



**HYDROCARBON EXPLORATION AND PRODUCTION ON THE LIBERIAN
CONTINENTAL SHELF: LIBERIA'S OBLIGATIONS UNDER INTERNATIONAL
AND NATIONAL LAW TO PROTECT THE MARINE ENVIRONMENT**

BY

GYUDE MUHLENBURG WAHUEMO

JUR-3910

Small Master's Thesis

*Masters of Laws in Law of the Sea
UiT The Arctic University of Norway*

Faculty of Law

Fall 2013

17.863 words

ACKNOWLEDGEMENT

The author wish to thank Dr. Tore Henriksen, Dr., Professor Erik Jaap Molenær, Dr. Feno Ogutu for their much valued-advice and critics, Dr. Ingrid Ulrikke Jakobsen, for generously providing documents of interest, Dr. Marcus Buck, Tor Arne Morskogen for their kind furnishing of Literature, Dr. Invild Kvalvik and Dr. Trond Pettersen for their lectures, guidance, and recommendations, special thanks to my supervisor Maria Madalena Das Neves for her advice and recommendations that led me to this stage. Special thanks to George Wahuemo-Sialoh for my up-bringing and encouragement to this level. Special thanks to Anne Johanna Makkonen for her enthusiasm, advice, and special technical assistance during all the difficult time of my study. Thanks to all my class-mates and God bless all of us.

ABSTRACT

The objective of the study is to examine as to what extends Liberia is complying with her requirements through the practices of International Environmental Law to protect the marine environment from pollution as a consequence of hydrocarbon exploration and exploitation activities on Liberia`s continental shelf. This study go further on to see if Liberia`s National legislation transposes and operationalizes obligations Liberia has assumed under International Environmental Law (IEL), relating to upstream Petroleum Exploration and Exploitation Activities on the Continental Shelf of Liberia. This study has discovered that Liberia has made important efforts in targeting its International Environmental Law responsibility as demonstrated by the Liberian Petroleum Act of 2002 and as envisioned by the National Petroleum Policy of 2012 among others, for it offshore hydrocarbon exploration and exploitation activities. One can see that Liberia is moving in the right direction. Nevertheless, the study observed that Liberia has much more to be done when it comes to complying with its International Law obligations for the exploration and exploitation of its hydrocarbon activities. In the final chapters of this study, recommendations are made that can be useful in Liberia`s effort.

TABLE OF CONTENTS

Table of cases.....	10
Table of conventions.....	10
1: 0 CHAPTER ONE – INTRODUCTION.....	11
1: 1 RESEARCH QUESTIONS.....	11
1: 2 Hydrocarbons on Liberia`s continental shelf.....	11
1: 3 Exclusive Economic Zones and the Continental Shelf Regime.....	14
1: 4 Impact of Pollution.....	15
1: 5 Materials and how they are used for this study.....	16
1: 6 Description of the study.....	17
1: 7 Delimitations.....	18
2: 0 CHAPTER TWO - LIBERIA`S OBLIGATONS UNDER INTERNATIONAL LAW.....	19
2: 1 Introduction.....	19
2: 2 1982 United Nations Convention on the Law of the Sea (UNCLOS)	19
2: 3 Duty under UNCLOS to cooperate.....	20
2: 4 Duty to protect the marine environment.....	21
2: 5 Obligations of Liberia to protect the marine environment from pollution.....	22
2: 6 International Convention for the Prevention of Pollution from Ships and Its Protocol MARPOL 73/7819.....	23
2: 7 MARPOL 73/78 definition of “vessel” and “discharge”.....	23
2: 8 The Contents of Regulations.....	24
2: 9 International Convention on Oil Pollution and Preparedness, Response and Co-Operation (OPRC).....	25
2: 10 Prevention of pollution by oil of the marine environment.....	25
2: 11 Convention on Biological Diversity (CBD).....	27
2: 12 Liberia has obligation to protect the marine environment.....	27
2: 13 Measures for the management of environmental impact of the marine environment...28	
2: 14 Abidjan Convention.....	29
2: 15 Obligations to protect the marine environment.....	29
2: 16 Pollution from hydrocarbon activities on the sea-bed.....	30
2: 17 Liberia shall assess the impact of pollution.....	30

2: 18 Measures to prevent transboundary pollution arising from activities taking place on Liberia`s continental shelf.....	31
2: 19 Liberia has obligation to prevent transboundary pollution.....	33
2: 20 Transboundary pollution.....	34
2: 21 Cooperation for the prevention of marine pollution.....	34
2: 22 Transboundary pollution of the marine environment.....	36
2: 23 Conclusion.....	37
3: 0 CHAPTER THREE - NATIONAL LAW OF LIBERIA.....	39
3: 1 Introduction.....	39
3: 2 Relationship between National and International Law: Liberia as a dualist State.....	39
3: 3 Relationship between Liberia`s Law and International law.....	40
3: 4 The 1986 Constitution of Liberia.....	41
3: 5 The Petroleum Act of Liberia.....	42
3: 6 Obligations for the protection of marine environment.....	43
3: 7 An Act for Environmental Protection.....	44
3: 8 Obligations under the Environmental Protection Act.....	44
3: 9 Control of pollution of the marine environment.....	45
3: 10 The Environmental Protection and Management Act.....	46
3: 11 Obligations under the Environmental Protection and Management Act.....	46
3: 12 Conclusion.....	48
4: 0 CHAPTER FOUR - ASSEMENT OF LIBERIA`S EFFORTS UNDER NATIONAL AND INTERNATIONA LAW.....	50
4: 1 Introduction.....	50
4: 2 General duty to cooperate	51
4: 3 General duty to adopt law for the protection of the marine environment within Liberia`s national boundaries.....	51
4: 4 Duty to Conduct Environmental Impact Assessment (EIA).....	52
4: 5: Conclusion.....	53
5: 0 CHAPTER FIVE - RECOMMENDATIONS AND CONCLUSION...54	
5: 1 Introduction.....	54
5: 2 Recommendations.....	54
5: 3 Conclusion.....	56

Bibliography	57
A1. Literature list.....	57
A2. Internet websites.....	59
B. International Conventions, Multi- and Bilateral Agreements and other International Legal Guidelines.....	60
C. Protocol.....	61
D. Annexes.....	61
E. Case Law.....	61
F. National Law of Liberia.....	62
G. National Petroleum Policy.....	62

List of Abbreviations

UNCLOS	1982 United Nations Convention on the Law of the Sea
LMA	Liberia Maritime Authority
MARPOL	International Convention on Marine Pollution
OPRC	International Convention on Oil Pollution Preparedness, and Response and Co-operation
AC	Abidjan Convention
CBD	Convention on Biological Diversity
EEZ	Exclusive Economic Zone
EHS	Environmental Health and Safety
EPL	Environmental Protection Law
EPAA	Environmental Protection Agency Act
EPA	Environmental Impact Assessment
IEL	International Environmental Law
ICJ	International Court of Justice
ITLOS	International Tribunal on the Law of the Sea
NLL	National Law of Liberia
NPLL	New Petroleum Law of Liberia
IOC	International Oil Companies
HTC	Hydrocarbons Technical Committee
NPP	National Petroleum Policy
MLME	Ministry of Lands, Mines and Energy
LMA	Liberia Maritime Authority
VCLC	Vienna Convention on the law of Treaties
UN	United Nations
ECOWAS	Economic Community of West African States
GOL	Government of Liberia

List of Figures/Maritime Zones

Fig 1 Location of Petroleum activities (page 13)

Fig 2 Continental Shelf of Liberia and other maritime zones (page 14)

Table of Cases

Trial Smelter case (Canada/ United States) (1938 and 1941)

Mox Plant case (Ireland v United Kingdom) (2002)

Table of Conventions

1. The 1982 United Nations Convention on the Law of the Sea (UNCLOS)
2. International Convention on Oil Pollution Preparedness, and Response and Co-operation (OPRC)
3. Abidjan Convention (AC)
4. International Convention for the Prevention of Pollution from Ships, as Modified by Protocol of 1973 Relating Thereto (MARPOL 73/78)
5. Vienna Convention on the Law of Treaties (VCLT)
6. Convention on Biological Diversity (CBD)

1: 0 CHAPTER ONE –INTRODUCTION

1: 1 RESEARCH QUESTIONS

The purpose of this introductory part is to provide clarification of the two (2) research questions that the thesis will address subsequently herein. The first question is to find out as to what international conventions targeting marine pollution from hydrocarbons activities is Liberia a party to? The second question is: How and to what extent has Liberia implemented and operationalized in its national legislation obligations assumed under those conventions? objective of the study is to determine whether or not Liberia is capable of mitigating pollution from hydrocarbon exploration and exploitation activities on Liberia`s Continental Shelf (CS). If there is any imminent danger due to pollution in the Marine Environment (ME) can Liberia meet its obligations as a sovereign State to deal with such threat resulting from offshore activities on the sea-bed of Liberia`s continental shelf? These are the questions the thesis will provide answer for. This paper will provide some legal recommendations where there are weaknesses and shortcomings to assist Liberia in meeting its national and international obligations for the protection of the marine environment from pollution as a result of hydrocarbon exploration and exploitation activities on Liberia`s continental shelf.

1: 2 Hydrocarbons on Liberia`s Continental Shelf

Liberia`s quest for oil and gas back dates to the early parts of 1940s. Exploration activities first began in Liberia between 1960 and 1972. Liberia and the United States conducted aeromagnetic survey. The survey demonstrated the presence of sedimentary basins on Liberia`s continental shelf. Up to 600 meters depth upon the data from the survey conducted between 1960 and 1972. Blocks for explorations were awarded to some companies. However, the blocks did not produce any commercial quantity and this discouraged potential investors. More recently, new oil and gas discoveries in the Gulf of Guinea, together with the global need for oil and gas has led international petroleum corporations to build more confidence and interest in Liberia`s marine environment for exploration and exploitation of those resources.¹

¹ http://www.nocal.com.lr/pdf/Resource_Library/National_Petroleum_Policy.pdf-. Accessed, 18.7.2013. See *Petroleum Law Compendium Book 1* (2008) pp. 25-39.

The huge interest for oil in the Gulf of Guinea (GG) has intensified exploration and exploitation of oil and gas on the continental shelf of Liberia from the year 2000.²

After the Liberian Civil War between 1989-2003. There has been conduction of systematic and extensive seismic surveys of 2D and 3D between the years 2000-2010.

This survey has led to the mining of five wells.³ For now, there is uncertainty as to whether or not Liberia will produce potential commercial oil and gas for exports. But at the same time there is scientific evidence that Liberia should join the African oil and gas producing States in few years to come. Taking into consideration risk and conflicts, foreign interests associated with oil mining sectors in the Gulf of Guinea, Liberia as emerging producer should put precautionary measures in place to avoid any potential threat to the marine environment.

The National Oil Company of Liberia (NOCAL) was established through an Act of the National Legislature of April 20, 2000. (NOCAL) is tasked to oversee all oil and gas exploration and exploitation activities in the territories of Liberia.⁴ However, the petroleum's Act that established NOCAL has provided marine environmental pollution mitigation principles that international oil companies are required to complied with, during the petroleum exploration and exploitation activities of the marine environment as shown in the map below.⁵

² http://www.nocal.com.lr/pdf/Resource_Library/National_Petroleum_Policy.pdf. Accessed 18.7.2013.

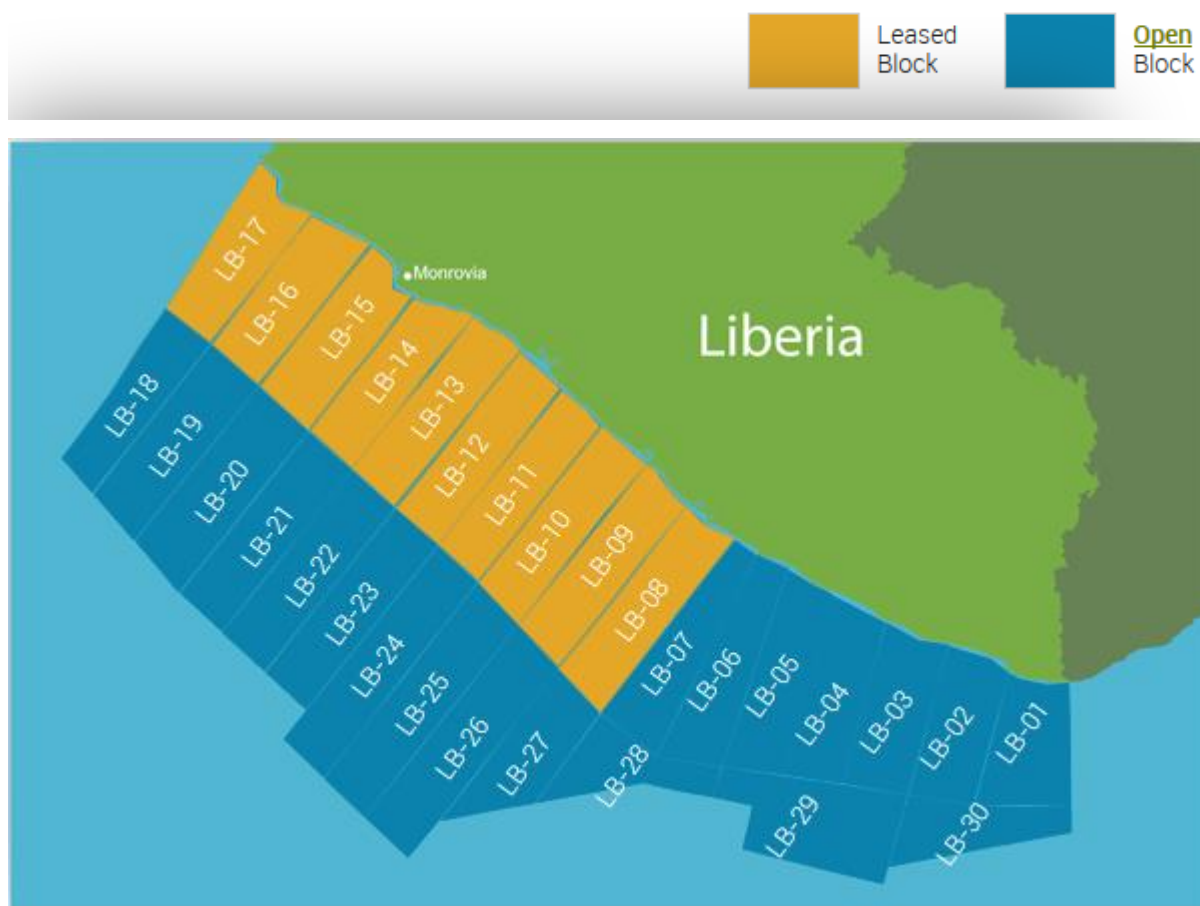
³ "http://www.menas.co.uk/App_Data/elib/OverviewExploreLiberia.pdf". Accessed 17.7.2013.

⁴ Chapter III Article 22 (b) of the 1986 Constitution of Liberia. See *Petroleum Law Compendium Book 2* (2008) pp. 59-64.

⁵ Chapter XII Section 12 (3) of New Petroleum Law of Liberia.

See Birnie et al. *International Law & the Environment* (2009) pp. 136-158, 451-462.

Fig1: The location of Petroleum activities



Liberia oil and gas discovery is estimated to be thirty (30) concessionary blocks. There are 17 deep-water blocks from the Continental Shelf to water depths of 2500 meters to 400 meters and 13 “Ultra-deep water” blocks to water depths of 4500 meters this is what constitute Liberia`s off-shore acreage as shown in the upstream or offshore locations from 1-17.⁶ See Fig-2 on page eleven below for more details on the discoveries of oil and gas on Liberia`s continental shelf. ⁷ The research paper will now turn to the Exclusive Economic Zone (EEZ) and Continental Shelf (CS) of Liberia where the mining activities are taking place.⁸

⁶ <http://www.nocal.com.lr/operations/block-status>. Last accessed, 19.7.2013.

⁷ http://www.menas.co.uk/App_Data/elib/OverviewExploreLiberia.pdf. Last visited 17.7.2013, at 13:35.

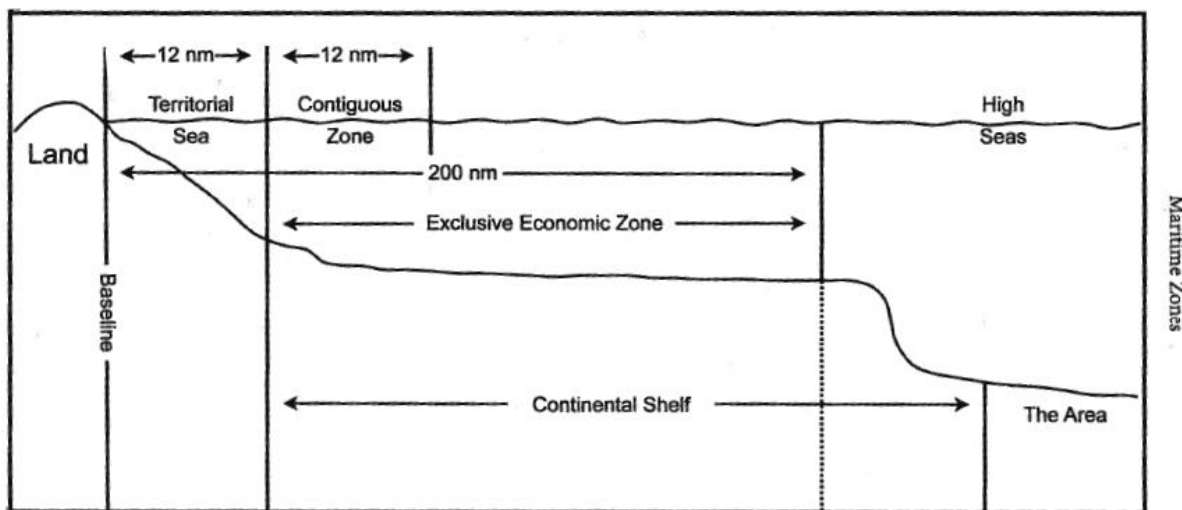
See Chapter II Article 7 of the 1986 Constitution of Liberia

⁸ Article 56 (1)(a) (b)(iii) of UNCLOS. See Kiss and Shelton: *International Environmental Law* (2007) pp. 202-210, 445-456.

1: 3 Exclusive Economic Zones and the Continental Shelf Regime

The exploration and exploitation activities in the marine environment that this paper is concerned about are taking place within the Liberian continental shelf as shown in figure Fig-2 diagram.⁹ The high sea freedom is safeguarded by Article 87 of UNCLOS, except otherwise provided where the high sea freedom is subject to the conservation and management of the high seas living marine resources.¹⁰ Article 77(4) provides that natural resources referred to in this part are mineral and other non-living resources of the sea-bed. Article 76(1) provides that the continental shelf is the natural prolongation of coastal State land territory.¹¹ From Article 77 one can conclude that Liberia can do mining on the shelf. Because Article 77(2) provides that coastal State has exclusive rights to explore and exploit the natural resources of the continental shelf, no one may undertake such activities without the consent of the coastal State. However, Liberia shall do this sustainably and take all precautionary measures for the prevention, reduction, and control of pollution of the marine environment.¹² See maritime zones in Donald and Stephens, *The International Law of the Sea* (2010).

Fig 2: *Maritime Zones*



Part V Article 56 (1) (a) of UNCLOS provides that Liberia has sovereign rights in the EEZ to explore and exploit, conserve and manage the natural resources found therein, the sovereign rights of Liberia give Liberia the authority to carry on hydrocarbon exploration and exploitation activities in the EEZ. The resources found of the water superjacent of the seabed

⁹ Article 76 of UNCLOS.

¹⁰ Article 77 of UNCLOS.

¹¹ Article 76(1) of UNCLOS.

¹² Chapter III Article 22(b) of the 1986 Constitution of Liberia. See Yoshifumi Tanaka. *The International Law of the Sea*: (2012) pp. 124-144. See Zedalis: *International Energy Law* (2000) pp. 11-38. See Fisher et al: *Implementing the Precautionary Principle* (2006) pp.46-47.

and its subsoil are for Liberia.¹³ Liberia authority in the EEZ includes all exploration and exploitation of the EEZ for economic benefits. Liberia`s authority include conservation and management measures for fisheries and all living resources in the EEZ of Liberia. This assertion is in conformity with Part XII of UNCLOS which this paper will discuss in chapter two.¹⁴

1: 4 Impact of Pollution

In recent years, the levels of contaminants in the marine environment have increased as a consequence of anthropogenic activities.¹⁵ In the Liberian context, the exploration and exploitation of petroleum in the marine environment constitute hazard to marine biodiversity. The activities can have negative consequence on human health if not properly managed. However, it is important to mitigate pollution arising from drilling oil and gas in the marine environment. The Ixtoc I oil spill of June 3, 1979 to 23, to March 1980, and the deep-water Horizon oil spill, from April- August 2010, should remind us of how hydrocarbon activities can damage livelihoods and the marine environment.¹⁶ Besides these impacts, other potential hydrocarbon catastrophic uncertainty as a result of deep water mining are for example, explosion, fire, oil-leakages, and mismanagement of oil platforms, wells. Nevertheless, all these can cause transboundary pollution of the marine environment if measures to stop the pollution are not taken urgently.¹⁷

International Environmental Law (IEL) provides legal principles for the protection of the marine environment by mitigating pollution.¹⁸ Liberia as a signatory to majority of these Conventions has obligation to comply with them by incorporating them into the Liberian domestic Law.¹⁹ The law shall have effects on the hydrocarbon production activities on Liberia`s continental shelf.²⁰

¹³ Gavouneli: *Pollution from Offshore Installations* (1995) pp. 37-49.

¹⁴ Article 61(1-5) and 62(1-4) of UNCLOS. See Rothwell and Stephens: *The International Law of the Sea* (2010) pp. 82-94.

¹⁵ Ayesha Dias in Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 79-84.

¹⁶ Beyerlin and Maraudhn: *International Environmental Law* (2011) pp. 122-132, 369-374.

¹⁷ Article 194 of UNCLOS. Gavouneli: *Pollution from Offshore Installations* (1995). PP. 34-49.

¹⁸ Birnie and Boyle: *International Law & the Environment* (2002) pp. 181-205-212, 353-364.

¹⁹ Article 193 of UNCLOS.

²⁰ Article 145 of UNCLOS.

1: 5 Materials and how they are used for this study

This research paper will depend both on National and International Law legal sources. The process will be accompanied by Article 38 of the International Court of Justice (ICJ). Article 38 is considered as an authoritative enumeration of sources of International Law.²¹ The interpretation process of all relevant Conventions shall be led by Article 31 of the Vienna Convention on the Law of Treaties.²² On the National laws aspect Chapter II Article 7 of Liberia's Constitution which provides that Liberia has the constitutional power to explore and exploit her hydrocarbon resources on the continental shelf will be used to demonstrate Liberia's sovereign rights.²³ However, Liberia being a signatory to UNCLOS and other international environmental law instruments shall execute her sovereign rights in conformity with international environmental law provisions.²⁴ Chapter II Article 9 of the 1986 Constitution of Liberia provides that "The Republic shall encourage the promotion of bilateral and regional cooperation between and among Liberia and other nations and the formation and maintenance of regional organizations..."²⁵ Articles 34(f) and 57 of the 1986 Constitution of Liberia should be considered as the legal basic that make Liberia a dualist State.²⁶ Meaning that International Environmental Law (IEL) marine pollution has to be incorporated into Liberia's national law and enforced for the protection of the marine environment as a consequence of hydrocarbon exploitation or production activities on Liberia's continental shelf. The provisions of the environmental protection laws of Liberia are way of Liberia fulfilling her national and international obligations, but to what extends? The following international laws instruments will be used: (a) UNCLOS (b) MARPOL 73/78 (c) OPRC (d) CBD (e) Abidjan Convention. The National laws to be used are: (a) The 1986 Constitution of the Republic of Liberia (b) The New Petroleum Law of Liberia, 2002 (c) the Environmental Protection Law of Liberia, 2003 (d) the Environmental Protection Agency Act of Liberia, 2003.²⁷

On the other hand, literature, relevant policy document, case laws, electronics sources such as internet websites will be used. Despite the fact that the focus of the research is on legally binding instruments soft law, policy documents, will be used to provide a contextual basis.

²¹ See Article 38 of the Statute of the ICJ.

²² See Article 31 (3)(c) of the 1969 Vienna Convention on the Law of Treaties.

²³ Chapter II Article 7 of the 1986 constitution of Liberia.

²⁴ Article 193 of UNCLOS.

²⁵ Chapter II Article 9 of the 1986 constitution of Liberia.

²⁶ Article 34(f) of the 1986 constitution of Liberia. See Tshosa: *National Law and International Human Right Law* (2001) pp. 3-12.

²⁷ Chapter VI Article 57 of the 1986 Constitution of Liberia. See Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 13-28. See Churchill and Lowe: *The Law of the Sea* (1999) pp.331-352.

Moreover, the focus of the research is on legally binding instruments. Soft laws are not binding on States, but States can apply them at their own convenience when they find a reasonable ground for the instruments. Hard laws are binding on State parties. In this research, applicable international hard law instruments that are binding on Liberia for the prevention, reduction, and control of marine pollution arising from the hydrocarbon exploration and exploitation activities on Liberia`s continental shelf will be discussed therein. In that regards, the thesis will focus on Liberia`s obligations under binding principles of international environmental law as legal provisions for brightening the scope of Liberia. The national laws give Liberia legal rights for the hydrocarbon production activities therein²⁸

1: 6 Description of the study

This research paper is constructed into five chapters. Chapter one is divided into seven sub-sections. The first three sections provide the historical contexts and background that give Liberia legal rights to do deep water mining. The other four sub-sections provide the introductory overview of this research and the objective for this study are mentioned therein. The structure of the thesis, the materials and how they are used for this study are mentioned hereinafter. The provision of the Constitutional legality that provides Liberia with the Constitutional power to do upstream mining on its continental shelf and the basis for the exploration and exploitation of hydrocarbon activities are provided herein.²⁹

In the second chapter of this paper, there will be discussion on Liberia`s obligations under International Law, specifically obligations to protect the marine environment from offshore hydrocarbon activities. Chapter three of the thesis examine the pertinent, National Law of Liberia incorporating the aforementioned international legal obligations in the domestic Liberia legal system, and how this law impacts, on the hydrocarbon exploitation activities on Liberia`s continental shelf. Chapter four provides an assessment of Liberia`s efforts to comply with its obligations, under national and international law to protect the marine environment. Chapter five contains recommendations for Liberia as a contribution of this research. The paper ends with its conclusion after recommendations in chapter five.

²⁸ Chapter II Article 9 of the 1986 Constitution of the Republic of Liberia. See Evans: *International Law* (2010) pp. 122-138, 430-434.

²⁹ Chapter II Article 7 of the 1986 Constitution of Liberia

1: 7 Delimitations

This research paper is based on the followings:

Hydrocarbon activities refers to in this study means the exploitation and production of naturally occurring liquid, or condensate field that is under the sea, or to activities or operations carried out in relation to such a field, or gaseous carbon-hydrogen compounds such as bituminous schist, organic minerals or liquid petroleum, crude oil, natural gas, fossil fuels and other related liquid. These natural resources are to be exploited with regard to protect and preserve the marine environment as provided under Articles 56(1)(a)(b)(iii), 193 of UNCLOS. The hydrocarbon activities include installations, structures or platform operation, or construction and equipment of mobile offshore drilling units, surface and subsurface, exploration and exploitation, activities of storage, processing, pipeline transportation and hydrocarbon commercialization, and seismic surveys.³⁰

For the purpose of this thesis, platforms in the Liberian marine environment include fixed and floating platforms and drilling rigs, floating production, storage facilities (FPSOs) used for the offshore production and storage of oil, floating storage units (FSUs) use for the offshore storage of produced oil. However, there are transportation of oil and gas from the oil fields. And there are processing plants within the marine environment. But this thesis will focus on the platform aspects and how this impacts the marine environment due to the upstream mining activities therein.³¹

³⁰ For the definition of hydrocarbons visit <http://www.elmhurst.edu/~chm/vchembook/500hydrocarbons.html>, accessed 10.7.2013. For more information on the stages of hydrocarbon activities see http://cil.nus.edu.sg/wp/wp-content/uploads/2010/10/OG_SCS_CIL-Part206oct2011-1.pdf, accessed 9.7.2013. See Dias in Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 73-84. See Articles 56(1)(a)(b)(iii), 193 of UNCLOS. See Churchill and Lowe: *The Law of the Sea* (1999) pp. 374-375.

³¹ Marpol73/78 Annex 1. chapter 7.

2: 0 CHAPTER TWO - LIBERIA'S OBLIGATIONS UNDER INTERNATIONAL LAW

2: 1 Introduction

The work of this part of the research paper is to present and discuss in detail Liberia's obligations under International Environmental Law. The relevant provisions of UNCLOS that has to do with the protection and preservation of the marine environment, particularly part XII of UNCLOS will be discussed. The next discussion shall be on MARPOL73/78 part that has to do with marine environmental pollution namely: Annex 1, chapter 7 provides regulation for platforms or installations that can harm the marine environment due to oil from the activities therein. There will also be discussion on OPRC as it targets the prevention, reduction, and control of pollution by oil in the marine environment. The Abidjan convention is considered as one of the most relevant provisions for this thesis due to the fact that it also provides mechanism for the prevention of marine pollution arising from the hydrocarbon exploration and exploitation activities on Liberia's continental shelf. Lastly, I will discuss the relevant part of the CBD. It is important to noticed that the CBD does not target hydrocarbon activities, but it provides that Liberia has to consider the consequence of mining its sea-bed for petroleum and that Liberia has to make sure as a State party that Biological Diversity are protected from pollution arising from activities taking place on Liberia` continental shelf.³²

2: 2 1982 UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (UNCLOS)

As a signatory to UNCLOS Liberia is under obligations to implement UNCLOS` provisions as provided under Article 192 of UNCLOS, protection and preservation of the marine environment as a result of Liberia's hydrocarbon exploration and exploitation or production activities under Liberia's jurisdiction.³³ The "right and obligation" of Liberia are found under Article 193 of UNCLOS. Article 193 provides that Liberia has sovereign rights to exploit her hydrocarbon resources.³⁴ Article 237(2) of UNCLOS provides that Liberia has categorical obligations for the protection of marine environment.³⁵ Article 194 (1-5) obligates Liberia to take all necessary measures to prevent, reduce and control pollution of the marine

³² Birnie et al: *International Law & the Environment* (2009) pp. 128- 132, 136-137.

³³ Article 192 of UNCLOS.

³⁴ Article 193 of UNCLOS.

³⁵ Rothwell and Stephens: *The International Law of the Sea* (2010) pp. 338-382.

environment originating or arising from the exploration and exploitation of Liberia's hydrocarbon activities. These measures shall not only deal with hydrocarbon activities, but all sources of pollution must be dealt with as mentioned.³⁶

2: 3 Duty under UNCLOS to cooperate

Liberia shall cooperate with neighboring Sierra Leone and Ivory Coast and even on global and regional basis to meet its obligation and requirements under UNCLOS.³⁷ Article 197 of UNCLOS, provides that "States shall cooperate on a global and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules and, standards and recommended practices".³⁸ The cooperation should give Liberia the impetus regarding how Liberia can protect the marine environment. It is important for Liberia as a coastal State to cooperate because through cooperation Liberia shall be complying with Parts V and VII of UNCLOS that deals with States' rights and duties concerning the conservation and management of marine living resources, including marine mammals, in the exclusive economic zone as provided under Article 56, 61, and 65 as this is part of Liberia's obligations to protect the marine life from pollution arising from mining activities on her sea-bed³⁹

In a nutshell, UNCLOS's regulatory mechanism for the marine environmental protection is a "package deal". This package deal provides a general rules and framework for Liberia's rights and obligations. Article 197 is the legal basis for Liberia and other coastal States cooperation as a way of establishing, regional and international agreed norms that are imposed on Liberia clear-cut environmental obligations, including the substantive ones. This provision is a very strong emphasis on the prevention, reduction and control of pollution in the marine environment. UNCLOS exerts, a considerable efforts on all further law-making regimes and processes concerning the protection of Oceans and Seas' marine environmental resources. In this regard, UNCLOS being the Constitution of the Sea do imposed on Liberia as a State party. This view is shared by Tommy Koh, who argued that UNCLOS "...is the Constitution of the Oceans...". Summarily, cooperation by coastal States shall assist in the mitigation of pollution of the marine environment as a result of activities in the area. In the next sub-

³⁶ Article 194 (1-5) of UNCLOS.

³⁷ Birnie et al: *International Law & the Environment* (2009) PP 137-146,147-149.

³⁸ Article 197 of UNCLOS.

³⁹ Article 209 (1), 214 of UNCLOS. See Birnie et al: *International Law & the Environment* (2009) pp. 137 -147, 431-440.

section, the research paper will discuss Liberia's obligations under UNCLOS to adopt laws for the mitigation of marine pollution.⁴⁰

2: 4 Duty to protect the marine environment

Article 208(1) of UNCLOS provides that coastal State has obligations to adopt laws and regulations to prevent marine environmental pollution from sea-bed activities that are subject to coastal States jurisdiction. Article 208(1)(5) should be read and interpreted in connections with Articles 60(1-8) and 80 of UNCLOS. However, Article 81 of UNCLOS provides that coastal State shall have exclusive right and authority while regulating oil drilling on the continental shelf for all purposes. Article 208 (2) of UNCLOS required Liberia for example, or any other coastal State(s) for that matter to take other measures that such State deem necessary in order to prevent, reduce and control pollution. Besides adopting laws and regulations, there are requirements for coastal States under Article 208(3) that provides that laws, regulations and measures that UNCLOS imposed on Liberia and other coastal States shall not be less effective than those of the international rules, standards and recommended practices and procedures. In addition to the above, Article 208(5) of UNCLOS provides that "States acting through competent international organizations or diplomatic conference, shall established global rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment...". Article 208 of UNCLOS provides impetus that the above provisions shall be the basis for forming a regional convention for its operationalization or other international supplementary regimes that should obligate coastal States to tackle and prevent pollution before it can occur.⁴¹ These principles are regimes in nature. They are also considered to be part of the defined International Environmental Law (IEL). However, they are binding on founding members like Abidjan Convention, and MARPOL instruments.⁴² Notwithstanding, Articles 207 (1)(4), 209 (1-2), 210 (4), 211 (2)(5)(6), 212 (1)(3) do explicitly and objectively reinforced these "international agreed rules, standards and recommended practices and procedures as provided under Articles 197, 211 (2) of UNCLOS that States shall "adopt laws and regulations to prevent marine pollution...". We will now turn to Liberia's obligations to protect the marine environment.⁴³

⁴⁰ See Article 197 of UNCLOS. Beyerlin and Marauhn: *International Environmental Law* (2011), pp.115-140, 177-182, 211-239.

⁴¹ Article 208 (1)(3)(5) of UNCLOS. See Birnie and Boyle: *International Law & the Environment* (2002) pp. 351-356, 377-380.

⁴² Article 215 of UNCLOS.

⁴³ Ulrich Beyerlin and Marauhn: *International Environmental Law* (2011) pp.118-120, 121-140.

2: 5 Obligations of Liberia to protect the marine environment from pollution

The obligations to protect the marine environment by coastal States and other States is evidenced by Articles 192-5 of UNCLOS, by regional treaties and by other multilateral regimes such as the Abidjan Convention for West and Central African States, UNCLOS, MARPOL, OPRC and the Convention on Biological Diversity (CBD), among others negotiated agreements since 1954.⁴⁴ One important instrument is the 1972/96 London Dumping Convention which Liberia is not a party to and therefore not binding on Liberia.⁴⁵ Articles 208(1)(5), and 214 obligate Liberia to adopt laws and regulations and enforce them to prevent, reduce and control pollution arising from the hydrocarbon exploration and exploitation activities on Liberia`s continental shelf or sea-bed.⁴⁶

The 1973/78 MARPOL Convention, OPRC, including Abidjan Convention among others provide legal provisions that Liberia has to comply with for the prevention, reduction, control of marine pollution as a consequence of Liberia`s hydrocarbon exploration and exploitation or production activities.⁴⁷ Moreover, Provisions under UNCLOS on marine environment are supported by strong measures of opinion juris and this is representing an agreed codification of existing principles which become part of customary international law.⁴⁸ More details on protection of the marine environment are to be discussed in subsequent Conventions. Article 235 (1) of UNCLOS reiterate Liberia`s obligations as a coastal State under international law for the protection, and preservation of the marine environment from pollution arising from or in connection with the exploration and exploitation activities of the sea-bed.⁴⁹ This provision asserts that, Liberia has an obligation to fulfill. Additionally, Article 235 (2) provides that Liberia or coastal States shall ensure recourse is available in accordance with their legal systems for prompt and adequate compensation due to damaged caused by pollution of the marine environment arising from, for example, hydrocarbon activities. The research paper will now turn to MARPOL73/78 in the next section which is considered as a supplementary convention to UNCLOS.⁵⁰

⁴⁴ Articles 192, 193, 194(1), 195 of UNCLOS. Birnie and Boyle: *International Law & the Environment* (2002) pp. 362-363,382-390.

⁴⁵ Article 237 (1-2) of UNCLOS.

⁴⁶ Churchill and Lowe: *The Law of the Sea* (1999) pp. 370-378.

⁴⁷ Article 214 of UNCLOS.

⁴⁸ Birnie et al: *International Law & the Environment* 2009), pp. 382-392.

⁴⁹ Articles 135(1), 192, 193, 194(1),(3)(c) of UNCLOS.

⁵⁰ Gavouneli: *Pollution from Offshore Installations* (1995) pp. 113-145.

2: 6 INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS AND ITS PROTOCOL (MARPOL 73/78)

Liberia is a State party to the MARPOL Convention considered as one of the important international marine environmental conventions covering the pollution of the marine environment from harmful substances from ships.⁵¹ The MARPOL73/78 had been designed to minimize pollution from the seas, including dumping, oil and exhaust pollution. The stated objective is “to preserve the marine environment through the complete elimination of pollution by oil and other harmful substances and the minimization of accidental discharges of such substances”. Requirements under MARPOL shall be considered as supplementary of UNCLOS or widening the scope of UNCLOS.⁵²

2: 7 MARPOL 73/78 definition of “vessel” and “discharge”

Platforms are defined in the Regulations as including fixed and floating platforms and drilling rigs, and are required to comply with Annex 1 and Annex VI of MARPOL. For the purpose of this thesis “Ship” means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms” Discharge in relation to harmful substances or effluent containing such substances, means any release howsoever caused from a ship and includes any escape, disposal, spilling, leaking, pumping, emitting or emptying; of such substances in the marine environment. Alexander Kiss and Dinah Shelton argued that once an operation is licensed, the coastal State authority has the power to prohibit, limit, or regulate any chemical or discharge from offshore installations that may cause injury or harm to the marine environment. However, it is important to notice regulation 34 on discharge in special areas and marine pollution from offshore rigs that is included and obligations concerning technical standards. Platforms are subject to the survey and certification requirements of Annex VI of MARPOL.⁵³ The scope of the survey and certification is limited to the extent that emissions directly arising from the exploration, exploitation and associated offshore processing of sea-bed mineral resources are, consistent with Article 3 Paragraph (b)(ii) of the MARPOL Convention, exempt from the provisions of Annex VI of MARPOL.⁵⁴ Such emissions include the following: (a) from any platform

⁵¹ MARPOL73/78 Article 1 (1) See Gavouneli: *Pollution from Offshore Installations* (1995) pp.40-52.

⁵² MARPOL73/78 Article 2 and 3 (a). Churchill and Lowe: *The Law of the Sea* (1999) pp. 370-374.

⁵³ MARPOL 73/78 Annex 1., Chapter 7, regulation 39 on special requirement for fixed or floating Platforms and Annex VI on Air Pollution., Article 2(3)(a),(4). See Kiss and Shelton: *International Environmental Law* (2000). PP. 457-478. See Evans: *International Law* (2010) pp. 698-702. See Warner and Marsden: *Transboundary Environmental Governance* (2012) pp. 181-190.

⁵⁴ Article 3 (b)(ii) of the MARPOL 73/78. Gavouneli: *International Environmental Law* (1995) pp. 40-50.

resulting from the incineration of substances that are solely and directly the result of exploration, exploitation and associated offshore processing of sea-bed mineral resources, including but not limited to: (i) the flaring of hydrocarbons and the burning of cuttings, muds and stimulation fluids during well completion and testing operations, (ii) flaring arising from upset conditions, and (iii) the release of gases and volatile compounds entrained in drilling fluids and cuttings, (b) Associated solely and directly with the treatment, handling or storage of a sea-bed mineral (c) from a diesel engine that is solely dedicated to the exploration, exploitation and associated off-shore processing of sea-bed mineral resources.⁵⁵

2: 8 the Contents of Regulations

Liberia as a State party to MARPOL73/78 can designate particular sensitive sea area (PSSA) or “special sea areas” within the marine environment.⁵⁶ The designation of special protected areas (SPA) shall be due to technical reasons or because of geographical and ecological reasons including sea traffic. The designated “particularly sensitive sea area” (PSSA) shall be under surveillance and protection of Liberia as compare to other area of the Liberian sea.⁵⁷ Article 4 and 6 of Marpol73/76 required that any States that violated the provisions of MARPOL shall be liable of such violation. Conclusively, Liberia as signatory to MARPOL 73/78 is required hereunder to comply with regulation 39 on platforms for the exploration and exploitation of petroleum resources on the continental shelf of Liberia.⁵⁸ In case of disputes as a result of the interpretation of MARPOL 73/78, Liberia has rights as a signatory to this convention to channel its assertion further. But first Liberia has to request for an arbitration tribunal through the secretary general of this Convention. Article 10 provides that Liberia first has to try to settle its dispute or conflict amicably by negotiation, but if both parties do not agreed than request can be made. In the next section, I will be discussing the International Convention on Oil Preparedness and Response (OPRC), and figured out its imposition and requirement on Liberia`s upstream mining operation.⁵⁹

⁵⁵ MARPOL73/78 Annex 1 is applicable to offshore installations. See Gavouneli: *Pollution from Offshore Installations* (1995) pp. 40-49.

⁵⁶ Churchill and Lowe: *The Law of the Sea* (1999) pp. 392-396.

⁵⁷ Sand et al: *Principles of International Environmental Law* (2012) pp. 443-446. See Kiss and Shelton: *International Environmental Law* (2000) pp. 336-338.

⁵⁸ MARPOL 73/76 Annex 1. See Warner and Marsden: *Transboundary Environmental Governance* (2012) pp. 178-190.

⁵⁹ Article 10 of MARPOL 73/78.

See MARPOL73/78Protocol II Arbitration Articles I, II, and III.

2: 9 INTERNATIONAL CONVENTION ON OIL POLLUTION PREPAREDNESS, RESPONSE AND CO-OPERATION (OPRC)

OPRC is defined as an international maritime convention's establishment that applies to ships and offshore units. For the purpose of this thesis, the question raised is to what extent is Liberia's offshore units complying with its obligations under OPRC? OPRC was established for the mitigation of marine oil pollution incidents nationally and in co-operation with other Countries as Provided under Article 6 and 7 of OPRC. OPRC was drafted within the framework of IMO its provisions pertaining to the prevention, reduction, and control of marine pollution arising from oil-spills do meet the requirement together with regulation 26 of MARPOL Annex 1, OPRC paid the global framework for preparation and response of oil-spills. However, Liberia is under obligation to comply and implement the provisions of OPRC as provided under Article 9(1)(a)(c)(d)(2). Liberia being a State party has an obligation as provided under Article 10 of OPRC to implement this convention. There are 107 States Parties to OPRC including Liberia and so this convention is binding on Liberia and at such reflect its hydrocarbon exploration and exploitation activities on the continental shelf of Liberia. OPRC is a framework of IMO. It was adopted in 1990 and enforce in 1995. OPRC 2002 protocol targets *inter alia*, hazardous and noxious substances.⁶⁰

2: 10 Prevention of pollution by oil of the marine environment

Article 3 paragraph 2 of OPRC on oil pollution emergency plan provides that Liberia as a States party to this Convention has obligations to require oil companies of the offshore units under Liberia jurisdiction to comply with oil pollution emergency plans.⁶¹ Such emergency plans are to be coordinated with the Liberian national system and in conformity with the requirement hereunder. These requirements shall be approved by the Liberian government before they become operational in the marine environment for the prevention, reduction and control of pollution. Article 6 (1) (a) of OPRC provides that Liberia as a State Party to the Convention has to establish a national system that is tasked with immediate response

⁶⁰ <http://cil.nus.edu.sg/1990/1990-international-convention-on-oil-pollution-preparedness-response-and-co-operation/>. Last visited; 10.8.2013. See Articles 6, 7, 9(1)(a)(c)(d)(2), 10 of OPRC. See Warner and Marsden: *Transboundary Environmental Governance* (2012) pp. 184-186. See Dias in Gao: *Environmental Regulation of Oil and Gas* (1998) pp.79-92.

⁶¹ Articles 2, 3, and 4 of OPRC. See Birnie et al: *International Law & the Environment* (2009) pp. 8-17, 136-150,167-183, 428-440.

whenever there are oil pollution incidents in marine environment.⁶² The Liberian pollution response unit must include the followings:

- (i) That Liberia shall have in place a competent authority with the tasked of monitoring oil pollution, preparedness and response.
- (ii) That Liberia shall, the word “shall” means that Liberia must at all cost have a national operations contact point or points. However, the points shall take care of receipt and transmission of oil pollution reports as mentioned in Article 4 of this convention.⁶³
- (iii) That the established Liberian authority for oil pollution shall be entitled to act on behalf of the Liberian State to request assistance or decide to render assistance when it is requested for the prevention, reduction and control of pollution of the marine environment due to hydrocarbon exploration and exploitation activities on Liberia`s continental shelf.

Summarily, Liberia is not complying with its obligations due to lack of enforcement measures as a consequence of systematic corruption⁶⁴ In the next section the research paper will be discussing the Biological Diversity Convention (CBD). This is another major area of concern for the international community as a consequence of hydrocarbon exploration and exploitation activities in the marine environment of coastal States and beyond.

⁶² Articles 3(2), 6(1) (a) of OPRC. See Gavouneli: *Pollution from Offshore Installations* (1995) pp. 30-42. See Kiss and Shelton: *International Environmental Law* (2000) pp. 280-288, 445-478.

⁶³ Article 6 (1)(a)(i-ii) of OPRC. See Birnie et al: *International Law & the Environment* (2009) pp. 143-150,387-394,451-454.

⁶⁴ Article 6 (1)(a)(iii) of OPRC. See Warner and Marsden: *Transboundary Environmental Governance* (2012) pp. 183-185. For more on Liberia`s corruption see: <http://www.theguardian.com/world/2013/may/08/liberia-natural-resources-deal-audit> ., <http://www.globalwitness.org/Liberia/EPO>., <http://www.usatoday.com/story/money/business/2013/07/14/most-corrupt-countries/2512785/>., The fact that corruption do exist in Liberia as proven by the above media reports and survey should be considered as an impediment of Liberia`s effort to comply and enforce National and International obligations for the protection of the marine environment. The act(s) of corruption in Public sector(s) is also violation of Section 10.5 of the Anti-Corruption Commission Act (2008), and Chapter II Article 7 of the 1986 Constitution of Liberia.

2: 11 CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

The Convention on Biological Diversity (CBD) is defined as an International Environmental Convention purpose of the protection and conservation of life sustaining biospheres systems. Overexploitation occurs when a resource is consumed at an unsustainable rate. The CBD hereinafter is binding on Liberia as a State party.⁶⁵ Zhiguo Gao, argued that it is important for the conservation of biological diversity that State parties to the CBD identify and monitor activities that may have negative impacts on the marine environment for the mitigation of pollution.⁶⁶ In the same vein, Philippe Sand and Jacqueline Peel, with Adriana Fabra and Ruth Mackenzie, assert that each contracting party to the CBD as far as possible and as appropriate should established a marine protection zone(s) or area, because the process of protected areas (PA) are considered as a durable or long-used techniques for the prevention of marine pollution.⁶⁷ In the next section, the research paper will discuss Liberia`s legal obligation as a State party to the CBD.

2: 12 Liberia has obligation to protect the marine environment

The CBD contains no provisions directly regulating hydrocarbon exploration and exploitation activities that this thesis is all about. However, Article 3 of the CBD provides States have, in accordance with the Charter of the United Nations and principles of international law, the sovereign right to exploit their own resources in regard their domestic environmental policies. Liberia shall ensure that the hydrocarbon exploitation and exploitation or production activities under her jurisdiction do not cause damage to the environment of other States or area beyond Liberia jurisdiction.⁶⁸

Article 14(1)(a) of the CBD provides that Liberia or any other contracting party to the CBD shall introduce appropriate procedures requiring Environmental Impact Assessment (EIA) for its proposed project that are likely to have significant adverse effects on biological diversity...” this should a way of preventing, reducing, and controlling pollution of the marine environment arising from Liberia`s hydrocarbon exploration and exploitation activities. This provision is calling on Liberia to take precautionary approach while exploiting its upstream oil and gas resources sustainably for the mitigation of pollution of the marine environment.⁶⁹

⁶⁵ Article 1 and 2 of the CBD. See Kiss and Shelton: *International Environmental Law* (2000) pp. 199-309.

⁶⁶ Zhiguo Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 17-18.

⁶⁷ Sands et al: *Principles of International Environmental Law* (2012) pp. 449-456,457-513. See *Transboundary Environmental Governance* (2012) pp. 88-112.

⁶⁸ Article 3 of the CBD. See Sand et al: *Principles of International Environmental Law* (2012) pp.449-462.

⁶⁹ Article 14(1)(a) of the CBD. See Warner and Marsden: *Transboundary Environmental Governance* (2012) pp.302-316.

Article 6 paragraph (a) of the CBD provides that Liberia and other contracting parties to the CBD are under obligations to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity...” Liberia can improve on its national environmental laws and policies in place. However, such laws and policies should reflect, inter alia, the requirements of the CBD for the prevention, reduction and control of pollution of the marine environment as a result of Liberia’s upstream hydrocarbon exploration and production activities.⁷⁰

2: 13 Measures for the management of environmental impact of the marine environment

Article 14(1)(a) of the CBD provides further that Liberia as far as possible and as appropriate should be in the position of avoiding or minimizing the effects of Liberia’s proposed projects where appropriate, allow for public participation in such procedures. Moreover, the qualified nature of each Party’s obligations increases the possibility that the Party will fail to meaningfully address any one specific issue. Looking at the fact for example, that many of the most important obligations relating to conservation and sustainable use are qualification include phrases such as “each Contracting Party shall, as far as possible, and as appropriate”.⁷¹ Article 14(1)(b) of the CBD provides that Liberia should or any other contracting party to the CBD shall introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that can impact biological diversity are duly managed. Article 14(1)(d)(e) of the CBD provide that Liberia should promote national arrangements for emergency responses to activities or events, whether cause by naturally or otherwise, which pose great and imminent danger to biological diversity. However, for the purpose of this thesis, Liberia shall encourage international cooperation as a way of supplementing national efforts for the mitigation of pollution of the marine environment arising from Liberia’s hydrocarbon exploitation or production activities. Article 14(1)(e) of the CBD further provides that Liberia shall cooperate with other coastal States or regional economic organization like ECOWAS and the Mano River Union for example, for the establishment of joint contingency plans for the prevention, reduction and control of pollution of the marine environment. Summarily, the above provisions assert that Liberia has responsibility to protect biological diversity from pollution as a result of Liberia’s hydrocarbon exploration exploitation activities in the marine environment. The research paper

⁷⁰ Article 6(a) of the CBD. See Birnie et al: *International Law & the Environment* (2009) pp. 115-136, 585-596. See Jeffery et al: *Biodiversity, Conservation, Law + Livelihood* (2008) pp. 69-82, 92-93.

⁷¹ Article 14(1)(a) of the CBD. See Gillespie: *Protected Areas and International Environmental Law* (2007) pp. 157-166. See Birnie et al: *International Law & the environment* (2009) pp. 617-618.

will now discuss the Abidjan Convention that covered the protection of the marine environment from pollution arising from activities under Liberia jurisdiction.⁷²

2: 14 ABIDJAN CONVENTION

The Abidjan Convention is administered by the United Nations Environment Programmes (UNEP). The convention is considered as an umbrella agreement that addresses pollution. The convention scope include: Overfishing, dumping at sea, exploration and exploitation of the sea-bed and other activities that pollute the marine environment and coastal ecosystems.⁷³ Geographically, the convention`s area starts from Mauritania in North-Western Africa to Namibia in Southern Africa. Liberia, being a member of this convention is obliged as provided under Article 3 and 4, to implement this convention and its related protocol thereto.⁷⁴

2: 15 Obligations to protect the marine environment

Article 3(1) of the Abidjan Convention provides that Liberia and all other States parties to the Abidjan Convention can enter into bilateral, sub-regional, regional and multilateral agreements, once those agreements` objectives are for the protection of the marine and coastal environment of the convention`s area. In doing so, such agreements should conform to the rules of international environmental law.⁷⁵ Article 4 Paragraph 1 of the Abidjan Convention provides that contracting parties shall, individually or jointly as the case may be, take all appropriate measures in conformity with the provisions of this Convention and its protocols in force to which they are parties for the prevention, reduction, and control of pollution that for the purpose of this thesis be arising from the hydrocarbon activities on Liberia`s continental shelf. However, Article 4(3) of the Abidjan Convention provides that the contracting parties shall incorporate this convention into their domestic laws through establishing national laws to discharge such duty. Article 4(4) of the Abidjan Convention provides that Contracting Parties shall cooperate with competent international, regional and sub-regional organizations to established and adopt recommended practices, procedures, and measures to prevent, reduce, combat and control pollution from all sources in conformity with the objectives of this

⁷² Article 14 (1)(a)(b)(d)(e) of the CBD. See Kiss and Shelton: *International Environmental law* (2007) pp. 299-323. See Warner and Marsden: *Transboundary Environmental Governance* (2012) pp. 302-310.

⁷³ Articles 2(1), 3(1)(3) of the Abidjan Convention. See Kiss and Shelton: *International Environmental Law* (2000) pp. 461-478.

⁷⁴ Article 1 of the Abidjan Convention.

⁷⁵ Article 3(1) of the Abidjan convention. See Dias in Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 71-102.

convention and its related protocols...”.⁷⁶ This provision is in conformity with Part XII of UNCLOS, and also reflects the argument of P. W. Birnie, A. E. Boyle and C. Redgwell that “States have a duty to prevent, reduce, and control transboundary pollution and environmental harm resulting from activities within their jurisdiction or control.”⁷⁷

2: 16 Pollution from hydrocarbon activities on the sea-bed

Article 8 provide that all contracting parties shall take necessary measures to prevent, reduce, combat and control pollution as a result of the installations and structures place in the marine environment for the exploration and exploitation activities of the natural resources of the “sea-bed and its subsoil subject to the jurisdiction of coastal State”.⁷⁸ Article 12(1) of the Abidjan Convention provides that Liberia and other contracting parties to this convention shall cooperate to deal with marine pollution emergencies in the Convention area in order to mitigate marine environment pollution arising from hydrocarbon activities. Article 12(2) of the Abidjan Convention provides that contracting parties shall send notice to the organization or other member(s) of the organization where a member State(s) is likely to be affected by emergency pollution such as for example, oil-spill, for the elimination of such threat of marine pollution in the convention area.⁷⁹ Article 13(2) of the Abidjan Convention provides that Contracting Parties, or Liberia for the purpose of this thesis, shall include an assessment of the potential environmental effects when planning the activities such as the hydrocarbon exploitation or production activities on Liberia`s continental shelf that may cause substantial pollution in the marine environment.

2: 17 Liberia shall assess the impact of pollution

Article 13(1) of the Abidjan Convention provides that Liberia or other member States as part of their environmental management policies are to make available technical and other guidelines to assist planning their development projects on Liberia`s continental shelf for mitigating or minimizing their harmful impact on the marine environment or any other activities that may cause marine pollution in the Convention area.⁸⁰

⁷⁶ Article 4(1)((3)(4) of the Abidjan convention. See Birnie et al: *International Law & the Environment* (2009) pp. 143-157,386-398, 430-440,473-480.

⁷⁷ Article 4(4) of the Abidjan Convention. See Birnie et al: *International Law & the Environment* (2009) pp. 137 - 148-157.

⁷⁸ Article 8 of the Abidjan convention. See Kiss and Shelton: *International Environmental Law* (2000) pp. 468-482. See Gavouneli: *Pollution from Offshore Installations* (1995) pp. 43-50.

⁷⁹ Article 12(1)(2) of the Abidjan convention.

⁸⁰ Article 13 (1)(2) of the Abidjan convention. See Gavouneli: *Pollution from Offshore Installations* (1995) pp. 15-42. See Holder and Lee: *Environmental Protection, Law and Policy* (2007) pp. 548-564.

Protocol Article 1(2) of the Abidjan Convention provides that Liberia has responsibility to respond to “Marine Emergency” in case of marine pollution due to “...petroleum production blow-outs and the presence of oil or other harmful substances arising from the failure of industrial installations”.⁸¹

Protocol Article 1(3) of the Abidjan Convention provides that Liberia shall have a “Marine Emergency Contingency Plan” on both a national, bilateral and multilateral basis, to mitigate pollution and other activities that might have adverse effects on the marine and coastal environment, or the threat thereof as a consequence of failure of industrial installation in the marine environment.⁸² The research paper will now be reinforcing all the above International Environmental Law Provisions by case laws hereinafter.

2: 18 Measures to prevent transboundary pollution arising from activities taking place on Liberia`s continental shelf

Liberia has obligations under International Environmental Laws instruments and guidelines to refrain from activities or control them firmly in order not to cause harm, injury or any other form of transboundary pollution of the marine environment. As observed in the trail smelter case, it was the complaints made by American farmers in the State of Washington in 1925 regarding crop and forest destruction due to smoke from smelter activities at trail that led to the arbitration, this can be useful for Liberia`s hydrocarbon exploration and exploitation activities as reflection the prevention, reduction, and control of transboundary pollution from Liberia` sea-bed mining activities.⁸³ Article 214 of UNCLOS provides that Liberia is under obligation as provided in this convention to enforce her laws and regulations adopted in conformity with Article 208(1)(5) of UNCLOS. The provision further asserts that Liberia shall adopt other laws, rules and regulations and take other measures that might be necessary to implement international rules and standards established through competent international organizations or diplomatic conferences for the prevention, reduction, control of pollution of the marine environment arising from or in connection with sea-bed activities on Liberia`s continental shelf and subject to Liberia jurisdiction.⁸⁴

⁸¹ See Protocol concerning co-operation in combating pollution in cases of emergency Article 1(2) of the Abidjan Convention. See Churchill and Lowe: *The Law of the Sea* (1999) pp. 370-371.

⁸² Protocol concerning co-operation in combating pollution in cases of emergency Article 1 paragraph (3-5) of the Abidjan Convention. See Gavouneli: *Pollution from Offshore Installations* (1995) pp. 40-50.

⁸³ Birnie et al: *International Law & the Environment* (2009) p. 136-143-145.

⁸⁴ Article 208(1)(5) of UNCLOS. See Trail smelter Arbitration case: 33 AJIL (1939) 226, Para. 29. See Gavouneli: *Pollution from Offshore Installations* (1995) pp. 25-40.

Article 194(2) of UNCLOS obligate Liberia to make sure that all necessary measures are in place so that activities under her control and jurisdiction do not spread beyond area where Liberia exercise sovereign rights.⁸⁵ This is demonstrated, and evidential in the trail smelter case. All FPSOs and FSUs, and all other offshore drilling activities under the jurisdiction of the Liberian authority are to comply with this provision to avoid transboundary disaster in particular and for the prevention, reduction, control of pollution of the marine environment in general.⁸⁶

Article IX of the Convention between Great Britain and the United States of January 11, 1909 provides that any differences between the two neighboring coastal States shall be settled amicably through the International Joint Commission (IJC). The arbitration panel used evidence previously submitted to the IJC. In the panel proceedings, it found that Canada breach its obligation. as now provided under Article 209(1)(2) and 208(1) of UNCLOS to managed trans-boundary pollution from its smelting plant in trail after substantial evidence such as the Canadian Document A1, also turn as the Dean Report to the International Joint Commission of September 1929, plus the Stevens County, Washington State forest survey of 1935. The evidence found that the effect of smelting at trail was polluting the environment due to Canada lack of cooperation for the prevention, reduction, and control of transboundary pollution which contravened the provisions of Article 123 and 197 of UNCLOS. This had merit the tribunal with the above evidence that Canada was liable for the pollution that destroyed American livelihood and environment. UNCLOS was not available at the time and has no effect on the nature of the trail smelter case, but it is assumed for the purpose of this thesis that in case it was available. Liberia has an obligation not to repeat passed mistake(s) of other coastal State(s) by putting in efforts on both national and international level for the mitigation of marine pollution that might arise from the activities taking place on Liberia's continental shelf. Where the measures taken to protect neighboring States from environmental damage are inadequate leading to violation other State(s) rights international tribunal can order additional measures to be taken for the protection of the marine environment⁸⁷

⁸⁵ Article 194(2) of UNCLOS. See Gavouneli: Pollution from Offshore Installations (1995) pp. 15-40

⁸⁶ Read Article 145 of UNCLOS.

⁸⁷ *Trail Smelter Arbitration*, 35 AJIL 684 (1941) 726; Gabcikovo-Nagymaros, 82, para 155(2); *Land Reclamation (Arbitral Award)* (2005) operative para 2, Annex. See Vinogradov and Wagner in Gao: *Environmental Regulation of Oil and Gas* 1998) pp.93-106. See Birnie et al: *International Law & the Environment* (2009) pp. 303-304, 430-440,443-462.

2: 19 Liberia has obligation to prevent transboundary pollution

The question now is how the sulphurous acid gases emission case between the Dominion of Canada and the United States from 1932 to 1940 are related to the Hydrocarbon exploration and exploitation activities on Liberia` continental shelf? In the view of this research paper, Liberia is under obligation as Professor Eagleton puts in “Responsibility of States in International Law, 1928, p. 80:” He argued that “States owns at alltime a duty to protect others States against injuries acts by individuals from within its jurisdiction”. The word “injuries” means damaged done to other sovereign coastal States due to other neighboring coastal States or other States failure to apply Article 123 and 197 of UNCLOS and to take precautionary measures in discharging their sovereign rights as provided under part XI Article 145, 150 (b), 153, 206, and 208 (1) of UNCLOS.⁸⁸ As observed in “Article 15 of the ILC’s 2001 Articles on Prevention of Transboundary Harm (PTH) prohibits discrimination based on nationality, residence, or place of injury in granting access to judicial or other procedures, or compensation, in case of significance transboundary harm. Article 32 of the 1997 UN Watercourse Convention is comparable. Both allow victims of transboundary pollution or damage to have direct recourse to local remedies in the state where the source of the harm is located”. In this regard, Liberia shall take into consideration that any injury sustained by neighboring coastal State(s) due to lack of compliance for the prevention, reduction, and control or mitigation of pollution arising from the petroleum mining activities on the sea-bed of Liberia as provided under Article under 145 (a), 153 (4), 193, 209 (1), 214 of UNCLOS can lead to the demand for indemnity as a consequence of Liberia`s inability or failure to prevent, reduce, control or mitigate pollution of the marine environment due to installation(s) for Liberia`s petroleum mining activities in the marine environment.⁸⁹ The term “International Responsibility” under the auspices of the International Law Commission 2001 Article 1 obliged Liberia not to permits her territory to cause damages to other neighboring coastal States as a consequence of pollution arising from Liberia`s hydrocarbon exploration and exploitation activities in the marine environment as provided under Article 214 of UNCLOS. However, it is important that Liberia cooperate as provided under Article 123 with other States in the region to avoid transboundary pollution.⁹⁰ Because the forum in which the transboundary harm or damage is suffered is best placed to asses that harm, and this is why the 1969 Convention on Civil Liability for Oil Pollution

⁸⁸ Article 123, 197 of UNCLOS. See Birnie et al: *International Law & the Environment* (2009) pp. 136-149. See Fisher et al: *Implementing Precautionary Principles* (2006) pp. 20-30, 63-80, 113-130, 182-188.

⁸⁹ Article 235(1-3) of UNCLOS.

⁹⁰ Article 214 of UNCLOS. See Birnie et al: *International Law & the Environment* (2009) pp. 430-458.

Damage opted for this choice.⁹¹ Notwithstanding, Patricia Birnie, Alan Boyle, and Catherine Redgwell, argued that transboundary air pollution has its route in man-made disaster like burning of the Kuwaiti oil field by Iraqi forces in 1991. However, industrial activities such as mining of hydrocarbon resources in the Liberian marine environment can produce pollution that can have negative impact of the marine environment as a result of noise, vibration, oil, and other substances from the activities.⁹² To avoid all trans-boundary pollution Liberia has to comply with Article 208(1)(5) and part XI Article 145 of UNCLOS for the prevention, reduction and control of transboundary pollution of the marine environment. The mining activities on Liberia`s sea-bed can also cause migration, destruction of marine species and introduction of alien and invasive species due to construction and installations in the marine environment for petroleum mining activities on the continental shelf of Liberia.⁹³

2: 20 Transboundary pollution

The Mox plant case has its route in radioactive marine pollution, the research paper will figure out how the commissioning of the Mox Plant had prejudiced the sovereignty and sovereign rights of Ireland`s marine environment whether or not the commissioning of such plant had irreparable damage(s) to the marine environment due to nuclear radioactive activities as a consequence of the pollution arising from the activities of the Mox plant.⁹⁴ The thesis wants to find out, how the Mox plant case relates to the hydrocarbon exploration and exploitation activities on Liberia`s continental shelf?⁹⁵

2: 21 Cooperation for the prevention of marine pollution

The Irish assertion was based on the fact that her marine environment would be polluted by the commissioning of United Kingdom Mox plant`s installation(s). Ireland also argued that the United Kingdom violated its own obligations as a State party of UNCLOS by not complying with the provision of Article 123 of UNCLOS.⁹⁶

This research paper is of the view that Liberia shall have in place proper mechanism as required by UNCLOS so that Liberia do not risk violation of Articles 123, 192 to 194, 197, 206, 207, 211, 212 and 213 of UNCLOS, regarding marine pollution thereof. The right to

⁹¹ Articles 195, 123, 208(1)(5) of UNCLOS. See Churchill and Lowe: *The Law of the Sea* (1999) pp. 370-372.

⁹² Article 206 of UNCLOS. See Birnie et al: *International Law & the Environment* (2009) pp. 342-354, 443-466.

⁹³ Articles 145, 80, 60(1)(b), 56(1)(b)(iii) of UNCLOS.

⁹⁴ Article 194 (3)(c) see Gabčíkova-Nagymaros case: ICJ Reports (1997) 7. Para. 92, 104 and para. 141.

⁹⁵ Churchill and Lowe: *The Law of the Sea* (1999) pp. 370-371.

⁹⁶ Article 214 of UNCLOS.

protect the marine environment from hydrocarbon exploration and exploitation activities on the sea-bed of Liberia's continental shelf is embedded the obligations that the above UNCLOS provisions imposed on Liberia as a State party for the prevention, reduction, control of pollution of the marine environment.⁹⁷ Liberia and her international petroleum partners are under obligation as provided under Article 206 of UNCLOS to carry on assessment of potential effects of planned activities and obligation to communicate results of these assessments arising from their hydrocarbon exploration and exploitation activities in the marine environment to avoid any environmental threat. Liberia shall go in consultation and cooperation with other coastal States for the prevention, reduction, and control of pollution of the marine environment.⁹⁸ Liberia has to carry on Environmental Impact Assessment (EIA) to determine the scientific certainty and uncertainty as a consequence of pollution due to mining the sea-bed for petroleum resources. Such strategic precautionary measures shall assist Liberia ability to do mining on the continental shelf without the activities producing transboundary pollution. The duty to cooperate under the provisions of Part XII of UNCLOS are fundamental principal that Liberia need to implement and comply with for the prevention, reduction and control of marine pollution resulting from the hydrocarbon exploration and production activities on the sea-bed of Liberia's continental shelf.⁹⁹ The petroleum exploration and exploitation activities that are taking place on Liberia's continental shelf are of part of her sovereign rights as provided under Articles 56, 77, and 193 of UNCLOS. Nevertheless, in exercising her sovereign rights, Liberia has to cooperate with the other neighboring States for the mitigation of pollution due to the exploration and exploitation activities. Coastal State(s) should share the results of Environmental Impact Assessment (EIA) with other surrounding coastal States so as to take precautionary measures for the preventing, reducing and controlling of pollution of the marine environment arising from hydrocarbon activities such as for example, oil, gases, noise, installations, structures, platform, operation, surface and subsurface, exploration and exploitation or production, activities of storage, processing, pipeline transportation, hydrocarbon commercialization, and seismic survey in the marine environment.¹⁰⁰

⁹⁷ Article 208(1)(5) of UNCLOS.

⁹⁸ Article 209 of UNCLOS. See Gavounei: *Pollution from Offshore Installations* (1995) pp. 37-50.

⁹⁹ Article 204(2) of UNCLOS. See Bell and McGillivray: *Environmental Law* (2008) pp. 431-458.

¹⁰⁰ Article 123 of UNCLOS. See Birnie et al: *International Law & the Environment* (2009) pp. 115,430-434.

2: 22 Transboundary pollution of the marine environment

It is important to notice that if there is pollution that become irreparable prejudice to the rights of other coastal States due to Liberia`s hydrocarbon exploration and exploitation activities on the sea-bed, Liberia can be liable for causing injury or damages in the form of the transboundary pollution arising from activities under Liberia`s jurisdiction. However, Birnie, Boyle, and Redgwell assert that international law prohibits Liberia to permit activities under her jurisdiction to cause harm without regard for other States or protecting the global environment. “This point is sometimes expressed by reference to the maxim *sic utere tuo, ut alienum non laedas* or ‘principle of good neighborliness’”. Moreover, States has general duty to cooperate, as laid down in “Article 2 of the Charter of the UN, as well as wider duties of voisinage”.¹⁰¹ Churchill and Lowe argued that “...operational pollution may arise from the oil contained in drilling muds and cuttings, production water and displacement water, meaning that water displaced from containers used for sorting oil. Chemicals used in drilling, oil from drainage systems on platforms including the disposal of sewage, garbage and other wastes from installations” can impact negatively the marine environment.¹⁰² Article 142(1-3) of UNCLOS provides that hydrocarbons activities in the area shall be explored and exploited with due regards to the rights and legitimate interests of any coastal State interest across whose jurisdiction the activities are taking place. Ireland assertion in the Mox Plant case was based on such relevant provision. However, Article 208(3)(5) of UNCLOS provides that Liberia and other States shall established global and regional regimes, rules, standards and recommended practices and procedures for the prevention, reduction, and control or mitigation of pollution from sea-bed activities under Liberia`s jurisdiction.¹⁰³ When in place the provisions shall help for the avoidance of accidental pollution such as blown-out, the escape of oil or gas into the marine environment as a consequence of loss of control over the flown from oil-well, and rupture of a pipeline and collision between a ship and installations like for example, a tanker being loaded with oil from an installation facility or the destruction of a suspended well-head or sea-bed completion system are all threats that need Liberia attention for the prevention, reduction and control of pollution of the marine environment.¹⁰⁴

¹⁰¹ See Mox Plant Case (Provisional measures) (2001) ITLOS NO.10 Para. 26(4), 67, and 82; Land Reclamation Case (Provisional Measures) (2003) ITLOS No.12 Para 92. See Birnie et al. *International Law & the Environment* (2009). PP. 137-154.

¹⁰² Article 142(1-3) of UNLCOS. See Churchill and Lowe: *The Law of the Sea* (1999) pp. 370-372.

¹⁰³ Article 208(3)(5) of UNCLOS. See Article 123 of UNCLOS on the implementation of Article 208 (3)(5).

¹⁰⁴ Churchill and Lowe: *The Law of the Sea* (1999) pp. 329-335.

Notwithstanding, Liberia rights are subdue or subject under the provision of Article 56 (1)(b)(iii) of UNCLOS. As observed in the Mox plant case, Ireland claim for or demand for indemnity and compensation was based on Article 290 of UNCLOS. Ireland in that case asserted that the United Kingdom had not complied with her international obligations as provided under Article 123 and 197 of UNCLOS pertaining to cooperation between the two neighboring coastal States for the prevention, reduction, and control or mitigation of pollution of the marine environment.¹⁰⁵ Should Liberia find herself in similar situation, due to lack of cooperating for the prevention, reduction, and control of transboundary pollution, Liberia shall end up in a State of predicament.

Summarily, it is observed that in order for Liberia to comply with her obligations under international law Liberia has to enforce all international environmental law principles discussed above through Liberia National legislation as a way forward and the enforcement are to reflect the hydrocarbon activities on Liberia`s continental shelf.¹⁰⁶

2: 23 Conclusion

Chapter two discussed Liberia`s obligations under international environmental law instruments and principles applicable on the hydrocarbon exploration and production activities on Liberia`s continental shelf. The chapter provides legal principles that shall help Liberia`s upstream petroleum mining industry through their application for the prevention, reduction, and control of pollution of the marine environment. The purpose of the above international law principles is to safeguard Liberia in making sure that activities under Liberia`s jurisdiction o not harm or cause injury to other coastal States and the general international community by the prevention, reduction and control of pollution of the marine environment. Liberia and other States that are contracting parties to all these conventions, and Their protocols, and annexes, are tasked to carefully implement these international law principles because they are all international rules and standards made for the protection and preservation of the marine environment.¹⁰⁷ It is important to note that Liberia has duty to prevent transboundary pollution under each of the international treaties discussed under chapter two.

¹⁰⁵ Article 123 of UNCLOS. See Birnie et al: *International Law & the Environment* (2009) pp. 136-148-451-454.

¹⁰⁶ Read Article 145(a-b) of UNCLOS. See Warner and Marsden: *Transboundary Environmental Governance* (2012) pp. 182-188.

¹⁰⁷ Articles 208(1)(2)(5), 209(1), 214, 206 of UNCLOS. See Gavouneli: *Pollution from Offshore Installations* (1995) pp. 5-15, 16-26,40-54.

PART XII Articles 192-5 of UNCLOS provides that Liberia has an obligation(s) and duty under this Convention to preserve and protect the marine environment. This duty involved taking individually or jointly as appropriate all measure consistent with this Convention not to transfer one type of pollution into another. The duty to conduct Environmental Impact Assessment (EIA) is fundamental for Liberia to comply with her international obligations as provided under Annex 1 and Annex VI together with regulation 26 of MARPOL 73/78 for the protection of the marine environment. Liberia duty under OPRC are operationalizing her obligations as provided under Article 6(1) of OPRC through Liberia`s national Legislation and enforcing those provisions of OPRC for Emergency, Preparedness and response Mechanism for oil-spills. Liberia as a Contracting Party to the CBD has a duty as provided under Article 14(1)(a) of the CBD as far as possible and as appropriate to carry on Environmental Impact Assessment (EIA) for Liberia`s proposed projects that are likely to have significant adverse effects on biological diversity.

Liberia`s duty under the Abidjan Convention are duty to cooperate and duty to protect the marine environment in general and as provided under Article 4(3) shall incorporate and operationalized this Convention into Liberia`s domestic law through the establishment of national law such as the Petroleum Act, the Environmental Protection and Management Acts of Liberia that will be discuss in the next chapter three of this thesis for the prevention, reduction, and control of pollution arising from the petroleum activities taking place on Liberia`s continental shelf.¹⁰⁸

Chapter two has discussed the key implications of applicable international environmental law instruments on hydrocarbon activities on Liberia`s continental shelf. The chapter considered this under five thematic areas or Conventions. Under each of the above Conventions, the extent of Liberia`s obligations were importantly discussed and it established that Liberia as a developing Country is incapable of performing her general duty to protect the marine environment from pollution arising from the petroleum activities on Liberia`s sea-bed. In the next chapter, the research paper will be analyzing Liberia National Legal System applicable for the prevention, reduction, and control of pollution of the marine environment arising from the hydrocarbon exploration and exploitation activities on Liberia`s continental shelf.

¹⁰⁸ Birnie et al: *International Law & the Environment* (2009) pp. 171-178, 137-141. See MARPOL 73/78 Annex 1. See Bell and McGillivray: *Environmental Law* (2008) pp. 456-458, 469-472. See Warner and Marsden: *Transboundary Environmental Governance* (2012) pp. 268-277. See Shelton and Kiss: *International Environmental Law* (2000) pp. 463-470.

3: 0 CHAPTER THREE LIBERIAN NATIONAL LAWS

3: 1 Introduction

The work of this chapter is to match National legal provisions giving effect to International Law obligations identified in chapter two. This chapter is analyzing the implementation and operationalization of international obligations in National Legislation regarding how Liberia has incorporated and implemented her obligations assumed under International Environmental Law (IEL) concerning the protection of the marine environment from pollution arising from offshore hydrocarbons activities as provided under Chapter II Articles 7 and 9 of the 1986 Constitution of Liberia. Obligations identified in chapter two such as UNCLOS, OPRC, Abidjan Convention, CBD, MARPOL73/78 are implemented through national legislation by way of provisions in the Petroleum Act, Environmental Protection and Management Acts with the obligations of protecting the marine environment from pollution arising from Liberia's offshore petroleum activities. The second sections of this chapter will examine the relationship between the National Law of Liberia (NLL) and the International Environmental Laws (IEL) regarding upstream activities in the marine environment. The Constitution of Liberia empowers Liberia to mine her resources through the individual freedom and social justice, enshrined in the Constitution.¹⁰⁹ The new petroleum law of Liberia, the environmental protection law of Liberia, and the environmental protection and management law are all legal principles and guidelines for the prevention, reduction, and control of pollution of the marine environment arising from Liberia's sea-bed mining activities.¹¹⁰

3: 2 Relationship between national and international law: Liberia as a dualist State

Morten Ruudand and Geir Ulfstein assert that in Monism States the act of ratifying an international treaty immediately incorporates the law into national law. In the United States for example, international treaties are considered as “the supreme law of the land” while dualist States require the translation of the latter into the former in order to have legal effects¹¹¹. According to the dualist State theory, though the Liberian legal system and the international obligations imposed on Liberia as law are distinct, the application of international law by way of incorporation or transformation in the municipal or domestic Liberian law is achievable

¹⁰⁹ Chapter II Article 7 and 9 of the 1986 Constitution of Liberia. See Dias in Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 81-91.

¹¹⁰ Chapter XII Section 12.3 of the *New Petroleum Law of Liberia*. See Birnie et al: *International Law & the Environmental* (2009 pp. 143-156. See Dias in Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 75-88.

¹¹¹ Ruud and Ulfstein: *Innføring in Folkerett* (2006) pp. 50-54. See <http://www.ejil.org/article.php?article=1519&issue=35>, and full text available at <http://www.ejil.org/pdfs/12/2/1519.pdf>. Accessed 15.8.2013.

because the National Law of Liberia conditions its validity operation within the domestic Liberian legal system sphere, and thus the Liberian municipal or domestic law assumes primacy over the international law because the Liberian Courts can execute provisions of international laws applicable to the hydrocarbons exploration and exploitation activities for the prevention, reduction and control of marine pollution. In contrast, monism asserts the supremacy of international law within the Liberian National Law sphere and describes the individual as subject of international law.¹¹² However, Article 27 of the Vienna Convention on the Law of treaties provides that when there is conflict between Liberia National Law (LNL) and the International Law (IL) pertaining to the prevention, reduction, and control of pollution arising from the hydrocarbons activities, Liberia shall be obligated to comply with its obligations under international law except otherwise provided under Article 46 of the Vienna Convention.¹¹³

3: 3 Relationship between Liberia`s Law and the International Law

The dualist system make Liberia to contained two inter-connected legal systems. This mean that Liberia is under obligation to directly or indirectly apply principles of international law after the Liberian legislation as provided under Chapter V Article 34(f) of the 1986 Constitution of Liberia, has voted for them and ratified by the President of the Republic of Liberia as provided under Chapter VI Article 57 of the 1986 Constitution of Liberia, the international law automatically becomes integral part of the Liberian Constitution or legal system and at such binding on Liberia as hard-law instrument(s).¹¹⁴

Liberia`s obligations and efforts under International Conventions and Treaties Law (ICTL) has to meet the general rules and requirements of the Vienna Convention. This means that, when integrating and interpreting international legal principles, Liberia has to do such in good faith. Moreover, the overarching aim of the present thesis entitled Article 31(3)(c) of the VCLT and the principle of systemic integration is to provide a comprehensive analysis of the content and the function of Article 31(3)(c) both as a conventional and as a customary rule

¹¹² Chapter II Article 9, Chapter V Article 34 (f), and Chapter VI Article 57 of the 1986 Constitution of Liberia. See Tshosa: *National and International Human Rights Law* (2001) pp. 167-158, 208-2014, 264-274.

¹¹³ Article 27 and 46 of the 1969 Vienna Convention on the law of Treaties. See Chapter V Article 34 (f) and Chapter VI Article 57 of the 1986 Constitution of Liberia. See Tshosa: *National and International Human Rights Law* (2001) pp. 259-264. See Evans: *International Law* (2010) pp. 413-434.

Chapter III Article 22(b) of the 1986 Constitution of Liberia.

¹¹⁴ Chapter V Article 34(f) and Chapter VI Article 57 of the 1986 Constitution of Liberia. See Tshosa: *National and International Human Rights Law* (2001) pp. 153-156.

(i.e. as principle of systemic integration).¹¹⁵ Liberia being a dualist State, as stated above, has to incorporate the International Environmental Law (IEL) as it is, without any addition or subtraction, unlike the National Law of Liberia (NLL), that can be amended if circumstances so required.¹¹⁶

3: 4 the 1986 Constitution of Liberia

Chapter II Article 7 of the 1986 Constitution of Liberia provides that Liberia through the law of individual freedom and social justice, as provided in this Constitution, shall managed the national economy of Liberia and the natural resources of Liberia. In managing the natural resources of Liberia the Liberian State shall make sure that the people of Liberia are involved in the extraction or production process of the pressure resources like for example, the drilling activities on the continental shelf. As for the Constitution, involving the citizens of Liberia in the activities of the petroleum resources should help advance the economy development of Liberia for all Liberians. Article 22(b) of the 1986 Constitution of Liberia provides that private property rights, however, shall not extend to any mineral resources meaning that only the Liberian State have natural rights to own natural resources on land and under the sea, including all waterways of Liberia therein.

Chapter II Article 7 of the 1986 Constitution of Liberia further provides that Liberia has the power to do upstream mining for the economy benefits and the development of the Liberian State and its citizens.¹¹⁷ However, Chapter V Article 34(f) of the 1986 Constitution of Liberia provides that the legislature is tasked and has special power invested in it to approved treaties, conventions and other international agreements into the National Law of Liberia. Chapter VI Article 57 of the 1986 Constitution of Liberia provides that the President of Liberia is empowered to conclude treaties, conventions and similar international agreements with the concurrence of a majority of each House of the Legislature.¹¹⁸ Articles 9, 34(f) and 57 of the 1986 Constitution of Liberia are the legal basis for explaining the dualism system application of Principles of International Law (PIL) for the prevention, reduction, and control of pollution

¹¹⁵ Chapter II Article 9 of the 1986 constitution of Liberia is the legal provision complying with Article 31 (3)(c) of the Vienna Convention on the Law of Treaties.

¹¹⁶ Chapter II Article 57 of the constitution of Liberia. See *Evans: International Law* (2010) pp. 411-428.

¹¹⁷ Chapter II Article 7 of the 1986 Constitution of Liberia.

¹¹⁸ Chapter V Article 34 (f) of the 1986 Constitution of Liberia. See *Evans: International Law* (2010) pp. 181-188. See Tshosa: *National Law and International Human Right Law* (2001) pp. 3-13,153-158.

arising from the hydrocarbon exploration and exploitation or production activities on Liberia's continental shelf.¹¹⁹

3: 5 The Petroleum Act of Liberia

Chapter II Article 7 of the 1986 Constitution of Liberia provides that all natural resources found within the territory of Liberia shall be the property of Liberia (hereinafter referred to as the "Republic"). The management of the natural resources of Liberia should be consistent with the Constitution. The National Legislation Act of April 20, 2000 enacted law establishing the National Oil Company of Liberia (NOCAL) under the Petroleum Act approved 7, June 2002 and task therein with the management of all hydrocarbon exploration and exploitation activities on Liberia's continental shelf, basing on the provision of Chapter III Article 22(b) and Chapter II Article 7 of the 1986 constitution of Liberia. Chapter III Section 3(1)(4) of the Petroleum Act provides or explains the "purpose" of the National Oil Company of Liberia (NOCAL).¹²⁰ NOCAL was formed to enforce the new petroleum law of Liberia, such as holding all rights, title and interest of Liberia, including all hydrocarbon activities both inland and upstream within the territory of Liberia. Chapter IV-Section 4.3 and Chapter V- Section 5.1 and Chapter VIII-Section 8.7 of the Act discuss the task of NOCAL as function for facilitating in the area of exploration and exploitation and the mitigation of marine pollution in area designated as potential oil and gas deposit spots on the continental shelf of Liberia. Thereafter, NOCAL is to negotiate with all foreign international oil corporations that have interest in conducting seismic survey as to determine the nature of any potential discovery of oil and gas resources in Liberia.¹²¹ When there are facts findings on petroleum resources, NOCAL is task to arrange agreements on behalf of Liberia. NOCAL is also responsible to negotiate all financial aspects or royalty tax as provided under Chapter III-Section 3.7 of the New Petroleum Law of Liberia with investors and all interested parties, including relevant government ministries.¹²² However, all agreements for exploration and exploitation of petroleum activities from Liberia shall meet the final approval of the President of Liberia to preserved, safeguard the interest of Liberians against abuse, protect and promote

¹¹⁹ Chapter VI Article 57 of the 1986 Constitution of Liberia. See Churchill and Lowe: *The Law of the Sea* (1999) pp. 370-379.

¹²⁰ Chapter III Article 22 (b) of the 1986 constitution. See Chapter II Article 7 of 1986 constitution of Liberia. See Birnie et al: *International Law & the Environment* (2009) pp. 141-156, 451-462.

¹²¹ Chapter III Section 3.1-3, and Chapter V-Section 5.1 of the of the *New Petroleum Law of Liberia*.

¹²² Chapter III Section 3.2-3, 7 of the New Petroleum Law of Liberia.

the positive needs of all Liberians as provided under Article 12 of the United Nations Indigenous and Tribal People Convention, 1989.¹²³

3: 6 Obligations for the protection of the marine environment

Chapter 1- Section 1.3.6 of the Petroleum Act provides that Environmental Impact Assessment (EIA) are “activities designed to identify and predict the impact on the bio-ecological environment and on human health and wellbeing resulting or likely to result from legislation, legislative proposals, policies, programs, projects, petroleum exploration and operational procedures”. However, Chapter XII Section-12.3 of the Petroleum Act provides that all holders of petroleum contracts, including NOCAL shall conform to internationally accepted standards of the industry with respect for environmental protection and regulations for the prevention, reduction, control or mitigation of marine pollution arising from the activities. Section 2.5.2 of the Petroleum Act provides that all holders of petroleum contracts shall abide by Environmental Protection Law of Liberia. Holders of petroleum contract shall avail their productions sites, installations to the agent(s) of the National Environmental Protection Agency (NEPA) of Liberia.¹²⁴

Chapter II Article 7 and Chapter III Article 22(b) of the 1986 Constitution of Liberia are all being effected, enforce or comply with through the practical application of Chapter XII Section 12.3 of the Petroleum Act for the mitigation of marine pollution arising from the exploration and exploitation activities. In the same vein, Chapter II Section 2.5.10 of the petroleum Act of Liberia provides that holder(s) of petroleum contract including their subcontractors under the jurisdiction of the Republic of Liberia shall comply with adopted safety and health standards use in the international petroleum industry. The provision further asserts that all accidents resulting from the hydrocarbon exploration and exploitation activities on the sea-bed of Liberia shall be reported to the competent authority.¹²⁵ Chapter XII Section 12.3 and Chapter II Section 2.5.20 of the Petroleum Act are implementing Liberia`s international obligations or duty theoretically under Abidjan Convention, and UNCLOS as provided under Part XII Articles 192-5, 208, 214 of UNCLOS and Article 8 of the Abidjan Convention. However, Liberia is weak when it comes to practical implementation.

¹²³ Chapter VI Article 57 of the 1986 Constitution of Liberia. See Kiss and Shelton: *International Environmental Law* (2000) pp. 155-187. See Birnie et al: *International Law & the Environment* (2009) pp. 286-298.

¹²⁴ Chapter II Section 2.5.2. See Chapter XII Section 12.3 of the *New Petroleum law of Liberia*. See *Petroleum Law-Selected documents* (2013) Page 111 of 439-112 of 439.

¹²⁵ Chapter XII Section 12.3 and Chapter II Section 2.5.10 of the *New Petroleum law of Liberia*. See *Petroleum Law Compendium Book 1* (2008) pp. 135-152.

3: 7 An Act for Environmental Protection

The Act creating the Environmental Protection Agency Act of Liberia (EPAA) was established by law passed in the Senate and House of representative of the Republic of Liberia. Chapter II Article 7 of the 1986 Constitution of Liberia should be the legal basis for this Act. Chapter V Article 34(L) of the 1986 Constitution of Liberia provides that the Legislature shall have the power to make all other laws...” including the Environmental Protection Agency Act (EPAA) of Liberia. However, the environmental protection Act should be enforcing Chapter V Article 34(b) of the 1986 Constitution of Liberia, specifically “environmental security”. Part II Section 5 of the Act provides that “The Agency shall be the principles authority in Liberia for the management of the environment and shall co-ordinate, monitor, supervise and consult with relevant stakeholders on all activities in the protection of the environment and sustainable use of natural resources”. This provision further asserts that the marine environment should be protected from the hydrocarbon exploration and exploitation activities on a sustainable level not to damage other natural reserve in the marine environment like fish and coral reefs. Moreover, the economic development of Liberia should not undermine Liberia`s ecosystem. Part II- Section 4(1) provides that the environmental protection agency was established through the executive branch of the government of Liberia as an autonomous body, and it is to be called the “Environmental Protection Agency of Liberia”. Nevertheless, the Act is to be referred to as the Agency. Section 7.1 of the Act provides that the National Environmental Policy Council of Liberia shall be the ultimate policy-making body on the environment.¹²⁶

3: 8 Obligations under the Environmental Protection Act

Environmental Impacts Assessment (EIA) is done by the Environmental Protection Management Agency of Liberia (EPMAL). In the Liberian context, see section 37(1-4) of the Environmental Protection Agency Act of Liberia, before any project begins operation environmental impact assessment license or permit under this Act should be issued and such license should meet the requirement mentioned herein with the Agency establishing all rules, regulations and procedures relating to the implementation of the environmental impact assessment that is subject to reviewed every five years after implementation date as a way of implementing Liberia`s national and international obligations. Permits` requirements are necessary for the examination of environmental impacts arising from industrial activities such

¹²⁶ Part II Section 5 of *the Environmental Protection Agency Act of Liberia*. See Chapter V Article 34 (b) of the 1986 Constitution of Liberia. See Birnie et al: *International Law & the Environment* (2009) pp. 8-16, 128-148.

as installations and structures in the marine environment, for example. Part ii-section 6(1)(k) of the Environmental Protection Agency Act of Liberia provided that the Agency is to identify projects, activities, policies, and programs for which environmental impact assessment is to be conducted under this Act. The Agency see Part ii-section 6(r) is empowered to also function as national clearinghouse for all activities relating to regional and international environment-related conventions, treaties, and agreements, and as national liaison as a way of complying with the international law imposed on Liberia.

3: 9 Control of pollution of the marine environment

Part V- Section 32.1 of the Environmental Protection Agency Act of Liberia provides that every person in Liberia has right to healthy environment and a duty to all appropriate measures to protect and enhance it through the Agency. This provision asserts that there shall be judicial measures through the Liberian Environmental Court if a Liberian citizen feels threatening due to as provided under Part V- Section 32.2(c) “...on-going activity”...which shall be subject to environment audit in compliance with this law. The phrase “on-going activity” may include the hydrocarbon exploration and exploitation activities on Liberia’s continental shelf. This provision has not defined the meaning of ongoing activity. However, Part V-Section 32.2(d) provides that such on-going activities whether it is mining of oil and gas in the marine environment of the Liberian continental shelf or other activities are to be “...subject to environmental monitoring in accordance with this law”. Moreover, part v-section 32.2(e) provides that individual Liberian citizen has natural rights under this law to demand the person who have caused injury or damaged whether in the marine environment or on land “to restore the degraded environment as far as practicable to its immediate condition prior to the damage”.¹²⁷

part v- section 43.1 of the Environmental Protection Agency Act of Liberia provides that the environmental agency through other relevant environmental ministry and departments shall establish standards, guidelines and procedures as follows: (a) provides “...environmental quality air, water...”, (b) “pollution control, toxic substances, hazardous waste...”, (c) Solid waste management; (d) “Protection of Liberia’s wildlife and natural resources”, (e) “Protection of Liberia’s biodiversity, natural heritage and ozone layer”.

These provisions provide overviews that pollution arising from the offshore exploration and exploitation activities can cause harm to the environment if not properly control. The word

¹²⁷ Part Part ii-section 6(1)(k)(r), Part V- Section 32.1, 2(a-g) of the *Environmental Protection Agency Act of Liberia*. See Holder and Lee: *Environmental Protection, Policy and Law* (2007) pp. 15-22.

“pollution control, toxic substances” as provided under Part v-section 43(1)(b) of the Environmental Protection Agency Act (EPAA) should reflect the hydrocarbon exploration and exploitation activities on Liberia’s continental shelf. It is assumed that if those in charge for the prevention, reduction and control of pollution of the marine environment failed to discharge their duty, any affected person, under this Act can press charges since they are entitled to a healthy environment as provided herein.¹²⁸ Liberia’s international obligations to implement the CBD through national legislation is evidence by Part ii-section 6(1)(e-g)(r), Part v-section 43(1)(a-e) of the Environmental Protection Agency Act of Liberia. However, there are shortcomings or weaknesses due to Liberia’s lack of trained human resources and technology capacity to address the practical challenges for Liberia’s hydrocarbon activities.

3: 10 The Environmental Protection and Management Act

The jurisdiction of the environmental management and protection Act of Liberia was established under the auspices of Chapter II Articles 7 and 9 of the 1986 Constitution of Liberia with the objective among others of doing Environmental Impact Assessment, see Part iii-section 9(1)(a-), 10(1-3) of the Environmental Protection and Management Law of Liberia, as a way of providing regulations and rules for preventing pollution of the marine environment by chemicals materials or substances produced in the exploration and exploitation of offshore petroleum activities on Liberia’s sea-bed. Chapter V Article 34(b) of the 1986 Constitution of Liberia empowered the legislature of Liberia to provide security for the Republic. The word “security” in the view of this research paper should include the protection of the marine environment from pollution arising from hydrocarbon exploration and exploitation activities on Liberia’s continental shelf.¹²⁹

3: 11 Obligations under the Environmental Protection and Management Act

Part ii-section 4(1) of the Environmental Protection Management Act of Liberia provides that all the provisions for the prevention, reduction, control of marine pollution shall be guided by (a) the principles of sustainable development (b) The precautionary principle. Section 4(2)(d) of this provision provides that this law shall “ensure the implementation of the biodiversity conservation principles and measures declared by treaty law to which Liberia is a Party faithfully, through the institutional arrangements as shall be established under this law”. Part ii- section (2)(k)

¹²⁸ Part V-Section 43.1(a-d) of the Environmental Protection Agency Act of Liberia. See Holder and Lee: *Environmental Protection, Policy and Law* (2007) pp. 334-342.

¹²⁹ Chapter V Article 34(b) of the Constitution of Liberia. See Chapter II-Section 4(1)(2)(d) of the Environmental Protection Law of the Liberia. See Dias in Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 59-66.

of the Environmental Protection and Management Act of Liberia provides that environmental protection standards and monitor shall be established for any changes in environmental quality. Part iv-section 50(1) of the Environmental Protection and Management Act of Liberia provides that the “Agency in consultation with other relevant Lime Ministry, Arm Forces, Police force, the National Fire Service, health care authority, the county and districts environmental committees and other organizations which the Agency considers necessary, develop and implement contingency plans for the management of environmental disasters...” shall work as provided under part iv-section 51(1) in collaboration with appropriate ministries for the mitigation of pollution of the marine environment arising from as provided under Part iv-section 50(1)(a) Major oil spills and gas leakages apparently due to mismanagement of platforms; (b) Spills of hazardous substances, such as for example, oil and gas or other chemical compounds due to man-made cause(s) in the drilling area; (c) industrial accidents such as miscalculation, and misplacement of dangerous chemicals. However, all oil companies operating in the territory of the Republic of Liberia are naturally under the jurisdiction of Liberia.¹³⁰ In this regards, all these provisions are to be comply with by oil companies on the hydrocarbon exploration and exploitation activities for the prevention, reduction, and control of pollution of the marine environment arising from the activities.¹³¹

Part I-section 3 of the Act provides that agencies that function for the protections of the environment are abbreviated as “LINE Ministry”. These are the national bodies with expertise on environmental issues. Inspections result from the above are to be made public for the Liberian people to have knowledge and comments it intends. see Part iii-section 8(1-4) of the Act which provides that there are timeframe for the environmental agency, ministry and other relevant Authority to effects their view on such documents and if the ministry or agency fails to cope with time, the Agency can approve the project or activity. However, in the determination of a project, the environmental impacts on the life of living and non-living things are essential as a prerequisite. The agency and all other relevant environmental authority are to go in consultation to arrive at suitable results for the benefits of the environment as provided under part Part iii-section 8(4) of the Act. The result from the screening determined whether such application should be executed or not. Project requirements as provided under Part iii-section 8(1)(a)(b)(c) of this Act are as follows: (A) description of the project to be undertaking. (B) the location of the project, meaning which

¹³⁰ Part IV-Section 50 (1) (a-c) of the Environmental Protection Law of Liberia. See Birnie et al: International Law & the Environment (2009) pp. 115-130, 137-147.

¹³¹ Gavouneli: *Pollution from Offshores Installations* (1995) pp. 39-40.

County or region's law such project should be subject to. (C) Land that the project will occupy and the environmental implication of such project. If the agency is not convince due to other scientific uncertainty regarding the impacts of the project on the local communities it may request a review or reassessment.¹³² The agency is also task to educate Liberian citizen on issue concerning how to manage their environment sustainably.¹³³ However, Birnie et al., argued that States have responsibility under international law "...on the control and prevention of environmental harm and the conservation and sustainable use of natural resources and ecosystem".¹³⁴ Liberia has obligations to implement principles of International Environmental Law (IEL) provisions Annex 1 of MARPOL73/78, CBD, and Articles 3(1-3), 7(1-3) of OPRC that target marine pollution arising from Liberia's hydrocarbon exploration and exploitation or production activities on Liberia's continental shelf as provided under Part v-section 50(1)(a-c), Part vii-sections 83(1)(a-h), 84(1)(a-f), 85(1)(a), (b)(i-vi), (c)(i-ii) of the Environmental Protection and Management Act of Liberia. The shortcoming is that Liberia is lacking behind as a developing Country when it comes to practical implementation of the above provisions due to lack of skillful man power, technological capacity and poverty.

3: 12 Conclusion

Chapter three discussed and examined the National Legal System of Liberia by way of legislative framework targeting the hydrocarbon activities on Liberia's sea-bed. The chapter examined the dualism system or the relationship between Liberia law and the applicable international environmental law discussed or identified in chapter two as provided under Chapter V Article 34(f) and Chapter VI Article 57 of the 1986 Constitution of Liberia, such as for examples, MARPOL, UNCLOS, OPRC among others constitute relevant(s) and key

¹³² Part I-Section 3., III Section 8(1)(a-c),(2-4) 7(1), 8(1-4) of *the Environmental Protection Law of Liberia*. See Sands et al: *Principles of International Environmental Law* (2012) pp. 601-623.

¹³³ Part XI Section 102 of *the Environmental Protection and Management Act of Liberia*.

¹³⁴ Part X Section 98(1-2), 99(1)(a-c)(2-5) of *the Environmental Protection law of Liberia*. See Birnie et al: *International Law & the Environment* (2009) pp. 211-218.

Part X Section 98(1-2), 99(1)(a-c)(2-5) of *the Environmental Protection law of Liberia*. See Birnie et al: *International Law & the Environment* (2009) pp. 211-218.

International Conventions that are applicable to hydrocarbon exploration and exploitation activities taking place on Liberia's continental shelf. In the establishment of the national sphere, the Environmental Protection and Management Act and its regulations, the Environmental Protection Agency Act, the Petroleum Act all provide regulatory basis or platform for the hydrocarbon exploration and exploitation activities on Liberia's continental shelf. the chapter identified key relevant provisions that give legitimacy to the Government Policy makers and other environmental ministries and Agencies dealing with all kind of environmental protection issues including the protection of the marine environment, due to pollution arising from the hydrocarbon exploration and exploitation activities on Liberia's continental shelf.

The chapter also touches the legal framework that legitimized Liberia rights which derived from Liberia own jurisdiction and sovereignty and sovereign tights to do hydrocarbon exploration and exploitation activities on Liberia's sea-bed. Chapter also observed the Environmental Protection Agency Act (EPAA) and the Environmental Protection and Management Act (EPMA), including the Petroleum Act (PA) positive contributing factors for the prevention, reduction, and control or mitigation of pollution of the marine environment as a consequence of the hydrocarbon exploration and exploitation activities on Liberia's continental shelf. The chapter noted in addition that provisions within the Petroleum agreements between Liberia and the National Oil Company of Liberia (NOCAL), and the International Oil Companies should be legal basis the regulations of the hydrocarbon activities on Liberia's continental shelf.¹³⁵

Chapter four will assess and discuss Liberia's efforts for the mitigation of marine pollution arising from the hydrocarbon production activities on Liberia's continental shelf under both national and international law.

¹³⁵ Chapter V Article 34(b) and Chapter VI Article 56 of the 1986 Constitution of Liberia.

4: 0 CHAPTER FOUR-ASSESSMENT OF LIBERIA'S EFFORTS UNDER NATIONAL AND INTERNATIONAL LAW

4: 1 Introduction

The purpose of this chapter is to discuss and assess Liberia's efforts under National law giving effects to the implementation and operationalization of the implication of principles of International Environmental Law (IEL) obligations outlined in chapter two and discussed in chapter three regarding the hydrocarbon exploration and exploitation or production activities that Liberia through (NOCAL) is undertaking on her Continental Shelf (CS). The focus of the assessment is to determine whether or not Liberia is complying with the Principles of International Law (PIL) imposed on Liberia through domestic legislation.

Liberia obligation(s) to comply with the due process of International Environmental Law (IEL) provisions that target offshore hydrocarbon activities for the mitigation of marine pollution through national legislative Act(s) are provided under A. Part iii-section 27(1-4), Part iv-section 37(a-d), Part vii-section 83(1)(a-h), and Part vii-section 84(1)(a-f) of the Environmental Protection and Management Act of Liberia., B. Part v-section 37(1-4), Part v-section 43(1)(a-e) of the Environmental Protection Agency Act of Liberia., C. Chapter xii-section 12.3 of the Petroleum Act of the Liberia. Chapter four aim is to answer whether Liberia's practices under national legal arrangements considered in chapter two meet the requirements or respond to the International Environmental Law (IEL) obligations imposed on Liberia. This chapter will determine if what Liberia has done is sufficient or not to meet the requirements or obligations observed in chapter two and discussed in chapter three. If so why it is sufficient? If not sufficient, why it is not sufficient? These are the legal questions that will be answer in the below discussion. This chapter will figure out where there are shortcomings and try to fill the vacuum. The ones to be discussed are as follows: 1. General duty to cooperate 2. General duty to adopt laws for the protection of the marine environment within Liberia's boundary as well as the prevention, reduction, and control or mitigation of transboundary pollution.¹³⁶

¹³⁶ Chapter II Article 7 of the 1986 Constitution of Liberia. See Churchill and Lowe: *The Law of the Sea* (1999) pp. 328-376.

Chapter II Article 9 of the 1986 Constitution of Liberia. See Chapter V Article 34(F) of the 1986 Constitution of Liberia. See Birnie et al: *International Law & the Environment* (2009) pp. 136-150.

4: 2 General duty to cooperate

Viewing this duty from the hydrocarbon activities context, it is wise to acknowledge that Liberia is making some efforts by the creation of the environmental institutions such as the Environmental Protection Agency (EPA) as a way of Liberia fulfilling her international obligations through the Environmental Impact Assessment (EIA). Liberia's ratification UNCLOS that also target and regulate pollution arising from sea-bed mining activities and vessel source pollution are way forward for Liberia complying with her international obligations. On the regional level, the Abidjan Convention contains important provisions for regional cooperation for the mitigation of marine pollution in the Gulf of Guinea. MARPOL and its Annex 1 regulating and preventing pollution by oil is another positive sign that Liberia is committed to her national and international duty. OPRC, CBD and the Abidjan Convention among others are legal framework for multilateral cooperation among State parties for the prevention, reduction, and control of marine pollution as a consequence of the hydrocarbon exploration and exploitation activities on Liberia's continental shelf.

4: 3 General duty to adopt laws for the protection of the marine environment within Liberia's National boundaries

It is important when assessing Liberia's efforts under international law to take into consideration Part XII of UNCLOS. "International Rules and National Legislation to Prevent, Reduce and Control Pollution of the Marine Environment. Liberia ratification of UNCLOS is considered as the means through which the implementation of international obligations is imposed on Liberia as a national responsibility. However, the question posed is to what extent is Liberia complying with her obligations as provided under Part XII Section 5, Article 208(1)? From the discussion in chapter two and three of this thesis, it is assumed from the assessments that Liberia is not complying with her obligations under national and international environmental laws due to lack of enforcement and compliance¹³⁷

Part XII Section 5, Article 210(4) of UNCLOS provides that States, acting through for example, the UNCLOS, Abidjan Convention, MARPOL, OPRC, or any other competent international organizations or diplomatic conferences, shall endeavor to established global and regional rules and standards for the prevention, reduction, and control of pollution. However, such established rules and standards and practices and procedures shall be re-examined from time to time as necessary. The research paper is looking at two ways of assessing Liberia

¹³⁷ Articles See Articles 206, 208(1)(5), 114 of UNCLOS. See Holder and Lee: *Environmental Protection, Law and Policy* (2007) pp. 145-154, 334-338, 567-578.

efforts under international law: (a) the theoretical part and (b) the practical part. (1) Part iv section 50(1)(a-c) of the Environmental Protection and Management Act of Liberia (EPMA); (2) Part v-section 32(1)(2)(a-g),(3)(4) of the Environmental Protection Agency Act of Liberia (EPAA); (3) Chapter xii- section 12(3) of the Petroleum Act of Liberia are all evidences that Liberia is theoretical making effort as part of the obligations imposed on Liberia as a State party under International Environmental Law (IEL) provisions discussed in chapter two of this thesis.¹³⁸

When it comes to the practical level of Liberia`s efforts under International Law instruments and guidelines from the assessment of this thesis, it is conclusive that Liberia is lacking behind practically in complying with her National and International obligations to protect the marine environment due to (a) lack of enforcement, (b) liability and nepotism, (c) corruption and criminality.¹³⁹

4: 4 Duty to Conduct Environment Impact Assessment (EIA)

As discussed Liberia`s obligations include monitoring the risk of marine pollution as a consequent of the hydrocarbon exploration and exploitation activities on Liberia`s sea-bed.¹⁴⁰

Liberia`s Environmental Impact Assessment (EIA) procedures are detailed and considered the major and basic principles that regulate an Environmental Impact Assessment (EIA). Liberia problem is implementation of the legislation already in place.

Liberia has environmental data that is not adequate. Liberia has no technical capacity to access environmental data for the exploration and exploitation of her hydrocarbon activities. The question is how can Liberia monitor, effectively observe, measure, and evaluate or analyze good scientific method or means the risk and effects of marine pollution arising from the offshore hydrocarbon activities with such limited environmental data and human resources capability? Liberia Environmental Impact Assessment (EIA) information is to some extend

¹³⁸ Chapter XII Section 12.3 of the New Petroleum Law of Liberia. See Part V Section 50(1) (a-c) of the Environmental Protection Law of Liberia. See Birnie et al: *International Law & the Environment* (2009) pp. 386-402.

¹³⁹ Chapter II Article 7 of the 1986 Constitution of Liberia. See Birnie et al: *International Law & the Environment* 2009) (pp. 430-445. For more on factors impairing Liberia`s efforts generally on the National and International level for the protection of the environment see: <http://www.globalwitness.org/Liberia/EPO>, Last visited, 10.11.2013
<http://www.theguardian.com/world/2013/may/08/liberia-natural-resources-deal-audit>. Last visited 20.11.2013.
<http://www.usatoday.com/story/money/business/2013/07/14/most-corrupt-countries/2512785/>. Last visited 27.07.2013.

¹⁴⁰ Article 194(1)(3)(C) of UNCLOS.

provided by field officers or operator`s EIA and that can substantially or to some extends impair the EIA impartially and not responding to the requirements and criterias of Liberia`s duty under national and international law to protect the marine environment as a consequence of pollution arising from the hydrocarbon activities.¹⁴¹

Summarily, the factors discussed above are impairing Liberia`s efforts in discharging her national and international obligations for the prevention, reduction, and control of pollution of the marine environment arising from Liberia`s hydrocarbon exploration and exploitation activities on her continental shelf

4: 5 Conclusion

Liberia as a developing coastal State has made a tremendous efforts in implementing all the Regional, and Multinational Treaties, Conventions and Agreements that Liberia is a signatory to for the prevention, reduction, and control of pollution in the marine environment theoretically. The assessments of Liberia`s efforts give an insight that Liberia is complying with the meaning of the Vienna Convention that talk about the Laws of Treaties meaning that international laws on treaties between States is important to be respected by effecting such laws through domestic legislative supremacy and enforcing them as a dualist State.

Liberia as a weak and poor developing State is moving in the rightful direction by the efforts Liberia has made through Liberia`s own environmental legislation. The Environmental Protection Laws of Liberia call for the mitigation of pollution of the marine environment. This initiative or effort is a positive sign for Liberia, although there are weaknesses and more are needed to be done because the assessment uncovered that Liberia is practically performing poorly due to lack of enforcement, liability and nepotism, and corruption and criminality in the Liberian system. However, in the subsequent chapter, there will be discussion of the recommendations that the thesis have provided for Liberia. The research paper will come to an end with a final conclusion.

¹⁴¹ Holder and Lee: *Environmental Protection, Law and Policy* (2007) pp. 15-18,310-312. See Bell and McGillivray: *Environmental Law* (2008) pp. 466-472.

5: 0 CHAPTER FIVE- RECOMMENDATIONS AND CONCLUSION

5: 1 Introduction

The objective of this chapter is to provide recommendations to help Liberia move forward in the rightful direction ensuring that the exploration and exploitation of Liberia hydrocarbon resources is done with respect for the marine environment. The chapter taking into consideration Liberia own challenges as a developing West African State, relating to the apparent lack of expertise and technology needed to carry on any petroleum operation. The paper will end with a final conclusion.¹⁴²

5: 2 Recommendations

From the assessment of Liberia efforts under national and international laws, it is observed that Liberia has perform on the theoretically level tremendously in complying with its general duty under International Environmental Laws instruments for the protection of the marine environment. However, there are more challenges that remain to be address practically. Environmental and other policy institutions of Liberia are to address pollution question, including how to deal with inter-sectorial functionality precisely for the prevention of pollution from varies sources. This is imperative for human health and national economic development.

UNCLOS, MARPOL73/78, OPRC, CBD the Abidjan Convention has not provided any effective way such as sanctions for any Contracting Party not comply with their obligations under these Convention discussed in chapter two to protect the marine environment from pollution as there is no evidence of punishment for Liberia and other regional States Parties for pollution arising from hydrocarbon activities of the marine environment in the Gulf of Guinea where some parts represent a semi-enclosed sea as provided under Article 122 of UNCLOS.

The responsibilities are left with each Contracting Party, as far as possible and as appropriate to introduce their own legislation and enforce it domestically. In this regards, the thesis recommends that Liberia work internally for its institutional improvements such as prosecuting environmental law violators.

Liberia should work along with other States Parties of ECOMWAS and other friendly successful petroleum producing Countries in Africa and beyond like Angola, Norway,

¹⁴² Chapter II Articles 7 and 9, Chapter V Article 34(F), Chapter VI Article 57 of the 1986 Constitution of Liberia. See Birnie et al: *International Law & the Environment* (2009) pp. 136-150, 164-176, 387-412.

Venezuela to find a common ground for sharing technical knowledge and data pertaining to offshore drilling activities and the management of such activities for the prevention, reduction, and control of pollution of the marine environment as Liberia explore and exploit her hydrocarbon resources on the continental shelf.¹⁴³

Liberia should work with the Mano River Union (MRU) to adopt laws and regulations for the prevention, reduction, and control of transboundary pollution of the marine environment arising from the hydrocarbon exploration and exploitation activities in this part of the Gulf of Guinea, as this is part of Liberia's duty to cooperate.

This research paper recommends that the Mano River Union form Environmental Impacts Assessment Committee (EIAC) in every Members State of the Mano River Union. The Committee should work with the Liberian Environmental Protection Agency (LEPA) to widen the scope and effectiveness of the Environmental Impact Assessment (EIA): In so doing, this research paper proposing that the Mano River Union Environmental Assessment Organ be structures as follows:

- (i) Adopt laws for National Environmental Impact Assessment Agency (NEIAA) in every County of Liberia. Such laws shall call for prosecution, arrest, detention, judicial proceeding(s) for any violation of the Liberian Environmental Law (LEL).
- (ii) Adopt laws for a Regional Environmental Impact Assessment Agency in every region of member States.
- (iii) Adopt laws for County/Municipal Environmental Monitoring Agency (EMA) in every County/Municipality in order to enforce their duty. This is very important considering the potential petroleum activities in the Mano River Union boundaries.

Summarily, the environmental monitoring team shall help to protect the marine environment as a result of pollution arising from the hydrocarbon exploration and exploitation or production activities in the marine environment in this part of the Gulf of Guinea. The application of the above recommendations shall lead Liberia in the rightful, good, secure, and ecological and sustainably developmental environment. The provisions shall provide an

¹⁴³ Chapter II Article 9 of the 1986 Constitution of Liberia. See Gao: *Environmental Regulation of Oil and Gas* (1998) pp. 4-32, 89-92.

impetus and clarity and avoid public doubts regarding the status of the upstream resources, and their use.¹⁴⁴

5: 3 Conclusion

The hydrocarbon exploration and exploitation activities on the continental shelf of Liberia brings with it serious impacts of marine environmental pollution arising from the offshore petroleum production activities. As a consequence, Liberia has national, regional, and global obligations that Liberia has to comply with for the prevention, reduction, and control of pollution of the marine environment as introduced in chapter one and discussed in chapter two and three of this thesis. The offshore oil and gas drilling posed threats to the marine and coastal environments of Liberia. However, Liberia`s obligations under International Environmental Laws (IEL) are to complied with principles of international laws that are discussed in chapter two of this thesis. But as discussed in chapter four Liberia is performing poorly due to weaknesses named. International regimes like UNCLOS, OPRC and MARPOL Annex 1 imposed their laws and regulations for the mitigation of pollution of the marine environment on Liberia as a State party. Liberia as a signatory to these conventions has done well by incorporating them into the Liberian legal system for the mitigation of marine pollution as discussed in chapter three of this thesis, Moreover, there are more to be done practically due to lack of enforcement of both international law and Liberia`s own environmental law provisions for the prevention, reduction, and control of pollution of the marine environment.¹⁴⁵

¹⁴⁴ Chapter II Article 9 of the 1986 Constitution of the Republic of Liberia. See Bell and McGillivray: *International Law* (2008) pp. 431-475.

See Birnie et al: *International Law & the Environment* (2009) pp. 106-210, 164-180.

¹⁴⁵ Chapter XII Section 12.3 of the Petroleum Act of Liberia. See Gavouneli: *Pollution from Offshore Installations* (1995) pp. 9-17, 30-50, 159-166, 177-182.

Bibliography

A1. Literature list

Birnie, Patricia, Alan Boyle, and Catherine Redgwell: *International Law & the Environment*, Third Edition. New York, Oxford University Press Inc., 2009).

Birnie, Patricia, and Alan Boyle: *International Law & the Environment*, Second Edition. New York, Oxford University Press Inc., 2002).

Bell, Stuart, and Donald McGillivray: *Environmental Law*, Seventh Edition, New York, (Oxford University Press Inc., 2008).

Beyerlin, Ulrich and Thilo Marauhn: *International Environmental Law, Oxford*, (Hart Publishing Ltd, 2011). For more see (Website: <http://www.isbs.com>).

Churchill, R.R., and Lowe A. V., *The Law of the Sea*, Second/This Edition. Manchester, (Juris Publishing, Manchester University Press, 1999).

Evans, Malcolm D., *International Law*, Second Edition, New York, (Oxford University Press Inc., 2006).

Evans, Malcolm D., *International Law*, Third Edition. New York, (Oxford University Press Inc., 2010).

Fisher, Elizabeth, Judith Jones, and Rene Von Schomberg, *Implementing the Precautionary Principle: Perspectives and Prospects*, Cheltenham, UK, Edward Elgar Publishing Limited 2006).

Gavouneli, Maria., *Pollution from Offshore Installations: International Environmental Law & Policy Series*, London, (Graham & Trotman Ltd, 1995).

Gillespie, Alexander., *Protected Areas and International Environmental Law*, Leiden, The Netherlands, Martinus Nijhoff Publishers, 2007). For more see (<http://www.brill.nl>).

Gao, Zhiguo: *Environmental Regulation of Oil and Gas*, London, (Kluwer Law International Ltd, 1998).

Holder, Jane, and Maria Lee., *Environmental Protection, Law and Policy*, Second Edition, Text and Materials. Cambridge, London, (Cambridge University Press, 2007). For more see www.cambridge.org. (Information on this title: www.cambridge.org/9780521690263).

Hammer, Dr. Professor Juris Ulf, Editor., *Petroleum Law Compendium Book 1: Nordisk institutt for sjørett*. Scandinavian Institutt of Maritime Law, Oslo (University of Oslo, 2008). For more visit internet: (www.jus.uio.no/nifs).

Jeffery, Michael I, Jeremy Firestone, and Karen Bubna-Litic, *Biodiversity, Conservation, Law + Livelihoods*, Bridging the North-South Divide: IUCN Academy of Environmental Law, New York, Cambridge University Press, 2008). Information on this title: (www.cambridge.org/9780521885034

JUS 5411 Petroleum Law, *Petroleum Law - Selected documents*: Scandinavian Institutt of Maritime Law, Oslo. (University of Oslo, 2013). More visit internet: (www.jus.uio.no/nifs).

Kiss, Alexander and Dinah Shelton: *International Environmental Law*, Leiden, The Netherlands, (Martinus Nijhoff Publishers, 2007).

Kiss, Alexander and Dinah Shelton: *International Environmental Law* (Second Edition. Ardsley, New York, (Transnational Publishers, Inc. 2000).

Nesdam, Anne Karim, and Jan Syversen, *Petroleum Law Compendium Book 2: Nordisk institutt for sjørett*. Scandinavian Institute of Maritime Law, Oslo, (University of Oslo, 2008). For more visit internet: (www.jus.uio.no/nifs).

Ruud, Morten, and Geir Ulfstein., *Innføring i folkerett*, Oslo. (Universitetsforlaget, 2006).

Rothwell, Donald R., and Tim Stephens: *The International Law of the Sea*, Oxford, (Hart Publishing Ltd, 2010).

Sands, Philippe, Jacqueline Peel, Adriana Fabr, and Ruth Mackenzie, *Principles of International Environmental Law*, Third Edition. New York, (Cambridge University Press, 2012). For more see www.cambridge.org (Information on this title: www.cambridge.org/7980521769594).

Tshosa, Onkemetse., *National Law and International Human Right Law: Cases of Botswana, Namibia and Zimbabwe*, Hampshire UK, (Ashgate Publishing Company/Limited, 2001). For more on publication see (Ashgate website: <http://www.ashgate.com>).

Tanaka, Yoshifumi, *International Law of the Sea*, Cambridge, London. (Cambridge University Press, 2012).

Warner, Robin, and Simon Marsden, *Transboundary Environmental Governance. Inland, Coastal and Marine Perspective*, Farnham, England (Ashgate Publishing Limited, 2012). For more see (www.ashgate.com).

Zedalis, Rex J., *International Energy Law: Rules governing future exploration, exploitation and use of renewable resources*, Hants UK, (Ashgate Publishing Ltd, 2001). For more on publication see (Ashgate website: <http://www.ashgate.com>).

A2. Internet websites:

European Journal of International Law. State Contracts in Contemporary International Law: Monist versus Dualist Controversies, Maniruzzaman, A.F.M., available at <http://www.ejil.org/article.php?article=1519&issue=35>, and full text available at <http://www.ejil.org/pdfs/12/2/1519.pdf> on dualism which has been contextualized for the purpose of this thesis just to widen the scope and understanding of Liberia as a dualist State. pp. 218-229 pages. (Last visited on June 28, 2013).

Lyons, Youna, *Centre for International Law: Offshore oil and gas in the SCS and the protection of the Marine Environment*. August 2011. pp. 9-11 pages. (Last visited on June 30, 2013). Available at: http://cil.nus.edu.sg/wp/wp-content/uploads/2010/10/OG_SCS_CIL-Part206oct2011-1.pdf

Ophardt, Charles E., *Virtual Chembook*: Elmhurst College., Classifications of Hydrocarbons. c. 2003. <http://www.elmhurst.edu/~chm/vchembook/500hydrocarbons.html>, (Last visited on July 12, 2013).

Overview of the Liberian Petroleum Exploration and Exploitation Seismic data is available at http://www.menas.co.uk/App_Data/elib/OverviewExploreLiberia.pdf. (Last visited on July 7, 2013).

The National Oil Company of Liberia is available at <http://www.nocal.com.lr/operations/> (Last visited on 21 July, 2013).

The Liberian Maritime Authority is available at <http://www.maritimeliberia.com/> (Last visited on 25 July, 2013).

Petroleum Agreement between National Oil Company of Liberia (NOCAL) and Oranto Petroleum Limited and Chevron Liberia Limited available at <http://www.tnrliberia.net/documents/9-1-7.pdf> (Last visited on July 24, 2013).

The Ministry of Lands, Mines and Energy of Liberia available at <http://www.molme.gov.lr/> (Last visited on 28 July, 2013).

<http://www.globalwitness.org/Liberia/EPO>, Last visited, 10.11.2013.

<http://www.theguardian.com/world/2013/may/08/liberia-natural-resources-deal-audit>. Last visited 20.11.2013.

<http://www.usatoday.com/story/money/business/2013/07/14/most-corrupt-countries/2512785/>. Last visited 27.07.2013.

B. International Conventions, Multi- and Bilateral Agreements and other International legal Guidelines

1. United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982. In force 16 November, 1994. As of August 2013 165 Countries and the European Union have joined the Convention. 21 *ILM* 1245 (1982)
2. International Convention for the Prevention of Pollution from Ships, as Modified by the Protocol of 1978 Relating Thereto (MARPOL73/78). In force 2 October 1983. As of May 2013, 152 states, representing 99.2 per cent of the world's shipping tonnage, are parties to the convention. 1350 UNTS 62 (Registration Number 22484)
3. International Convention on Oil Pollution Preparedness, Response and Co-Operation, London 30 November 1990. In force 13 May 1995. 107 Ratifications. # 18 *LOS* 37 (1991)

4. Framework Convention on Biological Diversity, 5 June, 1992. In force 29 December 1993. 192 Countries including the European Union are Parties to the CBD. All UN member States with the exception of the United States, Andorra, and South Sudan have ratified the treaty. (1995) *UNTS* 51 000,000
5. Convention on the Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, (Abidjan, 23 March 1981. In force 5 August 1984. 22 Ratifications or Convention`s area 11 December 2013. 20 *ILM* 746 (1981)
6. The Vienna Convention on the Law of Treaties, Vienna, 23 May 1969. In force 27 January 1980. The VCLT has been ratified by 113 States as of January 2013. (1980) *UKTS* 58

C. Protocol

Protocol concerning Co-operation in combating Pollution in Cases of Emergency, Abidjan, 23 March 1981. In force 5 August 1984. 22 States Ratifications or Convention`s area 11 December 2013. 20 *ILM* 756 (1981) 333

D. Annexes

Regulations for the Prevention of Pollution by Oil, Annex 1 (MARPOL73/78).

Regulation for the Prevention of Air Pollution, Annex VI (MARPOL 73/78).

E. Case Law

Moxt Plant Case: Panel President CHANDRASEKHARA RAO; Vice-President NELSON; Judges CAMINOS, MAROTTA RANGEL, YANKOV, YAMAMOTO, KOLODKIN, PARK, BAMELA ENGO, MENSAH, AKL, ANDERSON, VUKAS, WOLFRUM, TREVES, MARSIT, EIRIKSSON, NDIAYE, JESUS, XU; Judge ad hoc SZÉKELY; Registrar GAUTIER.

(Provisional measures) (2001) ITLOS NO.10 Para 26(4), 67, and 82: land

Reclamation Case (Provisional Measures) (2003) ITLOS No.12 Para 92. (41 *ILM* 405/42 *ILM* 1187).

Trial Smelter Case: Partners: United States of America, Canada.

Special Agreement: Convention of Ottawa, April 15, 1935.

Arbitrators: Charles Warren (U.S.A.), Robert A. E. Green-shields (Canada), Jan Frans Hostie (Belgium).

Award: (April 16, 1938, and March 11, 1941) 3 RIAA 1911.
33 AJIL (1939) 226, para 29.

Gabcikova-Nagymaros Case:

INTERNATIONAL COURT OF JUSTICE
REPORTS OF JUDGMENTS,
ADVISORY OPINIONS AND ORDERS
CASE CONCERNING
THE GABCIKOVO-NAGYMAROS PROJECT
(HUNGARY/SLOVAKIA)
JUDGMENT OF 25 SEPTEMBER 1997
ICJ Rep 7.

F. NATIONAL LAW OF LIBERIA

1. The Constitution of the Republic of Liberia, 1986.
2. An Act Adopting the New Petroleum Law of the Republic of Liberia, June 7, 2002.
3. An Act Adopting the Environmental Protection and Management Law of the Republic of Liberia, November 26, 2002.
5. An Act Adopting the Environmental Protection Agency of the Republic of Liberia, April 30, 2003.

G. NATIONAL PETROLEUM POLICY

1. REPUBLIC OF LIBERIA

National PETROLEUM

Policy

November, 2012

