. NOSCP is the blueprint for oil spill management in Nigeria through containment, recovery and remediation/restoration. In fact, it is a policy document for the cost effective response mechanism for oil spills within the territorial waters of Nigeria.²¹¹

It is a strategy for preventing loss of lives, assets and natural resources. Thus it aims to establish a mechanism to either monitor and assist or if necessary to direct the actual response, including the capability to swiftly mobilize the necessary resources to save lives, protect threatened environment and clean up to the best practical extent of the polluted site; as well as maximize the effective use of the available facilities and resources of individual companies, their international connections and oil spill cooperatives in implementing appropriate spill response.

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As a national system plan for prompt response to probable or actual oil pollution incident in Nigeria, NOSCP creates a platform for the participation of all major stakeholders – local, regional and international. It stipulates the duties of the Nigerian government towards protecting the Nigerian environment from oil pollutions of any size and from any source which threatens it.²¹¹

NOSCP made the National Oil Spill Detection and Response Agency (NOSDRA) the lead agency with respect to oil spill response management. However, while it requires NOSDRA to liaise with the Federal Ministry of Petroleum Resources for its implementation; it on the other hand, mandates National Emergency Management Agency to work with NOSDRA in coordinating oil spill emergencies.²¹¹

The NOSCP is for use by all operators in the oil industry in response to Tiers 1, 2 and 3 oil spills.²¹¹ Tier 1 is for operational type spills that is less than or equal to 7 metric tonnes (50

barrels) that may occur at or near a company's own facility from its own activities. The company would typically provide resources to respond to the spill. Tier 2 is for larger spills greater than 7 metric tonnes but less than 700 metric tonnes (5000 barrels) in the vicinity of a company's facility where resources from another company, industry and possibly government would be required to respond. On the other hand, tier 3 is a large spill greater than 700 metric tonnes where substantial further resources and support from a National tier 3 or International cooperative stockpile may be required to respond.

It further empowered NOSDRA to co-opt with the vital governmental ministries and agencies,²¹¹ local governments and non governmental agencies in the event of a major oil spill; and also stipulates their roles in the event of oil pollution incident.²¹¹

According to NOSCP, the primary objective of a response action is to prevent or minimize the adverse health and safety, environmental, commercial, or social effect of the oil pollution; ensure the safety of response personnel and the public; secure the source of the spillage if the spill is continuing or threatens to continue; maximize oil recovery at the spill source to the extent practicable; contain the spill to the extent practicable to minimize the area impacted by oil; forecast spill movement and give priority to protecting environmentally, commercially or socially sensitive areas; minimize the overall adverse impacts of the spill and spill mitigation and restorative activities; minimize environmentally induced conflict between industries and communities; and ensure a balanced decision is made as to when clean-up operation should cease.²¹¹

In December 2, 2013, NOSDRA in line with its mandate under NOSCP conducted a 48 hours drill in collaboration with Shell in Port Harcourt in order to ensure the workability of NOSCP to respond effectively to oil spill disaster in the country.²¹¹

5.3 Institutional Frameworks for Oil Pollution Response and Clean Up

Oil pollution response and clean up is the ability to quickly respond to an oil spill, to control the spread and to clean up the spill. Effective response to oil pollution depends on good preparedness, adequate resources and expertise, and the size, location of oil spill and the characteristics of the oil will determine the level of response.

Consequently, it involves oil containment systems, oil recovery systems and adopting special techniques for the removal of spilled oil. The three basic approaches for removal of oil from water are burning the oil, filtering offshore and collecting the oil (using skimmers) for later processing. Moreover, in response and clean up, oil dispersants are used to facilitate the digestion of the oil by microbes before the oil reach the surface; and containment boom is used either to corral the oil or to block it from a marsh, mangrove, shrimp/crab/oyster ranch or other ecologically sensitive areas.²¹¹

The institutional framework for oil pollution response and clean up would be discussed for the International, United States and Nigeria.

5.3.1 International Legal and Administrative Regime for Oil Pollution Response and Clean Up

The Legal and administrative framework that regulates oil pollution response and clean up are the Convention on Oil Pollution Preparedness, Response and Corporation (OPRC), 1990; Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (the Intervention Convention), 1969; International Spill Control Organisation (ISOC); International Tanker Owners Pollution Federation Limited (ITOPF); The Association of Petroleum Industry

Managers (APICOM); International Petroleum Industry Environmental Conservation Association (IPIECA) and International Tier 3 Response Centre.

5.3.1.1 Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC), 1990

This Convention drafted within the framework of IMO, was, under the pressure of U.S, adopted in London on 30th November 1990 as an aftermath of the Exxon Valdez catastrophe. It deals with issues relating to preparedness and response to oil pollution by the international community.²¹¹ The state parties undertake individually or jointly to take all appropriate measures to prepare for and respond to oil pollution incidents. Consequently, it established measures for dealing with incidents of oil pollution nationally and in cooperation with other countries.

The convention recognized that oil pollution incidents poses serious threats to the marine environment and that prompt and effective action whenever oil pollution incident happens is important in order to minimize the damage.²¹¹ In line with this, the OPRC applies to vessels, offshore installations, sea ports and oil handling facilities.²¹¹

Article 3 of OPRC requires ship operators to carry on board an oil pollution emergency plan in accordance with the provisions adopted by IMO. The plan shall be subject, while in a port or an offshore terminal under the jurisdiction of a state party, to inspection by the duly authorized officials of that state party. It also requires operators or authorities in charge of offshore installations, sea ports and oil handling facilities under the jurisdiction of a state party to have oil pollution emergency plans which are to be coordinated in accordance with the national system of oil pollution preparedness and response.²¹¹

In addition, the OPRC established an oil pollution reporting procedures. It requires a person in charge of a ship flying the flag of a party, and a person in charge of an offshore unit to report without delay any event on the ship or offshore unit or any observed event involving discharge or probable discharge of oil respectively to the nearest coastal state and coastal state. Moreover, it also requires a person in charge of sea ports or oil handling facilities under the jurisdiction of a party to report without delay any event involving a discharge or probable discharge of oil or the presence of oil to the competent national authority. Parties should also instruct their maritime inspection agents and pilots of civil aircraft to report promptly any observed event at sea port or oil handling facility or sea involving a discharge of oil or presence of oil to the competent national authority or nearest coastal state.²¹¹ Whenever a party receives a report, it should assess it to determine whether it is an oil pollution incident, its nature, extent and possible consequences and without delay, inform all states whose interests are affected or likely to be affected by the oil pollution incident.²¹¹

In Article 6, the OPRC obligated member parties to establish a national system for responding promptly and effectively to oil pollution incidents. According to the Article, the system should designate competent national authority with responsibility for oil pollution preparedness and response, have national operational contact point/s for the receipt and transmission of oil pollution reports; and designate authority that should be entitled to act on behalf of the state to request assistance or to decide to render assistance when requested. Moreover, the system should include a national contingency plan for preparedness and response, showing the organizational relationship of the various bodies involved whether private or public and in accordance with the guidelines developed by IMO.²¹¹ In addition, the Article requires each party, either individually or through bilateral or multilateral cooperation and in cooperation

with the oil and shipping industries, ports authorities and other relevant entities, to establish: a minimum level of pre-positioned oil spill combating equipment and programs for its use; a program of exercises for oil pollution response organizations and training of relevant personnel; detailed plans and communication capabilities for responding to an oil pollution incident; and a mechanism or arrangement to co-ordinate the response to an oil pollution incident with the capabilities to mobilize the necessary resources.²¹¹ The parties must also ensure that current information is provided to the IMO, directly or through regional organization or arrangement.²¹¹

The OPRC established a mechanism for international cooperation in pollution response. Thus, parties agreed that subject to their capabilities and the availability of relevant resources, they will cooperate and provide advisory services, technical support and equipment for the purpose of responding to an oil pollution incident, when the severity of such incident so justifies and upon the request of any party affected or likely to be affected. The financing of the cost for such assistance shall be based on the provisions set out in the Annex to this Convention.²¹¹

The parties also agreed to cooperate in the promotion and exchange of results of research and development programmes relating to the enhancement of the state-of-the-art of oil pollution preparedness and response, including technologies and techniques for surveillance, containment, recovery, dispersion, clean-up and otherwise minimizing or mitigating the effects of oil pollution and for restoration; as well as cooperate in training of personnel and conclude bilateral or multilateral agreements for oil pollution preparedness and response.²¹¹

Thus, the OPRC is a treaty that dealt generally with the framework for oil pollution preparedness and response and vests on the IMO the responsibility of coordinating prompt response to oil pollution incidents, technical support and financial assistance to member states.

The OPRC did not establish an independent fund for financing the costs of assistance by member parties in oil pollution incidents. This is a major setback on compliance with the OPRC.

5.3.1.2 **Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (The Intervention Convention), 1969**

Drafted within the framework of the IMO, the Intervention Convention was adopted in 1969 in Brussels, Belgium.²¹¹ This convention was made after the 1967 *Torrey Canyon* disaster which severely damaged coastal and marine environment and wildlife of the coastal state. Consequently, the convention was made to enable coastal states to take necessary measures to protect itself from oil pollution incidents outside the states territory and on the high seas while also protecting the legitimate interests of ship-owners, cargo owners and the flag states, as well as recognizing the principles of freedom of the high seas.²¹¹

First, the Convention applies to all sea going vessels except warships and other vessels owned by government and used for government non-commercial service.²¹¹

It also gives a coastal state right to take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from oil pollution or threat of oil pollution of the sea by maritime casualty or acts related to such casualty.²¹¹ However, before such a coastal state can take such steps, it must consult other affected states and other interests;²¹¹ use its best endeavours to avoid any risk to human life and to afford persons in distress any assistance which they may need, and in appropriate cases to facilitate the repatriation of ships crews; notify all interested states, owners of ships and cargoes and the IMO of all measures taken; ensure that all measures are

proportionate to actual or threatened damage; and pay compensation for any damage caused by measures which exceed those reasonably necessary to achieve the end.²¹¹

Thus the Convention empowers coastal states to take action to prevent or mitigate oil pollution effect to their coastline or related interests.

5.3.1.3 **International Spill Control Organisation (ISOC)**

This organization is a nonprofit one, formed in 1984 for the purpose of improving worldwide preparedness and co-operation in response to oil pollution. It has 36 member countries worldwide. It has consultative status at IMO and through it, gives the oil pollution response community a voice and an input in the IMO's work of safeguarding the marine environment.²¹¹

ISOC alerts the spill response community on new developments, helps in collating information on experience in response to oil pollution, which will be valuable in the drafting of new guidelines and manuals for oil pollution response. ISOC also has a weekly newsletter that is focused on news relating to oil spill control and incident. Through this Newsletter, it disseminates information on new developments that affect the international spill response community. It promotes technical development and professional competency, and provides a focus for making the knowledge and experience of spill control professionals available to IMO, UNEP, EC and other organizations.²¹¹

The International Spill Accreditation Association (ISAA) is responsible to works with governments, the response community and other stakeholders to raise standards of oil pollution response. It undertakes independent assessment and accreditation of oil pollution response

companies and organisations; and organizes training events, workshops and seminars. The ISOC administers the ISAA.²¹¹

Finally, ISOC supports IMO's Technical Cooperation Programs and helps in finding qualified staff to help third world countries in implementing OPRC and other conventions. It encourages cooperation between oil spill responders; helps members find the right partner with right expertise and skill to handle new challenges; as well as assists governments and other organizations to source support and resources for handling major oil pollution incidents.²¹¹

5.3.1.4 **International Tanker Owners Pollution Federation Limited (ITOPF)**

This organization, founded in 1968 at the wake of the *Torrey Canyon* incident,²¹¹ is nonprofit making and is funded by the global shipping industry. Its membership comprises of over 6,300 tanker owners and bareboat charterers who between them owns and operate about 10,900 tankers, barges and combination carriers with a total gross tonnage of about 338 million GT²¹¹.

It is established to respond to ship-source oil spill in the marine environment by giving technical advice on clean up measures, environmental and economic effects and compensation. Thus, the ITOPF is involved in assessing the impact of oil pollution on the economic resources and the environment, advising on merit of compensation claims. It does these on behalf of its members and their insurers, and sometimes at the instance of state governments and international agencies.

It also puts the experience gained by the staff in its involvement in oil pollution incidents to good use in undertaking contingency planning and training assignments, as well as in the production of technical publications. Its activities are overseen by an International Board of

Directors representing the organisation's independent and oil company tanker owner members, its Associates and Protection and Indemnity Insurer (P&I Insurers).²¹¹

It has its office in London and has had an observer status both with IMO and the International Oil Pollution Compensation Fund (IOPCF). Since inception, it has attended to more than 500 spills in some 90 countries.²¹¹ IOPCF has evolved into the maritime industry's primary source of objective technical advice, expertise and information on effective response to ship source pollution.

5.3.1.5 The Association of Petroleum Industry Cooperative Managers (APICOM)

This Association was founded in 1972 and is an association of unaffiliated petroleum industry oil spill cooperative managers. It has the purpose of exchanging information related to the management of an oil spill response cooperative. Further, it serves as a forum for the exchange of ideas related to oil spill technologies, operations, regulations and other issues of common interest to its members.²¹¹

APICOM also seeks to enhance public awareness of the role of oil spill response cooperatives in protecting marine environment. It participates in and sponsors government and industry workshops, conferences and seminars related to oil spill response. Recently, it addressed issues relating to Oil Spill Response Technologies & Methods, Responder Training & Safety Standards, Mutual Aid & Assistance Agreement, Informational & Personnel Exchanges Members Alaska Chadux Corporation, among others.²¹¹

5.3.1.6 International Petroleum Industry Environment Conservation Association

(IPIECA)

The International Petroleum Industry Environment Conservation Association was established in 1974 as a voluntary nonprofit organization with a mission to develop and promote scientifically sound, cost-effective, practical, socially and economically acceptable solutions to global environmental and social issues concerning petroleum industry.²¹¹ It has as its members, 36 petroleum companies and 16 associations²¹¹ at the national, regional and international levels. Some of its association members also take part to address oil spill prevention and response.

IPIECA holds formal consultative United Nations status and has access to UN negotiations as non-governmental organization. It acts as a liaison between the petroleum industry and the United Nations agencies. It has several working groups. The Oil Spill Working Group is in charge of improving oil pollution preparedness and response around the world. It does this by: enabling the industry and its partners to improve oil spill preparedness and response around the world; informing global policy and external stakeholders pro-actively and credibly on oil spill related issues; and monitoring, assessing, and where necessary, responding to oil spill related developments.²¹¹

The group has in conjunction with the IMO and UNEP worked to improve countries' capacity to manage oil pollution since 1987. It has also produced a number of guides on effects of oil pollution, contingency planning and managing issues facing responders during and after oil spill.²¹¹

5.3.1.7 International Tier 3 Response Centre

In the 1980s, the oil industry decided that they needed to position oil spill response resources at strategic locations in the world to cover their risks to oil spills from their operations or in the transportation of oil. Consequently, they established three International Tier 3 Response

Centres namely Oil Spill Response Limited (OSRL) in Southampton, Clean Caribbean Cooperative (CCC) in Florida and East Asia Response Limited (EARL) in Singapore.²¹¹ These Tier 3 Response Centres have deployment arrangements for rapid response to oil spill incidents in their respective regions and globally. The establishment of these three International Tier 3 Response Centres is a demonstration of the support of the oil industry to the OPRC Convention. The industry has worked through IPIECA with IMO and governments to develop and enhance contingency plans and oil spill response resources in the world. In recent times, new international tier 3 response centers were established, to wit: Clean Caribbean & Americas (CCA) in 1990 in USA, Australian Marine Oil Spill Center (AMOSC) in Australia in 1992 and stockpiles of resources was established in high risk areas like the one established by Petroleum Association of Japan (PAJ) in Tokyo Japan²¹¹.

Access to the resources of the Centers is through membership. Members pay annual fees and have a service agreement with the centres. In the event of a member spill, a Tier 3 centre would respond and work with the member and the government and other responders in combating the spill. In the event of a non-member or third party spill, a Tier 3 centre does not guarantee a response, but if it does respond on an ad-hoc contract, it would endeavour to work with the spiller, government and other responders.²¹¹

The centres have a stockpile of varied equipment and a small core group of specialists that were designed to supplement a national resource and capability but not to replace it. The centres are not “one-stop” shops, they are also not designed to take command and control as that role should stay with the national authorities whose contingency plan should stipulate the roles of the many parties involved in the response. The International Tier 3 Response Centres are not designed nor resourced to clean up a spill on their own.

In addition to the stockpile of varied equipment each of the three centres have the specially designed Airborne Dispersant Delivery System (ADDS Pack). There are only a few of such units in the world. The ADDS Pack is a roll-on-roll-off aluminum tank with a capacity of 5,500 US gallons to be used from a Hercules L-382 aircraft for aerial dispersant spraying offshore. EARL and OSRL each has a dedicated Hercules L-382 on charter and on standby 24 hours a day while CCC obtains one from the commercial market when required. The ADDS Pack is increasingly recognized by industry and governments as the only effective means of significantly reducing the threat of massive shoreline impact from a major offshore spill.

When a centre is activated to mount a response at the spill site, equipment and manpower needs to be deployed from the centre to the site. The centre will mobilize and arrange for the equipment and manpower to be transported to the airport, loaded on the plane and flown to the designated airport. On arrival, the client (spiller) is responsible for clearing customs and immigration and transportation to the spill site. The client is also responsible for storage, procurement of labor, boats, barges and waste disposal. The client will also be responsible for liaison with the national authority in the response. The Centre will support the client and government authority with advice as necessary.

If the spiller is an oil company and if the company is a centre member, the centre will be activated by the company. The company is responsible for receiving the centre's equipment and providing support and other equipment such as boats for the response. The company would normally have their company contingency plan and response team to perform these tasks. The national authority may provide equipment if it has access to them within the country. The government can exert considerable power and influence during an emergency. However in the case of a third party spill from a ship, the ship owner and his P&I club may not have staff or

resources at the spill site to provide the support to the centre. In this case the national authority or its designated agency or contractor has to provide the support. The national authority is responsible for control of the cleanup. The spiller is responsible for the cost and the provision of whatever resources he can muster to support the cleanup effort led by the government.²¹¹

5.3.2 USA Mechanism for Response and Clean Up in Cases of Oil Pollution

In the U.S., federal response to and clean up of oil pollution is started by the reporting of the incident to the National Response Center by the parties who discharged the oil, the quantity of which exceeds the allowable amounts.²¹¹ The discharge of oil is reportable where it violates applicable water quality standards; cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines; or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.²¹¹ Further, state officials, local officials, or members of the public who witness oil pollution may also report to the NRC and state or local officials who first responded to an oil pollution site may contact the NRC for the incident site to be elevated to federal attention.

Once a report is received, the U.S. Coast Guard, which administers the NRC would collect the data on the incident and notify the appropriate federal agencies and departments that would carry out the response under NCP in coordination with the state and local authorities.²¹¹

Once the NRC receives the notice of the incident, a federal response may be undertaken as specified in the NCP. The administrative bodies that may undertake such response are the National Response Team, Regional Response Team, Area Committees, On-Scene Coordinator, the Secretary of Homeland Security and Non governmental entities. However, worthy of note is

that the President has the authority to perform clean up immediately using federal resources, monitor the spiller's response or direct the spiller's cleanup activities.²¹¹

5.3.2.1 National Response Team (NRT)

The NRT undertakes federal response and in doing this, all the departments and agencies employ skilled personnel and maintain specialized equipments that can enhance the effectiveness of the federal response. NRT consists of 15 federal departments and agencies, to wit: the EPA (chair), U.S. Coast Guard (Vice-Chair), Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Department of Health and Human Services, Department of the Interior, Department of Justice, Department of Labor, Department of State, Department of Transportation, Federal Emergency Management Agency, General Services Administration, and Nuclear Regulatory Commission.²¹¹ The NCP outlined the specific role of each of these agencies in responding to oil pollution,²¹¹ and these roles shall be discussed specifically.

However, under the NCP, some federal agencies and departments that are not listed but administer federal facilities and vessels are standing members of the NRT and may be called upon to support a response to oil pollution.²¹¹ For example, the U.S. Navy dispatched oil collection equipment to aid the federal response during the *Deepwater Horizon* incident. Further, the Department of Justice serves as a standing member also in order to represent the U.S. in any litigation that may involve the federal response.²¹¹

(a) Environmental Protection Agency (EPA)

EPA is the lead federal response agency for oil spills occurring in inland waters. In line with NCP, EPA prepares a schedule of dispersants, other chemicals and oil spill mitigating

devices and substances that may be used to remove or control oil discharges. It maintains the NCP Product Schedule, which lists the types of products authorized to be used for oil pollution, to wit: dispersants, surface washing agents, surface collecting agents, Bioremediation agents and miscellaneous oil spill control agents.²¹¹

Furthermore, EPA is the standing Chair of the NRT and co-chairs with USCG in RRTs. However, in federal response to a discharge of oil within the coastal zone, it becomes the acting vice chair while the USCG becomes the acting chair.²¹¹ It provides pre-designated OSCs for all inland areas for which ACP is required under the Clean Water Act²¹¹ and for discharges and releases occurring in the inland zone. The Administrator of EPA is also responsible for designating an oil spill of national significance (SONS) in the inland zone.²¹¹ In such cases, he may appoint a senior agency official to assist the OSC in communicating with affected parties and the public and in coordinating federal, state, local, and international resources at the national level.²¹¹ EPA also provides expertise on human health and ecological effects of oil discharges or releases of hazardous substances, pollutants or contaminants; ecological and human health risk assessment methods and environmental pollution control techniques.²¹¹

The EPA through its Emergency Response Offices (ERO) regularly responds to oil spill on land or in non-navigable waters of the U.S. Consequently, they prepare, maintain and store plans for such emergencies, as well as watch around the clock for such emergencies. Each ERO employs staff known as Emergency Response Teams (ERTs) which includes On-Scene Coordinators.

The EPA Emergency Response (Special) Teams include the Environmental Response Team; Radiological Response Team; Chemical, Biological, Radiological, and Nuclear Consequence Management Advisory Division; and National Criminal Enforcement Response

Team. They support the U.S. response, clean up and renewal of its contaminated land, water and air. They assist with oil identification, as well as provide instruction for the Shoreline Cleanup and Assessment Technique (SCAT) process, Special Monitoring of Applied Response Technologies (SMART), in-situ burning, dispersants, bioremediation, booming strategies, response equipment, disposal of oily waste and other alternative countermeasures.²¹¹ They are trained to deal with the media, with volunteers from the general public and with cleanup or construction contractors. They are the first responders and offer other agencies first responder training. They also interact with state environmental officials in the course of carrying out a response.²¹¹

(b) United States' Coast Guard (USCG)

With respect to oil spill response, the USCG is the vice chair for NRT, Co-chair for the standing RRTs and provides pre-designated On-Scene Coordinator (OSC) for oil spill in the U.S. coastal zone.²¹¹ The Commandant of the USCG is responsible for designating an oil spill of national significance (SON). In such cases, he may appoint a National Incident Commander (NIC) to assume the role of the OSC.²¹¹ Hence, USCG is the lead response agency for spills in coastal waters and deepwater ports.

The USCG maintains response equipment at 19 sites around the U.S. to supplement private efforts. It also has three strike teams made up of about 1,200 specialized trained personnel²¹¹ capable of and ready to respond quickly to oil pollution as well as specialized equipment²¹¹ for such response. Moreover, the U.S. Navy Superintendents of Salvage's large fleet of pollution response vessels and specialized vessels and salvage equipments meant for navy use is made available upon request to the USCG.²¹¹

Further, the USCG provides rapid response support in incidental management, site safety, contractor performance monitoring, resource documentation, response strategies, hazard assessment, oil spill dispersant and *in-situ* burn use, operational effectiveness monitoring and high capacity lightering and offshore skimming capabilities, through its National Strike Team.²¹¹ It investigates marine casualties and allegations of improper Merchant Mariner actions to determine the cause of oil pollution incident as well as to prevent future occurrence. In relation to this, the USCG investigates death and injury to individual, loss of properties, damages to vessels and harm to the environment. The USCG is also a member of the National Search and Rescue Committee and therefore is the federal agency responsible for maritime Search and Rescue (SAR) operations and maintains a rescue coordination centers for this purpose.²¹¹

The Coast Guard also maintains a District Response Group (DRG), which consists of all Coast Guard units, personnel and equipment within a district's boundary to organize their response operation. The Coast Guard has been lauded for its quick responsiveness and adaptability in a broad range of emergencies. In the Deepwater Horizon Oil Spill, notwithstanding the magnitude of the spill which released an estimate of 210 million gallons of oil, the USCG responded and directed federal efforts to contain and clean up the spill, as well as search and rescue survivors, which involved nearly 50,000 responders involved in cleanup activities in the open water, beach and marsh habitats.²¹¹

(c) **Department of Commerce's National Oceanic and Atmospheric Administration (NOAA)**

The Department of Commerce (DOC), through its National Oceanic and Atmospheric Administration (NOAA) provides scientific support for response in coastal and marine areas such as assessments of the hazards that may be involved, prediction of movement and dispersion

of oil through trajectory modeling, and information on the sensitivity of coastal environments to oil and associated clean-up and mitigation methods; provides expertise on living marine resources and their habitats, like endangered species, marine mammals and National Marine Sanctuary ecosystems; provides information on actual and predicted meteorological, hydrological, ice, and oceanographic conditions for marine, coastal, and inland waters, and tide and circulation data for coastal and territorial waters and for the Great Lakes.²¹¹ Thus, the National Oceanic and Atmospheric Administration (NOAA) provide personnel to advise the Coast Guard on scientific and technological matters related to response.

Further, it serves as the natural resource trustee for the living marine resources it manages and protects. Its Office of Response and Restoration works to remediate damaged to coastline and marine resources caused by oil pollution. Their scientists analyze and identify solutions to environmental contamination.²¹¹

(d) **Department of Interior (DOI)**

Department of Interior by its Natural Resources Damage Assessment and Restoration Program (NRDAR) works in partnership with the state, tribal and federal agencies to determine the adverse impacts caused by oil spill or hazardous substance released to natural resources managed by the department. It then negotiates settlement with those responsible or if the accused party would not settle, takes them to court to garner funds for use in the restoration process, which the restoration program implements.²¹¹ The department also serves as natural resource trustee for the resources it manages or protects; and the Regional Environmental Offices of the Department are designated members of RRTs.²¹¹

The bureaus with expertise under the department include: Fish and Wildlife Service, Geological Survey Bureau of Indian Affairs, Bureau of Land Management, Mineral Management Service, Bureau of Mines, National Park Service, Bureau of Reclamation, Office of Surface Mining and Reclamation Enforcement, Bureau of Indian Affairs, and Office of Territorial Affairs.²¹¹

(e) **Other Departments/Agencies**

Other Departments/Agencies²¹¹ that are involved in response activities in the national response team and their roles are:

(i) **Department of Agriculture (DA)**

It measures, evaluates and monitors situations where natural resources, including soil, water, wildlife, and vegetation have been affected by oil pollution. It contributes expertise from its Forest Service, Agricultural Research Service, Natural Resources Conservative Service, Food Safety and Inspection Service, and Animal and Plant Health Inspection Service.²¹¹

(ii) **Department of Defense (DOD)**

It acts when oil or hazardous substances are released from a facility or vessel under its jurisdiction. Further, upon request, it will provide the U.S. Navy oil spill containment and recovery equipment and manpower, as well as equipment for ship salvaging, shipboard damage control, and diving. The U.S. Navy Supervisor of Salvage has an extensive salvage/search and recovery equipment inventory with the requisite knowledge and expertise to support these operations, including specialized salvage, firefighting, and petroleum, oil and lubricants offloading capability. It can also make U.S. Army Corp of Engineer equipment and expertise available for removing navigational obstructions and performing ship structural repairs.²¹¹

(iii) **Department of Energy (DOE)**

It provides the OSCs when oil pollution occurs from its facilities or from oil being transported under its control. Its staff aids in the control of immediate radiological hazards.²¹¹

(iv) **Department of Health and Human Services (HHS)**

It assesses health hazards at a response. It also maintains and provides information on health effects through its Agency for Toxic Substances and Disease Registry and the National Institutes for Environmental Health Services (NIEHS), which in addition also offer training on the health effect of oil pollution²¹¹.

Further, its Centers for Disease Control and Prevention (CDC) assess public health threats from discharges of oil. Thus, it played a prominent role in assessing threats to public health from oil pollution in the Gulf of Mexico during the Deepwater Horizon incident²¹¹. Finally, it also provides technical guidance on workers health and safety through the National Institute for Occupational Safety and Health.

(v) **Department of Justice (DOJ)**

It provides expert advice on complicated legal questions arising from oil pollution and federal agency responses. It also represents federal government in litigation relating to oil pollution.²¹¹

(vi) **Department of Labour (DOL)**

The DOL through its Occupational Safety and Health Administration (OSHA) conducts safety and health inspections of oil spill sites to ensure that onsite employees are protected from hazards and to determine if a site is in compliance with safety and health standards and regulations.²¹¹

(vii) **Department of State (DOS)**

It takes the lead in developing international contingency plans. It helps to coordinate international response efforts when the oil pollution cross international boundaries or involves a foreign flag vessel. It also coordinates requests for aid from foreign governments.²¹¹

(viii) **Department of Transport (DOT)**

Through the Pipeline and Hazardous Materials Safety Administration (PHMSA), the DOT provides response expertise to transportation of oil by all modes. The PHMSA also produce emergency response guidebooks and support protective action decision strategies and exercise scenarios.²¹¹

(ix) **The Federal Emergency Management Agency (FEMA)**

It advises and aids lead agencies in coordinating relocation assistance. It provides guidance, policy, and technical assistance in emergency preparedness planning, training, and exercising activities for state and local governments.²¹¹

(x) **General Services Administration (GSA)**

The GSA provides logistic and telecommunications support to the federal agencies. During an emergency situation, the GSA quickly responds to aid state and local agencies as directed by other federal agencies. The type of support provided might include leasing and furnishing office space, setting up telecommunications and transportation services, and advisory assistance.²¹¹

(xi) **Nuclear Regulatory Commission (NRC)**

It responds in accordance with its incident response plan whenever radioactive materials are released by its licensees.²¹¹ It ensures that public health and environment are protected and adequate recovery operations are instituted.

5.3.2.2 Regional Response Team (RRT)

The RRT is made of regional representatives of each of the NRT member agency, state governments and local governments.²¹¹ There are 13 RRTs in the U.S. each representing a particular geographic region including the Caribbean and the Pacific Basin.²¹¹

The Environmental Protection Agency and the natural resource trustee agencies in the Departments of Commerce and the Interior have personnel in every region trained in pollution emergencies, and every state has a department or agency that houses dedicated spill response personnel.

The two main components of the RRT are the Standing Team, which is the designated representatives from the federal agencies, state and local government; and the Incident Specific Team nominated from the standing team when a response is activated. The roles of the RRTs standing team include communication systems and procedures, planning, coordination, training, evaluation, preparedness, and related matters on a region wide basis. It also includes coordination of Area Committees for these functions in the areas within their respect region as appropriate. On the other hand, the role of the incident specific teams would depend on the operational requirements of the response to and technical nature of specific oil pollution.²¹¹

RRTs are co-chaired by the EPA and USCG except when the RRT is activated, then, the chair shall become the member agency that providing the OSC. State affected by the oil pollution may participate in all RRT activities. Where an incident is beyond the scope of RRTs, the OSC can request for NRT's assistance to deal with the incident.²¹¹

5.3.2.3 Area Committees

The Area Committees have the function of preparing the Area Contingency Plan for its designated geographical area within a region. They consist of qualified personnel from federal, state, territorial, and local agencies that the President designates to serve on the committees. They support the RRTs in preparing for a response to oil pollution in U.S. waters or adjoining shorelines.²¹¹ The designated OSC chairs the ACs and directs and coordinate their efforts.

ACs are encouraged to solicit advice, guidance and expertise from all appropriate sources, and establish subcommittees as needed to assist with the preparedness and planning responsibilities. The subcommittees' members may include facility and vessel owners/operators, cleanup contractors, emergency response officials, marine pilots, local chemical manufacturers and so on.²¹¹

5.3.2.4 On Scene Coordinator (OSC)

The OSC, who is usually a high level federal official, is empowered to direct and coordinate all response and recovery activities of the federal, state, local and private entities at the scene of oil pollution. He is also empowered to draw on available resources through the appropriate ACPs and RRTs. Thus, the OSC is in charge of all the response efforts at the scene of oil pollution incident and ensures that the oil spilt is effectively cleaned up and that further spillage from the source is prevented.

Consequently, the OSC is responsible for making final decisions on what specific actions are necessary to carry out the federal response to an incident, the use and allocation of federal funds to carry out those actions, what other federal resources may be needed to carry out those actions, and what specific responsibilities are delegated to each entity participating in the federal response, including the party or parties responsible for the incident.²¹¹

Further, the OSC must consult the designated Trustees of Natural Resources and the Governor of the States affected by the oil pollution. He also determines when cleanup is completed and when the regulations of the NCP are satisfied.²¹¹

5.3.2.5 The Secretary of Homeland Security

The secretary may take a lead role in response under the NCP, first, in the coastal zone in the capacity of administering the USCG; and second as the principal federal official for domestic incident management in response to terrorist attacks, major disasters or other emergencies.²¹¹ The Second office would arise where: a federal department/agency has requested for assistance of the secretary; the resources of state and local authorities are overwhelmed and federal assistance has been requested; more than one federal department/agency has become substantially involved in responding to the incident; or the President has directed the Secretary to assume responsibility for managing the domestic incident.²¹¹

Thus, under this directive, Secretary Napolitano coordinated the response taken under the NCP during the 2010 Deepwater Horizon oil incident.²¹¹ Whether or not the secretary would coordinate a response would depend on the nature and is generally reserved for incidents of greater magnitude.

5.3.2.6 Non Governmental Entities

The non governmental entities here include parties that are responsible for the oil pollution, private contractors procured either by the responsible parties or federal agency to conduct physical work; industry groups; academic organisations; members of the public; and individual volunteers that wish to contribute resources.²¹¹

These non governmental entities are allowed to participate in activities that are appropriate for their level of skill and are restricted if dangerous conditions exist. They may also generate scientific or technical information to assist the development of response strategies.

5.3.3 Nigerian Administrative Regime for Response and Clean Up Activities in Cases of Oil Pollution

Response to oil pollution in Nigeria is based on the tiered system as contained in NOSCP. According to EGASPIN, response to oil pollution involves an investigation into the incident to determine the cause of the oil pollution and such other information like the volume of oil spilt and the area affected by an investigation team.²¹¹

Response to oil spill must commence within 24 hours of the incident,²¹¹ and the agency at the forefront is the National Oil Spill Detection and Response Agency (NOSDRA). However, the agency has the power to co-opt and collaborate with various ministries/agencies in the event of major Tier 2 or Tier 3 oil response. Hence the Agency and other important ministries/agencies involved in oil spill response shall be discussed.

5.3.3.1 National Oil Spill Detection and Restoration Agency (NOSDRA)

NOSDRA is established by the National Oil Spill Detection and Response Agency (Establishment) Act No. 15, of 2006.²¹¹ It has the responsibility for preparedness, detection and response to oil pollution. Hence, it is empowered as the lead agency to coordinate and control response to oil pollution in Nigeria. In fact, the objective of NOSDRA is to coordinate and implement the NOSCP.²¹¹

In coordinating and implementing the NOSCP, NOSDRA is mandated among other things, to: establish a viable national operational organization that ensures a safe, timely, effective and appropriate response to major or disastrous oil pollution; identify high-risk areas as well as priority areas for protection and clean up; establish the mechanism to monitor and assist or where expedient direct the response, including the capability to mobilize the necessary resources to save lives, protect threatened environment, and clean up to the best practical extent of the impacted site; and to maximize the effective use of the available facilities and resources of corporate bodies, their international connections and oil spill cooperatives i.e. Clean Nigeria Associates (CNA) in implementing appropriate spill response.

It also has the duty to ensure funding and appropriate and sufficient pre-positioned pollution combating equipment and materials, as well as functional communication network system required for effective response to major oil pollution; co-operate and provide advisory services, technical support and equipment for purposes of responding to major oil pollution incident in the West African sub-region upon request by any neighbouring country, particularly where a part of the Nigerian territory may be threatened; provide support for research and development (R&D) in the local development of methods, materials and equipment for oil spill detection and response.

Another mandate of NOSDRA is to co-operate with the International Maritime Organization and other national, regional and international organizations in the promotion and exchange of results of research and development programme relating to the enhancement of the state-of-the art technology in oil pollution preparedness and response, including technologies, techniques for surveillance, containment, recovery, disposal and clean-up to the best practical extent; establish agreements with neighbouring countries regarding the rapid movement of

equipment, personnel and supplies into and out of the countries for emergency oil spill response activities; determine and ensure pre-positioning of vital oil spill combat equipment at most strategic areas for rapid response; and establish procedures by which the Nigerian Customs Service and the Nigerian Immigration Services shall ensure rapid importation of extra support response equipment and personnel.²¹¹

Further, with respect to coordinating oil pollution response NOSDRA shall, among other things, be responsible for surveillance and ensure compliance with all existing environmental legislation and detection of oil spills in the petroleum sector; receive reports of oil spillages and co-ordinate oil spill response activities throughout Nigeria; co-ordinate the implementation of the Plan as may be formulated, from time to time, by the Federal Government; perform such other functions as may be required to achieve the aims and objectives of the Agency under this Act or any Plan as may be formulated by the Federal Government pursuant to this Act.²¹¹

NOSDRA is mandated to have a National Control and Response Centre²¹¹ to monitor and receive reports of oil spill from Zonal and Control Units of NOSDRA, and coordinate responses. The centre is headed by an officer of the NOSDRA who reports to the Director General of NOSDRA.

NOSDRA is also mandated to impose penalties for oil companies' failure to report oil spills within 24 hours or clean up and remediate spill sites. It also has the mandate to assist in mediating between affected communities and the oil spiller; undertake a post spill impact assessment to determine the extent and intensity of damage and long term effects; and advise federal and state governments on possible effects of the health of the people and ensure that appropriate remedial action is taken for the restoration and compensation of the environment.²¹¹

Furthermore, NOSDRA as the lead agency for oil pollution response management,²¹¹ has the right to make regulations for the purpose of protecting the Nigeria environment. In pursuance to this, NOSDRA promulgated the Oil Spill Recovery, Clean-up, Remediation and Damage Assessment Regulations, 2011. The regulation²¹¹ provides for an on oil spill Joint Investigation Visit (JIV). Upon report of oil spillage, the JIV, made up of representatives of NOSDRA, state ministry of environment and DPR, the company spiller and the affected community shall be constituted to visit the spill site and investigate the cause of the spill and report their findings.²¹¹ However, it is discovered that the lead agency NOSDRA do not initiate or led the investigation. Rather it is the personnel of the oil company that organizes and led the investigation. It supplies technical data about the spill and takes the agencies to the site. Finally, the investigations are carried out long after the spill incident.

5.3.3.2 Other Bodies

In undertaking its duties of responding to tier 2 or tier 3 responses NOSDRA is mandated to co-opt and collaborate with the following ministries and bodies,²¹¹ to wit: the Federal Ministry of Environment; Nigerian Institute of Oceanography and Marine Research; the Federal Ministries of Works; Federal Ministry of Health, Federal Ministry of Transport; Federal Ministry of Information; Federal Ministry of Water Resources; Federal Ministry of Agriculture and Rural Development; Ministry of Communications, Federal Ministry of Aviation (NIMET); Ministry of Science and Technology; Ministry of Defence; the National Emergency Management Agency; the Oil Producers Trade Section (OPTS)/ Lagos Chambers of Commerce; the Nigerian Police Force, State and Local Governments involved; Non-Governmental Organizations (NGOs); Industrial Groups and Academic Organisations.²¹¹

During oil spill response, the Nigerian Institute of Oceanography and Marine monitors the extent of impact in the coastal and marine environment, effectiveness of clean up exercise, and recovery rate of impacted area; advise on least damaging techniques for quick recovery of impacted areas, recommend rehabilitation and restoration methods as well as provide technical and scientific support services to NOSDRA. On the other hand, the Ministry of works provides access roads to the scene, mobilize resources to evacuate affected communities and construct structures to resettle them as well as provide fire services to combat any fire that may arise.

While the Federal Ministry of Health has the responsibility to set up medical outpost, mobilize medical personnel, drugs and relief materials to the affected communities and monitor the effect of the oil pollution on the general health of the community; the Federal Ministry of Information provides up to date information about the spill and accurate reporting of response activities. The Federal Ministry of Transport mobilizes all nearby port facilities to assist in the response and advice on navigability of the water ways. It is the responsibility of the Federal Ministry of Water Resources and the Federal Ministry of Agriculture and Rural Development to provide bore holes for water supply, food and relief materials and provide resources to resettle fishermen affected by the incident. The Federal Ministry of Aviation (NIMET) provides data on weather conditions, the Ministry of Communication assists in setting up communication centres around the scene and international contacts with foreign resource centres; and allocate frequencies to be used by NOSDRA and the centre.

Further, the NEMA supplies relief materials, liaise with the State Agencies to evacuate and resettle affected persons and work alongside NOSDRA in coordinating oil spill emergencies. The Ministry of Science and Technology is in charge of research and development on the local methods for oil spill detection and response, while the Nigerian Police keeps order, protects

workers, property and equipments at the scene and the surroundings. The Ministry of Defence shall assist to evacuate victims, provide additional security, patrol the sea and coastline, make surveillance flights over the scene, monitor oil slick movement, provide vessel for oil recovery and provide transportation to and from the scene of the incident.

Lastly, the Oil Producers Trade Section/Lagos Chamber of Commerce (OPTS) has the responsibility to provide operational and ESI maps of the affected or likely to be affected areas and necessary logistic support services for response as well as assist in securing the services of international organizations in the response efforts. The Industrial Groups, Academic Organisations and others may offer services in assisting to ensure effective response actions, conducting scientific researches on sustainable cleanup strategies and rehabilitation techniques as well as organize, coordinate and ensure safe use of volunteers in the response activities.

It is observed that the NOSDRA Act did not list and assign duties to the Federal Ministry of Petroleum Resources, Foreign Affairs, Nigerian National Petroleum Cooperation, Nigerian Ports Authority and NIMASA,²¹¹ which were given duties in NOSCP. Further, the NOSDRA Act did not specify how NOSDRA would cause cooperation of these ministries/agencies, and what would happen where any ministry/agency fails, to any ministry/agency that fails to cooperate with NOSDRA.

5.4 Concept of Environmental Restoration

Numerous cases of the severe damages caused to the environment by oil pollution abounds, hence the need for environmental restoration. In general terms, restoration refers to the process of returning injured resources to their baseline conditions and replacing the services lost when resources are injured.

In fact, it is the return of the ecosystem to a close approximation of its condition prior to disturbance through reconstruction of antecedent physical hydrologic and morphologic conditions, chemical clean up or adjustment of the environment and biological manipulation including re-vegetation and the re-introduction of absent or currently non-viable species.²¹¹ Thus restoration involves restore, rehabilitate, replace or acquire the equivalent of the injured natural resources and services.²¹¹

The issues that rose with respect to restoration lead to legal liability for oil pollution. The issues are who should pay for the cost involved in pollution clean-up and restoration of the damaged environment; and what should be the standard for acceptable cleanups. In answering this question, the international environmental law principle of “the Polluter Pays” was adopted. Therefore, Legal liability (environmental restoration) is a way of forcing an oil polluter to repair the damage that is caused, pay for those repairs or compensate someone for the damages where such cannot be repaired. Thus, Restoration projects go beyond cleanup activities by restoring injured natural resources or lost services.

5.4.1 Categories of Restoration:

There are two acceptable categories of restoration. They are Primary Restoration and Compensatory Restoration. These measures together, aim to fully compensate the public for the damage incurred as a result of oil pollution.

5.4.1.1 Primary Restoration

Primary restoration is any actions, including natural recovery, meant to return injured natural resources or services to their pre-injury or baseline condition. In some cases, it may

involve active measures that accelerate the recovery of the injured resources, while in some it relies on natural recovery.²¹¹

Thus the options for primary restoration in order of preference include restoring the injured resources directly, replacing the injured resources or acquiring equivalent resources.²¹¹ Changing physical, chemical, and/or biological conditions through substrate replacement or hydrologic modification are also types of primary restoration actions.

Although strategies for primary restoration are numerous, they can be categorized into non intervention, limited level of intervention, full-scale reconstruction, and monitoring and surveillance. For the *non intervention*, the oil is left to degrade naturally. Here, the restoration should seek to assist natural processes to restore the damage inflicted on the environmental habitats or species populations. When applying the *limited level of intervention* (preferable) strategy, the intervention level is minor like planting grasses, trees or shrubs that provide improved structure that enables natural re-colonization. On the other hand, for the *full scale reconstruction* is uncommon. It involves intensive removal of the contaminants (most obtainable), replacement of soils, replanting of habitants and re-introduction of species populations.

In addition to these three strategies, there is also *monitoring and surveillance*, wherein the habitants and species population are monitored in order to ensure that restoration targets are met. This may be done through remote sensing from satellite imagery or air photography or detailed vegetation and species surveys using standard ecological monitoring techniques.²¹¹

5.4.1.2 Compensatory Restoration

Compensatory restoration is any action taken to compensate for interim losses of natural resources or services that occur from date of the incident to recovery.²¹¹ Compensatory restoration generally involves enhancing resources or providing replacement resources. Thus, compensatory restoration activities are intended to replace a specific quantity of lost or diminished services provided by resources from time of injury until base line conditions are achieved. The services may be ecological services or human use services.

Compensatory restoration is necessary because while resources are impaired, they cannot carry out the complete set of functions on which the ecosystem relies. Therefore, compensatory restoration replaces these interim losses by enhancing productivity or access or by providing replacement resources.²¹¹

Further, the total quantity of lost services to be replaced by compensatory restoration partly depends on how rapidly and completely injured resources are restored to their baseline condition through primary restoration.

5.4.2 Legal Framework for Regulating Environmental Restoration

The three strands under which environmental restoration for oil pollution may be carried out are under the rules of international law, statutes, and the Common Law. Thus, the laws regulating environmental restoration would be discussed for the International, United States and Nigeria as well as under the common law.

5.4.2.1 Environmental Regime for Regulation of Restoration under International Law

The world has witnessed major oil pollutions with dramatic consequences. The incident that broke the ice was *Torrey Canyon* oil spill disaster in 1967. The *Torrey Canyon* ran aground

near the Scilly Isles and polluted the UK and French Coastlines. This incident exposed the absence of international agreement on liability and compensation for such oil pollution. In reaction to this unfortunate incident, the international community under the auspices of the IMO enacted conventions to ensure timely and effective restoration of the environment. Consequently, these international conventions and agreements relating to environmental restoration would be discussed.

(a) **Convention on Civil Liability for Oil Pollution Damage (CLC), 1969 Amended 1992**

The Civil Liability Convention (CLC) was adopted in 1969 under the auspices of the IMO in response to the *Torrey Canyon* disaster as the first liability convention for oil pollution. It is a regime that guarantees the payment of compensation by ship owners for oil pollution damages caused by oil pollution incident from their ship. However, a major review was made in 1992 in the form of a stand- alone protocol, which was ratified in 1996. As at April 2014, 133 States, representing 96.7% of world fleet became contracting parties to CLC Protocol 1992.²¹¹

The CLC 1969 restricted itself to oil pollution from ships carrying oil in bulk as cargo,²¹¹ and does not apply to warships or vessels owned or operated by the state for non commercial purposes. However, it would apply to such state owned or operated ship that is used for commercial purposes and such states are deemed to have waived their sovereign immunity in such instances.²¹¹

The 1992 protocol enhanced compensation and widens the scope of application of CLC by changing the meaning of ship, pollution damage,²¹¹ incidence and geographical scope.²¹¹ Thus CLC 1992 covers pollution damage in the Exclusive Economic Zone; spills from sea going vessels constructed or adapted to carry oil in bulk as cargo so that it applies to both laden and

unladen tankers; and includes spills of bunker oil from such ships. It also limits liability for compensation for impairment of the environment other than loss of profit to costs incurred for reasonable measures to reinstate the environment.²¹¹

The CLC makes a ship owner strictly liable for oil pollution damages, except where such oil pollution is as a result of war, natural phenomenon of exceptional character, malicious act of a third party or through government negligence.²¹¹ Thus, liability is channeled to ship owners.

Further, it created uniform international rules and procedures for determining questions of liability and to ensure adequate compensation for victims of oil pollution.

Actions under the CLC are brought in courts of the contracting parties where damage occurred or is threatened to occur. The judgement of the court of a contracting party is enforceable in all the contracting and no contracting party can review such judgement except where the judgment is obtained by fraud or that defendant was not given fair hearing or for the formalities of enforcement of foreign judgement²¹¹. Where claims succeed with respect to an incident, the amount would be distributed among the claimants in proportion to the amount of their established claims.²¹¹ The right to bring an action under CLC lapses after 3 years from the date of the oil pollution incident or 6 years for other matters.²¹¹

Moreover, a ship owner can limit his liability at between 4.51million Special Drawing Rights (SDR) for a ship of 5,000 GT to 89.77million SDR for ships over 140,000 GT by creating a fund under Article V,²¹¹ except where it is shown that the pollution occurred as a result of the ship owner's action committed with intent to cause damage or recklessly with knowledge that such damage is likely to occur.²¹¹ This limit translates to around US\$6.5846 million to US\$126.5757 million, although SDR exchange rates fluctuate daily.²¹¹

The CLC also requires a ship owner carrying more than 2000 tons of oil in a cargo to maintain insurance and other financial security, sufficient to cover the maximum liability for one oil spill. The contracting states are obligated to put laws in place to enforce compliance with this insurance requirement.²¹¹

The CLC is a step in the right direction, and the boldest international step toward enforcing compensation of oil damages by sea going vessels. However, a close look at the provisions reveals that it did not cover oil pollutions on land or from natural gas, and it did not specifically provide for environmental restoration.²¹¹ It is therefore suggested that the CLC should be expanded to include these three aspects. Further, the interpretation of environmental damage is subject to the domestic laws of the state parties. Hence, some claims that are not admissible under CLC are rejected in some states on grounds of non admissibility and granted in other states. A good example is the Erika incident²¹¹ where the Cour de Cassation of Paris stated that compensation for ecological damage depends on the Judicial Process and does not refer to CLC regime and therefore allowed the claims of government authorities and awarded them compensation for ecological damage done to marine environment.²¹¹

(b) **Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND Convention) Amended 1992**

The Fund Convention was created under the auspices of the IMO in 1969, following the *Torrey Canyon* disaster to supplement the liability coverage of the CLC. The 1969 Fund Convention was amended in 1992 and later, following the *Erika* and *Prestige* incidents, a Supplementary Fund Protocol to the 1992 Fund Convention, which provided additional compensation for oil pollution damage of state members to the Protocol, was adopted in 2003.²¹¹

It ensures that adequate compensation is available to persons who suffer damage as a result of oil pollution from ships by providing compensation for oil pollution damages not fully available under CLC because the ship owner is not financially capable of paying the compensation or is exempted from liability or the damage exceeded the limits of his liability; which consequently makes the compensation paid either inadequate or compensation would not be paid at all.²¹¹ It also indemnifies ship owner or his insurer in oil pollution incidents where a ship is in full compliance with international conventions and there was no willful misconduct resulting in the incident.

The 1992 Fund Convention created the International Oil Pollution Compensation Fund, 1992 (1992 Fund), and the maximum compensation payable under the 1992 Fund is SDR 203 million for incidents occurring on or after 1 November 2003, notwithstanding the size of the ship, and SDR 135 for incidents occurring before that date. These are the maximum amounts payable and include the amount actually paid by the ship owner under CLC.

On the other hand, the Supplementary Fund Protocol established the International Oil Pollution Compensation Supplementary Fund 2003 (Supplementary Fund), which provides additional compensation for member states of the 1992 Fund who are parties to the Protocol. The maximum amount is SDR 720 million, which includes the amount paid under the 1992 CLC and Fund Convention.²¹¹

The Fund Convention and Protocol sought to relieve ship owners from unfair liabilities due to unforeseeable circumstances and on the other hand remove liability caps that some member states thought were too low. Thus, they established a statutory system that compelled oil cargo interests in the member parties to pay a levy calculated on the basis of their national share of international oil receipts towards the International Oil Pollution Compensation (IOPC) Fund.

Under the 1992 Fund, contributions are levied on any person that received more than 150,000 tonnes of contributing oil in a member state in one calendar year. For the Supplementary Fund, basis for contribution is same as 1992 Fund. However, it is deemed that each member state received at least 1 million tonnes of contributing oil each year.²¹¹ These contributions cover expected claims, together with the costs of administering the Funds.

The Fund Convention covered same geographical scope as CLC, to wit: it applies also to oil pollution damage suffered in the territory, territorial sea and exclusive economic Zone or equivalent area²¹¹ of the state parties.²¹¹

To be entitled to compensation under the Fund Convention, the damage must result from oil pollution and must have caused a quantifiable economic loss, which the claimant must substantiate by producing appropriate evidence. Therefore compensation here may be claimed for cleanup cost, property damage, and other economic losses of persons that engage in the business fishing, mariculture and tourism. The claims for compensation are brought in the applicable courts of the contracting parties where the damage occurred and the time limitation within which to bring a claim is same as CLC.²¹¹ Further, the Fund shall not pay compensation where pollution damage occurred as a result of act of war, hostilities or insurrection or from a warship or other ships used by government for non commercial purposes; or where the damage resulted from the act or negligence of the party who suffered it.²¹¹

The idea of the Fund Convention, which is not to put the entire burden of oil pollution liability on the shoulders of the ship owners but to share the liability with the cargo owners, that is the oil importers is a laudable one. Thus, any person that suffers oil pollution damage in a member state of the Fund caused by ship can claim compensation from the ship owner, his insurer and the Fund. However, there are difficulties in obtaining a proper assessment and

quantification of damage to the environment because the marine environment does not have a quantifiable market value.²¹¹ Further, the Fund Convention suffered same limitations as the CLC. It did not apply to compensation for gas flaring and oil pollution damages from other sources not sea going vessels carrying oil in bulk, such as on shore facilities or fixed oil installations at sea. Thus, it is suggested that the Fund Convention should be expanded to include oil pollution damages from other sources.

Be that as it may, by 31st December 2000, the Fund had approved the settlement of oil pollution damage claims in about 96 incidents, amounting to more than £263 million.²¹¹ In fact, the Funds have been involved in 149 oil pollution of varying sizes all over the world. In almost all the cases, all claims were settled out of court and over US\$630 million were paid. The *Alfa I* is the first incident taking place in a member state of the Supplementary Fund. It is very unlikely that the incident will exceed the limit under the 1992 Fund.²¹¹

(c) Convention on Civil Liability for Bunker Oil Pollution Damage (BOPC), 2001

The 1992 CLC and 1992 Fund Conventions did not make provisions for damages from oil pollution by other sea going vessel that carry substantial quantities of bunker fuel not as cargo. However, it is a fact that some ships carry bunker oil exceeding the cargo carrying capacity of some oil tankers. Moreover, the quality of bunker oil are less than that carried as cargo and its effect whenever there is a spill, although small, cause significant damages that requires disproportionate clean-up cost.²¹¹ For instance, when in 1997 the 43,000 dwt wood chip carrier *Kure* struck the dock at a loading facility at California and spilt 105 barrels of bunker oil, it took ten days and the sum of US\$47 million to respond and clean up. Also, New Zealand

described the *Rena* incident, where a container vessel grounded and spilt 400 tonnes of fuel oil in 2011, as the worst marine environmental disaster it has had.²¹¹

The International communities, having recognized the need to make a convention to provide for liability and compensation where bunker oil is spilt by all types of sea going vessel other than oil tanker, made the BOPC to take care of this. It entered into force on 21st November 2008 and currently has 64 state members, representing 89.21% of world tonnage.²¹¹

The purpose of the BOPC is to ensure that adequate, prompt, and effective compensation is paid to persons who suffer damage from oil pollution caused by spill of oil carried as fuel in a ship's bunker.

The BOPC has similar features with the provisions of the CLC. Its territorial scope extend to the territory, territorial sea and the Exclusive Economic Zone and applies to damages caused outside the ship by contamination resulting from the spillage of the bunker oil and cost of preventive measures. Further, it is based on strict liability and requires compulsory insurance by a registered owner of a ship of more than 1000GT,²¹¹ and a claimant has right of direct action against the insurer.

However, there are some fundamental differences between them. First, BOPC stipulates persons other than ship owners that are responsible for oil pollution damages by defining ship owner to include registered owner, bareboat charterer, manager and operator of the ship.²¹¹ Second, it did not stipulate the limits of liability of the ship owner but left it to any national or international law applicable to the ship owner or his insurers although in all cases, the limits shall not exceed an amount calculated in accordance with the Convention on Limitation of Liability for Maritime Claims, (LLMC) 1976 as amended.²¹¹

The BOPC is a step in the right direction and is considered to fill the gap left by the CLC regime.²¹¹ It is the only International Legal Instrument that ensures that significant compensation is available to victims of bunker oil pollution arising from ships that are not oil tankers like coasters, reefers, bulk carriers, chemical carriers, container vessels and cruise ships. However, it suffers some limitations, one of which is making limitation of liability of ship owner dependant on differing national and international laws that determines liability amount.

(d) **International Agreements by Oil Tankers Industries**

Although not an international compensation regime, it is worthy to mention the compensation schemes made by the shipping industry in order to address the imbalance created by the establishment of the Supplementary Fund. These schemes are two private agreements introduced by the International Group of P&I Clubs, which entered into force on 20th February 2006.

The Agreements are the Small Tanker Oil Pollution Indemnification Agreement (STOPIA), 2006, and the Tanker Oil Pollution Indemnification Agreement (TOPIA) 2006. These agreements, which were set up to indemnify the Funds for compensations paid above the limits of liability of ship owners under 1992 CLC. In addition they provide for review to be carried out after every 10 years to ensure that the balance between the industries does not exceed 60% for either of them.²¹¹

(i) **Small Tanker Oil Pollution Indemnification Agreement (STOPIA) 2006**

STOPIA 2006 is a voluntary agreement between owners of Small (29,548 GT or less) tankers and their insurers. It applies to all small tanker owners who entered in a P&I Club that is

a member of the International Group and reinsured through the pooling arrangements of the Group.²¹¹

Under STOPIA 2006, the maximum amount of compensation payable by owners of small tankers is raised to 20 million STD per incident. Thus, while the 1992 Fund and the Supplementary Fund provides compensation for claimants under the Fund Convention and Protocol, SOPIA would apply to indemnify the Funds for the difference between the vessel's limits of liability under 1992 CLC and 20 million SDR²¹¹. The indemnity would only apply in an event where oil pollution from a tanker affects a state in which the 1992 Fund convention or the Supplementary Fund Protocol is in force and where liability is imposed on the ship owner under 1992 CLC. Neither the flag of the vessel nor the ownership of the cargo is relevant, provided that the amount of compensation payable exceeds the ship owner's limit under CLC 1992, the scheme will operate even if there is no claim upon the Funds.

The indemnity is payable to the 1992 Fund, and although the 1992 Fund is not a party to the agreement, the agreement created a legally enforceable rights to indemnification for the benefit of the 1992 Fund from the ship owner in states parties to the 1992 Fund Convention or supplementary fund protocol.²¹¹

The first incident involving a vessel under this agreement was the M/T *Solar 1* incident.²¹¹ In this case, more than 30,000 claims for compensation were made and about SDR 10 million (US\$ 13 million), which is double the tanker's limit under CLC was paid.²¹¹

(ii) **Tanker Oil Pollution Indemnification Agreement (TOPIA) 2006**

This is another voluntary agreement which applies to all tankers entered in the P&I Club that are members of the International Group and reinsured through the pooling arrangement of the group. It applies in respect of claims covered by the 2003 Supplementary Fund Protocol and

the parties agreed to reimburse the Supplementary Fund for 50% of any compensation that is paid out in respect of incidents involving tankers entered in the agreement.²¹¹

These agreements which created an indemnification mechanism for the benefit of the Funds are a welcome development that enhanced payment of compensation for oil pollution damages by reallocating liability for compensation between the shipping and oil industries and thus reduce the burden on one industry.

5.4.2.2 USA Legal and Regulatory Framework for Environmental Restoration

In addition to the fines and penalties charged with respect to oil pollution in the United States, there are also various federal and states laws that compel environmental restoration by the responsible party. The Natural Resource Damage Assessment and Restoration Program of the Department of Interior is in charge of this and have developed several laws, regulations and bodies dealing with environmental restoration of oil polluted area. These laws, regulations and bodies shall be discussed.

(a) Statutes Prior to Oil Pollution Act

Several federal statutes regulated oil pollution liability and created a fund to be used for cleanup and natural resources restoration before the Oil Pollution Act. These statutes are:

(i) Clean Water Act of 1972

Oil pollution liability under the Clean Water Act, applied to vessels and facilities and the applicable parties are liable for removal costs²¹¹ and natural resource damages. In relation to this, the liability limits for both single-hull and double-hull vessels/barges is the greater of US\$125/gross ton or US\$125,000 for inland oil barges, as well as US\$ 150/gross ton or

US\$250,000 for other tank vessels/barges. For non tank vessels, it is US\$150/gross ton while for offshore facilities, onshore facilities (including pipelines) and Deepwater Ports, it is US\$50 million. It also created a fund maintained by Federal appropriations.²¹¹

(ii) **The Deepwater Port Act, 1974**

In this Act, liability applies to deepwater ports and vessels operating in their vicinity. The applicable party is liable for cleanup cost and damages²¹¹ resulting from oil pollution. Further, with respect to single-hull and double-hull vessels/barges, the liability limits for oil pollution is the lesser of US\$150/gross ton or US\$20 million, while for deepwater ports is US\$50 million. It also created the Deepwater Port Liability Fund, financed by a per gallon tax on oil transferred at the Deepwater ports.²¹¹

(iii) **Outer Continental Shelf Land Act, 1953 with the Amendment, 1978**

Liability here applies to offshore facilities and vessels transporting oil from offshore facilities, and is in respect of removal costs, natural resource damages, and economic damages, including real and personal property, loss of use of real or personal property, subsistence use, profit and earning capacity and tax revenue. The limit of liability for oil pollution is the greater of US\$300/gross ton or US\$250,000 for single-hull or double-hull tank vessels/barges; US\$35 million for natural resource damages and covered economic damages and unlimited liability for recovery cost for offshore facilities. It further established the Offshore Oil Pollution Compensation Fund financed by a per gallon fee on produced oil.²¹¹

(iv) **Trans-Alaska Pipeline Authorization Act of 1973**

Liability under this Act apply to holders of pipeline right of way and vessels transporting oil from the Trans Alaska pipeline and extend to all damages including clean up costs. Moreover, the holder of right of way is liable to all damaged properties, public or private. Limitation to their

liabilities are US\$14 million for tank vessels/barges, US\$50 million for other damages with respect to onshore facilities (including pipelines) and total removal of pollutant for holders of right of way. The Act also created a fund financed through a lessee fee.²¹¹

(v) **Public Law**²¹¹

The law made any person who or any instrumentality²¹¹ that destroys, causes the loss of, or injures to any park system resource or any marine or aquatic park resource liable to the response cost and damages resulting from such destruction, loss or injury in addition to other liability arising under federal or state law. However, such person would not be liable where the oil pollution is solely as a result of an act of God, war, act or omission of a third party not an employee or agent of such person or by an activity authorized by Federal or State Law.²¹¹

(b) **Oil Pollution Act, 1990 (OPA)**

The purpose of the OPA was to establish limitations on liability for damages resulting from oil pollution, to establish a fund for the payment of compensation for such damages and for other purposes.²¹¹ Thus, it provides for oil pollution liability and compensation. The objectives of its Title I²¹¹ is to ensure adequate funds to provide expeditious federal response to oil spills, ensure paying damages by oil spillers and establish a liability and compensation regime that will serve as a deterrent to potential responsible parties.

In fact, the OPA consolidated existing federal oil pollution laws, expanded authorities within the Clean Water Act and created new provisions regarding oil pollution liability and compensation.²¹¹

First, according to Section 1002,²¹¹ the responsibly parties are liable for any discharge of oil or threat of discharge from a vessel or facility to navigable waters, adjoining shorelines, or the

exclusive economic zone of the United States. The responsible parties for the different sources of oil spills are: for vessels, any person owning, operating or demise chartering the vessel; onshore facilities not pipelines, the person owning or operating the facility but not the government authority owner that transfer possession and right to use to another person by lease, assignment or permit; Offshore facilities (not a pipeline or deepwater port license), the lessee or permittee of the area where the facility is located or the holder of the right of use and easement granted under the applicable laws in the area, apart from government agencies that transfers possession and right to use the property as owner to another person through lease, assignment or permit; Deepwater ports, the licensee; pipelines, any person owning or operating the pipeline; and for abandoned vessel, onshore facility, offshore facility, deepwater port or pipeline, the person that would have been the responsible party immediately prior to the abandonment of the vessel or facility.²¹¹

In addition, OPA defined facility broadly and included pipelines and vehicle.²¹¹ OPA imposes strict liability on responsible parties²¹¹ and made them liable for all cleanup costs and damages incurred in relation to the oil pollution, whether by government or private parties.²¹¹

Further, it broadened the scope of damages that responsible parties would be liable for to include damages for: injury to natural resources,²¹¹ loss of real or personal property and resultant economic losses,²¹¹ loss of subsistence use of natural resources,²¹¹ loss of revenues resulting from destruction of property or natural resource injury,²¹¹ lost profits and earning capacity resulting from property injury or natural resource injury,²¹¹ and cost for providing extra public services during or after oil pollution response.²¹¹ The researcher believes that by requiring the responsible party to pay compensation for interim losses provides incentive for them to

timeously restore the injured resources. It also provided defenses for these liabilities in cases of act of God, act of war, and act or omission of third parties.²¹¹

In addition to the foregoing, the OPA also made provisions for:

(i) **Liability Limits:**

Further, OPA provides liability limits for environmental restoration applicable on the basis of sources of the oil pollution. However, liability limits does not apply to oil pollution incidents caused by responsible party's gross negligence, willful conduct, or violation of an applicable safety regulation; or where the responsible party fails to report the incident or cooperate with response officials. The Act went on to require the President to issue regulations to adjust the liability limits at least every three years to take into account changes in the consumer price index.²¹¹

Under the OPA, for vessels, liability limits is based on the size of the vessel and encompasses both removal costs and other damages. For tank vessels whether single or double hull, if greater than 3000 gross tons, it is the greater of US\$1200 per gross ton or US\$10 million, and if vessel is less than or equal to 3,000 tons, it is the greater of US\$1200 per gross ton or US\$2 million. For other vessels, the limit is the greater of US\$600 per gross ton or US\$500,000.²¹¹

In 2006, the Coast Guard and Maritime Transportation Act 2006²¹¹ adjusted the liability caps. It relates liability limit to the safety structure of the vessel. Thus, for tank vessels it distinguished for between single and double hull. For single hull vessels greater than 3,000 gross tons, the greater of US\$3,000 per gross ton or US\$22 million; while for vessels less than or equal to 3,000 gross tons, the greater of US\$3,000 or US\$6 million. For double hull vessels greater than 3,000 gross tons, the greater of US\$1,900 per gross tons or US\$16 million, while for vessels

less than or equal to 3,000 gross tons, the greater of US\$1,900 per gross ton or US\$4 million. For other vessels, it is the greater of US\$950 per gross ton or US\$800,000. Further, in 2009, the Coast Guard made a further adjustment to wit: for single hull tank vessels it is the greater of US\$3,200 per gross ton, or US\$23.5 million for vessels more than or equal to 3,000 gross tons, and US\$6.4 million if vessel is less than 3,000 gross tons; for double hull tank vessels, it is the greater of US\$2,000 per gross ton, or US\$17.1 million if vessel is more than or equal to 3,000 gross tons, and US\$4.3 million if vessel is less than 3,000 gross tons; and for other vessels, the greater of US\$1,000 per gross ton or US\$854,000.²¹¹

For Offshore facilities, the limit for other costs is US\$75 million, plus unlimited removal costs; and for onshore facilities, the limit, which includes removal cost is US\$350 million. However, for Deepwater ports, the liability limits which includes removal costs under OPA was US\$350 million, but the department where USCG is operating, adjusted this limit to US\$62 million in 1995 and US\$87 million in 2009.²¹¹ Further, for the purposes of liability limits, Mobile Offshore drilling units are first treated as tank vessel and if the removal costs and damages exceed the liability cap, it would be deemed to be an offshore facility for the excess amount.²¹¹

(ii) **Financial Responsibility**

OPA requires vessels and offshore facilities to maintain evidence of financial responsibility.²¹¹ This is to ensure that responsible party for vessels or offshore facility oil pollution incidents would provide funding for environmental restoration. The levels of financial responsibility are related to current liability limits for the various sources of oil pollution.²¹¹ However, there is no financial responsibility requirement for onshore facilities.

The levels of financial responsibility required are directly tied to the corresponding liability limits for vessels. However, the responsible party is required to demonstrate the maximum amount of liability to which he/she/it could be subjected to under the OPA.²¹¹

For offshore facility in federal waters that has unlimited liability for removal costs, the financial responsibility for the responsible party is US\$35 million, unless the President determines a greater amount not exceeding US\$150 million. Currently, the financial responsibility amount is between US\$35 million and US\$150 million.²¹¹

With respect to implementation of the provisions relating to financial responsibility, while the Coast Guard's National Pollution Funds Centre (NPFC) see to that of Vessels, the Bureau of Ocean Energy Management, Regulation and Enforcement handles that of offshore facilities.

Finally, non compliance with the requirement for financial responsibility, such person shall be liable to the US for an administrative civil penalty not exceeding US\$25,000 per day of violation. The person may also in addition or in lieu of the civil penalty, be liable on the request of the Attorney General to any relief as the public interest and equities may required, granted by the district court of the US. The relief may include an order terminating such persons operations in the US.²¹¹

(iii) Federal and State Trustees

The OPA²¹¹ requires the President and State Governors to designate officials to serve as trustees for natural resources²¹¹ on behalf of the public. Most states of the US and Indian Tribes have designated officials to be trustees. The natural resource trustees are responsible for assessing the natural resources damages caused by oil pollution.

The Federal agencies that form the natural resource trustees are the US Department of Interior, National Oceanic and Atmospheric Administration, US Department of Defense, US Department of Agriculture, and US Department of Energy.²¹¹ The Governors of the states and Governing bodies of the Indian tribes have designated agencies to be trustees, and these trustees join the federal trustees whenever oil pollution incident affects any natural resources entrusted to them. In the state of Texas, these agencies are the Texas General Land Office and Texas Parks and Wildlife Department.²¹¹

Depending on the stage of restoration, and the nature of the injury, loss or threat, the trustees may conduct a preliminary survey of the area that are or anticipated to be affected by oil pollution; cooperate with the OSC in coordinating assessments, investigations and planning; carry out damage assessments; or devise and carry out a plan for restoration, rehabilitation, replacement, or acquisition of equivalent natural resources.²¹¹ The trustees also have the authority to request the Attorney General to seek compensation from Responsible party for the damage assessed, cost of assessment and restoration planning, as well as participate in negotiations between US and responsible party to finance or conduct assessments and restoration of injured natural resources or protect threatened natural resources.²¹¹

(iv) **Natural Resource Damage Assessment**

This is a process created by the OPA for assessing the damages caused by oil pollution. Natural resource damages are monetary payments for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such oil pollution.²¹¹ The payments are considered as compensations, not punitive damages and are intended to cover the past injury and residual costs or losses beyond whatever restoration can be achieved through remediation.

It is the duty of the trustees to assess and recover damages to trust resources resulting from oil pollution.²¹¹ Thus, the trustees prepare a natural resource damage assessment that seeks to quantify oil pollution damages to public natural resources, the services they provide and the public's lost use of those resources.²¹¹

The goal of natural resource damage assessments is to make the environment and public whole from injuries to natural resources and services resulting from oil pollution. The basis of natural resource damage claims is the restoration of the public resources, which have three major parts, which are: primary restoration comprising the cost of restoring, rehabilitating, replacing or acquiring the equivalent of the damaged natural resources; compensatory restoration – interim lost or diminution value of injured natural resources pending recovery; and reasonable cost of assessing these damages. Further, compensatory liability is in terms of restoration and not in terms of dollar value lost.

Basically, the process of Natural Resource Damage Assessment are- determine whether injury to, or loss of, trust resources has occurred; ascertain the magnitude of the injury or loss; calculate the dollar value of the injury, loss and/or cost of restoration; and develop a restoration plan.

Under the Natural Resource Damage Assessment (NRDA) regulations²¹¹ under the OPA made by the National Oceanic and Atmospheric Administration (NOAA), the process is contained in three phases of natural resource damage assessment. They are the pre-assessment, restoration planning, and restoration implementation.

Pre-assessment Phase

In this phase, the trustees would determine whether they have the jurisdiction to conduct an assessment and if they have, whether it is appropriate to do so. This they do by determining if

there has been an oil pollution incident that is not excluded from liability under OPA and whether there are risks to natural resources under their trusteeship.

Further, the trustees would on the basis of early available information, make a preliminary determination on whether natural resources or services have been injured. The trustees would proceed with the assessment where the injury is expected to continue, response actions are not expected to handle the injuries, and there exists other feasible restoration alternative to handle the injuries.

If they decide to conduct an assessment, they would issue a “Notice of Intent to Conduct Restoration Planning”²¹¹ and thereafter, open a publicly available administrative record²¹¹ to document the basis for their decisions throughout the assessment.

Restoration Planning Phase

This phase which has two stages is concerned with evaluating potential injuries to natural resources and services and determining the need for and scale of restoration actions. The two stages are injury assessment and restoration selection.

The purpose of *injury assessment* is to determine the nature and extent of injuries done to natural resources and services. Thus, once the trustees determines that injuries have been done to natural resources or services, they would go on to quantify the degree, spatial and temporal extent of the injury vis-a-vis the baseline condition. The trustees may quantify the injury in terms of reduction in services provided the natural resources or an amount of services lost as a result of the oil pollution.

After evaluating the injuries done, the trustees would go on to conduct *Restoration Selection*. The first thing they do is to consider the restoration alternatives that are needed to restore the environment. The restoration actions include both primary and compensatory

restoration. The trustees would identify the types of restoration actions that would provide natural resources and services of comparable type and quality as those provided by the injured natural resources. Thereafter, they would scale²¹¹ those restoration actions using the service-to-service or resource-to-resource approach and valuation approach.²¹¹

The trustees would select the preferred restoration alternative/s considering among other things such actions' cost effectiveness, success rate and effect on public health and safety. Thereafter, the trustees would prepare a Draft Restoration Plan, which is given to the public for review and comments. The trustee then develops a Final Restoration Plan taking into consideration, public's comments on the Draft Restoration Plan.

Restoration Implementation Phase

In this final phase, the trustees would open a new record wherein they would accurately and completely record all restoration implementation phase decisions, actions and expenditures; and any modifications made to the Final Restoration Plan. The trustees have to recover damages from the responsible party. In some cases, the responsible party may enter into an enforceable agreement to pay the cost of restoration assessment and implementation, or to implement the restoration plan and reimburse the cost of assessment and trustee oversight cost. Where no such agreement is made, the trustee would present a demand to the responsible party to either implement the Final Restoration Plan subject to trustees' oversight and reimburse cost of assessment and oversight, or advance specific sum representing the assessment cost and trustees' estimate of direct and indirect cost of developing and implementing the Final Restoration Plan. If the responsible party fails to comply with this demand within 90 calendar days or denies all liability for the claim, the trustees may commence an action in court against the responsible party

or guarantor or seek compensation from Oil Spill Liability Trust Fund. However, it must file the actions or claim within 3 years after the Final Restoration Plan.²¹¹

Actions undertaken by Federal Trustees to restore the natural resources or services impacted by oil spill are subjects to National Environmental Policy Act 42 U.S.C. §4321 *et seq.*, and its implementation guiding regulations 40 C.F.R Part 1500. Consequently, they are expected to produce environmental impact statement (EIS) with respect to their actions especially relating to preparation of environmental documentation which are expected to have significant impacts on the quality of the human environment.

(v) **Oil Spill Liability Trust Fund (OSLTF):** the OPA created the OSLTF in order to make federal funds available for environmental restoration of oil pollution sites where the responsible party is unable to pay for clean up and damages or is not known.

The OSLTF may be used to pay costs of: responding to and removing oil pollution; natural resources damage assessment, development and implementation of restoration plan; claims for uncompensated removal costs and damages; net loss of government revenue and increased public services; and federal administrative and operational costs and US\$25 million per year for USCG operational expenses.²¹¹

The OSLTF is funded by damages recovered for damage to natural resources,²¹¹ interests on the Fund, fines or civil penalties collected, and taxes.²¹¹ Further, the balances from other federal liability funds were transferred into the OSLTF.

The OSLTF is managed by the National Pollution Funds Centre (NPFC), an office within the USCG.²¹¹ OSLTF claims process is regulated²¹¹ and amount that can be awarded for each incident is limited. The maximum amount per incident shall not exceed US\$1 billion and US\$500 million for natural resource damage claims.²¹¹ Costs incurred beyond this limit may be

addressed in several other ways, for instance by applying state law. It is only the Natural Resources Trustees that may submit natural resource damage claims to the NPFC.

Prior to OSLTF, private parties found it difficult to recover damages for oil pollution. The creation of OSLTF made it possible to respond to oil pollutions in a prompt way and reimburse claims if the responsible party does not pay or is not known, and is also very important considering the fact that about 40% of oil pollution in the US waters are “mystery” spills.²¹¹

From the foregoing, it is clear that OPA strengthened existing liability provisions and thereby provide a greater deterrent to oil industries. Since the OPA, spill occurrence and volume have reduced substantially.²¹¹

(c) **USA States Laws**

The OPA did not preempt states from imposing additional liability or requirements relating to oil pollution or establishing analogous state oil spill funds.²¹¹ The state laws and funds would supplement federal liability frame work under OPA when necessary.

Consequently, the 24 US coastal states have their laws which set out standards regarding oil pollution liability, financial responsibility, compensation and cleanup. Discussions here would be under financial responsibility requirements, liability limits for cleanup and damage, and other liabilities.

Financial Responsibility Requirements

Four of the US coastal states did not require evidence of financial responsibility. They are Alabama, Connecticut, Georgia, and Hawaii. While Maine, Massachusetts, Mississippi, New Hampshire, New Jersey, North Carolina, Pennsylvania, and South Carolina, they require only Federal Certificate of Financial Responsibility; Florida, and Texas require evidence of financial

responsibility of OPA 1990 amount, which is for tankers over 3,000 gross tons, the greater of US\$1,200 per gross or US\$10 million. On the other hand, Louisiana, New York, Oregon, and Rhode Island states require both Federal Certificate of Financial Responsibility and evidence of financial responsibility of OPA 1990 amount.²¹¹

Further, six of the coastal states have individual requirements for financial responsibility. Alaska requires tank vessel owners to show proof of financial responsibility of the greater of US\$337.50 per incident per barrel of crude oil storage capacity or US\$112.5 million and the greater of US\$112.50 per incident per barrel of non-crude oil storage capacity or US\$1.125 million subject to a maximum of US\$39.375 million. California requires evidence of financial responsibility of US\$1 billion while Delaware requires for vessels over 300 gross tons, US\$150 per gross ton for non tank vessels; and the greater of US\$300 per gross ton or US\$250,000 up to a limit of US\$30 million for tank vessels. While Maryland State requires a bond showing financial backing for US\$500 per gross tons; the State of Virginia requires proof of financial responsibility of US\$500 per gross ton in addition to production of Federal Certificate of Financial Responsible. Finally, Washington requires evidence of financial responsibility of US\$500 million for tank vessels carrying oil in bulk.²¹¹

Liability Limits for Cleanup and Damage

Most of the US Coastal States have unlimited liability for clean up and damages for oil pollution. Only a few provide limited liability for cleanup and damages which is mostly the same as their financial responsibility requirement. Florida, Louisiana, New York and North Carolina limits liability to OPA 1990 amount which is for tank vessels over 3000 gross tons, the greater of US\$1,200 per gross ton or US\$1 million. Texas has the same liability limit for natural resource damages but limits liability for cleanup and other damages to US\$1 million for vessels of 300

gross tons or less that do not carry oil as cargo, US\$5 million for vessels of 8,000 gross tons or less, and US\$600 per gross ton for vessels greater than 8,000 gross tons. New Jersey provides for unlimited liability for cleanup and US\$150 per gross ton for damages except where there is willful conduct or negligence on the part of the responsible party. Virginia also provides for unlimited liability for cleanup cost and limits liability for damages to the greater of US\$500 per gross ton and US\$10 million.²¹¹

Other Liabilities

Most US Coastal states do not have other liabilities. However, Alabama made the responsible party liable for civil damages for reasonable costs to prevent, minimize, or clean up any damages resulting from wrongful act, omission or negligence and also awards punitive and compensatory damages for willful conduct as well as an additional amount to restock waters or replenish wildlife affected by the oil pollution. Also, Florida provides that natural resources damages shall not be less than US\$1 or greater than US\$1,000 per gallon of oil spilt or equivalent unit as determined by the square footage of habitat impacted.²¹¹

While in Louisiana, private claimants can seek up to US\$1,000 per day of oil pollution; responsible parties in Mississippi that violate the order of state officials to remove oil and caused harm to wildlife and/or fish as a result shall pay all costs necessary to restock them.²¹¹ Further, in New Hampshire, a responsible party who does not comply with state orders is liable for costs up to twice the cost spent by the state to investigate, remediate and cleanup the oil pollution.²¹¹ Oregon made damage liability up to the amount of damages where there is willful or negligent discharge of oil.²¹¹ Finally, Washington state made natural resource damage liability determined by a state compensation schedule of between US\$1 – US\$50 per gallon of oil spilt, depending on the characteristics of the oil and the sensitivity of the area affected.²¹¹

5.4.2.3 Nigerian Mechanisms for Regulating Restoration of Impacted Environment

In Nigeria, several statutes made provisions for environmental restoration. However, majority of these statutes provide for compensation for oil pollution with respect to acquisition of land or landed property and consequently, make only tangential reference to compensation for oil pollution as it deals primarily with acquisition rather than injurious affection of oil pollution. Be that as it may, these statutes shall be discussed hereunder.

(a) **Environmental Guidelines and Standards for Petroleum Industry (EGASPIN), 1991 (as revised 2002)**

This is a non binding guideline issued by DPR which forms basis for most environmental regulations of oil industry. It provides for the restoration of impacted sites and made oil spiller responsible to clean up the site and restore it to its original state,²¹¹ as well as to monitor impacted site and restorative activities. However, the DPR must certify any chemical to be used for oil spill cleanup in the territorial waters, but not coastal or inland waters before its use.²¹¹ Furthermore, it requires oil industry operators to keep a register of Potentially Polluted Sites (PPS) or Past Impacted Sites (PIS), which sites should be cleaned up, remediated and certified by the DPR.

Further, it requires DPR to take actions to safe guard human health and welfare in situations where there is inadequate response by the licensee in an oil pollution incident. However, the DPR would recover all the expenses they reasonably incurred from the licensee.

EGASPIN also requires an operator to take prompt and adequate steps to contain, remove and dispose of oil pollution discovered within his area of operation, whether or not the source is

known. In fact, clean up should commence within 24 hours of oil pollution and notwithstanding the extent of the oil pollution, there should be no visible sheen after the first 30 days of the incident.²¹¹ This regulation is observed more in disobedience than in obedience, as there are regular delays in carrying out containment and cleanup process.

It went further to stipulate that such an operator shall be reasonably compensated for the damages incurred as a result of such oil pollution from government funds or oil industry funds established for that purpose.²¹¹

Finally, EGASPIN made an oil spiller liable for compensation and damages for oil pollution. The compensation and damages are determined by direct negotiation between the oil operator and the landlord affected. If negotiation fails, other methods, such as arbitration and legal adjudication shall be used.²¹¹

The provisions of EGASPIN did not contain a comprehensive or defined pattern of restoration. What amounts to restoration to original state cannot be appropriately quantified. Thus it is suggested that it is necessary for Nigerian government to have a law on the specific acceptable level of restoration or cleanup of oil pollution impacted sites. Further, it confers all the powers with respect to its monitoring compliance and enforcement on the DPR. This is not healthy as the successes of its implementation would depend on the vision and capabilities of the Director, Petroleum Resources.

(b) **Petroleum Act, 1969**

The Petroleum Act, though the major Act regulating oil exploration, production and refining in Nigeria made no provision with respect to environmental restoration. It only made provision for the payment of fair and adequate compensation by holders of an oil exploration

license, oil prospecting license or oil mining lease for the disturbance of surface or other rights to owners or rightful occupants of the licensed or leased land.²¹¹

However, the Petroleum (Drilling and Production) Regulation 1969, a subsidiary legislation to the Petroleum Act made provisions guiding compensation and environmental restoration. First, it made licensee or lessee that cuts protected and productive tree, or unreasonably interferes with a person's fishing rights liable to pay a fair and adequate compensation to the owner of the tree or fishing rights.²¹¹

The Regulation went further to enjoin licensees and lessees to adopt all practical measures including provision of up to date equipment to prevent oil pollution of Nigerian waters. Further, it provides that where oil pollution occurs, the licensee or lessee should take prompt action to control and if possible, end the oil pollution.²¹¹

It is submitted that this regulation, apart from urging the oil polluter to control or end the oil pollution incident, did not expressly mandate the oil polluter to restore the impacted environment. There was no clear mandate to clean up the impacted site under this regulation.

(c) Oil Pipeline Act, (OPA) 1965

OPA provides for payment of a fair and adequate compensation by holder of oil pipeline license to owners or occupiers of property for damages arising from leakage or breakage of oil from the pipeline or for any injurious affectation of any land resulting from the oil pipeline not otherwise made good. The parties are to reach agreement on the amount of compensation payable. If they fail to agree, the matter would go to court.²¹¹

The Court is enjoined to award such compensation as it considers just taking into consideration the damages done to any buildings, crops or profitable trees, disturbances or

damages suffered as a result of holder of pipeline license's negligence, and loss in value of the land or interests in land.²¹¹

Again, OPA failed to make a specific provision with respect to environmental restoration of oil pollution impacted sites. It only made provision for payment of compensation to owners of land/property for damages suffered as a result of injury to land/property but did not make it mandatory for the restoration of the land itself.

Further, the OPA stipulates that where the interest affected is that of a local community, the court may order the compensation to be paid to any chief, headman or member of that community of behalf of the community or in accordance with a scheme of distribution approved by the court or that it be paid into a fund to be administered by a person approved by the court on trust for the application of the general, social or educational benefit and advancement of that community of any section thereof.²¹¹ The OPA ought to have stipulated how the compensation received here must be mandatorily applied, instead of leaving it at the discretion of the persons to whom it is paid.

Finally, according to OPA, the payment to any person to whom any compensation shall be paid or the payment into court of any compensation upon a decision of the court shall effectually discharge the person making such payment from seeing to the application or being answerable for the misapplication of that compensation.²¹¹ By this provision, the OPA left the application of the money to the land/property owner, who knows next to nothing about environmental restoration of oil pollution impacted sites.

(d) **Assessment of Damage in Nigeria and Compensation Payable**

Major oil spills can take several years to clean up. For example, the United Nations estimates that the restoration process in Nigeria's Niger Delta could take up to 30 years with a projected cost of US\$1 billion in the first five years.²¹¹ This illustrates the fact that the costs of clean-up, restoration and reclamation are often enormous and far-reaching. Hence, international law places a duty on the multinational companies to pay for such clean-up costs. For example, the UN recommended that Shell should set up an Environmental Restoration Fund to support clean-up and restoration in the Niger Delta.²¹¹

Reports from Shell Petroleum Development Company²¹¹ and other oil companies in Nigeria is to the effect that some form of restoration is carried out in the Niger Delta, such as planting seeds in the mangroves, replacement of destroyed materials and rehabilitation. However, the present level of degradation in the Nigeria Niger Delta region seems to agree with the general assumption that no restoration activities goes on in the region.²¹¹

The Nigerian statutes did not specifically mandate oil polluters to restore the environment, albeit, primary restoration. Some of the statutes deal with compensatory restoration and they require that a "fair and adequate" compensation be paid for oil pollution damages only. However, there is no statutory definition of fair and adequate compensation. Consequently, the Court of Appeal in the case of *Shell Petroleum Development Company v. Farah*,²¹¹ stated that to be fair and adequate, such compensation should restore the person suffering the loss as far as money can do that, to the position he was before the loss or would have been but for the loss.

According to Section 11 of the Oil Pipeline Act, where the amount of compensation cannot be agreed between the victim of oil pollution and the licensee or lessee, it shall be fixed by the court in accordance with the relevant sections of the Act.

Further, by Section 20(3) of Oil Pipeline Act the court shall determine the quantum of compensation payable for environmental damage from oil pollution by an assessment of the affected area. The evaluation is carried out by experts in various fields and the evaluation is always scientific. In the case of *Seismograph Services v. Ogboni*,²¹¹ the damages claimed by the Plaintiff were dismissed for want of expert evidence to prove them. In conducting the valuation, full information of the conditions of the affected area before and after the oil pollution incident is required.

Section 11 of Oil Pipeline Act encourages informal/non judicial compensation system via negotiation. It is only when this fails that a party can go to court. The issue of determining compensation payable through valuation applies in court cases. In cases of informal/non judicial compensation system, the statutes did not specify the scope of what can be covered by compensation, who would determine what is fair and adequate – the government or the oil company, as well as the criteria for measuring fairness and adequacy. This it is believed left these issues at the discretion of the parties involved and left room for differing interpretations and application that would result to different outcomes even with respect to the same oil pollution incident.

Moreover, the amounts of money paid under the informal/non judicial system are also causes for concern and the system lacks transparency. First, the amounts paid are not made public, and it is not clear to whom they are paid. Second, there is no transparency about the basis on which the amount is calculated and how individual or communal compensation is divided.²¹¹ Thus, it becomes inevitable that many damages are either not adequately covered or not covered at all under the informal/non judicial compensation system.

The quantum of compensation payable is dependent on the magnitude of ecological disturbance from the incident. Consequently, the factors considered in determining compensation payable are: the population and the type of the community impacted, the size of the crops affected – whether they are seedling, medium or mature, the area polluted – whether it is an area of high value, time of the year – whether it occurs in dry or rainy season, and the fact that pollution at times act as fertilizer and would thus be to the advantage of the victims in future.²¹¹ Clear from this that compensation for oil pollution is narrowed down in terms of buildings, crops or profitable trees, loss of fishing rights and loss of value of land. It did not address long-term damages to livelihood or injury to health.

Compensation for oil pollution in Nigeria is dependent on government guidance that specifies items for which compensation will be paid, and the standard amount payable. Oil pollution compensation is fixed by the Oil Producers' Trade Section of Lagos Chamber of Commerce and Industry (OPTS)²¹¹ based on government compensation rates. In 1997 the OPTS recommended N15,860 per hectare of land while the 1995 official rate was N1,375. However, the World Bank concluded based on annual rent of N5,000 that the amount of compensation for land should be at least N50,000 per hectare.²¹¹ The rate was set in Lagos without involving the affected communities. Thus, the oil polluter plays a significant role in setting the terms of compensation.²¹¹

In addition to the foregoing, oil polluters are exempted from paying compensation once the oil pollution is as a result of sabotage.²¹¹ Oil companies in Nigeria catch on this to avoid payment of compensation to victims of oil pollution. Moreover, it is the oil companies that are responsible for providing oil pollution data to the Department of Petroleum Resources. Consequently, there is nothing to prevent them from reporting oil pollution incidents resulting

from equipment failure such as rupture of pipelines due to deterioration as sabotage.²¹¹ Thus, oil companies have used the issue of sabotage as a means for depriving victims of oil pollution damages of their genuine demand for compensation.

Under Regulation 23 of the Petroleum (Drilling and Production) Regulation, before a victim can get compensated must establish that the operator exercised his rights unreasonably. This condition it is submitted would be hard for the poor and illiterate fisherman to prove considering the technicality involved in the operations of the oil industry.

Thus, it is clear from the foregoing that oil companies in Nigeria have several avenues under the Nigerian laws to dodge payment of compensation for oil pollution. Even when they agree to pay compensation, there are issues as to the extent of areas polluted, the categories of damage to be compensated for, the rate to use and who should be paid.

In Nigeria, compensations are not just paid by oil polluters even when there is an overwhelming evidence of damages to victims resulting from oil pollution, but are paid reluctantly after a protracted negotiation and expensive law suits²¹¹ which the victims most times cannot afford.

It has been observed that there are flaws in the payment of compensation. That even where the oil polluters undertake to pay, most often, the oil polluters determine the quantum of compensation to be paid. Also, the oil polluters pay for surface rights like farm crops and not for the land itself and only to identifiable landlords, leaving occupiers and lessee without any remedy. This was the case in the oil pollution incident in Idoho-Eket, Akwa-Ibom State in January 12, 1998, the oil polluter presided over the ultimate process of determining the quantum of compensation payable to aggrieved individuals and communities, notwithstanding that the

entire claim process failed to take into account immediate, short and long term damage of oil pollution.²¹¹

Thus, in reality, many damages are either inadequately covered or not covered at all by the non judicial compensation system. Moreover, only pittance gets to the victim of oil pollution at the end of the day as the substantial part of the compensation that the oil polluter agree to pay are also usually hijacked by the elites in the community.²¹¹ It is clear from the foregoing that payment of compensation for oil pollution damages in Nigeria is plagued by problems of due process and difficulties in interpreting series of overlapping statutes, combined with rules developed through common law.

Further, the paltry rates set by OPTS, the imbalance in power and information, and the process of negotiation have seriously disadvantaged many communities and persons and undermined their rights to effective remedy for oil pollution damages. This has led to violence in the Niger Delta region as most victims see violence as the only means of extracting compensation from the oil polluters.²¹¹

5.4.3 Analysis of the Common Law Principle on Environmental Restoration

Modern environmental laws have their roots in the common law particularly the torts of public and private nuisance, negligence, trespass and the rule in *Rylands v. Fletcher*.²¹¹ In the 19th Century, the common law afforded an excellent tool towards environmental protection. Remedies available under common law of torts include injunction, compensation, damages, declaration and restitution. The general principle in law of tort is *restitutio in integrum* meaning compensation to the full amount. However, in all the regimes already discussed - the

international, the US as well as Nigerian oil pollution liability system, the tortfeasor is not exposed to full liability.

Currently, actions for environmental restoration of oil pollution impacted area can be instituted under these torts.

Private nuisance is the unlawful interference with a person's use or enjoyment of land or some rights over, or in connection with it.²¹¹ To succeed, the plaintiff must show evidence of proprietary right as well as satisfy the court that the defendant is not using his property reasonably.²¹¹

On the other hand, public nuisance is one which materially affected the reasonable comfort and convenience of a life of a class who come within the sphere or neighbourhood of its operation; the question whether the number of persons affected is sufficient to constitute a class is one of fact in every case and it is sufficient to show that a representative cross section of that class has been so affected for an injunction to issue.²¹¹ For an individual claim to succeed, the plaintiff must show that the damage he suffered is over and above that suffered by others in the locality.

Action in nuisance is very restrictive because the plaintiff must show that he has *locus standi* to bring the action. Further, nuisance is not actionable per se. Thus, in *Oronto Douglas v. Shell Petroleum Development Co. Ltd & 5 Ors*,²¹¹ where the plaintiff sought an order of court to *inter alia* direct the defendant to comply with the Environmental Impact Assessment Act with respect to its Liquefied Natural Gas Projects, the court struck out the claim and held that the claim is baseless because the plaintiff has no *locus standi* to institute the action since he has not shown prima facie evidence that his right was affected or that any direct injury was suffered by

him, or that he suffered any injury which is more than that suffered by the generality of the people.²¹¹

With respect to action in public nuisance in Nigeria, where there is no personal injury suffered by any person above that suffered by other members of the public, private citizens cannot sue in public nuisance without obtaining the leave of the Attorney General or without joining him as a party. Thus, in *Amos & Anor v. Shell B. P. Petroleum Development Co. of Nig Ltd & Anor*,²¹¹ the court in response to Plaintiffs' claim in nuisance against the defendant for constructing a dam across their creek which led to the flooding of their farms, held that since the creek is a public waterway, blocking it constitutes public nuisance and that for plaintiffs to succeed, they must prove that they have suffered damages peculiar to them. This position was reversed by the Supreme Court in *Adeniran & Anor v. Inter-Land Transport Limited*²¹¹ where it held that Section 6(6) of 1979 Constitution entitles private citizens to sue in public nuisance with obtaining leave of the Attorney General or without joining him as a party.

Negligence is the complex concepts of duty, breach and damage thereby suffered by the person to whom the duty was owed.²¹¹ It is more than careless conduct. For an action under negligence succeed, the plaintiff must show that the defendant oil company owed him a duty of care, that the duty was breached and that the damages he complains of is a result of that breach.²¹¹

With respect to trespass, a victim of oil pollution who owns or is in rightful possession of land can sue for any unjustifiable intrusion by another person into the land. Trespass is actionable *per se*. Consequently, action in trespass resulting from oil pollution is highly limited and restrictive. However, in *Southport Corporation v. Esso Petroleum*,²¹¹ where oil from defendant's tanker polluted the plaintiff's shore, the court held defendant liable for trespass.

According to the rule in *Rylands v. Fletcher*, the person who for his own purposes brings unto his land and collects and keeps there anything likely to do mischief if it escapes, must keep it at his peril, and if he does not do so, is prima facie answerable for all the damages which is the natural consequence of its escape. This rule imposes strict liability on defendants. Thus, in *Umudje v. Shell BP Nig. Limited*,²¹¹ the Supreme Court applied this rule and held the defendants/appellants liable for the damage done to the plaintiffs/respondents' ponds and lakes.

However, the defendant can avail himself where the escape is as a result of an act of God, act or default of the plaintiff, plaintiff's consent, independent act of third party and statutory authority. Thus in *Ikpede v. Shell BP Development Company of Nig. Ltd*,²¹¹ the defendants were held not liable under this rule because their pipeline was laid pursuant to a license issued under the Oil Pipeline Act, that is, statutory authority.

These defences notwithstanding, with respect to strict liability, there is a built-in incentive for oil companies to invest in better oil pollution prevention technologies. The reason is that there is no need to determine the cause of the oil pollution. Once oil pollution occurs, the polluter would pay for damages arising there from.

In Nigeria, negligence is the most frequently used tort to pursue action against oil pollution. The defendant would be liable if existing levels of care are not met and the plaintiff who bears the burden of proof must not only show that the damages occurred, but also that it was as a result of the defendant's negligence. Thus, the cause of the oil pollution need to be investigated and proved in court to show that adequate care was not taken to prevent the pollution.

However, in proving negligence, the Nigerian courts, considering that it would be difficult for the plaintiff (oil pollution victim) to explain and prove technical terms of the oil

industry, such as ‘good oil field practice’ appear to be lenient with the plaintiff in some cases. Thus, in the case of *Machine Umudje v. Shell BP Nigeria Limited*²¹¹ although the plaintiff could not prove negligence on the part of the defendant, the court inferred negligence on the part of the defendant and held it liable in negligence.

Further, the maxim ‘*res ip sa loquitur*’ has been applied in Nigeria to shift the burden of proof on the defendant where the fact of causation and care exercised by the defendant ought to be within the knowledge of the defendant.²¹¹

In the US, oil pollution is a strict liability offence. Hence there is no need to determine the cause of oil pollution when determining whether or not damages will be assessed. The responsible party is strictly liable for cleanup and damages.

5.4.4 Judicial Attitudes to Environmental Claims in the US and Nigeria

As already stated, the US is reputed to have the most stringent regulations worldwide with respect to oil pollution. Oil polluters in the US are strictly liable for environmental restoration. The District courts in US have been consistent in applying strict liability with respect to restoration of the impacted sites, subject to liability limits placed by statutes.

Consequently, during the pre Oil Pollution Act of 1990, Exxon spent around US\$2.1 billion on clean up costs, US\$1 billion in natural resource damages, US\$500 – US\$600 million for economic damages to private parties and punitive damages of US\$500 million with respect to the 1989 Exxon Valdez oil pollution that spilt 11 million gallons and oiled over 1,200km of shoreline in Prince William Sound; while Amoco paid US\$85 million for the 1978 Amoco Cadiz oil pollution that spilt six and a half times more oil than Exxon Valdez.²¹¹

In May 1996, Chevron Pipeline facility in Pearl Harbor, Honolulu, Hawaii ruptured and spilt 41,000 gallons (140 tonnes) of oil. The District Court in the State of Hawaii sentenced Chevron to a US\$100,000 fine and in addition, Chevron agreed to pay US\$3 million in restoration costs, made up of US\$1.5 million for repair of the Arizona Memorial to servicemen killed in December 1941 attack on Pearl Harbor oiled during the spill and US\$1 million for ecological restoration.²¹¹

With respect to the April 20, 2010 Deepwater Horizon Oil pollution, by May 27, 2010, BP was defendant in 120 lawsuits of which 80 were class actions seeking payment for financial losses by fishermen, hotel operators, landowners, rental companies, restaurants and seafood processors, claiming a current or potential future loss of business in the aftermath of the oil pollution. The Federal Government and the affected five coastal states also sued BP. These suits were combined into one court as a multidistrict litigation and heard by US District Judge Carl Barbier of the District Court for the Eastern District of Louisiana.²¹¹

By March 2, 2012, BP agreed to a deal to settle roughly 100,000 claims which according to the group representing the plaintiffs does not have any specific cap. BP estimated that it would pay approximately US\$7.8 billion and said that it has US\$9.5 billion in assets set aside in a trust to pay the claims and that these claims would not increase the US\$37.2 billion it budgeted for oil spill related expenses. However, by October 2013, BP boosted this estimate of US\$7.8 billion to US\$9.2 billion and said that it could be significantly higher. Thus, in January 2014, BP sought an order to curb payment of fictitious and absurd claims from this settlement, but the U.S. Fifth Circuit Court of Appeals rejected BP's application and ruled that BP had not explained how it or the district court would identify or even discern the existence of claimants that have suffered no cognizable injury.²¹¹

Consequently, on August 13, 2012, BP requested the Judge to approve this settlement on the basis that its actions did not constitute gross negligence or willful misconduct.²¹¹ The Department of Justice responded and the government advised the Judge to disregard claims by BP that would have the effect of minimizing the environmental and economic impacts of the spill, giving examples of environmental damages that could cause negative impacts to marsh vegetation for years to decades. Consequently, on 4th September 2014, the judge ruled that BP was guilty of gross negligence and willful conduct under the Clean Water Act.²¹¹

On January 13, 2013, Judge Barbier approved BP's proposal of US\$7.8 billion partial settlement for medical-benefits. This is for persons who lived for at least 60 days in the oil impacted area or involved in clean up who can provide evidence of specific health condition caused by the oil or dispersant used for clean up or who were injured during cleanup. BP also agreed to pay US\$105 million over 5 years to set up a Gulf Coast health outreach programme and pay for medical examinations.²¹¹

With respect to the suits filed by Federal government and the five affected states against BP for economic losses and natural resource damages, on July 2, 2015, BP agreed on a record deal of US\$18.7 billion to settle all outstanding federal and state claims in the US. Under the terms of the consent decree lodged in federal court in New Orleans, BP must pay US\$ 5.5 billion federal Clean Water Act penalty, 80 percent of which will go to restoration efforts in the Gulf region; US\$8.1 billion in natural resource damages, which includes the US\$1 billion BP already committed to pay for early restoration; additional US\$700 million – accrued interest to address any later discovered natural resource conditions unknown at the time of the agreement; US\$600 million for other claims – reimbursement of federal and state natural resource damage assessment costs and other unreimbursed federal expenses.²¹¹

Additionally, BP had earlier entered into a separate agreement to pay US\$4.9 billion to the five Gulf States and up to a total of US\$1 billion to several hundred local governmental bodies to settle claims for economic damages they have suffered as a result of the spill.²¹¹

This settlement is in addition to several criminal fines and civil penalties paid in settlements of federal government claims concerning the incident. BP also reported that it spent US\$14 billion in a three-month effort to contain the spill. Thus, according to BP, the total cost so far suffered by it with respect to the incident is approximately US\$53.8 billion.²¹¹

The attitudes of Nigerian Courts to environmental claims are quite different from that of the Judges of the United States and leave much to be desired. It is the Federal High Courts that have the jurisdiction to hear matters relating to environmental restoration of oil pollution sites.²¹¹

First, the Federal High Courts are located in the major cities in Nigeria and may be out of the reach of many rural inhabitants affected by oil pollution. According to UN Development Programme, this is another example of collusion between the Federal government and oil companies.²¹¹ Moreover, the Nigerian courts have dealt mostly with the issue of compensatory restoration, and there is hardly any case decided that had to do with primary restoration.

Second, the Nigerian Courts may not be adequately equipped to deal with environmental claims. Most times, Nigerian courts, the aggrieved client as well as the lawyer are not in a position to appreciate the cause, effect and remedy arising from the sophisticated scientific questions involved in oil pollution incidents. The victims of oil pollution are expected to scientifically establish the impact of oil pollution on the soil, water, environment, crops and other properties. This has frustrated victims of oil pollution from getting compensation for oil pollution damages. The victims here are mostly rural dwellers – fishermen and farmers, who are poor and cannot afford experts to match that of the oil industries.

This became evident in *Siesmograph Services Limited v. Onokpasa*²¹¹ where the plaintiff in prove of his claim that the defendant's seismic blast in the area caused cracks to his college building brought an expert, and the defendant brought three experts. The trial judge awarded damages to the plaintiff but the Supreme Court reversed it and held that the trial judge ought to have believed the expert witnesses of the defendants who are specifically qualified in particular field of service which in this case comprise of knowledge and practice of seismology and civil engineering. In *Ogaile v. Shell Petroleum Development Co. Ltd.*²¹¹ the plaintiffs lost both at the High Court and Court of Appeal because they could not match the expert evidence given on behalf of the defendant. Also, in *Siesmograph Service v. Akporuovo*²¹¹ the trial court's award of compensation to the plaintiff for damages caused to their building and household good by the defendant's operations was reversed by the Supreme Court on the ground that the plaintiff's did not call any expert witness.

Further, the Nigerian courts are believed to weigh national economic considerations of oil over environmental concerns related to oil pollution. Thus, in *Allar Iron v. Shell B.P. Development Company (Nig.) Ltd*²¹¹ the Judge noting that oil is the main source of Nigerian's economy, refused the successful plaintiff an order of injunction restraining the defendant from further pollution of his farm land, fish pond and creek because the order would cause stoppage of defendant's trade and throw large number of people out of work.

Moreover, the courts' attitude in award of damages is generally poor with respect to the amount. Thus, the courts award paltry sums for oil pollution damages. In *Shell Petroleum Development Corporation (Nig.) Ltd. v. Tiebo VII*, the plaintiffs who claimed N64 million as general damages for oil pollution of the river they drink and fish, as well as desecration of their juju were awarded N6 million.²¹¹

Another issue has to do with delay in the prosecution of environmental cases in Nigeria. For instance, in *Shell Petroleum Development Co. (Nig.) Ltd. v. Ambah*²¹¹ the action was instituted in 1977 and judgement was delivered by the Supreme Court in 1999, that is, 22 years period.

Thus, it is clear that in Nigeria, legislative bottleneck and the lack of transparency in the payment of compensation as well as the paternalistic attitude of the judiciary are impediments to the actualization of fair and adequate compensation in the oil industry.²¹¹

CHAPTER SIX

LEGAL REGIME ON PENALTIES FOR VIOLATION OF ENVIRONMENTAL LAWS

6.1 Introduction

There are basically four categories of liability for oil pollution. These are cleanup and containment, damages, tort liability and criminal and civil penalties. This chapter is concerned with the last category – criminal and civil penalties.

National Laws of Countries impose differing fines and penalties for breach of national and international environmental laws on oil pollution. The fines and penalties imposed vary from country to country and for different offences. Generally, the factors considered in setting fines and penalties include the amount of oil spilled; the degree of the responsible party's culpability; whether the incident was reported to the authorities on time; environmental and property damages resulting from the breach; previous violations; the efforts of the party in breach to respond to, and to mitigate the impact of the pollution resulting from the breach; and the financial gain or benefit of non-compliance to environmental regulations.²¹¹

In case of oil pollution from land based sources, the national, state, provincial or local government where the incident occurs have jurisdiction to impose the prescribed fines and penalties. However, with respect to oil pollution by a moving vessel, the issue of jurisdiction becomes more complex and is addressed by international conventions – MARPOL and Intervention Convention.

Under MARPOL, the coastal state or port state affected by the violation would report the breach to the flag state to facilitate action against the offending vessel. The coastal state can only punish the violator if the violation occurred in its territorial waters. However, the flag states have

not aggressively prosecuted flag ship for violations outside their territorial waters. This was evident in the *Torrey Canyon* accident. However, the Intervention Convention allows the coastal or port state to intervene in the high seas if deemed necessary to protect their interests after notification to the flag state.²¹¹

Currently, the approach being adopted is port state control, whereby the port state authorities have taken matters into their hands by: conducting inspection, detaining violators and reporting violators to other ports to bar them from entering the ports. Further, the cooperation between port states has increased effective port state control.

Moreover, fines and penalties imposed are now stiffer, flag states are taking greater responsibility in punishing violators, and there is advancement in surveillance technology. Hence, a captain has been detained for one year for oil spill caused by the grounding of an uncharted object in the shipping channel in Venezuela; Singapore court sentenced a captain to imprisonment for oil record book violation; Brazil imposed record fine for spills; and United States for the first time, successfully prosecuted a US flag ship for violation of MARPOL which occurred in 1993, in 1997.²¹¹

Basically, oil pollution fines and penalties are of two types, criminal fines/penalties and civil penalties. Crimes relating to violation of environmental law are in the form of white-collar crime, and if convicted, the violators would face fines, probation, jail terms or a combination of them. Thus, apart from other liabilities borne by a party responsible for an oil pollution incident, the party is also liable to criminal fines and/or imprisonment, as well as civil penalties for violating the national environmental law of the state affected by the incident.

The legal regime for oil pollution fines and penalties for violation of environmental laws shall be discussed for the United States and Nigeria.

6.2 Legal Framework for Oil Pollution Fines and Penalties in USA

In the US, both the Federal government and the coastal states impose criminal fines and/or imprisonment and civil penalties for breach of environmental laws of oil pollution. Thus, in addition to paying for clean-up costs, the Responsible party and sometimes the contractor hired by the responsible party to clean up the pollution may incur fines and penalties under OPA, the Federal Water Pollution Control Act,²¹¹ the Deepwater Port Act and the Trans-Alaska Pipeline Authorization as well as the state laws of the various coastal states affected by the oil pollution.

In the US, oil pollution fines and penalties are generally steep in order to act as a deterrent to potential polluters. Thus, the US has been reputed to have a strict system of fines and penalties at both levels. The discussions here shall be based on the Federal and the US States regimes for criminal fines and/or imprisonment and civil penalties.

6.2.1 USA Federal Regime for Criminal Fines/Penalties

The major law that provides for criminal fines and penalties for breach of environmental law on oil pollution in the United States is the Oil Pollution Act 1990.²¹¹ According to the Act, it is a crime to negligently or knowingly discharge a harmful quantity of oil into US waters; and to knowingly fail to immediately report an oil spill to the National Response Centre. Thus, it provides three structures for criminal fines and penalties as follows:

First, for negligently causing an oil spill, a person shall be punished by a fine of not less than \$2,500 and not more than \$25,000 per day of violation, or by imprisonment for not more than 1 year; or by both imprisonment and fine. Second, knowingly causing an oil spill attracts a

fine of not less than \$5,000 and not more than \$50,000 per day of violation, or imprisonment for not more than 3 years or both. Third, for knowingly spilling oil with the knowledge that another person is thereby placed in imminent danger of death or serious bodily injury attracts a fine of \$250,000 or imprisonment for not more than 15 years or both for an individual and \$1,000,000 for an organization. Generally, where the conviction is the second for same offence the punishment shall be double the maximum punishment for both fines and imprisonments.²¹¹

Moreover, where a person who is in charge of a vessel, onshore or offshore facility that discharged oil in a harmful quantity upon US waters, adjoining shoreline or contiguous zone fails to report such incident immediately after becoming aware of it to the appropriate Federal Agency, such a person shall be liable to imprisonment for not more than 5 years and/or fine of \$200,000 for individual and \$500,000 for organization;²¹¹ or up to twice the gross gain or loss arising from failure to notify the government agency.²¹¹

Further, under the Act for the Prevention of Pollution by Ships (APPS),²¹¹ it is a class D Felony to knowingly violate the provisions of MARPOL and is punishable by up to 10 years imprisonment and a fine of up to US\$250,000 for an individual and US\$500,000 for a corporation, for each violation.²¹¹ Moreover, the vessel that violated the MARPOL provision may be arrested and sold to satisfy any fine or penalty under the APPS.²¹¹ Also, the person that gave information leading to the conviction may receive up to half of the fine.²¹¹

Thus, in US, both individuals and corporations are exposed to severe criminal fines and imprisonment for oil pollution at the Federal Level.

6.2.2 USA Federal Regime for Civil Penalties

The responsible party of oil pollution incident is also subject to civil penalty administered by the USCG and the EPA depending on where the oil pollution occurred. Thus, the OPA provided USCG and EPA with authorities to enforce the provisions of the OPA, as well as the Clean Water Act and regulations made under the Act.²¹¹

Under Oil Pollution Act, 1990, the USCG and the EPA have the authorities to impose civil penalty for violations of the Clean Water Act through spillage of oil and hazardous materials, breach of regulations for facilities transporting oil in bulk, violation of regulations for pollution prevention by vessels and oil transfer operations which occurred in the coastal waters or deepwater ports and in the land or inland waterways respectively.²¹¹

Under Section 311(b)(6) of CWA as amended, the OPA provided the USCG and EPA with administrative or judicial means to pursue monetary penalties against responsible party for oil pollution. Thus, the USCG and EPA can assess Administrative Civil Penalty or Judicial Civil Penalty. In Administrative civil penalty, the agency assesses the penalty in-house. It is further classified as Class I or Class II penalties. However, for Judicial civil penalties, the Federal Government (through the USCG or EPA) may decide to pursue a larger civil penalties by taking out an action in the U.S. District Court in any district in which the responsible party resides, carries on business or is located.

All civil penalties paid pursuant to Section 311 of the Clean Water Act, whether imposed administratively or judicially, are to be deposited in the Oil Spill Liability Trust Fund.²¹¹ Penalty deposits into the Oil Spill Liability Trust Fund (OSLTF) are generally between \$4 million and \$7 million per year.²¹¹ Civil penalty provides an incentive for violators and other persons to comply with the Clean Water Act and stop oil pollution. Thus, the federal regime for civil penalties would be discussed under USCG civil penalties and EPA civil penalties.

6.2.2.1 United States Coast Guard Civil (USCG) Penalties

Flowing from the forgoing, the USCG can, under OPA 1990 which amended the Clean Waters Act, assess a civil penalty on the owner, operator or person in charge of a vessel, onshore facility, or offshore facility who fails to notify the appropriate authorities of the discharge of oil or who fails to comply with regulations issued under the National Response System.

The USCG would, for class I Administrative Civil penalty, assess the maximum sum of US\$10,000 per violation, but not more than US\$25,000 per case. For a more flagrant violation, the USCG would impose a class II administrative penalty which would not exceed US\$10,000 per day of violation up to a maximum of US\$125,000.²¹¹

Furthermore, the owner, operator, or person in charge of a vessel that illegally discharges oil can be assessed a judicial civil penalty of up to US\$25,000 per day of violation or up to US\$1,000 per barrel of oil spilt. If there is proven case of gross negligence or willful misconduct, these penalties may be increased to not less than US\$100,000 and not more than US\$3,000 per barrel of oil spilt. Moreover, for failure to comply with removal order, the Responsible party may be assessed a substantial penalty of up to US\$25,000 per day of violation or up to three times the costs incurred by the OSLTF as a result of such failure.²¹¹

In addition, the USCG also has authority under the OPA, 1990 to enforce the violation of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) through violation of requirements for code of financial responsibility, administrative orders, denial and detention orders against entering or leaving U.S Ports, and for failure to report release.²¹¹ The maximum penalties for these violations are different from that of the Clean Water Act.

In respect of these, the USCG can assess Class I administrative penalty of US\$25,000 per violation; Class II administrative penalty of US\$25,000 per day per violation or US\$75,000 per day per violation for subsequent violations; and judicial civil penalty of US\$25,000 per day per violation or US\$75,000 per day per violation for subsequent violations.²¹¹

In imposing administrative civil penalty, the USCG generally holds a hearing at the request of the responsible party to enable such party present evidence in its defence. For class II penalties, the USCG issued a final rule on practice and procedure for assessing class II civil penalties, which empowers Administrative Law Judges to administer, hear and decide class II penalty cases.²¹¹

The USCG in administering the APPS, can also assess the following civil penalties: for violating the MARPOL provisions a penalty not exceeding US\$25,000 for each violation; and for making false statement or representation, up to US\$5,000 for each statement or representation. It is worthy to note that each day of a continuing violation constitutes a separate violation. The whistle blower whose information lead to the getting of the penalty shall be paid half of the penalty recovered.²¹¹

Annually, the USCG enforces the FWPCA violation broadly and deals with about 3,400 cases while it deals with few cases for CERCLA violations.²¹¹

6.2.2.2 Environmental Protection Agency (EPA) Civil Penalties

The EPA has the authority to impose civil penalty on persons who spill oil in land or inland waterways either by administrative means or by seeking judicial civil penalty. The EPA may assess a violator a Class I administrative penalty of up to US\$10,000 per violation, up to a

maximum of US\$25,000, or a Class II administrative penalty of up to US\$10,000 per day of violation, and not to exceed US\$125,000.²¹¹

Further, such a violator may be subject to a judicial civil penalty of up to US\$25,000 per day of violation, or up to US\$1,000 per barrel of oil spilt. In cases of gross negligence or willful misconduct, these penalties would be increased to not less than US\$100,000 and not more than US\$3,000 per barrel of oil spilt.²¹¹

For events occurring after January 30,1997, these penalties have been increased by 10% by virtue of the Debt Collection Improvement Act of 1996²¹¹ and its implementing regulations published at 40 C.F.R. Part 19.

Further, the EPA civil penalty program is based on gravity and economic benefit. The gravity of the offence has to do with the seriousness, culpability, mitigating efforts and history of violations; while the economic benefits has to do with the economic gain the violator made from the noncompliance.²¹¹

6.2.3 USA States Regime for Oil Pollution Fines and Penalties

The OPA did not pre-empt the authority of the US states to impose criminal fines and imprisonment as well as civil penalties for oil pollution within their state; and did not modify the obligations or liabilities of any person under any state's law.²¹¹ Consequently, the responsible party is in addition to the federal fines and penalties, separately subject to the fines and penalties prescribed in any of the 24 US coastal states affected by the violation in many situations. The states fines and penalty regimes are as follows:²¹¹

1. Alabama

This state has only criminal fines and penalties, which subject any person who willfully or with gross negligence violates the state pollution laws to a fine of not less than US\$2,500 and not more than US\$25,000 per day of violation or imprisonment for not more than 1 year or both. For repeat offence, the responsible party is subject to a fine of US\$5,000 to US\$50,000 per day or by imprisonment for 1 to 2 years or both. Secondly, a person who knowingly make false statement, record, report, or document, or tamper with any monitoring device and/or method is liable to a fine up to US\$10,000 or up to 6 months imprisonment.²¹¹

2. **Alaska**

The civil penalty schedule is calculated on the basis of sensitivity of the receiving environment, as well as the toxicity, degradability and dispersibility of the oil spilt. The penalties per gallon of oil spilt respectively for freshwater, marine and public land are: for critical environment, US\$10, US\$2.50 and US\$1; for sensitive environment US\$5, US\$2 and US\$0.50; and for environment without significant resources US\$1, US\$1 and US\$0.25. However, for very sensitive environment, there is civil penalty of US\$0.75 for only public land. Moreover, in addition to the above, the responsible party is subject to civil penalties of US\$500 – US\$100,000 for the initial violation, and thereafter, up to US\$5,000 to US\$10,000 per day.

For criminal fines, where gross negligence is shown, the above civil penalties would be multiplied by a factor of five for oil spills and by a factor of four for crude oil spills.²¹¹

3. **California**

The Responsible party shall be subject to: (a) criminal fine of US\$5,000 to US\$50,000 per day for causing spill, failure to start clean up, failure to follow state oil spill administrator's directions or failure to notify USCG of oil spill; US\$2,500 to US\$250,000 per day for failure to notify the Office of Emergency Services, operating without an approved contingency plan or

failure to follow the plan; and US\$50,000 for every other knowing violations. (b) Civil penalty of US\$25,000 to US\$500,000 per day for causing spill, failure to being cleanup, failure to notify USCG or follow the state oil spill administrator's order and up to US\$250,000 per day for other violation. In alternative to this civil penalty, the California Department of Fish and Game's Oil can assess administrative penalty of US\$10 per gallon spilt, to be reduced by the amount recovered or up to US\$100,000 per day. In cases of gross negligence, this may be increased by US\$30 per gallon.²¹¹

4. **Connecticut**

Any responsible party who negligently or willfully cause damage in this state is respectively subject to criminal fines of up to 1½ or 2½ times the cost of cleanup plus interest. Further, a responsible party who fails to report a spill to the USCG and state authority would also be assessed civil penalty of US\$5,000 or US\$1,000 for an individual.²¹¹

5. **Delaware**

Has no provision for fines and penalties.

6. **Florida**

For failure to submit Oil Spill Contingency plan, the responsible party is subject to civil penalty of US\$5,000 or US\$10,000 for first offence and second offence respectively. The Florida Department of Natural Resources would assess penalty of US\$25,000 for failure to provide financial security and up to US\$50,000 per day for other violations. However the criminal fine if spill is due to gross negligence or willful conduct is that the responsible party is liable to pay all cleanup costs and damages without limit.²¹¹

7. **Georgia**

For knowingly violating any oil spill law, causing personal injury or damage to property, or failing to comply with any court order make a person subject to criminal penalty of US\$2,500 to US\$25,000 per day and/or imprisonment for 1 year and up to US\$50,000 and/or 2 years imprisonment on second conviction. Moreover, a person would be liable for knowingly violating any oil spill laws or failure to comply with emergency order to a civil penalty up to US\$25,000 per day.²¹¹

8. **Hawaii**

A person would be liable to criminal penalty as follows: for knowingly spilling oil US\$5,000 to US\$50,000 per day and/or imprisonment up to 3 years, and for second conviction, up to US\$100,000 per day and/or imprisonment up to 6 years; for negligence US\$2,500 to US\$25,000 per day and/or imprisonment up to 1 year, and for second conviction, up to US\$50,000 per day and/or 2 years imprisonment; knowingly endangering another person during oil spill, individual - US\$250,000 and/or up to 15 years imprisonment, organization - US\$1,000,000, and on second conviction, double of fine and imprisonment; and for false statements and reports or tampering with monitoring or safety device, up to US\$10,000 per day and/or 2 years imprisonment, and for second conviction double of the fine and imprisonment.

Moreover, the responsible party would be subject to civil penalty of up to US\$10,000 per day and if party interferes with official inspection an additional US\$5,000.²¹¹

9. **Louisiana**

No civil penalty. Responsible party is subject to criminal penalty of US\$25,000 per day for withholding information or false representation; up to US\$1,000,000 or clean up coast plus US\$100,000 per day and 10 years hard labour if human life is threatened; and US\$25,000 per day if human life is not threatened.²¹¹

10. **Maine**

Violation of any oil pollution law makes a person subject to US\$100 to US\$25,000 per day. Moreover, for failure to comply with official order or providing false information, a person would be subject to criminal fine of up to US\$10,000. However, if the economic benefit of the violation is greater than the maximum fine in either of these penalties, the person would be subject to up to twice of the economic benefit.²¹¹

11. **Maryland**

The responsible party would be liable to criminal penalties as follows: failure to comply with official order US\$50,000 and/or 1 year imprisonment; knowingly making false statements or reports, or tampering with monitoring or safety devices up to US\$10,000 and/or 6 months imprisonment; and for additional violations up to US\$ 50,000 per day and/or 2 years imprisonment. On the other hand, for violating any oil spill regulations, the responsible party would be liable to civil penalty of up to US\$25,000, plus up to US\$10,000 per day up to US\$100,000; and if the oil spilt is over 25,000 gallons, to an additional penalty of up to US\$100 per gallon.²¹¹

12. **Massachusetts**

A violator is subject to criminal penalty of up to US\$25,000 and/or up to 2 years imprisonment. However, for failure to report a known spill, a responsible party is liable to up to US\$100,000 and/or imprisonment in state prison for not more than 20 years or in jail or house correction for up to 2½ years. Further, violators of oil pollution laws are subject to civil penalty of US\$25,000.²¹¹

13. **Mississippi**

No criminal penalty, but a violator of state oil pollution law is subject to civil penalties of up to US\$25,000 for each violation.²¹¹

14. **New Hampshire**

No criminal penalty, but civil penalty of up to US\$10,000 per day for willful discharge of oil into waters that could impact public water supplies as well as an additional administrative fine of US\$2,000.²¹¹

15. **New Jersey**

No criminal penalties, but civil penalty of up to US\$50,000 for spills less than 100,000 gallons and up to US\$10,000,000 for spills of 100,000 gallons or more; for non cooperation, the greater of US\$100,000 and double of the violator's gain; and for corporation, three times of whatever is levied. There is an additional civil penalty of up to US\$50,000 per day, as well as administrative penalty of up to US\$50,000 per violation per day.²¹¹

16. **New York**

A violator would be subject to criminal penalty of US\$2,500 to US\$25,000 per day and up to US\$50,000 per day for second offence for intentional, knowing and reckless violation; and to US\$50,000 for violating the booming requirement for transfer of over 1 million gallons, as well as civil penalty of up to US\$25,000 per day for discharge of oil.

17. **North Carolina**

A person would be subject to criminal penalty of up to US\$10,000 and/or 6 months imprisonment for intentionally, knowingly or willfully discharging oil, and to civil penalty of up to US\$5,000 for intentionally or negligently spilling oil or failure to report a spill.²¹¹

18. **Oregon**

No criminal penalty, but civil penalty of up to three times the cost of cleanup for failure to make good faith cleanup efforts.²¹¹

19. **Pennsylvania**

No criminal penalty, but civil penalty of up to US\$10,000 per day of violation.²¹¹

20. **Rhode Island**

The maximum civil penalty for oil discharge is US\$25,000. However a violator would be liable to criminal penalty of up to US\$25,000 and/or 5 years imprisonment for violating official orders or rules of oil spill laws or for knowingly making false statements or reports or tampering with monitoring device. Each day is considered a separate offence.²¹¹

21. **South Carolina**

No criminal penalties, but civil penalty of up to US\$5,000 per day.²¹¹

22. **Texas**

It has the most extensive oil pollution fines and penalties. A violator would be subject to criminal penalties as follows: for failure to report a discharge, US\$500 to US\$250,000 for individual and US\$500 to US\$500,000 for corporation or other entities; for failure to abate, contain and remove oil US\$25,000 per day or 3 times the cost incurred as a result of the spill; and US\$100 to US\$100,000 per day up to US\$125,000 for violation of any oil pollution law.

An oil spiller is subject to civil penalty of US\$250 for a spill of 1 gallon or less than; and US\$500 plus US\$250 per barrel for oil spill of more than 1 gallon. However, an oil spiller that has a Sound Management Practice Programme may assess lower penalty with respect to oil spill more than 1 gallon, while one without it assesses a higher penalty. The penalty here increases with subsequent oil spillage. Consequently, the spiller with sound management practice

programme would be assessed US\$300 plus US\$100 per barrel of oil spilt; while one without it would be assessed US\$350 plus US\$200 per barrel of oil spilt. Note that for every subsequent spill the penalty for the spill increases with US\$50 up to the 5th within a period of 12 months, while the penalty per barrel remains constant.

Further an oil spiller is also subject to Texas Oil Spill Prevention and Response Penalties as follows: US\$500 for failure to notify Texas General Land Office, adjacent property owner or local responder, or failure to immediately initiate response action or removing vessel that spilt oil from jurisdiction without showing proof of financial responsibility; US\$1,000 for failure to cooperate with state OSC or take reasonable action to abate, contain, and remove pollution, and for operating a facility or vessel without an approved plan; and US\$100 for failure to file completion report and any violation of waste disposal regulation.²¹¹

23. **Virginia**

A responsible party is subject to criminal penalties as follows: for knowingly violating any regulation, or administrative or judicial order, up to US\$100,000 and/or 1 year imprisonment; for false statements and reports, US\$100,000 and/or 1 – 3 years imprisonment; negligently discharging oil into the state waters, US\$50,000 and/or up to 1 year imprisonment; knowingly or willfully discharging oil, US\$100,000 and/or 1 to 10 years imprisonment and for second offence, US\$200,000 and/or 2 to 10 years imprisonment; violation of any regulations or judicial orders, US\$1,000,000 or an amount three times the economic benefit realized from the violation.

On the other hand, a responsible party would be subject to civil penalty for failure to maintain contingency plan, US\$50,000 for initial violation and thereafter, additional US\$5,000 per day; for failure to maintain evidence of financial responsibility, US\$1,000 to US\$100,000 for

initial violation and thereafter, US\$5,000 per day; for discharging oil, up to US\$100 per gallon of spilt oil; and for failure to cooperate in containment and cleanup of discharge oil, US\$1,000,000 with additional US\$10,000 per day after the initial violation.²¹¹

24. **Washington**

A person shall be subject to criminal penalty of up to US\$10,000 per day plus cost of prosecution for willfully violating oil spill regulations or official orders; up to US\$100,000 for failure to maintain a contingency plan or proof of financial responsibility; and up to US\$1,000 for violation of oil spill response system. Furthermore, a responsible party shall be subject to civil penalty for negligently spilling oil and for intentional or reckless discharge of oil of US\$20,000 and US\$100,000 respectively per violation per day of risk to the environment.²¹¹

Worthy of note is the fact that four states, to wit: Florida, Massachusetts, Rhode Island and South Carolina made penalty exceptions to the extent that penalty cannot be imposed where the discharge is as a result of act of God, Government, War, and omission of third party.

6.3 **Nigerian Legal Regime for Oil Pollution Fines and Penalties**

In Nigeria, a look at the numerous statutes and regulations guiding the oil industry reveals that while most of them are criminal in nature, some are merely preventive provision that neither impose civil penalty nor criminal fines and imprisonment. For instance, Regulation 13 of the Petroleum Regulation merely prohibited both willful and non-willful spill into the waters of the ports where a vessel has brought in petroleum. This provision just prohibits oil pollution without more.²¹¹

Moreover, in places where the law imposes fines and penalties, they are extremely low when compared to other nations. By making most of the prescribed regimes for fines and

penalties merger, the operators were given a wide latitude to conscienceless invade the environment and violate it with impunity and this is what is happening considering the rate of oil pollution in Nigeria.

On the other hand, by making some of provisions of the laws just prohibitive is not good enough. Thus it is humbly suggested that a deterrent in form of heavy punishment and costly penalties needs to be put in place to check on the operators as most of them are wont to violate these provisions.

Worthy of note is that in Nigeria, only the Federal legislature has the right to legislate on matters relating to mines and minerals, including oil fields, oil mining, geological surveys and natural gas²¹¹. Thus, in Nigeria, unlike in the United States, only the federal government can prescribe fines and penalties for oil pollution, and the Niger Delta states that are affected by the pollution has no right to prescribe fine and penalties for oil pollution.

Be that as it may, discussions here shall be based on the legal framework for criminal fines and/or imprisonment and civil penalties in Nigeria.

6.3.1 Nigerian Legal Framework for Criminal Fines and Penalties

Nigeria is often lethargic, indifferent and ineptitude in law making and law implementation and enforcement. As already stated before, in some instances where Nigeria has penalties and fines for oil pollution, they are mainly meager penalties. Consequently, there is no statutory provision imposing adequate criminal penalties on the oil industries for oil pollution like the US. Instead, what we have in Nigeria are stiff penalties against Nigerians who are usually not the culprits, but the victims. Examples are the Criminal Justice (Miscellaneous Provisions) Act and the Petroleum Production and Distribution (Anti-Sabotage) Act.²¹¹

Section 3 of the Criminal Justice (Miscellaneous Provisions) Act prohibits acts of sabotage with respect to oil pipelines. It made such sabotage resulting in oil pollution an offence punishable by a fine two times the value of the affected pipeline or installation or oil that escaped as a result of the sabotage or N2,000 whichever is higher and/or imprisonment for 10 years.

On the other hand, Section 2 of the Petroleum Production and Distribution (Anti-Sabotage) Act prohibits sabotage against production, distribution or procurement of oil products; and make it an offence punishable by death sentence or imprisonment for a maximum of 21 years.

However, there are no stringent laws against the oil companies for equivalent misdeed that engender oil pollution. Be that as it may, except for some specific legislation, there are also on ground, general criminal offences applicable to oil pollution. Consequently, discussion here would consider the criminal penalties for oil pollution in the Nigerian Securities and Civil Defence Corps (NSCDC) Act, 2003, Criminal Code Act, Oil in Navigable Waters Act and other Nigerian Statutes prescribing criminal fines and penalties.

6.3.1.1 Nigerian Securities and Civil Defence Corps (NSCDC) (Amendment), Act, 2007

This Act vest on the Nigerian Securities and Civil Defence Corps (NSCDC) the power with respect to oil pollution, to arrest, detain, investigate and institute legal actions in the name of Attorney General of the Federation against persons reasonably suspected to have committed an offence by involving in any chemical poisoning or oil spillage, or oil pipelines vandalization.²¹¹ The Act did not stipulate any oil pollution criminal fines and penalties, but only grants right to try the oil spiller on NSCDC.

6.3.1.2 **Criminal Code Act, Cap. C38, LFN, 2004**

The Act did not contain any specific provision with respect to oil pollution. It made any person who corrupts or fouls the water of any spring, stream, well, tank, reservoir or place, so as to render it less fit for the purpose for which it is ordinarily used guilty of misdemeanor punishable by 6 months imprisonment. It also provides that 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 guilty of a misdemeanor punishable by 6 months imprisonment.²¹¹

It is submitted that due to the punishment stipulated, it applies to only individuals and not to corporate bodies. Further, persons that flare gas during oil exploration activities and other oil polluters can be adequately prosecuted here. However, no oil polluter has been arraigned to court under this law.

6.3.1.3 **Oil in Navigable Waters Act, 1968²¹¹**

The Act specifically prescribes criminal fines and imprisonments for oil pollution. Thus, the occupier of the land, the person in charge of the apparatus or the owner of the vessel would be guilty of an offence and on conviction be liable for criminal fines and/or imprisonment. Consequently, the court can impose fines and/or imprisonments as follows: For illegal oil spillage in Nigerian water courses, or failure to maintain oil spill prevention equipment on vessels, a fine in excess of two thousand naira (N2,000); for failure to maintain oil record books, a fine of N1,000 and/or imprisonment of up to 6 months; for oil transfer operations at night without the appropriate permits and 96 hours notifications, a fine of up to N200; for failure to

report discharges of oil into waters of harbours, a fine not exceeding N400; and for illegal discharges of oil residues/oily ballast in harbors, a fine of up to N20 per day.²¹¹

An oil spiller has some special defences that can absolve him/her of liability. The defences are: where the discharge of oil was due to measures needed to secure the safety of the vessel or prevent damage to the vessel or cargo or to save life; where the oil escaped was not due to any want of reasonable care, or was as a result of damage to vessel or leakage not due to want of reasonable care and the defaulter, as soon as practicable after discovering the escape, took all reasonable step to stop or reduce it; where the discharge of oil was caused by the act of a person who was in that place without the permission of the occupier; and where oil was contained in an effluent produced by operations for refining oil and all practicable steps had been taken for eliminating oil from the effluent.²¹¹

Currently, the court that has jurisdiction to try these cases is the Federal High Court.²¹¹ Moreover, the court can seize the vessels or equipment where the defaulter fails to pay the fines imposed.

It is observed that these special defences expose the delicate environment of the Niger Delta Region of Nigeria to oil pollution which the Act and OILPOL sought to prevent. Moreover, the penalties are ludicrously low as to serve as deterrent for oil pollution to the wealthy multinationals that compose the oil industry. Thus, it is suggested that these penalties should be increased to bring it in tune with the realities of the modern time.

6.3.1.4 Other Statutes Prescribing Criminal Fines/Penalties

Apart from the foregoing laws, other statutes that prescribed criminal fines and penalties relating to oil pollution include:

(a) **Oil Terminal Dues Act:**

Section 6 incorporated Sections 3, 4 and 6 of the Oil in Navigable Waters Act with respect to the offence of oil spillage, the penalties and defences relating thereto. It made any person who spills oil within any oil terminal liable to a fine in excess of two thousand naira (N2,000). Note however that the special defences that avails defaulters in Oil in Navigable Waters Act also applies in this Act.

(b) **Nigerian Maritime Administration and Safety Agency Act, 2007**

According to Section 58, for failure to comply with directives of the Agency or with any provisions of the Act, such person would be liable to forfeiture of any articles seized, and in addition, to fine not exceeding N1,000,000 and/or 12 months imprisonment; and in case of continuing offence, to a further fine not exceeding N200,000 per day.

(c) **Oil and Gas Pipelines Regulations, 1995**

Contravention of any provision of the regulation constitutes an offence punishable upon conviction by a fine of up to N500,000 and/or 6 months imprisonment.²¹¹

(d) **Petroleum Regulations 1967**

The Regulations prohibited discharge of petroleum into the waters of the ports in Nigeria and make any person who commits a breach of any provisions of the regulations guilty of an offence and liable to a fine not exceeding N50,000 and/or 6 months imprisonment. If the defaulter is a holder of a licence, the licence may be cancelled by the Director General.²¹¹ Further, in addition to various penalties laid down in the Merchant Shipping Act, the master of a ship or person in charge of a boat or other vessels who breaches the provisions of the regulation is liable to a fine not exceeding N250,000 and/or 6 months imprisonment.²¹¹

(e) **Merchant Shipping Act, 2007**

The Act made any person who contravenes the provisions of Section 335²¹¹ dealing with prevention of pollution from ship or any regulations made under it liable to a fine of N500,000 and/or not less than 2 years imprisonment²¹¹. Notwithstanding the creation of these criminal liabilities for oil pollution, with sanctions imposed in form of fines and imprisonment, however, this has not been followed by criminal prosecution of offenders. Thus, Nigeria has not been able to test the efficacy of these criminal penalties²¹¹ and the essence of their being promulgated, that is, to serve as a deterrent to oil spillers has not been achieved. The fact that environmental pollution by oil is still on the increase in Nigeria cannot be overemphasized.

6.3.2 Nigerian Legal Regime for Civil Penalties

In Nigeria, the legislation that prescribed civil penalties for oil pollution is the National Oil Spill Detection and Restoration Agency (NOSDRA) Act, 2006.

6.3.2.1 National Oil Spill Detection and Restoration Agency (NOSDRA) Act, 2006

Under this Act, failure to report oil spillage to NOSDRA within 24 hours of its occurrence attracts a penalty of N500,000 per day of the default, while failure to clean up the impacted site to all practicable extent, including remediation attracts a penalty of N1,000,000.²¹¹

It is observed that these penalties, apart from being low, applies to only cases of oil spillage and would not readily apply to individual spillers who cannot carry out clean up of impacted sites, but rather to oil companies. What then is the fate of an individual who negligently or knowingly spills oil? Hence, it is believed that this Act is not comprehensive and does not cover other areas that may lead to oil pollution.

Recognizing these facts, on 19th September 2012, Senator (Dr.) Bukola Abubakar Saraki presented a bill for the amendment of this Act to strengthen the institutional and regulatory capacity of NOSDRA to proactively manage oil spill in a much more robust and effective manner, create a clear and specific regime of penalties and responsibilities for oil spills, and provide a consistent guide and procedure for assessing and accessing compensation for oil pollution and other civil liabilities.²¹¹ However, up to the moment, the bill has not been passed into law.

6.4 Enforcement of Oil Pollution Fines and Penalties in U.S and Nigeria

In the US, fines and penalties for oil pollution are measures used among others to bring polluters back in compliance to environmental laws as well as deter future polluting conducts. Consequently, the US federal and state authorities take enforcement of the prescribed criminal sanctions and civil penalties very serious and have imposed them whenever the occasion arises. These criminal fines and penalties are independent of claims for natural resource damages, individual damages and clean up costs. Some instances where the US federal and state governments imposed fines and penalties for oil pollution include:

Exxon was fined US\$25 million, plus US\$100 million for restitution for the Exxon Valdez oil pollution of 1989.²¹¹

In the case of M/V France Hammer (18,720 GRT), the USCG discovered from an inspection and oil log books that an illegal discharge of 60,000 gallons of oily waste (slop) had taken place on April 1993 on the high seas in the Atlantic Ocean, off Florida, USA. There was no impact on shorelines, wildlife, any property or natural resources. In December 1997, the US attorney for the Middle District of Florida sentenced the owner/operator to a fine of US\$50,000

and 2 years imprisonment, the Company to US\$200,000 (for harming the environment by oil input into the sea) and to issue a public apology, the captain to 5 years imprisonment, US\$250,000 fine and 24 months suspension of his license and documents, while the chief mate agreed to pay US\$5,000 fine, surrender his license and documents for 1 year and apologize to USCG.

Further in the case of M/V Command (61,000 DWT) on September 27 1998 discharged 51,000 gallons of fuel in the Pacific Ocean, off San Francisco, California, USA. The spill affected 180 birds, including brown pelicans, to national marine sanctuaries and monetary Bay National Marine Sanctuary. The USCG discovered the spill after the tanker has left the area. On 27th September 1999, the tanker owners – Anax International Agencies of Greece and the captain pleaded guilty in US Federal Court that the Command negligently spilled oil into the ocean and failed to report it to the authorities. The Judge sentenced the tanker owners to US\$9,413,213 in criminal and civil penalties, the captain to probation and prohibited from being on any ship in US port for 3 years and the Chief Engineer on pretrial diversion for a period of 18 months during which he is prohibited from working on any ship that sails into any US port.²¹¹

Recently, on April 20, 2010, the Deepwater Horizon Oil rig in the Gulf of Mexico exploded and sank. Oil flowed for 87 days until it was capped on July 15, 2010. Eleven people went missing and were never found, and an estimated 4.9 million barrels of oil were spilt. The operator of the rig was Transocean under contract for BP. The spill affected five coastal states, to wit: Louisiana, Florida, Mississippi, Alabama and Texas. The spill affected Marine ecosystem, businesses, and human health. The companies involved are BP, Transocean, Cameroun International Corporation (blowout preventer manufacturer) and Halliburton Energy Services (cementer). The District Court held that the act of BP with respect to the spill was an example of

gross negligence and willful misconduct. It also held that the other companies were also guilty of gross negligence.

On November 14 2012, BP and US DOJ reached a settlement on the civil penalty claims filed in US District Court, Eastern District of Louisiana and BP paid US\$4.5 billion for civil penalties and other payments. The settlement includes payments of US\$2.394 billion to the National Fish and Wildlife Foundation, US\$1.15 billion to the Oil Spill Liability Trust Fund, US\$350 million to the National Academy of Sciences for oil spill prevention and response research, US\$100 million to the North American Wetland Conservation Fund, US\$6 million to General Treasury and US\$525 million to the Securities and Exchange Commission. In addition, US government temporary banned BP from new federal contracts over its lack of business integrity.²¹¹

In resolution of the Federal criminal charges against it, BP also agreed to plead guilty to 11 felony counts related to the death of the 11 workers, environmental crimes²¹¹ and obstruction of Congress and paid US\$4 billion in criminal fines and penalties.²¹¹

In addition, BP's two highest ranking supervisors on board the Deepwater Horizon were each charged for 23 counts indictment, to wit: 11 felony counts for Involuntary Manslaughter, 11 felony counts for seaman's manslaughter and 1 violation of the Clean Water Act. If convicted, each would face a maximum of 10 years imprisonment on each seaman's manslaughter count, up to 8 years imprisonment on each involuntary manslaughter count, and up to 1 year imprisonment on the Clean Water Act count. Further, another BP staff was charged of one count of obstructing an inquiry by U.S Congress into the amount of oil being spilt while the spill was ongoing and one count of making false statement to law enforcement officials. If convicted, he would get up to 5 years imprisonment on each count.²¹¹

Further Moex Offshore 2007, a partner to BP with 10% stake in the Deepwater Horizon²¹¹ agreed to pay US\$45 million to Oil Spill Liability Trust Fund, US\$25 million to five Gulf States and US\$20 million to Supplemental Environmental Projects.²¹¹

On January 3, 2013, Transocean Deepwater Inc. agreed to plead guilty to violating the Clean Water Act and to pay a total of US\$1.4 billion in civil and criminal fines and penalties in a claim filed against it and other related entities.²¹¹ The sum was made up of US\$400 million in criminal fines US\$1 billion for civil penalty claims. The sum of US\$800 million goes to Gulf Coast Restoration Trust Fund, US\$300 million to the Oil Spill Liability Trust Fund, US\$150 million to the National Wild Turkey Federation and US\$150 million to the National Academy of Sciences. Moreover, Transocean must implement court enforceable measures to improve the operational safety and emergency response capabilities of all their drilling rigs working in US waters.²¹¹

Still with respect to the same oil pollution, Halliburton, on July 25th 2013 pleaded guilty to destruction of critical evidence after the oil spill. It agreed to pay the maximum allowable fine of US\$200,000 and be on probation for 3 years.

However, the same cannot be said of in Nigeria with respect to criminal fines and imprisonment, notwithstanding the several legislations on that. It is observed that the creation of environmental offences has not been followed with any criminal prosecution. In fact, the present position is that despite the creation of environmental offences, environmental pollution by corporate entities and officers continue to occur on a wide scale with no enforcement of the criminal provisions²¹¹. Realizing this, NOSDRA Director General moved to make oil spillage a criminal offence under their law by seeking the help of the National Assembly to amend the NOSDRA Act.²¹¹

With respect to civil penalties as stipulated in the NOSDRA Act, NOSDRA on 19th September 2011, via a letter sanctioned Nigeria's Agip Company limited a mere N1 million fine for its poor response to oil spills in its operational area by failing to remediate oil spill impacted sites in Rivers State. NOSDRA directed Agip to pay the money into its account within 14 days or face stiffer penalty. It also directed Agip to mobilize to impacted site already destroyed by inferno for immediate clean-up and remediation to prevent further degradation of the environment.²¹¹

Furthermore, NOSDRA imposed a sanction of N68 million on Sterling Oil Exploration and Energy Production Company Limited (SEEPCO) for its failure to report the oil spill incident that occurred at the Okwuibome Location C (OPL 280) on March 5, 2011. Consequently, on February 17, 2012, it instituted an action in the Federal High Court against SEEPCO. On October 29, 2015, the Court held that SEEPCO was in breach of Section 6(2) of NOSDRA Act and must be sanctioned. The Honourable Court further held that NOSDRA has the powers under its enabling Act to impose the fine and ordered SEEPCO to the fine of N68 million imposed on it by NOSDRA.²¹¹

NOSDRA also slammed Mobile Producing Nigeria Unlimited (MPNU) with N10 million sanctions for failure to cleanup oil spill at the Qua Iboe Terminal. However, due to MPNU's failure to pay, the Director General of NOSDRA wrote a reminder letter to the company directing it to pay or face legal action.²¹¹

Moreover, upon an action by NOSDRA against Pipelines and Products Marketing Company (PPMC), for failure to pay the fine of N62.5 million imposed against it, the Federal High Court ordered PPMC, a subsidiary of Nigerian National Petroleum Corporation (NNPC) to pay the total fines of N62.5 million for refusing to clean up and remediate some oil spills. The

finances are N21.5 million for failure to report oil spillage at its system 2A Pipeline at Eko-Amukpe, Delta State, N1 million for failure to clean up the spill which occurred on June 6, 2009 when a ship, J.S. Amazing was loading Low Pour Fuel Oil, LPFO at the NNPC Jetty, at Ijala, Warri in which 12 communities were impacted, and N40 million for oil spillages that occurred at its various sites in Kaduna and its environs between November 5 and December 4 2011.²¹¹

The actions of NOSDRA with respect to enforcing the civil penalty regime entrusted to it are positive steps towards making the oil polluters desist from indiscriminate and unconcerned pollution of the Niger Delta environment with oil. Furthermore, it is believed that the Judgments of the courts in the two cases above would boost NOSDRA's efforts to ensure compliance with all existing environmental legislation and detection of oil spills in the oil industry.

However, contrary to its powers under NOSDRA Act, about July 16 2012, NOSDRA recommended the imposition of an Administrative fine of \$5 billion against Shell Nigeria Exploration and Production Company (SNEPCO) for the oil spill in Bonga deepwater oil platform where 30,000 barrels of oil were spilled to the Nigerian President. On July 23, 2012, the President approved the recommendation.²¹¹

It is suggested that this act of NOSDRA is wrong. First, the law creating NOSDRA did not give it power to impose or recommend for imposition administrative fines for oil pollution. The only power conveyed on NOSDRA with respect to oil pollution fines and penalties is that it should fine oil spillers N500,000 per day for failure to report oil spill and N1 million for failure to cleanup and remediate the impacted site.²¹¹ This fine against SNEPCO was not based on any of these violations. Second, there is no Nigerian Law that requires that the President may approve administrative fines for oil pollution. Thus, it is believed that this action of NOSDRA if challenged (and SNEPCO is already indicating that it will challenge it), it cannot be sustained by

the court, as same is ultra vires NOSDRA and would therefore amount to a nullity. Once the court dismisses the case, this may send the wrong signal to oil polluter with respect to the powers of NOSDRA and may make a mess of the feat it has accomplished with respect to oil spill civil penalties in Nigeria.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7.1 **Conclusion:**

Oil is the main source of energy in the world today and the world's largest traded commodity. Further, both Nigeria and the United States of America are active players in the oil industry and depend heavily on oil as source of energy and revenue. Oil pollution is the inevitable consequences of exploration, production, storage, transportation and use of oil. Degradation caused by oil pollution has affected human health and the environment and had drawn global attention since it knows no boundaries.

Nigeria has, like the U.S, other countries and International bodies created laws and regulatory bodies for the control and prohibition of oil pollution in their respective jurisdictions. However, while U.S have succeeded in controlling or preventing oil pollution as well ameliorating the consequent effect on the environment whenever it occurs, Nigeria on the other side, notwithstanding the plethora of laws and bodies created to regulate oil pollution and its consequent effect on the environment, the incidents of oil pollution is on the increase. Thus, a comparative study of the environmental laws regulating oil pollution in U.S and Nigeria is very instructive because of the contrast between the regulations of the industry in these jurisdictions.

This work is an attempt at Comparative Analysis of the Environmental Laws Regulating Oil Pollution in these jurisdictions with a view to identifying distinctive areas that Nigeria can learn from in order to effectively regulate oil pollution in Nigeria.

In doing justice to this work, seven chapters are dedicated to the work. This research discussed the concept of environmental law and principles of international environmental law,

the incidents of oil pollution, its impacts on the environment and environmental impact assessment. Thereafter, it extensively examined the environmental laws regulating oil pollution of land resources, air resources and water resources; the administrative and regulatory bodies for the Prevention and Preparedness for oil pollution, and for oil pollution Response and Clean Up in these three jurisdictions; as well as the legal frameworks for regulating environmental restoration of oil pollution impacted areas in the International, United States of America and Nigeria. The work also dwelled intensively on the United States of America and the US States as well as Nigeria's regime on penalties for violating environmental laws.

As seen from this research, International Law has made appreciable efforts to control oil pollution of land, air and water resources through various treaties, conventions, and declarations as well as bodies. International Law also made provisions for restoration of oil pollution impacted areas. There are also few positive results in the area of regulation of the activities of the multinational oil companies. However, most of the regulation of the environment is a matter of national law and some International Environmental Laws hinders the attempt by nations to curb the excesses of the multinational oil companies.²¹¹ Further, these International Environmental Laws are non-binding and failures to comply with obligations contained in them most time do not result to international sanctions unless the resulting pollution crosses national boundaries.

Although regulation of the oil pollution is a matter of national laws, extraterritorial application of national laws are discouraged.²¹¹ However, due to weakness of the international environmental regime and the difficulty in obtaining adherence of all states to strict environmental standards, extraterritorial regulation by states with strong environmental regime is the best option for effective legal action.²¹¹ Thus, it is suggested that hosts states of multinational oil companies should as a matter of foreign policy and global environmental protection make it

obligatory for the oil companies to apply similar environmental laws in their subsidiary companies in the developing countries.

Moreover, in the United States of America, the several laws dealing with oil pollution were modified and unified in the Oil Pollution Act of 1990, which is an exclusive regulatory framework for dealing with oil pollution in the US.²¹¹ In fact, United States of America learnt several lessons from the aftermath of the Valdez Oil spill. Two of the most obvious were that the USA lacked adequate resources, particularly Federal funds to respond to the spills and that the scope of damages compensable under federal law to those impacted by a spill was fairly narrow.

Consequently, the OPA which was established thereafter, set new requirements for vessel construction and crew licensing and manning; mandate contingency planning; enhances federal response capability, broadened enforcement authority, increase penalties, create new research and development programmes; increase potential liabilities; and significantly broadening financial responsibility requirements.

Further, the authorities and their responsibilities are defined in details to deal with the entire potential source of oil pollution. Each agency has its designated type of oil spill to deal with, and by doing so, the US states circumvents coordination problems that can be experienced where the duties of the agencies are not well specified.

In addition to having very high criminal and civil penalties for oil pollution, the USA has higher liability limits and fund scheme with a higher maximum amount of compensation than even the international regime. The OPA imposes unlimited liability on the responsible party in case of gross negligence or willful misconduct and violation of federal laws. The OPA also has defined recoverable damages, especially natural resources damages, unlike the international regime that has an ambiguous definition and scope of recoverable damages. Through the

OSLTF, it made the prompt response to oil spills and reimbursement of claims where the responsible party is not known or does not pay.

The OPA is a very important step intended to prevent oil spills and mitigate its effects. It improved oil pollution prevention, preparedness and response policy in the United States of America. Thus, after the implementation of OPA 90, the number of oil pollution and volume of oil spilt have declined in general, notwithstanding that US oil consumption and import has steadily increased since then. Therefore, there is hypothesis that OPA 90 successfully served to prevent oil pollution in the United States of America,²¹¹ and it is clear that prevention of oil pollution is the best way to protect the environment.

Furthermore, the coastal states in the United States of America also have their own laws and bodies that regulate oil pollution within their respective states. Thus, when oil pollution occurs in the United States, the responsible party is not only liable under the federal laws but also under the affected coastal state/s laws. Most of the coastal states have provisions for unlimited liability for oil pollution.

The OPA 90 established a freestanding oil pollution prevention, preparedness and response framework that resulted in an important decline in oil pollution. Thus, it is clear that the United States system is more effective to protect the environment from oil pollution when compared to the international system.

The study submits that the American framework on oil pollution is commendable, however, the area that has some criticism is the shortcomings of the liability limits with respect to whether the liability limits are sufficient to support the fundamental polluter pays principle and whether the risk is properly divided between the responsible party and the OSLTF. The current liability limits do not actually reflect the cost of oil pollution, and that most oil pollution

from tank barges and non tank vessels is greater than oil pollution from tankers and exceeds the liability limits. This in turn would result in a burden on the OSLTF. Another issue is with respect to the viability of the OSLTF especially with respect to potential major oil spills such as the Exxon Valdez which approximately cost US\$2 billion for cleanup and US\$ 1 billion for natural resource damages. For this incident under the liability limit, the responsible party has to pay only US\$285 million for single hull or US\$181 million for double hull tanker. The maximum amount that OSLTF can pay for any single incident cannot exceed US\$1 billion and natural damage claims US\$500 million. Going by this, it is clear that any major oil spill can easily deplete the OSLTF.²¹¹

On the contrary, oil pollution is so frequent in Nigeria due to corrosions from oil pipes, poor maintenance of infrastructure, artisanal refining, improper industrial waste disposal, sabotage, and that Nigeria is the second highest gas flaring nation after Russia.

Certain factors identified to be the cause why Nigeria could not adequately regulate oil pollution include: lack of clarity of some laws, dispel nature of the legal framework, inadequate and ineffective enforcement of existing legal frame work, lack of service of equipments and wear and tear, cumbersome procedure for court action, concentration of the regulation of oil pollution on the Federal government and bribery and corruption.

The Nigerian environmental laws that deal with oil pollution are filled with lots of ambiguities and gaps. The laws provide for preventive principles, permit system, precautionary principles, compensation, and penal regime and so on. However, in some laws, the provisions contradict themselves, and in others, inadequate punishment or no punishment at all is provided for non compliance.²¹¹ Any law that does not provide for punishment for its contravention is like

a toothless bull dog that can bark but cannot bite. This shows the un-seriousness of the Nigerian laws to achieve its objective of effective regulation of oil pollution.

The laws regulating oil pollution in Nigeria are too many, as much as over 20 legislations. Thus, the laws are scattered and cannot be easily ascertained. Likewise, the administrative bodies that regulate oil pollution in Nigeria are too many and without clearly defined duties. This makes their functions to overlap and conflict. For instance, the DPR, NOSDRA and NDDC have as one of their functions the duty to protect the environment from oil pollution. In most cases, the bodies are unwilling to properly discharge their duties due to corruption, which has eaten deep into the fabrics of these bodies.

In addition, the medium for the enforcement of these laws are generally short of administrative and enforcement mechanisms. Most laws stipulate conditions to be complied with by the oil industries but most times, there are no effective ways of determining whether the oil industries comply or not. Moreover, the oil industries lack regular maintenance culture. They apply different operational standard in United States and in Nigeria, hence they use pipelines that have outlived their life span and outdated equipments to detect oil pollution.

In addition, serious procedural obstacles beseech a victim who seeks redress against oil pollution, especially with respect to the distance of the courts, proof of environmental harm, and the burden and standard of proof. The federal government does not assist them as is obtainable in the U.S. In cases where the victims are successful, they are paid paltry sum and almost nothing ends up getting to them.

The civil and criminal penalties and fines payable for oil pollution in Nigeria is very small and the oil industries prefer to pay such fines and penalties than to maintain the stipulated standard. Finally, in Nigeria, only the Federal government makes laws regulating oil pollution,

unlike in the U.S. where coastal states have their own laws and can sue for fines and penalties for oil pollution.

Further, the requirements of the U.S. OPA 1990 are more stringent and first applied to prevention measures such as the requirement for double hull tankers. No Nigerian law contain stringent requirement geared towards prevention of oil pollution. Further, U.S. has a well defined preparedness and response system with the contingency planning requirement that provides national response to oil pollution depending on the size and type of oil pollution, while the Nigerian National Oil Spill Contingency Plan administered by NOSDRA has not been implemented in response to oil spill.

The U.S. compensation and liability requirements are more effective to recover the costs of environmental damages flowing from oil pollution. It also has a high liability limits and fund scheme. Nigeria does not have a fund scheme for oil pollution compensation and liability. Moreover, its liability limits is meager and nothing to write home about.

The oil operators take advantage of the weak regulatory framework characteristics of a poor and developing country and the government has not been able to hold them accountable because the government itself is culpable. The government's culpability is seen in its lackadaisical attitude towards environmental protection in the oil industry evident in its lack of will to enact effective laws or effectively enforce the existing laws; lack of public enlightenment and hoarding of information from citizens on the effect of oil activities on their lives; lack of independence of the legal framework in existence;²¹¹ not taking appropriate steps to ensure that adequate compensation is paid to oil pollution victims; and the vesting of jurisdiction for environmental damages claims on the Federal High Court, among others.

The researcher submits that the United States of America framework on oil pollution is commendable and has effectively prevented and controlled oil pollution in the United States. This cannot be said of Nigeria where notwithstanding the numerous laws relating to oil pollution, environmental degradation resulting from oil pollution has become a second nature in the Niger Delta Region depriving the inhabitants of food, water, shelter, good health, livelihood and other important amenities of life.

From the foregoing, it is clear that Nigeria's environmental law on oil pollution is not effective to handle the menace caused by oil pollution in Nigeria, hence the need for Nigeria to learn from the U.S. experience. It is believed that as long as the lackadaisical attitude of the Federal Government towards oil pollution continues, environmental degradation by oil pollution shall continue to be the order of the day. However, the researcher believes that if the recommendations made in this work are diligently applied, it would be a very big step towards protecting the Nigerian environment from oil pollution.

7.2 **Recommendations:**

Flowing from the foregoing discussions, in addition to recommendations already stated in the work,²¹¹ the following recommendations are proffered.

(a) **Policy and Legal Reform**

Under this heading, the researcher shall be advocating for:

(1) **Enacting a Single Comprehensive Legislation to Regulate Oil Pollution:**

In Nigeria, there are a plethora of laws with scattered provisions relating to oil pollution but these laws have failed woefully to address oil pollution in Nigeria as environmental

degradation flowing from oil pollution is on the increase in the Niger Delta region of Nigeria. The reasons for this are that these existing laws are replete with deficiencies.

First, most of these laws have outlived their usefulness because they are very old legislation and are no longer in tune with current trends in the oil industry. Instances are the Oil Pipeline Act of 1965, Oil Terminal Dues Act, 1965, Oil in Navigable Waters Act, 1968 and Petroleum Act of 1969, to mention but a few.

Second, the provisions of these laws failed to tackle the issue of oil pollution headlong but only beg the question. Some of these laws, instead of making provisions prohibiting oil pollution gave great powers to the Minister of Petroleum and Minister of Transport to make regulations with respect to oil pollution prevention²¹¹. For instance, the Petroleum Act of 1969, which is the major law regulating oil operations in Nigeria did not directly deal with prevention of oil pollution but vested so much power on the Minister of Petroleum to make regulations relating to construction, maintenance and operation of oil installations and operations. The implementations of the regulations made by these Ministers under these laws are left at the discretion and mercy of DPR, not even the Ministers themselves.

Third, even where some of these laws made elaborate provisions aimed at prohibiting and controlling oil pollution of the Nigerian Waters and made contravention of these provisions an offence, they undermine the effectiveness of these provisions by creating defences that watered down what they set out to do²¹¹. Furthermore, with respect to criminal penalties for oil pollution, Nigeria, unlike the US, has no law prescribing adequate penalties against oil industries for oil pollution²¹¹. What Nigeria has are laws that prescribe stiff penalties against Nigerians who are usually not the culprits but the victims²¹¹. In some cases, the law only granted right to try oil spiller without prescribing penalties.²¹¹

Fourth, some of these laws failed to make provisions requiring oil industries to carry out Environmental Impact Assessment in order to determine the impact that a proposed oil operation would have on the environment and humans beings within its vicinity before the actual execution of such operation²¹¹. Moreover, when oil pollution occurs, the Nigerian laws did not specifically request the oil polluter to restore the environment. Even where it made provisions for compensations to be paid, it recommended for “fair and adequate compensation” to be paid but failed to define what is fair and adequate in each circumstances of oil pollution incident. The victims of oil pollution ends up getting a paltry sum or no compensation at all from whatever is paid by the oil polluter.

The research discovered that major oil pollutions in the U.S. triggers off improvement of oil pollution laws and policies and as well as led to the formulation of new laws and policies, whichever is necessary. Thus, U.S. has a more effective system to prevent oil pollutions and to protect the environment compared even to the international regime. Nigeria should be more concerned with the protection of the environment and environmental remediation of oil polluted sites and not the money they make from the oil industry, which dictates the actions of the Nigerian government.

From the US experience, Nigeria should learn the importance of having a single comprehensive law that deals with oil pollution of the environment. This law should have an oil spill response policy to deal with oil pollution, a comprehensive legal framework, as well as contain provisions for good implementation and enforcement. It is clear that the application of US OPA 1990, which has a comprehensive preparedness, response, compensation and prevention legal framework that deals with oil pollution, and provisions for effective implementation and enforcement, brought about the reduction of oil pollution in the U.S.

Therefore, it is recommended that these existing laws should be amended and consolidated into a new law that would be comprehensive enough to really protect the Nigerian environment from oil pollution. Nigeria should, just like the U.S. after the Exxon Valdez oil pollution incident, adopt a new environmental policy and law flowing from the oil pollution incidents that would adequately address the issues of incessant oil pollution in Nigeria. It is recommended that this law should be patterned in line with the U.S. Oil Pollution Act.

Thus, the new law should provide for stringent requirements for oil industry operators in line with International Operational Standards in the world that would prevent oil pollution and make room for adequate environmental management, remediation and restoration of oil pollution impacted sites. The law should create a compensatory regime as well as create a trust fund that would take care of environmental restoration. It should also review the liability principles in Nigeria and ensure that responsible parties are made absolutely liable for environmental damages, especially where the oil pollution results from negligent acts and flagrant breach of stipulated procedures.

Further, the law should ensure that Environmental Impact Assessment is made compulsory at all phases of oil exploration, prospecting, mining, refining, transportation and marketing. It should be made a condition precedent to the granting of license or renewal of license.

(2) Allowing Oil Producing States to have their State Environmental Laws dealing with Oil Pollution

The researcher discovered that in US, both the Federal government and the coastal states impose criminal and civil penalties for breach of environmental laws of oil pollution as well as compel environmental restoration of oil pollution impacted sites and victims. It was further

discovered that these oil pollution fines, penalties and environmental restoration at both levels, which are generally steep act as a deterrent to oil polluters.

In Nigeria, only the Federal legislature has the right to legislate on matters relating to mines and minerals, including oil fields, oil mining, geological surveys and natural gas²¹¹. Thus, in Nigeria, unlike in the United States, only the Federal Government can prescribe fines and penalties and environmental restoration for oil pollution. The Niger Delta states that are affected by oil pollution have no right to prescribe fines, penalties and environmental restoration for oil pollution.

Therefore, it is recommended that the Constitution should be amended to include matters relating to oil in the concurrent legislative list. This would enable the coastal states to have laws to protect their indigenes from oil pollution and ensure that impacted areas are restored. Further, these states should in their laws provide for state institutions that would be involved in oil pollution response and clean up, as well as have their own liability framework.

(3) Establishing a Separate Court to Handle Environmental Cases

It was discovered in this Research that Nigerian Courts are not adequately equipped to deal with environmental claims and most times do not appreciate the cause, effect and remedy arising from the sophisticated scientific questions involved in oil pollution incidents. Consequently, the researcher recommends that the Constitution²¹¹ should be amended to remove jurisdiction for environmental matters from the Federal High Court and establish a court that would specifically deal with environmental matters. The Judges should be trained on environmental laws and procedures, and the courts should be cited in the Niger Delta localities. This would enable victims of oil pollution easily access the courts that are capable of handling their environmental matters.

(4) **Making the Government's Non Compliance with its Obligation to Protect, Improve and Safeguard the Environment a Fundamental Human Right Issue**

It was observed by this research work that oil pollution impacts also result in the violation of fundamental rights²¹¹ of the people that comes in contact with the incident. However, the provision giving the state the obligation to protect and improve the environment as well as safeguard the water, air, land, forest and wild life in Nigeria are contained in Chapter II of the Constitution²¹¹ which deals with the Fundamental Objectives and Directive Principles of State Policy. This chapter is not justiciable.

Therefore, the Researcher recommends that the Constitution should be amended by removing this provision from Chapter II of the Constitution and transferring it to Chapter IV dealing with Fundamental Rights to make it justiciable. This will enable people who feel that the government's non compliance with this obligation with respect to oil pollution has violated their fundamental rights to be able to seek redress in court.

(b) **Reform of Institutional Framework**

Nigeria, just like the U.S has so many institutions regulating oil pollution. However, these institutions are not well equipped, coordinated and their duties overlap. Consequently, it is recommended that just like in the U.S. these institutions should be appropriately split and those that need to be consolidated, consolidated. Further, their institutional roles and responsibilities should be clarified and specifically provided by law to avoid confusions that arise when an incident occurs in Nigeria.

The Researcher discovered that these institutions are not well equipped to carry out their duties. Consequently, they rely on the oil companies to supply them with equipment, facilities and information to carry out their duties. For instance, in carrying out a Joint Investigation

Visit²¹¹ upon report of oil spillage, that NOSDRA representatives who are supposed to lead the visit do not lead it because it lacks the technical equipments to carry out the investigation. Thus allows the company spiller to organizes and lead the investigation. Likewise, the DPR in carrying out their duties of controlling and monitoring oil pollution depends also on the oil companies for equipment, facilities and information for its operations. Hence, the Researcher recommends that these Nigerian institutions should be adequately and effectively strengthened to carry out their roles. The Federal Government should ensure that they have up to date equipment necessary for carrying out their activities. This would enable the institutions not depend on the oil polluters to undertake their duties.

In addition, each institution should employ officers specialized in the area of environmental laws the institution deals with and be given proper trainings to enable proper implementation of the mandate of each institution. The officers should be adequately paid and empowered to undertake their duties. However, there should be stiff penalties for corrupt officers of the institutions as well as officers that fail to execute their duties, especially those charged with detecting oil pollution, implementation and enforcement of environmental protection laws. This will discourage bribery and corruption of the officers and consequently lead to effective implementation and enforcement of the environmental laws of oil pollution in Nigeria.

Thus, the researcher recommends that the federal government should ensure that the institutions have sufficient budgets, capacity and political mandates to carry out their duties.

(c) Adoption of Strict Liability for Oil Polluters

In the USA, the environmental protection laws are based on strict liability and this reduced the stern requirement of prove on the victims of oil pollution. It is recommended that Nigeria should follow suit in order to relieve victims of oil pollution of the herculean task of

prove associated with environmental litigation. Thus, the Nigerian courts should come up with their own rule of strict liability with reference to the rule in *Rylands v. Fletcher*.

(d) **Strengthening Emergency Oil Pollution Response System**

Emergency response to oil pollution in Nigeria is poor. There is no standardized response system. Oil pollution occurs in the Niger Delta every day, but there is little or no awareness on how to report oil pollution, to whom to report. No regulatory agency has the resources to identify and contain oil pollution. Moreover, multiple agencies receive report but cannot respond promptly. There is no accountability and transparency in the process unlike what obtains in USA. Consequently, the government should require oil operators to have designated oil block response teams with oil spill contingency plan, capable of responding promptly to oil spill within their areas of operations. Strict penalty should be prescribed for failure to promptly report oil pollution by oil spillers. This would deter the oil industry from flagrant disregard of oil pollution notifications.

(e) **Reforming Oil Spill Compensation**

The system for compensating oil spill victims in Nigeria is currently complex, arbitrary and too often politicized. Compensations awarded often do not meet needs, satisfy expectations or bring justice. The processes are not transparent and litigations are costly and take years. Moreover, when they are finally paid, the lion share does not get to the members of the community negatively affected. Only fair and adequate compensation are payable. The rate of compensation set by government is low and heavily influenced by Oil Producers Trade Section (OPTS).

Therefore, the researcher recommends that the statutory framework for compensation should be revised. The rate and items for compensation should be increased to meet international

best practice. Further, a fund to be patterned like the Oil Spill Liability Trust Fund of the USA should be established for victims of oil pollution as well as to take care of restoration of impacted areas of oil pollution where the oil spiller is not known or is not capable of taking them up.

(f) Compelling the Oil Operators to Change Their Attitude with Respect to Social Responsibility in the Niger Delta Region

It was discovered in the course of this work that some oil pollution occurred as a result of sabotage. Sabotage is the after effect of non development of the Niger Delta region. It was further discovered that oil pollution results in the contamination of sources of drinking water, loss of means of livelihood, and different types of sicknesses for the people of the Niger Delta.

Consequently, it is recommended that the Federal Government should compel the oil operators to improve the lots of the host communities by providing infrastructural facilities such as good roads, pipe borne water, hospitals and schools. The Federal Government should also compel them to employ their junior staff from the host communities and ensure that they cooperate with the host community. The Federal Government can do this by incorporating them in the licences and leases granted to oil companies as conditions for renewal of the licences or leases. This it is believed would reduce pipeline vandalization and the consequent oil pollution.

Finally, it is also very important that the Federal Government should monitor the system and take necessary feedbacks from the experiences of implementation and stakeholders to make necessary changes and revisions on the environmental laws of oil pollution.

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