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ABSTRACT

The objective of this thesis is to find out to what extent is Ghana complying with the obligations required under the International Environmental Law to protect the marine environment from pollution emanating from hydrocarbon exploration and exploitation activities. The thesis outlined various international treaties and conventions, and explained their relevancy towards pollution from hydrocarbon exploration and exploitation activities. The Ghanaian National Laws were tested to see how they have incorporated the International Environmental Laws into the Ghanaian domestic laws.

The thesis concluded that, although Ghana has incorporated these International Laws, there are still room for improvement. The final chapter of the thesis gave recommendations and advice to the Ghanaian authorities to improve on their efforts in order to achieve the required acceptable international standard.

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LIST OF ABBRIVIATIONS

EPA	Environmental Protection Agency
GNPC	Ghana National Petroleum Corporation
FPSO	Floating Production Storage Object
PoD	Plan of Development
CS	Continental Shelf
EEZ	Exclusive Economic Zone
ME	Marine Environment
IEL	International Environmental Law
UNCLOS	United Nations Convention on the Law of the Sea
EIA	Environmental Impact Assessment
EP	Exploration and Production
CSLC	Commission on the Continental Shelf
ICJ	International Court of Justice
CBD	Convention on the Biological Diversity
OPRC	International Convention on Oil Pollution Preparedness, Response and Cooperation.
ITLOS	International Tribunal for the Law of the Sea
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships and its Protocol.
GMA	Ghana Maritime Authority
VCLT	Convention on the Law of Treaties
Abidjan Convention	The Convention for the Cooperation in the Protection and Development for the Marine and Coastal Environment for the West Africa and Central African Region.
IFC	International Finance Corporation
OTCP	Offshore Cape Three Point
NOSCP	National Oil Spill Contingency Plan
IAA	Inter-Agency Agreement

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7 Convention on the Prevention of Marine Pollution by Dumping of Waste and other Matter (London Convention)

1: 0 CHAPTER ONE- INTRODUCTION

1:1 RESEARCH QUESTION

The purpose of this part of the paper is to highlight the questions which are being researched on. The first question is to find out whether there are obligations under the International Environmental Laws (IEL) to prevent pollution emanating from hydrocarbon activities on the Ghana's Continental Shelf (CS). The second question will seek to clarify Ghana's obligations under international and national laws to protect the Marine Environment (ME). The research will delve into how and to what extent has Ghana incorporated international treaties and instruments and implemented into its national laws as demanded by international environmental laws, this is because under the Customary International Environmental Law, Ghana as a State is under the duty to "prevent, reduce, and control transboundary pollution and environmental harm resulting from activities within its jurisdiction or control, and also have a duty to cooperate in mitigating transboundary environmental risk and emergencies, through notification, consultation, negotiation and in appropriate cases, environmental impact assessment".¹ Also under the United Nations Convention on the Law of the Sea (UNCLOS) Ghana as a state party is also under the obligation to take necessary measures in accordance with the UNCLOS with respect to activities in the Area to ensure effective protection for the marine environment and from harmful effects which may arise from such activities, also Ghana "shall take, individually or jointly as appropriate, all measures consistent with UNCLOS that are necessary to prevent, reduce and control pollution of the marine environment [...]".²

The objective of this research is to find out if Ghana has put in place enough measures such as Environmental Impact Assessment (EIA) and other measures which could be used to combat, prevent and check pollution from hydrocarbon activities on the Ghana's continental shelf.

It is imperative to know if Ghana has put in place measures to check, prevent and reduce pollution as a result of hydrocarbon exploration and exploitation activities as required by International Environmental Law (IEL) which obligates States to protect the marine environment. The questions raised in this thesis, this paper will find answers to them and recommendations will be given in areas where there is a gap. Ghana's efforts to meet the international environmental law obligations will be magnified and examined to see to see if

¹ see Birnie and Boyle: International Law and the Environment (2009) p137

² See Articles 145 and 194 of UNCLOS

there are no laps in the national legislations which deals with the protection of the Marine Environment and pollution from the activities of hydrocarbon exploration and exploitation on the Ghana's continental shelf.

1: 2 Ghana's Oil and Gas exploration and exploitation activities on its Continental Shelf

The history of Ghana's Oil and Gas exploration and exploitation goes back to 1896 this was when hydrocarbon exploration in Ghana's sedimentary basins started. Between 1896 to 1957, twenty-one (21) shallow exploration wildcats were drilled.³ Ghana first offshore well was drilled in the Saltpond Basin in 1970 and this led to the increased of interest of offshore exploration activities, subsequently, more acreages were awarded and this intensified the exploration activities in the 1970s mainly in the Tano-Cape Three Points and Saltpond Basins.⁴ In 1974, the first exploratory well in the Voltaian basin was started, this was as a result of the acquisition of a 206-line kilometer 2D seismic data on the southern Voltaian basin and oil and gas production in Saltpond field started in 1978.⁵ The first deep-water well was drilled in 1978 at Cape Three Points.

In 1980 the government of Ghana established a new statutory and legal framework for petroleum exploration as well as institutional capacity in order to speed up Ghana's exploration and production efforts. Ghana National Petroleum Corporation Act (PNDC Law 64) was passed to established the Ghana National Petroleum Corporation (GNPC) as a statutory corporation with commercial functions to handle the country's Exploration and Production (EP) activities and in 1984, PNDC Law 84 was enacted.⁶ The law also allows the GNPC to advise the Ministry of Energy in Ghana on matters related to petroleum operations. It is germane to note that the 1984 act was passed to establish the legal and fiscal framework for the petroleum exploration and production activities in Ghana (The Petroleum Exploration and Production Law 'Act 84 of 1984'). The Act sets out the rights, duties and responsibilities of oil companies, and gives the regulatory authority to the Ministry of Energy on behalf of the stats.⁷ The Act 84 of 1984 requires that a Plan of Development (PoD) for the proposed developments be submitted and approved by the GNPC, The Ministry of Energy and the Environmental Protection Agency (EPA) before development of an oil field this is one of the ways to assess oil projects.⁸

³ The history of Ghana's oil and gas

⁴ Ghana National Petroleum Corporation

⁵ ibid

⁶ ibid

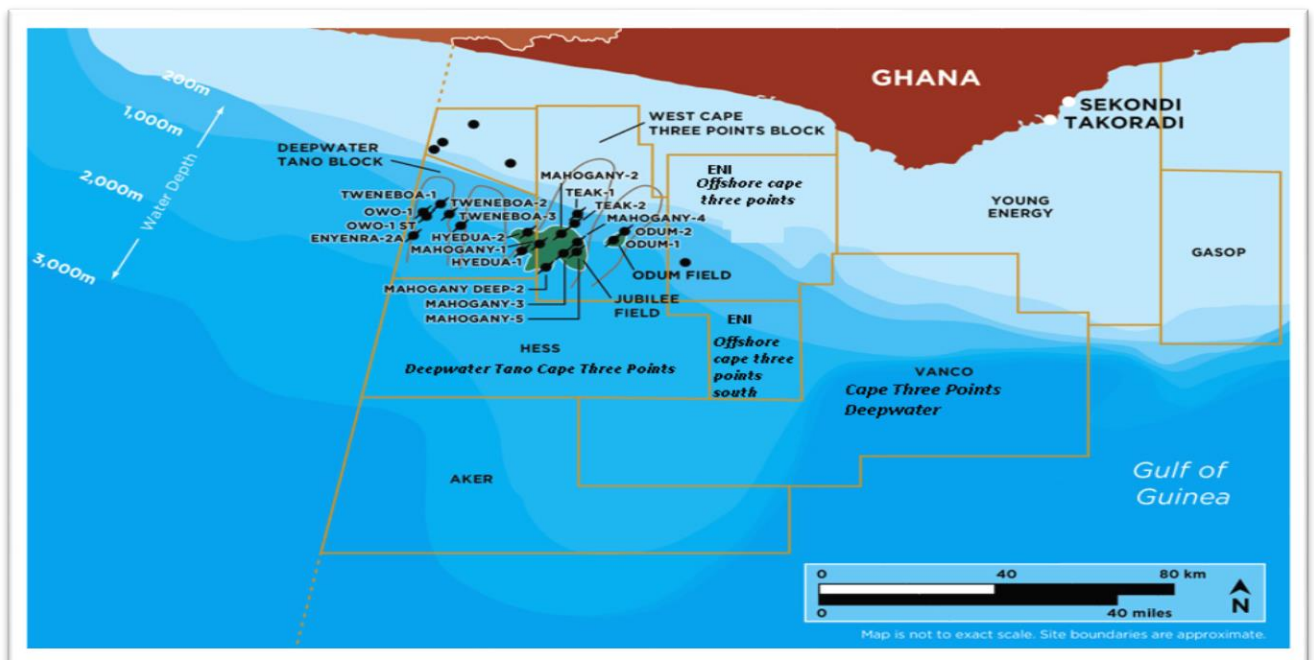
⁷ Tullow Ghana Limited '*Environmental Resources Management*'

⁸ ibid

There was a breakthrough of the oil discovery between the late 1990s to the year 2000 where there were significant exploration efforts through 2D seismic acquisition of offshore Saltpond field and discovery of deep-water by oil companies⁹. The most significant result crowing years of concerted efforts finally arrived in 2007 with the emergence of Kosmos Energy Consortium which discovered Mahogany and Hyedua, Tullow Oil and Anadarko in the West Cape Three Points and Deepwater Tano concession areas. These discoveries were unitized to form a single oil field which the government of Ghana named it “*Jubilee Field*”.¹⁰

This paper will now turn to the Continental Shelf of Ghana (CS) and the Exclusive Economic Zone (EEZ) of Ghana, it is believed that these two areas prevalent for hydrocarbon exploration and exploitation activities and of which most of the attention of this research would be based on.

Figure 1-Ghana’s offshore Oil and Gas blocks



⁹ ibid

¹⁰ Offshore oil and gas development in Ghana

1:3 The Continental Shelf of Ghana

The definition of continental shelf can be found in Article 76 of UNCLOS and it stipulates that: “ the continental shelf of a coastal State comprised the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to the distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance [...] and that States shall delineate the outer limits of its continental shelf where the shelf extends beyond 200 nautical miles [...] and the information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted to the Commission on the Limits of the Continental Shelf and the commission’s recommendations shall be binding [...].¹¹

The Continental Shelf of Ghana could be said to be the most well extended of all the continental shelves of West Africa. This is because Ghana is the only country in the West African sub-region to have applied for an extension which goes beyond the 200 Nautical Miles and this has been approved by the Commission on the Limits of the Continental Shelf (CLCS) in accordance with article 76 of United Nations Convention on the Law of the Sea (UNCLOS).¹² This can be found in two outer continental shelf polygons offshore of the country. It covers the Eastern Outer Continental Shelf and the Western Outer Continental Shelf.¹³ Article 77 of UNCLOS¹⁴ is still applicable to the Ghanaian Continental Shelf this is because the rights of the other coastal states as enshrined under the UNCLOS cannot be overridden by the extension beyond 200 nm. It is important to mention that the sovereign rights of Ghana over its continental shelf makes it possible to explore and exploit the natural resources such as the hydrocarbon from the continental shelf, and Article 76 (1) of UNCLOS stipulates that the continental shelf of Ghana comprises the seabed and soil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin [...] of 200 nautical miles from the baseline [...].¹⁵

¹¹ Article 76 of UNCLOS

¹² Article 76 of UNCLOS

¹³ <http://ghanabulletin.com/un-approves-extension-of-ghanas-continental-shelf/>

¹⁴ Article 77 of UNCLOS

¹⁵ Article 76 (1) of UNCLOS

1:4 Exclusive Economic Zone (EEZ)

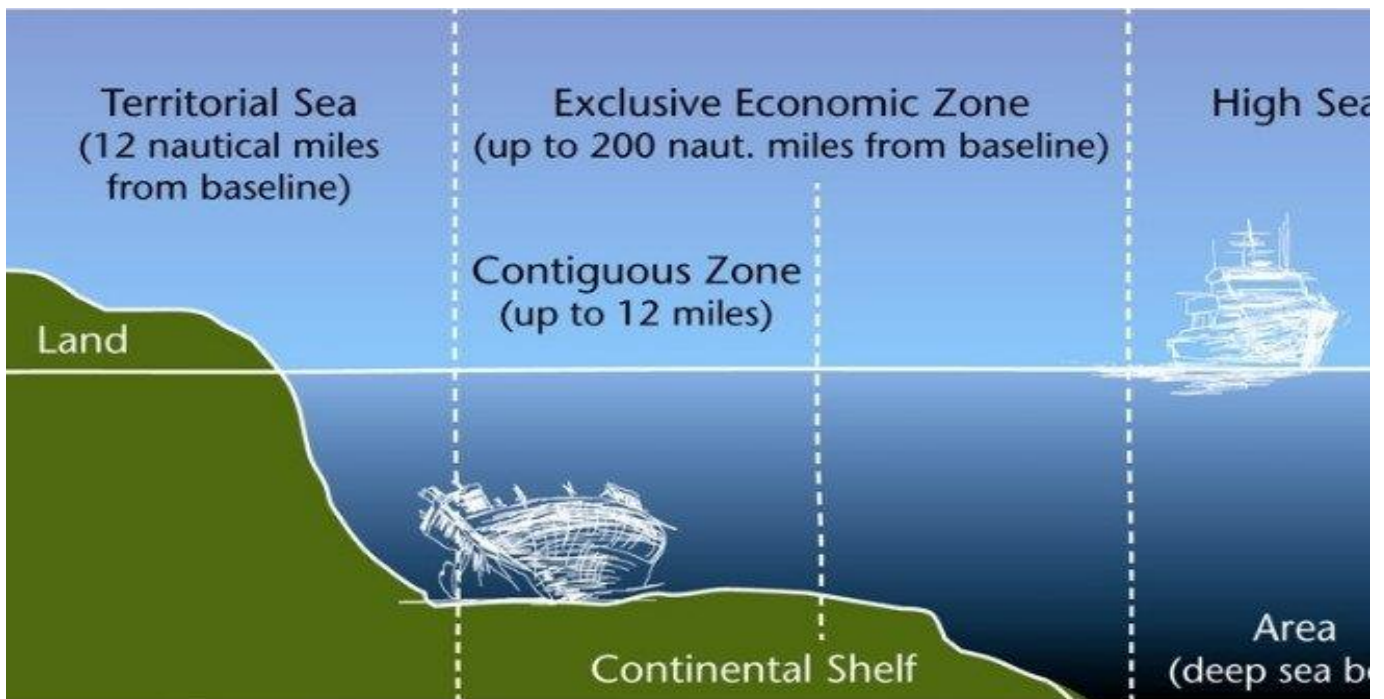
The Maritime Zones (Delimitation) Law (PNDCL 159 of 1986)¹⁶ defines the extent of the territorial sea and the Exclusive Economic Zone of Ghana. The Act defines the EEZ as the area beyond and adjacent to the territorial sea less than two hundred nautical miles from the low waterline of the sea. The Ghanaian law makers could be said to have taken the definition of EEZ from Article 55 UNCLOS which states that: Exclusive Economic Zone is an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this part¹⁷ The Act grant the rights to the extent permitted by international law to the government of Ghana. Article 56 (1) (a) of UNCLOS states that the coastal state has the sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources [...] and with regard to other activities for the economic exploitation and exploration of the zone [...].¹⁸ Impliedly, Article 56 (1) (a) of UNCLOS provides Ghana the sovereign rights in the EEZ to explore and exploit, conserve and manage the resources found within the zone which includes the hydrocarbon exploitation and exploration. Resources in Ghana's EEZ the State is in charge of its regulation control that is obligated to conserve and manage resources including the fisheries and living resources within the EEZ of Ghana. Per the authority and control bestowed on Ghana, Ghana is bound by all international and regional environmental requirements and obligations in regards to pollution in the marine environment including Exclusive Economic Zone therefore any activity must be in line with EEZ regime requirements and the International Environment Law.

¹⁶ PNDCL 159 of 1986 <http://faolex.fao.org/docs/pdf/gha1193.pdf>

¹⁷ See Article 55 of UNCLOS for the definition of EEZ

¹⁸ Article 56 of UNCLOS

Fig: 2 The Imagery of Maritime Zones



It is inherent to note that the discussion on the effects of UNCLOS will be touched on in part two of this paper. For the purpose of this paper, the research will be focused on exploration and exploitation of hydrocarbon and the effects such as pollution on the marine environment within Ghana's Continental Shelf and the Exclusive Economic Zone.

1:5 Delimitations

This thesis is based on the following premise:

Hydrocarbon activities as mentioned in this research refers to the exploration and exploitation including Floating Production Storage and Offloading (FPSOs), platform operations, drilling units and other installations. It also encompasses the production of unrefined natural liquids or gaseous compounds like organic minerals, crude oil and liquid petroleum, but would not include shipping and transportation of hydrocarbons. In order to clarified the scope of this thesis, it will be prudent to provide the definitions for Exploration and Exploitation of hydrocarbon. According to Cambridge online dictionary, Exploration is the activity of searching and finding out about something and Exploitation is the use of something in order to get advantage from it.¹⁹

¹⁹ See online <http://dictionary.cambridge.org/dictionary/english/exploration?q=Exploration>

The applicable international environmental laws would be discussed most especially the ones that Ghana has signed and which obligates Ghana to prevent pollution in the course of exploration and exploitation of hydrocarbon. The transportation of oil and gas from the fields by ship vessels would be discussed briefly as the main focus of the thesis will be dwell on the production activities and the prevention of pollution within the marine environment.

Ghana laws which deals with the specifications of the subject matter will be explained and discussed.

1:5.1 Pollution and its Effects

Pollution could be said to be an international phenomenon which happens either accidentally or negligently by oil producing companies who have been issued with licenses to operate within the maritime zone of a state. For the purpose of this thesis, it will be helpful to differentiate dumping at sea from pollution. Article 3 of London Convention on the Prevention of Marine Pollution by Dumping of Waste and other Matter (London Convention) states that: any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea; any deliberate disposal at sea of vessels, aircraft, platforms or other manmade structures at sea, it goes further to outline what will not be classified as dumping by stating that[...] the disposal at sea of wastes or other matter incidental to, or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, other than wastes or other matter transported by or to vessels, aircraft, platforms or other man-made structures at sea[...].²⁰ It is imperative that the distinction is made in order to distinguish pollution emanating

Although oil production is economically beneficial to the state, it is the state's responsibility to make sure that appropriate measures are put in place to check and prevent pollution as a result of hydrocarbon production and activities. For example, the Oil spill pollution represents the negative polluting effects that oil spills have on the environments and living organisms including humans. These negative effects are due to the environmental discharge of various organic compounds that make up crude oil and oil distillate products, the majority of which include various individual hydrocarbons. Hydrocarbons are made exclusively from carbon and hydrogen atoms which bind together in various ways, resulting in paraffins (or normal alkanes), isoparaffins (isoalkanes), aromatics (such as benzene), cycloalkanes and unsaturated alkanes (alkenes and alkynes). Other individual compounds that

²⁰ Article 3 London Convention http://www.gc.noaa.gov/documents/gcil_lc.pdf

are present in crude oil and oil discharges include (apart from carbon and hydrogen) sulfur, nitrogen and/or oxygen atoms too.²¹ Constantly, these toxic compounds are inadvertently released into the environment and if this effect is connected to the effect of accidental crude oil spills worldwide, then these combined sources of unrestricted hydrocarbons constitute the major cause of environmental pollution.²² Pollution control requires limiting the discharge of pollutants which are usually the by-products of either production or consumption, to air, water, or land after the pollutant have been produced.²³ These harmful chemicals if not checked could cause transboundary harm to neighbouring states for instance, hydrocarbon contain the above mentioned toxic components and if in the cause of extraction there is spillage can contaminate the ocean which could lead to death of living organisms such as fish and birds.

The International Environmental Law (IEL) sets out various legal ways to deal with pollution and how to resolve problems emanating from pollution.²⁴ Ghana being a party to many international environmental law conventions is obligated to prevent and control pollution within its jurisdiction which includes the EEZ and extends to 200 nautical miles from the territorial sea baseline.²⁵ For instance, with regards to protection and preservation of marine environment, Article 56 of UNCLOS states that coastal state has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resource, whether living or non-living of the waters superjacent to the seabed and of the sea-bed and subsoil, and with regard to other activities for the economic exploitation and exploration [...] jurisdiction as provided for the in the relevant provisions of this convention with regard to [...] the protection and preservation of the marine environment [...],²⁶ Ghana is under international obligation to incorporate these laws into its national laws and must have effects on the hydrocarbon exploration and exploitation activities as outlined by Article 145 of UNCLOS that is taking the necessary measures in accordance with UCNLOS with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities[...].²⁷

²¹ Oil Spill Pollution. See <http://www.environmentalpollutioncenters.org/oil-spill/>

²²Shukla Abha and Cameotra Swaranjit Singh: Hydrocarbon Pollution.
<http://cdn.intechopen.com/pdfs/37042.pdf>

²³ Kurt. A. Stresser: Prevention of Pollution

²⁴ Bernie and Boyle: International Law and the Environment (2002) pp184-210

²⁵ ibid

²⁶ See Infra 56 (1) (III)

²⁷ Article 145 UNCLOS

1: 6 Description of the Study

This work is divided into five chapters. Chapter one is sub-divided into 8 sections. The first four sections give an overview of the research question, outlining how the research would be carried out. The historical background of offshore hydrocarbon findings and activities in Ghana giving an overview of how Ghana had started looking for oil stemming back to 1896 and how in 2000 Deepwater exploration and exploitation has started and the legal rights of Ghana to do Deepwater and offshore hydrocarbon exploitation and exploration. The other four sections the Delimitation of the research and how the work will be carried emphasizing on the meaning and parameters of the thesis. The constitutional powers bestowed on Ghana to engage with hydrocarbon exploitation and exploration on the Continental Shelf is briefly discussed in this section plus the legalities surrounding hydrocarbon exploration and production activities. The thesis material and how they are used is cited this section.

The second chapter of this research, there will be discussing on Ghana's obligations under International Law, most especially obligations to prevent pollution from hydrocarbon activities and the protection of the marine environment.

The third chapter of thesis will discuss and examine the National Laws of Ghana to see if it has incorporated the above international Laws and its obligations into Ghana's legal system and the impact it has had on hydrocarbon production and exploitation activities on the Continental Shelf.

Chapter deals with the assessment of Ghana's efforts to comply with these obligations, under International and National Law to prevent and control pollution in the marine environment.

The last chapter will give recommendations and suggestions for Ghana and the summary of the study of the research.

1:7 Methodology

This research will be based on both National and International law. The process will be guided by Article 38 of the International Court of Justice (ICJ) which sets out the source of International law. The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply: "international conventions, whether general or particular, establishing rules expressly recognized by the contesting states; b. international custom, as evidence of a general practice accepted as law; the general principles of law recognized by civilized nations; subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means

for the determination of rules of law’’ 2. This provision shall not prejudice the power of the Court to decide a case *ex aequo et bono*, if the parties agree thereto.²⁸ All interpretations concerning any relevant international conventions shall be guided by Article 31 of the Vienna Convention on the law of treaties.²⁹ With regards to the National laws, the 1992 Constitution gives provision under chapter four Article 11 which provides the applicable laws of Ghana and their hierarchical order.³⁰ Furthermore, the Interpretation Act of 1960 as amended will be use in the course of analyses.³¹ Article 257(6) of Chapter 21 of the 1992 Constitution of Ghana stipulates: “ Every mineral in its natural state in, under or upon any land in Ghana, rivers, streams, water courses throughout Ghana, the exclusive economic zone and any area covered by the territorial sea or continental shelf is the property of the Republic of Ghana and shall be vested in the President on behalf of, and in trust for the people of Ghana’’.³² By these interpretations the constitution gives the constitutional powers to the Republic Ghana to have full ownership of mineral reserves including hydrocarbons under its jurisdiction. It would be germane to articulate that Ghana being a signatory to International Conventions such as UNCLOS and other International Environmental laws shall take into account when exercising its rights and sovereign rights in accordance with International Environmental Laws.³³

It is imperative to acknowledge that Ghana being a Dualist State will have to enact national laws before incorporation of International Environmental Laws into the National Laws could be possible to prevent and control marine pollution emanating from hydrocarbon exploration and exploitation activities.³⁴ The following International Laws will be visited to see if Ghana has fulfilled its obligations under these international instruments. Thus incorporating into the National Laws the provisions in (1) United Nations Convention on Law of the Sea UNCLSO, (2) International Convention for the Prevention of Pollution from Ships, as Modified by the Protocol of 1978 Relating Thereto MARPOL 73/78 and it Annexes, (3) Convention on Biological Diversity CBD, (4) Convention for Co-operation in the Protection and Development of the Marine and Coastal environment of the West and Central African Region and protocol (

²⁸ Article 38 ICJ

²⁹ See Article 31 (3) of Vienna Convention on the Law of Treaties.

³⁰ Article 11 of Ghana’s 1992 Constitution 1) The laws of Ghana shall comprise- (a) this Constitution; (b) enactment made by or under the authority of the Parliament established by this Constitution; (c) any Orders, Rules and Regulations made by any person or authority under a power conferred by this Constitutions; (d) the existing law; and (e) the common law.

³¹ See link <http://www.parliament.gh/assets/file/Acts%202016/INTERPRETATION%20ACT.pdf> retrieved 30/07/16

³² See Article 257

³³ See PNDCL 84 of 1984

³⁴ See Article 57 of Ghana’s 1992 Constitution

Abidjan Convention), (5) International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC) and (6) Rio Declaration on Environment and Development to Prevent Pollution from Hydrocarbon Exploration and Exploitation activities. The National to be used are: (1) Ghana National Petroleum Corporation Act (PNDCL 64 OF 1983), (2) Maritime Authority Act (Act 360 of 2002), (3) The Environmental Protection Act (Act 490 of 1994), The Petroleum (Exploration and Production) Law (Act 84 of 1984), The National Petroleum Authority Act (Act 691 of 2005) and Maritime Zones (Delimitation) Law (PNDCL 159 OF 1986).

On the other hand, literature, case laws, electronic source such as internet websites the oil companies operating in Ghana will be used and other sources such as policy documents will be cited.

2:0 Chapter Two – Ghana’s Obligations Under International Law

2: 1 Introduction

This part of the research will present, examine and discuss in detail Ghana’s obligations under International Environmental Law. The relevant international provisions under UNCLOS that deals the protection and preservation of the marine environment with particular emphases on part XII will be examined and discussed. The next International provision to be discussed will be OPRC which targets the prevention, reduction and control of pollution by oil in the marine environment. Another international Environmental Law provision to be examined and discuss after OPRC will be MARPOL 73/78 particularly the part that has to do with marine environmental pollution, this means that Annex 1 which provides regulation for platform and installations which can cause environmental disaster as a result of accident to the marine environment due to hydrocarbon exploration will be discussed. CBD will be discussed, it is worth mentioning that although CBD does not deal with hydrocarbon activities however, it urges Ghana to be aware of the Environmental Impact Assessment (EIA) and the resultant consequences that could emanate from hydrocarbon activities on the continental shelf of Ghana, therefore it is imperative for Ghana to make sure that as a party to CBD measures are put in place to protect the and prevent pollution on its continental shelf this is because pollution could harmfully affect the biological diversity organisms in the marine environmental areas.³⁵ Lastly, Abidjan Convention will be treated, it could be said to be one of the significant provision this is because it deals with the mechanism that prevent pollution on the marine environment as a

³⁵ See Article 14 of CBD

result of hydrocarbon activities on the Ghana's continental shelf. Now this paper will deal with the above mentioned International Environmental Law provisions in turn.

2: 2 Obligation of Ghana to protect the marine environment from pollution

The protection of the marine environment is an obligation on coastal states and other states as shown in Article 192 of UNCLOS. Regional treaty such as Abidjan Convention and other treaties like MARPOL 73/78, OPRC were “negotiated progressively [...] the degree of acceptance of these various treaties and the consensus expressed by states in negotiating the environmental provisions of the UNCLOS suggest that its articles on the marine environment are supported by a strong measure of opinio juris and represent an agreed codification of existing principle which have become part of customary law”.³⁶ It is imperative to note that Articles 208 and 214 commit Ghana to adopt laws and regulations to “prevent, reduce and control pollution in the marine environment arising from activities on the seabed [...] and state shall endeavour to harmonize their policies in this connection at the appropriate regional level”³⁷, in this it obligates Ghana to enforce its Laws and regulations in accordance with Article 208 and “shall adopt laws and regulations [...] and to take measures necessary to implement applicable international rules and standard [...]”.³⁸ Article 235 of UNCLOS reinforces Ghana's obligations as a Coastal State by compelling Ghana to fulfill its responsibility which under the international obligations concerning the protection and preservation of the marine environment, failure by any state to do so will incur liability, this provision stretches further that Ghana should make sure that prompt and adequate compensation in respect of damage caused as a result of hydrocarbon activities pollution of marine environment are in place.³⁹

2: 3 The United Nations Convention on the Law of the Sea (UNCLOS)

The United Nations Convention on the Law of the Sea (UNCLOS) is the resulting Treaty from the Third United Nations Conference on Law of the Sea (1973-1982) and it is probably the most recent major development in international law governing the oceans, providing new universal legal framework to manage marine natural resources and also the control of pollution⁴⁰. Ghana being a party to UNCLOS is under the obligation to make sure it adopts and

³⁶ see Birnie and Boyle: International Law and the Environment (2009) pp386-387

³⁷ Article 208 of UNCLOS

³⁸ See Article 214 of UNCLOS

³⁹ Article 235

⁴⁰ Michinel Álvarez: International Environmental Law, Preventing Oil pollution by Ships

implement the provisions provided under UNCLOS, therefore Article 192 which urges parties to the convention to protect and preserve the marine environment as a result of hydrocarbon activities such as exploration and exploitation within their jurisdiction. Ghana cannot be exempted from this provision and therefore it is the duty of Ghana to put measures in place as required by UNCLOS.⁴¹ Ghana's right to exploit their natural resources is derived from Article 193 of UNCLOS and it stipulates that: sovereign rights of states to exploit their natural resources [...] Ghana have the sovereign right to exploit its natural resources pursuant to its environmental policies [...] with duty to protect and preserve the marine environment.⁴² Article 194 of UNCLOS requires Ghana to take measures to prevent, reduce and control pollution of the marine environment, asking that Ghana shall take individually or jointly as appropriate, consistent with this convention that are necessary to prevent, reduce and control pollution [...] pollution from vessels and pollution from installations and devices used in the exploration and exploitation of natural resources [...] particular measures for preventing accidents and dealing with emergencies [...].⁴³ Furthermore, Article 237 of UNCLOS recognizes other conventions which deals with marine environment and obligates Ghana that obligations under other conventions on the protection and preservation of the marine environment with specific obligations assumed by Ghana under special conventions [...] should be carried out in a manner consistent with the general principles and objectives of this convention⁴⁴.

2:3:1 Duty to Cooperate under UNCLOS

According to Article 194 of UNCLOS, Ghana shall cooperate with neighbouring states such as Togo, Republic of Benin, Nigeria, Cote d'Ivoire, Liberia and Serra Leone and in a broader perspective the whole region of West Africa and the global community as a whole in order to achieve its obligation and requirement demanded under UNCLOS.⁴⁵ Further, Article 197 of UNCLOS clearly expressed that “States shall cooperate on global basis and, as appropriate, on a regional, directly or through competent international organisations, in formulating and elaborating international rules, standards and recommended practices for the protection of the marine environment”.⁴⁶ This article expands the cooperation and it gives Ghana the holistic approach to tackle pollution in the marine environment. It should be borne

⁴¹ Article 192 of UNCLOS

⁴² Article 193 of UNCLOS

⁴³ Article 194 of UNCLOS

⁴⁴ Article 237 of UNCLOS

⁴⁵ Ibid

⁴⁶ Article 197 of UNCLOS

in mind that at the international level, the issue of cooperation has become a customary practice and this assertion was shown in Mox plant case⁴⁷ by the International Tribunal of the Law of the Sea (ITLOS). Fundamentally, the duty to cooperate in the prevention pollution of the marine environment under Part XII of UNCLOS and other International Environmental law are complement by Article 290 of UNCLOS⁴⁸ where a grant of provisional measure is prescribed. The installation of some of the FPSO in Ghana have close proximity to the neighbouring states example the FPSO Kwame Nkrumah is very close to Cote d'Ivoire; this means that Ghana owe it a responsibility to cooperate with this country whenever there is pollution or oil spillage from the continental shelf of Ghana as a result of hydrocarbon activities. It should be borne in mind that FPSO Kwame Nkrumah is an illustration of how pollution could be get to the neighbouring States through hydrocarbon exploitation and exploration activities, this is non-harm principle of which this thesis will not be focusing on.

Ghana should comply with the requirements in Parts V and VII of UNCLOS to meet the demands that deals with States' rights and duties that is conservation and marine resources which can also be found under CBD. In the Exclusive Economic Zone where the following Articles deal with marine environmental pollution, that is Article 56,61 and 65⁴⁹ obligates Ghana to protect the marine environment from pollution emanating from seabed activities. Ghana derives its legal basis under Article 197 of UNCLOS⁵⁰ which requires all States and coastal States to cooperate so that they will be able to establish regional and international approach towards the protection of the marine environment, this commits Ghana into international obligations to preserve and protect the marine environment. There is broad specter about the about the provision under Article 197 of UNCLOS because it stretches on prevention, reduction and control of pollution in the marine environment. In summary, it could be said that UNCLOS convention encompasses most of the necessary provisions to safeguard the marine environment from pollution and Ghana being a party to it have legal obligations to comply with these provisions. In the next sub-section, subject to be discussed is going to be on duty to protect the marine environment.

⁴⁷ See Mox Plant Case (provisional measures) (2001) ITLOS NO 10 para 82

⁴⁸ Article 290 of UNCLOS. See Mox Plant Case

⁴⁹ See Article 56,61 and 65 of UNCLOS

⁵⁰ *ibid*

2: 4 Duty to Protect the Marine Environment

To start with, it is germane to mention that Ghana as a state have the permanent sovereignty over natural resources as stipulated by Principle 2 of Rio Declaration on Environment and Development that: “States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of others States or of the areas beyond the limits national jurisdiction”.⁵¹

The preamble of UNCLOS states that: “with due regard for the sovereignty of all States, a legal order for the sea and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilisation of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment”.⁵² This is an indication that the objectives of the UNCLOS are not only to set rules for the seas and the oceans but also to protect and preserve the marine environment, the preamble always state the main objectives of the institution and having this statement in the preamble of UNCLOS specifies the importance that the Convention attaches to the marine environment, even though UNCLOS allows exploration and exploitation to be carried on the sea-bed and on the continental shelf, it sets out rules that ought to be followed such as taking into account of the environment and other States interest as well.

This right is echoed in Article 193 of UNCLOS which stipulates that: ‘States have the sovereign right to exploit their mineral resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment’.⁵³ This statement highlights the fact that Ghana have the right to do hydrocarbon exploration and exploitation activities within its jurisdiction. However, the provision goes to say that those activities should be in accordance with the duty to protect and preserve the marine environment, clearly, it means that although Ghana have the sovereign right to embark on hydrocarbon exploitation and production there is the need to put measure in place to protect and preserve the marine environment conversely meaning the right is not absolute. Furthermore, Article 208 of UNCLOS confers obligations on states to adopt laws and regulations to prevent, reduce and control pollution of the marine environment arising from or in connection with seabed

⁵¹ Principle 2 of Rio Declaration on Environment and Development

⁵² See the preamble of UNCLOS

⁵³ Article 193 of UNCLOS

activities.⁵⁴ Another Article which deals with the hydrocarbon exploration activities is Article 81 of UNCLOS, it stipulates that the coastal state shall have the exclusive right to authorize and regulate drilling on the continental shelf for all purposes.⁵⁵ Here one could say that the provision under Article 81 of UNCLOS is more specific on coastal states drilling on the continental shelf and Article 208 of UNCLOS put emphases which required from coastal states to regulate, adopt laws [...] states shall endeavour to harmonize their policies in this connection at the appropriate regional level [...] such procedures shall be examined from time to time.⁵⁶ Lastly, it could be said that UNCLOS urges states to be mindful of all sorts of pollution be it from the sea, land, from vessel, by dumping and through atmosphere and to adopt regulations that will help to reduce and prevent pollution.⁵⁷ Invariably, Ghana is under the obligation as a signatory to comply with these provisions outlined above to adopt laws and regulations to prevent pollution in the marine environment. The next sub-section will deal with International Convention on Oil Pollution and Preparedness, Response and Cooperation (OPRC).

2:5 International Convention on Oil Pollution and Preparedness, Response and Cooperation (OPRC)

The OPRC was enacted in 1990 and its main objective is to implore the parties to it to be ‘conscious of the need to preserve the human environment in general and the marine environment in particular, recognising the serious threat posed to the environment by oil pollution incidents involving ships, offshore units, sea ports and oil handling facilities’.⁵⁸ In 2010 Ghana ratified the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC) and this convention applies to offshore units.

Article 2 of OPRC outlines the definitions for the purpose of the Convention; it stipulates that: “Oil means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products, oil pollution incidents means an occurrence or series of occurrences having the same origin which result may damage the marine environment[...] and that offshore units such as FPSOs means any fixed or floating installation of structure engaged in gas or oil exploration, exploitation or production activities [...].”⁵⁹

⁵⁴ *ibid*

⁵⁵ Article 81 of UNCLOS

⁵⁶ See *infra*, Article 208 for full text of the provision.

⁵⁷ See Article 207, 209, 210, 211 and 212 of UNCLOS.

⁵⁸ See the preamble of OPRC

⁵⁹ Article 2 of OPRC

In this thesis, what the writer is looking for is whether Ghana has fulfilled its obligations under this international convention (OPRC) in which it is party to it. This Convention (OPRC) was to deal with any issue that has to do with marine pollution incidents nationally with the cooperation of other States, that is each party shall establish a national system for responding promptly and effectively to oil pollution incidents.⁶⁰ Article 7 of OPRC urges state parties to cooperate to provide advisory services, technical support and equipment for the purpose of responding to an oil pollution incident [...] with expeditious movement into it.⁶¹ Ghana being a state party is under obligation to comply and implement the provisions of OPRC as stipulated under Article 9 which states that “parties undertake directly or indirectly or through the organization and other international bodies , as appropriate, in respect of oil pollution preparedness and response [...]”,⁶² the convention sets out the action to be taken on receiving an oil pollution report and provides for international cooperation in polluting response⁶³ and also Ghana being a party to OPRC has an obligation under Article 10 to implement the bilateral and multilateral agreements for oil pollution preparedness and response.⁶⁴ The next section of this thesis will discuss International Convention for the Prevention of Pollution from Ships and its Protocol.

2:5:1 Prevention of Pollution by Oil on Marine Environment

Ghana has ratified the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC) and therefore come under obligation as required by the convention. OPRC requires parties to undertake either individually or jointly to prepare and respond to an oil pollution incident. Under Article 3 of the OPRC, it provides that Ghana as a State party to the Convention is obligated to make sure oil companies which operates within its jurisdiction to comply with oil pollution emergency procedures.⁶⁵ The emergency procedures are to be coordinated by Ghanaian institutions are required by OPRC. Article 6 of OPRC requires that Ghana as a party to the convention have to establish a national system for responding promptly and effectively oil pollution preparedness and response, furthermore Ghana must cooperate through the organisation or relevant regional organisations or arrangements to promote, as appropriate, the holding on a regular symposia on relevant subjects, including technological advances in oil pollution combating techniques and equipment.⁶⁶ In summery Ghana should put

⁶⁰ Article 6 of OPRC

⁶¹ Article 7 of OPRC

⁶² Article 9 of OPRC

⁶³ Philippe Sands and Jacqueline Peel: Principles of International Environmental Law (2013) pp393-394

⁶⁴ See Article 10 of OPRC

⁶⁵ *ibid*

⁶⁶ See Articles 6 and 8 of OPRC

in place measures and equipment to deal with the monitoring of oil pollution and be prepared to respond appropriately. The thesis will now move to the discussion on international Convention for the Prevention of Pollution from Ships and its Protocol.

2:6 International Convention for the Prevention of Pollution from Ships and its Protocol (MARPOL 73/78)

The main purpose of MARPOL is to articulate the need to ‘preserve the human environment in general and the marine environment in particular, recognising that deliberate, negligent or accidental release of oil and other harmful substances from ships constitutes a serious source of pollution, and that this objective may be best achieved by establishing rules not limited to oil pollution having a universal purport’.⁶⁷ This gives an overview of the main purpose of MARPOL as it encourages its members to be conscious about the need to preserve the human environment.

According to Article 1 of MARPOL 73/78 ‘parties to the convention undertake to give effect to the provisions of the convention and those Annexes thereto are bound, in order to prevent the pollution of the marine environment by discharge of harmful substances or effluents containing such substances in contravention of the present convention’.⁶⁸ This means that Ghana being a state party is under general obligation to give effect to the provisions under MARPOL 73/78. Annex 1 of the MARPOL 73/78 which deals with regulations for the prevention of pollution by oil and further provides the requirements for the operation of FPSOs which relevant to this thesis in respect to Ghana’s hydrocarbon exploration and exploitation activities. Article 2(4) of MARPOL 73/78 defines ships vessel as any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicle, submersibles, floating craft and fixed or floating platforms.⁶⁹ Platform are defined in the Regulations as including fixed and floating platforms and drilling rigs, floating production, storage and offloading facilities (FPSOs) used for the offshore production and storage of oil and floating storage units (FSUs) used for the offshore storage of produced oil,⁷⁰ and the platform are to be complied with the requirement of Annex 1 and in conformity with Article 3 which deals with application.⁷¹ The thesis will now turn to the contents of the Regulations. The Regulations falls

⁶⁷ See the Preamble of MARPOL

⁶⁸ Article 1 MARPOL 73/78

⁶⁹ Article 2(4) of MARPOL 73/78

⁷⁰ See Regulation 39 of MARPOL 73/78 Annex 1

⁷¹ See Article 3 of MARPOL 73/78

under the annexes of MARPOL 73/78 and they deal with various types pollution, give specific definitions for the purpose of pollution which will be relevant to this thesis.

2:6:1 The Contents of the Regulations

Ghana as a State party to MARPOL 73/78 is allowed to have a special areas (SPA) this means a “sea area where for recognized technical reasons in relation to its oceanographic and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by oil is required”.⁷² Particularly Sensitive Sea Area (PSSA) is an area that needs special protection through action by IMO because of its significance for recognized ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities. The criteria for the identification of particularly sensitive sea areas and the criteria for the designation of special areas are not mutually exclusive. In many cases a Particularly Sensitive Sea Area may be identified within a Special Area and vice versa. In the case of Ghana, inspection of the FPSOs are to be carried out when they are sailing and Ghanaian port officials can inspect offshore terminals.⁷³ Ghana being a State party to MARPOL 73/78 shall carry on surveillance, monitor and protect these designated areas and any violation shall be sanctioned by Ghana.⁷⁴

2: 7 Obligations on Ghana to Protect the Marine Environment Under CBD

To start with, it will be germane to outline the objective of CBD, Article 1 of CBD states that the Convention is to pursued in accordance with its relevant provisions, are the conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the utilisation of genetic resources[...], and Biological Diversity means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystem and the ecological complexes of which they are part, this includes diversity within species, between species and of ecosystems.⁷⁵

These resources are not to be over exploited in order to achieve the sustainability of biodiversity. Parties to CBD are therefore bound by its provisions, example the In-Situ Conservation which requires contracting parties to as far as possible establish a system of

⁷² Annex I.11 of MARPOL 73/78

⁷³ See IMO further introductory comment on PSSA

<http://www.imo.org/en/OurWork/Environment/PSSAs/Pages/Default.aspx>

⁷⁴See Philippe Sands and Jacqueline Peel: Principles of International Environmental Law (2013) pp442-443, Articles 4 and 6 of MARPOL 73/78

⁷⁵ See Article 1 and 2 of CBD

protected areas or areas where special measures need to be taken to conserve biological diversity⁷⁶ and as such Ghana as a State party is not excluded, Ghana is to monitor the use of biodiversity, manage on a flexible basis attuned to the goals of observing biological unit, adopting holistic ecosystem approach, restoring areas of depleted biodiversity; adoption of both an integrated and precautionary approach[...].⁷⁷ In summary, CBD is to ensure responsible exercise of state sovereignty when identifying and using biological resources depends on the willingness of parties to fulfill their various duties under it to cooperate, and Article 5 of CBD requires parties in general to cooperate with each other as far as possible and appropriate.⁷⁸ Hydrocarbon exploration and exploitation activities may cause potential harmful effect on the marine resources and user albeit to the large extent therefor Article 8 of the CBD proposed that: (Art 8a) “contracting parties, as far as possible and appropriate should establish a system of protected areas of areas where special measures need to be taken to conserve biological diversity”.⁷⁹

Article 3 of Convention on Biological Diversity (CBD) provides that States have in accordance with the Chapter of the United Nations and Principles of International Law, the sovereign right to exploit their own resources pursuant to their environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.⁸⁰ The CBD has no provision which directly regulate hydrocarbon exploration and exploitation activities. However, Article 14 of the CBD states that Ghana or any contracting State party to the Convention “shall introduce appropriate procedures requiring Environmental Impact Assessment (EIA) of its proposed projects that are likely to have adverse effects on biological diversity [...]”⁸¹ this from the point of view of this thesis could prevent, reduce and control pollution on the marine environment due to hydrocarbon exploration and exploitation activities. The thesis will now discuss Abidjan Convention in the next sub-section.

⁷⁶ Article 8 CBD

⁷⁷ See Birnie and Boyle: International Law and the Environment (2009) pp621-622

⁷⁸See Birnie and Boyle: International Law and the Environment (2009) p648, Article 5 of CBD

⁷⁹ Article 8 of CBD

⁸⁰ See Article 3 of CBD

⁸¹ Article 14 of CBD

2:8 The Convention for the Cooperation in the Protection and Development for the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention)

The Convention for the Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention). The Abidjan Convention was adopted by the Governments in 1981; the Convention entered into force in 1984. The Abidjan Convention covers the marine environment, coastal zones and related inland waters falling within the jurisdiction of the States of the West and Central African Region, from Mauritania to Namibia inclusive, which have become Contracting Parties to the Convention. The Abidjan Convention is a comprehensive umbrella agreement for the protection and management of the marine and coastal areas. It lists the sources of pollution which require control: pollution from ships, dumping, land based sources, exploration and exploitation of the sea-bed, and pollution from or through the atmosphere.⁸² Ghana being a party to this convention is under the obligation set forth by Articles 3 and 4 to implement the convention and it's all protocols, that is general provision: "Contracting Parties may enter into bilateral or multilateral agreements, including regional or sub regional agreements, for the protection of the marine and coastal environment of the West and Central African Region [...] provided that such agreements are consistent with this Convention and conform to international law, and general obligations [...]".⁸³ Contracting Parties shall prevent, reduce, combat and control pollution of the Convention area in accordance with their capabilities [...] Ghana shall cooperate in the formulation and adoption of other protocols prescribing agreed measures, procedures, and standards to prevent, reduce, combat and control pollution from all sources or promoting environmental management in conformity with the objectives of this Convention.⁸⁴ On the issue of pollution from hydrocarbon exploration and exploitation activities, Article 8 of the Abidjan Convention provides that: "Contracting Parties shall take all appropriate measures to prevent, reduce, combat and control pollution resulting from or in connection with activities relating to the exploration and exploitation of the sea-bed and its subsoil subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction".⁸⁵ Directly, Ghana being a party to this convention is bound by its obligations and requirements, therefore any hydrocarbon activities on the Ghanaian continental shelf should be in conformity

⁸² See http://abidjanconvention.org/index.php?option=com_content&view=article&id=90&Itemid=189

⁸³ Article 3 of Abidjan Convention

⁸⁴ Articles 4 of Abidjan Convention

⁸⁵ Article 8 of Abidjan Convention

with the rules and regulations set by Abidjan Convention. The next sub-section of the thesis is going to be on Pollution from Hydrocarbon activities on the seabed.

2:8:1 Pollution from Hydrocarbon Activities on the Seabed

Article 8 of Abidjan Convention urges all contracting parties including Ghana to take all appropriate measures to prevent, reduce, combat and control pollution resulting from or in connection with activities relating to the exploration and exploitation of the sea-bed and its subsoil subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction.⁸⁶ Article 12 of the Abidjan Convention explains that Ghana being a contracting Party shall cooperate in taking all necessary measures to deal with pollution emergencies in the Convention area, whatever the cause of such emergencies, and to reduce or eliminate damage resulting therefrom. If Ghana becomes aware of a pollution emergency under its jurisdiction should, without delay, notify the Organisation and, either through this Organisation or directly, any other Contracting Party likely to be affected by such emergency.⁸⁷ The next sub-section will deal with Ghana's Assessment of Impact of Pollution.

2:9 Ghana shall Assess Impact of Pollution

Article 13 of the Abidjan Convention provides the provision on Environmental Impact Assessment during emergencies, it stipulates that: Contracting Parties shall cooperate in taking all necessary measures to deal with pollution emergencies in the Convention area, whatever the cause of such emergencies, and to reduce or eliminate damage resulting therefrom. Any Contracting Party which becomes aware of a pollution emergency in the Convention area should, without delay, notify the Organisation and, either through this Organisation or directly, any other Contracting Party likely to be affected by such emergency.⁸⁸ The Protocol 1 (2) of Abidjan Convention states that contracting parties including Ghana should during emergency coordinating reports of particular marine emergencies to the other states and stakeholders in order to prevent the spread of the disaster. The Abidjan Convention and its Protocol are concern with oil exploration from the seabed and how emergency arrangements and response to hydrocarbon pollution, this make the convention and its protocol relevant for this thesis. The thesis will discuss how to prevent transboundary pollution from hydrocarbon activities on the Ghana's continental shelf.

⁸⁶ *ibid*

⁸⁷ Article 12 of Abidjan Convention

⁸⁸ Article 13 of Abidjan Convention

2:10 Prevention of Transboundary Pollution Emanating from Hydrocarbon Activities on Ghana's Continental Shelf.

As we have seen from the above, Ghana as a State party to these treaties and conventions there are obligations that comes with the membership of these International Environmental conventions which provides strict requirements under which Ghana must adhere to at all times. According to UNCLOS, when a State becomes aware of a situation in which the marine environment is under imminent danger of being damaged, or has been harmed by pollution, it must immediately notify other States that are likely to be affected by such pollution as well as the competent international organisation.⁸⁹ This is an obligation that applies to all States, in respect to maritime areas.⁹⁰ In addition, States in the affected areas must, in accordance with their capabilities, cooperate in eliminating the effects of pollution and preventing or minimising damage,⁹¹ that is States are required to jointly develop and promote contingency plans for responding to pollution incidents, in areas where there is a possibility that the damage will spread to another State's jurisdiction or control then there is an obligation to reasonable steps to prevent this transboundary effect from occurring.⁹² It should be borne in mind that the purpose of this thesis is to establish whether Ghana has incorporated the international obligations into its national laws.

Transboundary obligation was reinforced in a case called "Trail Smelter" (Canada v United States of America).⁹³ The case arose out of damage done to crops, pasture land, trees and agriculture in the United States of America from sulphur dioxide emission from a smelting plant at the Consolidated Mining and smelting company of Canada at Trail, in the British Columbia. At the heart of the award is the holding of the tribunal that: "under the principle of International Law... no State has the right to use or permit the use of territory in such a manner as to cause injury by fumes in or to the territory of another or properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence".⁹⁴ This landmark decision has since shaped the International Environmental Law and the obligation to stop transboundary harm and pollution, this must be used as a guide by Ghana in its hydrocarbon exploration and exploitation activities on the continental shelf. Article

⁸⁹ Article 198 of UNCLOS. See also MARPOL 73/78, art8

⁹⁰ Donald R Rothwell, Tim Stephens: International Law of the Sea (2010). pp362-363

⁹¹ Article 199 of UNCLOS

⁹² Ibid art 194

⁹³ Trail Smelter (Canada v United States of America) 3 RIAA 1911

⁹⁴ Ibid 3 RIAA 1911. See Philippe Sands and Jacqueline Peel: Principles of International Environmental Law (2013) pp239-240

214 of UNCLOS also provides that Ghana is obligated to enforce its laws and regulations as provided under Article 208 of UNCLOS.⁹⁵ At this point, the thesis will discuss ‘Ghana have an obligation to prevent Transboundary Pollution’ in the next sub-section.

2:11 Obligation to Prevent Transboundary Pollution

Patricia Birnie, Alan Botle and Catherine Redgwell asserts that it is beyond serious argument the states are required by international law to regulate and control activities within their territory or subject to their jurisdiction or control that pose a significant risk of global or transboundary pollution of environmental harm. This is an obligation to take appropriate measures to prevent or minimise as far as possible the risk of significant harm not merely a basis for reparation after the event.⁹⁶ The decision on Trail Smelter case has become a yardstick to measure and a reference to alert States that are embarking on hydrocarbon exploration to be aware of the need to prevent transboundary harm, Ghana’s hydrocarbon exploration and exploitation activities is not exempted from this world accepted principle. Inherently, Article 194(2) of UCNLOS provides that Ghana should take all the necessary measures to ensure that hydrocarbon activities under its jurisdiction or control does not cause harm or spread other State’s territory. This provision applies to Ghana’s FPSOs installations which is located offshore, Ghana must take all the necessary steps as set out under Article 235 of UNCLOS to protect and preserve the marine environment, that is Ghana is responsible for the fulfilment of the international obligations concerning the protection and preservation of marine environment, failure to do so Ghana shall be liable in accordance with international law.⁹⁷ Articles 208 and 145 of part XI UNCLOS talks about the prevention of pollution as a result of hydrocarbon activities on the seabed such as dredging and drilling, and how Ghana as a State party to the Convention to adopt laws and regulations to prevent pollution from the seabed because any activities such as maintenance installation if not regulated and checked could affect or damage the flora and fauna of the marine environment.

2:12 Conclusion

Chapter two dealt with Ghana’s obligations under the International Environmental Law, its instruments, conventions and principles which are applicable to pollution from hydrocarbon exploration and exploitation activities on the offshore Ghanaian continental shelf. Chapter two

⁹⁵ See Article 208 and 214 of UNCLOS

⁹⁶ See Bernie et al (2009), 3rd Ed.p.143

⁹⁷ Article 235 of UNCLOS

sets out the legal principles that are relevant for Pollution emanating from hydrocarbon exploration and exploitation activities. The principles stipulate how Ghana should prevent and control pollution as a result of hydrocarbon activities within the jurisdiction of Ghana, and making sure that harm does not spread to the neighbouring marine environment. It imperative to acknowledge that Ghana is under the obligation to prevent transboundary harm or pollution in all the treaties discussed in chapter two. The protocols it must be said, are there to see the smooth implementation of these International Environmental Law principles as they set the standard made for the protection and preservation of the marine environment.⁹⁸ Under UNCLOS in which Ghana is a State party to it, there are obligations and duties on Ghana to preserve and protect the marine environment either single handedly or through collective approach which are consistent with the convention. Ghana is under duty bound by UNCLOS to cooperate. Importantly, Ghana shall cooperate with neighbouring states such as Togo, Republic of Benin, Nigeria, Cote d'Ivoire, Liberia and Serra Leone and in a broader perspective the whole region of West Africa and the global community as a whole in order to achieve its obligation and requirement demanded under UNCLOS. Ghana is under the duty to of OPRC to deal with any issue that has to do with marine pollution incidents nationally with the cooperation of other States, that is each party shall establish a national system for responding promptly and effectively to oil pollution incidents, this provision is set out under Article 6 of OPRC⁹⁹. It is important that Ghana incorporate into its National laws and enforce them during emergency such as pollution from the offshore hydrocarbon activities. MARPOL 73/78 and its Annexes were discussed to shed light on the need to protect the marine environment and the obligations in which Ghana have to protect the marine environment from pollution were discussed. The Conventions of Biological Diversity (CBD) was discussed in chapter two to highlight the importance for Ghana to monitor the use of biodiversity. Hydrocarbon production is gainful in economic sense, however, fumes and the oil spillages coming from production of hydrocarbons could have adverse effect on the marine environment therefore CBD advises State parties to use ecosystem approach to reduce and prevent pollution which could affect the biological diversity in the marine environment. Chapter two also discussed Abidjan Convention, and it requires Ghana to cooperate and duty to protect the marine environment and to incorporate into Ghana's national laws to reduce and control pollution emanating from hydrocarbon exploration and exploitation activities on the Ghanaian continental shelf and offshore oil production activities. The next chapter will discuss the National Laws of Ghana.

⁹⁸ See Articles 208,209, 206 and 214 of UNCLOS

⁹⁹ Article 6 of OPRC

3: 0 Chapter Three- The National Laws of Ghana

3:1 Introduction

This chapter of the thesis is going deal with the National Laws of Ghana. It will test the domestic Laws to see if it has given and incorporated the International Environmental Law obligations that were discussed in chapter two of this thesis. This chapter will analyses the National Legislation to see if it has given effect the international obligations concerning pollution coming from hydrocarbon exploitation and exploration activities. The International Environmental treaties in Chapter two are; UNCLOS, OPRC, MARPOL 73/78, CBD and Abidjan Convention. The second part will seek to know if the obligations emanating from these instruments regarding how hydrocarbon exploration and exploitation activities have been implemented through the national legislations. Section three will delve into the Constitution of Ghana to see if it allows the hydrocarbon exploitation in offshore and under which conditions. The Environmental Protection Agency (EPA) Act 1994 (Act 490), Obligations to protect the marine environment and control of pollution will be discussed and a conclusion will be drawn.

3:2 The National Laws of Ghana and the International Law

It is worth noting that Ghana is a “dualist system” therefore international law is not directly applicable domestically. It must first be translated into national legislation before it can be applied by the national courts. Therefore, for a dualist State Ratification of International Law Instruments are not enough, and national implementing legislation should be pass to make it necessary. Article 75 (2) of 1992 Constitution of Ghana which stipulates that: A treaty, agreement or convention executed by or under the authority of the President shall be subject to ratification by (a) Act of Parliament; or (b) a resolution of Parliament supported by the votes of more than one-half of all the members of Parliament.¹⁰⁰ Broadly the Ghanaian constitution embraces holistically the various international and other regional treaty organisations. Article 72 of the 1992 Constitution reinforces the international affairs in congruence with the accepted principles of public international law and in manner consistent with the national interest of Ghana. This is not to infringe the Vienna Convention on the law of Treaties Article 27 (VCLT) which stipulates: party may not invoke the provisions of its internal law as justification for its

¹⁰⁰ Article 75(2) of 1992 Constitution of Ghana

failure to perform a treaty.¹⁰¹ The thesis will discuss the Constitution of Ghana in the next subsection.

3:3 The 1992 Constitution of Ghana

The Constitution of Ghana the 4th Republic of Ghana was adopted in 1992 and came into force in January 7 1993. The Constitution is the fundamental law of Ghana and provides the framework on which all other laws stands therefore any law that is enacted or passed becomes binding in particular Article 36 of Chapter 6 which states that: “the State shall take appropriate measure needed to protect and safeguard the national environment for posterity; and shall seek cooperation with other States and bodies for purposes of protecting the wider international environment for mankind”¹⁰² The Constitution requires that all citizens protect and safeguard the natural environment of the republic of Ghana and its territorial waters.¹⁰³

The ownership of the Ghanaian mineral deposits is outlined in Article 257 (6) of 1992 Constitution of Ghana which stipulates that: “ every mineral in its natural state in, under or upon any land in Ghana, rivers, streams, water courses throughout Ghana, the exclusive economic zone and any area covered by the territorial sea or continental shelf is the property of the Republic of Ghana and shall be vested in the President on behalf of, and in trust for the people of Ghana,”¹⁰⁴ The 1992 Constitution of Ghana reflects the regimes set by UNCLOS, that is the territorial waters, exclusive economic zone and the continental shelf which normally stretches to the high seas. This means that any hydrocarbon deposits be it in upstream, offshore or land based is entrusted to the President of Ghana to keep in trust for the people of Ghana. Any transaction, contract or undertaking involving the grant of a right or concession by or on behalf of any person including the Government of Ghana, to any other person or body of persons howsoever described, for the exploitation of any mineral, water or other natural resource of Ghana made or entered into after the coming into force of this Constitution shall be subject to ratification by Parliament ,¹⁰⁵ that is Ghana will have to pass a domestic law in order to be able to use international and regional laws. The thesis will now move to the discussion of Environmental Protection Agency (EPA).

3:4 Environmental Protection Agency (EPA) Act 1994 (Act 490)

¹⁰¹ Article 73 of 1992 Constitution of Ghana. See <http://www.jus.uio.no/lm/un.law.of.treaties.convention.1969/27.html> Article 27 of Vienna Convention on the Law of Treaties

¹⁰² Article 36 of 1992 Constitution of Ghana

¹⁰³ Article 41(k) of 1992 Constitution of Ghana

¹⁰⁴ article 257 of 1992 Constitution of Ghana

¹⁰⁵ Article 268 of 1992 Constitution of Ghana

The Environmental Protection Act (Act 490 of 1994)¹⁰⁶ established the authority, responsible, structure and funding of the Environmental Protection Agency (EPA). Part 1 of the Act mandates the EPA with the formulation of environmental policy, issuing of environmental permits and pollution abatement notices and prescribing standards and guidelines. The act defines the requirements and responsibilities of the Environmental Protection Inspectors and empowers the Environmental Protection Agency to request that an Environmental Impact Assessment process to be undertaken. Furthermore, the Act establishes and mandate the EPA to see and request information on any undertaking that in its opinion can have adverse environmental effects and instruct the proponent to take the necessary measures to prevent the adverse effect. The Act is complemented with its regulations that is Legislative Instrument LI1652 1999 as Amended, 2002 this sets out various regulations for Environmental Impact Assessment which will be discussed below at 3:5:1.¹⁰⁷ The thesis will now discuss Obligations for the protection of the marine environment.

3:5 Obligations for the Protection of the Marine Environment

The Environmental Protection Agency Act 1994 (Act 490) section 2 stipulates: the agency(EPA) is to advise the minister on the formulation of policies on the environment and in particular to make recommendations for the protection of the environment, that is EPA is to use its expertise as a technocrat to formulate environmental polices to protect the marine environment. The EPA is to secure by itself or in collaboration with any other person or body the control and prevention of discharge of waste into the environment and the protection and improvement of the quality of the environment, and to collaborate or co-ordinate with foreign and international agencies for the purposes of this Act; to issue environmental permits and pollution abatement notices for controlling the volume, types, constituents and effects of waste discharges, emissions, deposits or any other source of pollutants and of substances which are hazardous or potentially dangerous to the quality of the environment or a segment of the environment and to prescribe standards and guidelines relating to the pollution of air, water, land and any other forms of environmental pollution including the discharge of waste and the control of toxic substances. The Act 490 entrust duty on the EPA to ensure enforcement of the laid down environmental impact assessment procedures in the planning and execution of

¹⁰⁶ Article 490 of EPA 1994

¹⁰⁷ See for further insight of LI1652 1999, as Amended 2002

<http://www.epa.gov.gh/ghanalex/acts/Acts/ENVIRONMENTAL%20ASSESSMENT%20REGULATION.1999.pdf>

development projects, including compliance in respect of existing projects. The EPA is obligated to conduct investigations into environmental issues and advise the Minister on these issues; to promote studies, research, surveys and analyses for the improvement and protection of the environment and the maintenance of sound ecological systems in the Republic; and to promote effective planning in the management of the environment.

Clearly, from the list on the above it could be said that there are broader grounds in which Act 940 of 1994 covers, however, the main responsibility and obligation is based on the protection of the marine environment from various contaminants and from pollution. The thesis will discuss Obligations under the Environmental Protection Agency.

3:5:1 The Role of the Environmental Protection Agency

As I have outlined in the previous section, the Environmental Protection Agency Act 1994 (Act 490) obligates EPA to conduct Environmental Impact Assessment (EIA) that is (EIA) has to be conducted by Environmental Protection Agency as it is its responsibility for ensuring compliance with EIA procedures in the planning and implementation of development projects, including compliance with respect to existing projects. This requires that any project likely to have potentially adverse effects on the environment be subjected to an Environmental Impact Assessment.

Regulation 6 of the Environmental Assessment Regulation, 1999 LI 1652, Schedule 1 Part 1 (Undertaking Requiring Registration and Environmental Permit) requires that an Environmental Permit to be obtained for crude oil and natural gas activities in Ghana this includes crude oil or petroleum production facilities as well as natural gas facilities. Further, Appendix 2, of the EPA's "Environmental Assessment in Ghana, A Guide" requires registration with the Agency of all undertakings such as "Mining (including milling), quarry and oil wells". Activities related to oil exploration and production (crude oil, petroleum or natural gas) fall clearly within the scope of the provision.¹⁰⁸ Part one of the Regulation stipulates that: no person shall commence any of the undertakings specified in Schedule 1 to these Regulations or any undertaking to which a matter in the Schedule relates, unless prior to the commencement, the undertaking has been registered by the Agency and an environmental permit has been issued by the Agency in respect of the undertaking, this is an obligations as failure to do so will block the issuance of permission and approval for Environment Impact Assessment. Initial assessment by screening of application has to be carried out, and then the Agency shall on

¹⁰⁸ Ibid

receipt of an application and any other relevant information required, as an initial assessment, screen the application taking into consideration. After the screening under regulation 5 the Agency shall issue a screening report on the application and shall state in the screening report whether the application has been approved or not. Where the Agency approves an application at the initial assessment, it shall register the undertaking, the subject of the application, and issue in respect of the undertaking an environmental permit. Where the Agency on the initial assessment reports that it objects to the application the report shall constitute a non-acceptance of the application and the undertaking shall not be commenced or where it is in existence, be discontinued. The agency may require the submission of a preliminary environmental report or the submission of an environmental impact statement, shall be communicated to the applicant within 25 days from the date of the receipt of the application for an environmental permit. Where the Agency upon consideration of an application decides that there is the need for a preliminary environmental assessment to be submitted in respect of the application, the Agency shall request the applicant to submit a preliminary environmental report on the proposed undertaking. In summary, compliance with the Environmental Assessment procedures starts with registration of undertakings as presented by completing the relevant Environmental Assessment Registration. The Environmental Assessment Regulations 1999, (LI1652) provides a list of undertakings requiring registration and mandatory EIA in schedules 1 and 2. In addition, undertakings which would be located in environmentally sensitive sites (listed in schedule 5) are required to be subject to EIA irrespective of size and scale. Regulations 3(12) indicates that the following petroleum related developments required EIA before an environmental permit is granted:

1. oil and gas fields development
2. construction of offshore and onshore pipelines
3. construction of oil and gas separation, processing, handling and storage facilities
4. construction of oil refineries
5. construction of product depots for the storage of petrol. Gas or diesel which are located within 3 kilometers of any commercial, industrial or residential areas.¹⁰⁹

The Environmental Impact Assessment as we have seen is not a straight forward process and it entails various steps which requires lot of investigations and bureaucracy before a permit could be issued however, if the strict process is followed as outlined, then there is a higher possibility of success in achieving the objective of preventing adverse pollution on the marine

¹⁰⁹ See Website for further elaborations on EIA guidelines: www.epa.gov.gh / www.oilandgas-epa.gov.gh

environment. I will now turn the attention to the discussion on the Control of Pollution of the marine environment in the next sub-section.

3:6 Control of Pollution on the Marine Environment

According to Article 41(k) in chapter 6 of the 1992 Constitution of Ghana requires that all citizens protect and safeguard the natural environment of the Ghana and its territorial waters.¹¹⁰ This makes it a statutory requirement for any citizen in Ghana to protect the environment and its territorial waters. At the international level, Ghana is under various obligations as it has been mentioned in chapter two of the thesis, these international obligations coupled with the requirements by the 1992 constitution of Ghana has bestowed on the Environmental Protection Agency in Ghana as an established authority under Article 490 of 1994 Environmental Protection Act to deal with control of pollution in Ghana. It is imperative to explain how the EPA control pollution in Ghana. Firstly, EPA is the sole agency that have been mandated to formulate environmental policies, issuing of environmental permits and pollution abatement notices and prescribing standard and guidelines. Therefore, all activities which are likely to have adverse effect such as pollution on the environment must be subject to Environmental Impact Assessment before the issuance of permit by the EPA. By this EPA can refuse to give permit if it finds any potential adverse effect such as pollution most especially from hydrocarbon exploration and exploitation. It is the responsibility of the EPA to coordinate the activities of the relevant bodies for the purposes of controlling the generation, treatment, storage, transportation and disposal of industrial waste, by so doing EPA will be putting measures in place to curb any potential to contain the spread of pollution. It is the obligation of EPA to to collaborate or coordinate with foreign and international agencies. As was mentioned in chapter two, the Abidjan Convention requires its State parties to collaborate with their neighbours in order to coordinate effectively in times of environmental disaster to avoid transboundary pollution. And lastly for the purpose of this thesis to prescribe standards and guidelines relating to the pollution of air, water, land and any other forms of environmental pollution including the discharge of waste and the control of toxic substances.¹¹¹ The Petroleum (Exploration and Production) Law (Act 84 of 1984) establishes the legal and fiscal framework for petroleum exploration and production activities in Ghana.¹¹² The Act requires that a Plan of Development (PoD) for proposed developments be submitted and approved by EPA before

¹¹⁰ *ibid*

¹¹¹ *Infra see note 94*

¹¹² *ibid*

development of the field. Additionally, A contractor or sub-contractor carrying out petroleum operations shall be responsible for any pollution or damage caused by or resulting from such operations as well as pollution or damage caused by or resulting from petroleum operations undertaken by an agent or employee of such contractor or sub-contractor and shall take all necessary measures to remedy any pollution or damage so caused.¹¹³ The thesis will now turn the discussion on Ghana Maritime Authority in the next sub-section.

3:7 Ghana Maritime Authority

The Ghana Maritime Authority Act (2002) (Amendment) Act 2011, (Act 825) established the Ghana Maritime Authority (GMA) to be responsible for the regulation and coordination of activities in the maritime industry and for the implementation of the provisions of enactments on shipping.¹¹⁴ After the discovery of high quantity of crude oil offshore Ghanaian waters, the GMA was confronted with new challenges because there were no effective polices, administrative, legislative and human capacity to support offshore oil and gas development. This prompted the objective of the amendment so that specific provisions could be made for the government to promulgate regulations for the purpose of fixing levies and specify the functions and duties of the GMA to meet the new challenges such as regulation of marine pollution. I will now turn to the next section to conclude what has been discussed in chapter three of this thesis.

3:8 Conclusion

Chapter three discussed the Ghanaian legal regime of Ghana by demonstrating how the legal system work in Ghana. The issues of dualism were touched on and how the relationship between Ghana Law and International Environmental Law instruments could be incorporated into the National Legislation highlighting the need to pass national law in order to be able to implement any international instrument. Environmental Protection Agency Act 1994 (Act 490) was examined, the thesis established that the Act 490 gave the legal framework for the formation of Environmental Protection Agency. The Act gave the EPA statutory powers to become the leading state institution to deal with pollution. It also established that EPA are responsible to monitor and issue abatements to potential proposed project. Inherently, the act

¹¹³ See part ii Section 18 of Article 84 of 1984.

http://www.petrocom.gov.gh/assets/petroleum_exploration_and_production-law_1984_pndc_law_84.pdf

¹¹⁴ See

[http://www.ghanamaritime.org/assets/photos/forms/GMA_Laws/Ghana%20Maritime%20Authority%20Act%202002%20\(Act%20630\).pdf](http://www.ghanamaritime.org/assets/photos/forms/GMA_Laws/Ghana%20Maritime%20Authority%20Act%202002%20(Act%20630).pdf)

defines the requirements and responsibilities of the Environmental Protection Inspectors and empowers the Environmental Protection Agency to request that an Environmental Impact Assessment process to be undertaken. Obligations for the protection of the marine environment were discussed bringing to light hosts of mandates bestowed under section two of Act 490 such as to collaborate or co-ordinate with foreign and international agencies for the purposes of this Act, to issue environmental permits and pollution abatement notices for controlling the volume, types, constituents and effects of waste discharges, emissions, deposits or any other source of pollutants and of substances which are hazardous or potentially dangerous to the quality of the environment or a segment of the environment, to issue notice in the form of directives, procedures or warnings to any other person or body for the purpose of controlling the volume, intensity and quality of noise in the environment, to prescribe standards and guidelines relating to the pollution of air, water, land and any other forms of environmental pollution including the discharge of waste and the control of toxic substances and to ensure compliance with the laid down environmental impact assessment procedures in the planning and execution of development projects, including compliance in respect of existing projects. Obligations under the Environmental Protection Agency were examined and discussed, it came to light that one of the main obligation is for EPA to conduct Environmental Impact Assessment (EIA). EIA processes were outlined highlighting the need conduct EIA in order to avoid potential adverse effect such as pollution. Lastly, how the EPA control pollution was discussed, bringing to bear the Act 84 of 1984 which established the petroleum exploration and production fiscal framework for oil production in Ghana. The issue of collaboration was mentioned linking it to Abidjan Convention which required State parties to cooperate in order to be effectively manage pollution, and lastly. GMA was mentioned and how it came to being, citing the new challenges which comforted Ghana in regards to gaps which were created as a result of the new oil discovery. The thesis will now move to chapter four to discuss to what extent has Ghana National laws been able to incorporate the obligations under International Environmental Law.

4: 0 Chapter Four- To What Extent Has Ghana Incorporated the International Obligations

4:1 Introduction

This chapter will discuss and examine to what extent has Ghana Incorporated the International Environmental Law Obligations. The Obligations listed in Chapter two and the discussion pertaining hydrocarbon exploration and exploitation activities on the Ghanaian continental shelf will be looked into to see if Ghana has fulfilled its international environmental legal

obligations. Firstly the duty to cooperate will be discussed in this chapter, this is to find out if there are gaps and if so what might have caused these gaps. Secondly there will be a discussion on the duty to adopt laws which will protect the marine environment within the national jurisdiction of Ghana. This is to test the potency of the national laws and how they have dealt with hydrocarbon activities especially pollution within the marine environment in Ghana. By doing so I will list various National Laws and examine them to see if they are inline with the International Environmental Laws mentioned in chapter two. Lastly, duty to conduct EIA will be assessed to see to what extent has the Ghanaian version incorporated the international standard into the local version. There will be a conclusion to sum up the chapter.

4:2 The Duty to Cooperate

Duty to cooperate with regards to hydrocarbon exploration and exploitation activities is very imperative as pollution can spread to other parts of the marine environment including beyond the national jurisdiction of Ghana to the neighbouring states. Ghana is a party to major international environmental law treaties as have been mentioned in chapter two that is UNCLOS which is a major international framework treaty, has been ratified by Ghana since 1994, the UNCLOS deals with the regulation of pollution broadly, Part XII of UNCLOS outline the general Obligations on State parties to preserve and protect the marine environment, therefore it can be concluded that Ghana has complied with the obligations under UNCLOS. MARPOL 73/78 and its Annexes, the protocol of 1997 was signed by Ghana in 2010, the Annexes I and II were ratified by Ghana in 2010 and the remaining Annexes III to VI came into force in 2011. Ghana being a State party to UNCLOS is under obligation to cooperate on global basis and on a regional basis, directly or through competent international organisations such as MARPOL in formulating and elaborating international rules, standards and recommended procedures consistent with UNCLOS for the protection of marine environment therefore for Ghana to have ratified MARPOL will cooperate with other States as stipulated international law, with this I can conclude that there is an indication that Ghana has fulfilled its obligations required from MARPOL 73/78 and its Annexes.

Ghana have National Biodiversity Strategy which came into force in 2002, Ghana signed and ratified the Convention on Biological Diversity since 1992. Ghana is therefore under obligation to develop a national strategy for the sustainable use of the country's biological resources, and was ratified in 1994. Article 5 of CBD¹¹⁵ which calls for cooperation among the contracting

¹¹⁵ Article 5 CBD

parties is applicable in Ghana most especially conservation of biological diversity within its jurisdiction' OPRC was adopted by Ghana in 1990 and came into force in 1995, however, it was ratified by Ghana in 2010 therefore Article 10 of OPRC which calls for bilateral and multilateral cooperation in response to pollution has been met by Ghana by instituting National Oil Spill Contingency Plan. It must be emphasise that the National Oil Spill Contingency Plan will be discussed in some detail in section 4:3.

Lastly, Abidjan Convention, was signed in 1981 and came into force in 1984, the Convention deals with pollution from ships, via incidental discharges and dumping, by referring the contracting parties to the applicable global conventions. Ghana has committed its national law and international obligations which is a good standing for the country. In this regard, it is sensible to create an institution that could monitor and coordinate with other local agencies and international partners in times of pollution or adverse effect. The creation of Environmental Protection Agency in Ghana means that it has fulfilled the International obligations for cooperation because the agency has been mandated to liaise with other organisations both in local, regional and international in times of emergency such as oil pollution as required by the Abidjan Convention Articles 12 and 14 which calls for cooperation in times of emergency and scientific cooperation respectively.¹¹⁶ The thesis will now turn to the next sub-section for the discussion on adoption of laws which will protect the marine environment within Ghana's national jurisdiction.

4:3 General Duty on Adopt Laws for the Protection of the Marine Environment within Ghana's National Jurisdiction.

The duty to adopt national laws for the protection of the marine environment from pollution and other adverse effects are captured in almost the entire international treaties and conventions that have been mentioned in this thesis. Part XII of UNCLOS articulate the need for States to adopt laws and regulations to prevent, reduce and control pollution of the marine environment arising from seabed activities subject to their jurisdiction and from artificial islands, installation and structures under their jurisdiction, pursuant to article 60 and 80.¹¹⁷ The ratification of UNCLOS in 1994 by Ghana is a great evidence of the adoption propounded under Article 208 of UNCLOS. Further, it means that Ghana is obligated to implement this international treaty into National Laws which imposes on Ghana responsibility. MARPOL 73/78 and its Annexes, MARPOL 73/78 provides the requirement related with the control of

¹¹⁶ Articles 12 and 14 of Abidjan Convention

¹¹⁷ *infra* Bernie et al (2009) 3rd Ed.p.143

waste oil, engine oil discharge as well as grey and black waste water discharge. The Environmental Protection Agency's guidelines for Environmental Assessment and Management in the offshore oil and gas Industry requires compliance with MARPOL 73/78 and its Annexes.¹¹⁸ It must be said that the ratification of MARPOL and its Annexes to date has helped very much considering the dualist nature of Ghana's legal system which could be sometimes associated with bureaucracy it is a sign of relief for the good people of Ghana this is because the International Finance Corporation's (IFC) Environmental Health and Safety Guidelines for offshore oil and gas development require compliance with MARPOL and its Annexes.¹¹⁹ IFC's Environmental and Social Performance Standards define IFC clients' responsibilities for managing their environmental and social risks. IFC's Sustainability Framework, which includes the Performance Standards, applies to all investment and advisory clients whose projects go through IFC's initial credit review process after January 1, 2012.¹²⁰ The thesis has been able to establish that the obligations pertaining adoption of laws to protect the marine environment by Ghana has been accomplished under UNCLOS and MARPOL. Example, the eni the Offshore Cape Three Points (OTCP) of Ghana project which is located approximately 32 nautical miles offshore and, therefore, outside Ghana's territorial waters but inside the EEZ, the operators of vessels will need a clearance for project vessels before they can be allowed to travel into territorial waters and the permit has to be issued by Ghana Maritime Authority. Furthermore, their guidelines for the removal of offshore installations in the EEZ is based on Article 60 of UNCLOS.¹²¹

OPRC was adopted by the government of Ghana in 1990 and came into force in 1995 it requires Ghana to establish measures for dealing with major incidents or threats in marine pollution, either nationally or in cooperation with other countries. In order to integrate OPRC Convention's requirement, the Ghana has developed a National Oil Spill Contingency Plan in 2010.¹²² The National Oil Spill Contingency Plan (NOSCP) sets out a clear definition of the responsibilities of the major participants: the national and the industries. This is provided in a set of national arrangements by way of an Inter-Agency Agreement (IAA), which also details such matters as divisions of responsibilities, contingency planning, access to national

¹¹⁸ See document note 3.5.2 of OCTP

[http://ifcextapps.ifc.org/ifcext/spiwebsite1.nsf/0/60279dbd070e6eb685257e110060ffee/\\$FILE/OCTP%20Phase%2020ESHIA%20Chapters%20final%20v03%20merged%20with%20ToC.pdf](http://ifcextapps.ifc.org/ifcext/spiwebsite1.nsf/0/60279dbd070e6eb685257e110060ffee/$FILE/OCTP%20Phase%2020ESHIA%20Chapters%20final%20v03%20merged%20with%20ToC.pdf)

¹¹⁹ Ibid OCTP

¹²⁰ See

http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/IFC+Sustainability/Our+Approach/Risk+Management/Perfo

¹²¹ Article 60 of UNCLOS

¹²² See http://www.itopf.com/fileadmin/data/Documents/Country_Profiles/ghana.pdf

equipment, and the management and control of financial affairs.¹²³ As a policy the NOSCP identified following as the primary aims of an oil spill response; these are to protect human health and secure their safety, minimizing environmental impacts and restoring the environment as near as is practicable to pre-spill condition. In the event of a major oil spill incident, NOSCP may sought assistance from overseas in accordance with the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC 1990).¹²⁴

It is important to say that a new Marine Pollution Bill, which incorporates the Convention on Oil Pollution Preparedness, Response, Cooperation and Dumping of Wastes to address the challenges of the oil industry, has been drafted to respond to the challenges of the oil industry, the bill when enacted will empower the Ghana Maritime Authority (GMA) to regulate marine pollution and will provide a legal framework to prevent and control marine source pollution. It is now clearly evident that Ghana's effort to adopt laws to protect the marine environment has demonstrated in the above mentioned international treaties even though there is more to be done in terms of marine pollution. The thesis will now turn to the attention of Environmental Impact Assessment (EIA) in the next sup-section.

4:4 Environmental Impact Assessment (EIA)

As was mentioned and explained in Chapter three, there is an obligation to carry out Environmental Impact Assessment in Ghana, the Legislative Instrument (LI1652 1999) as amended in 2002. The Environmental Assessment Regulations constitutes the principal enactment within the Environmental Protection Act (Act 490 of 1994). The Regulations says all activities likely to have an adverse effect on the environment must be subjected to environmental assessment and the issuance of permits before work commences on the activities.¹²⁵ The process looks more bureaucratic considering the various stages that the process has to go through, there is also lack of capacity to gather data by the EPA rather they rely on the experts who have been hired by the oil companies to do the data collection. This was evident when the writer compared documents from two oil companies in Ghana who are operating from different locations, since the thesis is not focused on investigating on performance much will not be said on the issue however it demonstrates a template like nature of EIA data collection. The EIA is mostly funded and managed by proponents whose major goal is to maximise economic benefits. The process is therefore sometimes rushed to help the

¹²³See <http://epaoilandgas.org/national%20oil%20spill.html>

¹²⁴ ibid

¹²⁵ Ibid

proponents get approval to commence the project and total neglect to the sustainable goal of the EIA process.¹²⁶

In Ghana the Environmental Impact Assessment is mostly done before the commencement of the project, the question is what happened after the assessment, has there been any continued monitoring of the projects since ongoing projects sometimes can change their modus operandi. Monitoring is generally undertaken after the project has begun, its purpose is to check initial EIA predictions and information to enable EPA to determine whether further measures are needed in order to abate or avoid pollution or environmental harm.¹²⁷

Lack of capacity to monitor the operational activities of the oil companies due to accessibility and locations of these offshore hydrocarbon explorations. Pollution emanating from hydrocarbon activities could spell disaster therefore the EIA needs to be taken serious. The next sub-section will give a conclusion.

4:5 Conclusion

Ghana could be said to have done well in its efforts in all international treaties and conventions in which it is a contracting party or signatory to it most especially those instruments that calls for prevention, control and reduction of pollution in the marine environment. Ghana's duty to cooperate under these international treaties were established using the major International Treaties and National Laws for illustrations. The duty to adopt laws to protect the marine environment within the jurisdiction of Ghana were also established. The duty to conducts EIA, although Ghana have extensive and well-structured laws EIA, there were some reservations about collection of data and bureaucracy which the writer think might cause problems if nothing is done about them. Lastly, the national laws of Ghana have been consistent with the international environmental law requirements to prevent and reduce pollution from hydrocarbon exploration and exploitation activities. The thesis will now enter into its last chapter, which chapter five, here there will be a discussion, recommendations and conclusion of this thesis.

¹²⁶ See the work of Stephen Appiah Takyi: Review of Environmental Impact Assessment (EIA): Approach, Process and Challenges. University of North British Columbia. 2012. P.14
http://www.academia.edu/3703629/Review_of_Environmental_Impact_Assessment_EIA_Approach_Process_and_Challenges

¹²⁷ See Birnie and Boyle: International Law and the Environment (2009) p165

5:0 Chapter Five-Final Recommendation, Suggestions and Conclusion

5:1 Introduction

This chapter will give recommendations and suggestions to Ghana in its quest to preventing and reducing pollution emanating from hydrocarbon exploration and exploitation activities within Ghana's continental shelf. The chapter will look into prevalent problems confronting Ghana in its endeavour to explore and exploit hydrocarbon on the continental shelf. The thesis will end with the final conclusion.

5:2 Recommendations

As was established in the previous chapters Ghana has exhibited great efforts under the local and international laws in protecting and preserving the marine environment within its jurisdiction by complying with the general international environmental laws instruments which requires all states to put in place measures to prevent and reduce pollution. Notwithstanding these efforts, there are other challenges which confronts Ghana such as lack of coherent inter-sectorial approach towards prevention and controlling of pollution from hydrocarbon exploration and exploitation activities. As it stands now, there are clusters of governmental sections and agencies which were either created by EPA or through the Act of Ghanaian parliament. These institutions are either directly responsible to EPA or collaborate with EPA. I recommend that there should be a well stated and structured responsibilities or roles to these institutions, or bringing all these institutions together under one big umbrella in order to avoid a backlash in coordination should there be an oil spillage from the operational platforms of the oil companies.

Another problem in which I will give a recommendation is the soft approach of the various international instruments that is with the exception of UNCLOS which to certain degree have a compulsory dispute resolution which could lead to sanctions, MARPOL 73/78, OPRC, CBD and Abidjan Convention do not have effective sanctions which are structured to punish State parties who do not comply with their obligations to protect and prevent pollution coming from hydrocarbon extraction activities into the marine environment. I recommend that since most of the companies are foreign and as such have a template like way of dealing with damages, the government of Ghana must strengthen its policies on sanctions. Also at any point in time, Civil Society and Parliament must demand accountability from these regulatory agencies. Parliament must as matter urgency demand environmental damage response plan from the EPA for scrutiny. The Petroleum (Exploration and Production) bill must require that

such plans be reviewed annually and updates on the offshore environment be presented to Parliament quarterly and if possible the updates gazetted. The situation where EPA hardly submits its annual report to Parliament or make it publicly available must be a thing of the past. Even if the report is ready or presented to Parliament it dates back to 2 to 3 years.¹²⁸

It is imperative to say that Ghana should work with other neighbouring states in West Africa and the whole of Gulf of Guinea. Geographically speaking, the Gulf of Guinea is made up of the maritime area located in the western part of the African continent. It includes eight countries bordering the Atlantic Ocean Ghana, Togo, Benin, Nigeria, Cameroon, Equatorial Guinea, Gabon, Sao Tome and Principe; with Angola and Congo. Most of these countries are oil producers therefore a unified organisation could be formed to structure a common policy to deal with hydrocarbon pollution. Also because these countries are developing States it will be in their own interest join forces together to avoid lack of capacity to deal with pollution from hydrocarbon activities.

It is recommended that these countries share technological knowhow and cooperation among the states as this would help to find a common solution to hydrocarbon pollution in the Gulf of Guinea region. Although there is in place Abidjan Convention, it does not effectively tackle the issue of sanctions as it has been noticed.

It is recommended that Ghana would strengthen National Oil Spill Contingency Plan (NOSCP) by way of ensuring that there is adequate logistics in place to help meet the objectives of its goals, that is to deal with respond to oil spill of any size in Ghanaian waters. Also the Marine Pollution Bill should be passed as this would empower Ghana Maritime Authority to regulate pollution and provide a framework to prevent and control marine source of pollution. Lastly, I will advise that EPA Ghana should have a capacity building programs for their affiliated partners at all levels to meet the demands for expertise in the area of hydrocarbon exploration and exploitation activities on its continental shelf. As it stands now, Ghana has subscribed to a number of international conservation programmes. However, Ghana has at present no nationally legislated coastal or marine protected areas and there are no international protection programmes specifically covering the Project Area. As a state party to International Maritime Organisation, it is the duty of Ghana to protect and preserve areas which are most likely to be affected through hydrocarbon pollution. The author of this thesis will recommend that domestic legislations could be passed to help protect the vulnerable areas.

¹²⁸ See <http://ghanaoilwatch.org/index.php/ghana-oil-and-gas-news/1366-oil-spills-in-ghana-and-the-kosmos-energys-snub-averting-the-gulf-coast-disaster>

The thesis will now conclude in the next sub-section.

5:3 Conclusion

Apart from the economic advantages that hydrocarbon exploration and exploitation activities might bring to Ghana, there is a high chance of serious marine environmental adverse implications such as pollution. This has imposed international, Regional and National legal obligations on Ghana to put measures in place to prevent, reduce and control pollution on the marine environment as was discussed in the in chapter one. The international obligation requirements by IEL and the principles associated with the obligations were discussed in chapter two. Assessment of the following were made: UNCLOS, MARPOL 73/78, OPRC, CBD and Abidjan Convention in chapter three. National laws of Ghana were tested to see how these International Laws and instruments have been incorporation into the national laws.

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