Harnessing the regulatory framework for compliance with environmental regulations in the hydrocarbon sector in Nigeria.

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Harnessing the regulatory framework for compliance with environmental regulations in the hydrocarbon sector in Nigeria

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Acknowledgments

Dedication

I dedicate this work to my very beautiful and funny mother. Mum was my best friend who sacrificed all to make others happy. Thank you, Mum for the inspiring life you lived from which I draw strength daily. I wish you were here to see me now.

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List of Abbreviations and Acronyms

ACHPR   African Charter on Human and Peoples Rights

AI   Amnesty International

BALA   Basinal Assessment and Lease Agreement

COP Conference of Parties

DPR   Department of Petroleum Resources

EER   Environmental Evaluation Report

EGASPIN   Environmental Guidelines and Standards for the Petroleum Industry in
Nigeria

EIA   Environmental Impact Assessment

EITI   Extractive Industry Transparency Initiative

ENSR   European Network for Social and Economic Research

FGN   Federal Government of Nigeria

FME   Federal Ministry of Environment

FPSO   Floating Production Storage and Offloading

GHG   Green House Gases

GoM   Gulf of Mexico

HC   Hydro Carbon

HCE   House Committee on Environment

HCEH   House Committee on Environment and Habitat

HSE   Health, Safety and Environment

ICG   International Crisis Group

IFC   International Finance Corporation

INECE   International Network for Environmental Compliance and Enforcement

IOCs   International Oil Companies

LCCI   Lagos Chamber of Commerce and Industry

JV   Joint Venture

MFO   Marginal Field Operators

MPR   Ministry of Petroleum Resources

NAPIMS   National Petroleum Investment Management Services

NCE   National Council on Environment NDC Nationally Determined Contributions

NEITI   Nigeria Extractive Industry Transparency Initiative

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NESREA	National Environmental Standards and Regulations Enforcement Agency
NNOC	Nigerian National Oil Company
NNPC	Nigerian National Petroleum Company
NNRA	Nigerian Nuclear Regulatory Agency
NOSDRA	National Oil Spill Detection and Regulatory Agency
OECD	Organization for economic cooperation and development
OML	Oil Mining License
OPEC	Organization of Petroleum Exporting Countries
OPL	Oil Prospecting License
OPTS	Oil Producers Trade Section
PIA	Post Impact Assessment
PIB	Petroleum Industry Bill
PIGB	Petroleum Industry Governance Bill
PPMC	Pipeline and Product Marketing Company
PSC	Petroleum Sharing Contracts
PAU	Public Affairs Unit
QDA	Qualitative Data Analysis
SCE	Senate Committee on Environment
SDGs	Sustainability Development Goals
SEA	Strategic Environmental Assessment
SME	State Ministry of Environment
SMEs	Subject Matter Experts
SPE	Society of Petroleum Engineers
SEIA	Strategic Environmental Impact Assessment
TAM	Turn Around Maintenance
UN	United Nations
UNEP	United Nations Environmental Program
USEIA	United States Energy Information Administration
USD	United States Dollars
UUOA	Unitization and Unit Operating Agreement
WCED	World Commission for Environment and Development
WEO	World Energy Outlook
WHO	World Health Organization

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Abstract

Over the past five decades, Nigeria has witnessed immense ecological disaster arising from unsustainable environmental exploitation of its natural resource. Evidence can be seen from the oil and gas sector. Oil and gas activities in the Niger Delta region of Nigeria has not only left the environment in a deplorable state but has distorted its delicate ecosystem thus leaving the host communities without a healthy environment. Economic gains and loss of the rich ecological diversity equally lost to the country. Current situation questions the effectiveness of the current regulatory framework adopted for the hydrocarbon sector in Nigeria. This study reviews current debates on environmental regulations, regulatory role and compliance. This research examines the Nigerian oil and gas regulatory framework and the style of compliance with environmental regulations by oil companies that operate in the country. It focuses on the role of regulators and the value of environmental compliance in oil and gas projects. It further examines how non-compliance increases production costs, loss and/or damage to assets. Compliance methodologies of companies, delayed compliance actions and outright non-compliance is highlighted and investigated in this research. The methodology adopted was a qualitative approach whereby feedback via semi-structured interviews with veterans in the industry were used as the primary means to understand further the concept of regulations and compliance. The adopted interpretative approach studies the social reality of non-compliance in the oil sector by the interactions of groups within the industry. This interpretation of these reactions gave the basis for the constructs thus developed to explain the phenomenon. This primary data source was subjected to thematic content analysis facilitating the identification of new constructs in compliance theory from the views and experiences of the twenty-seven research respondents sampled. The rich narratives from a range of seven groups across the value chain of the oil and gas sector provided valuable insights to compliance with environmental regulations in Nigeria, the lead regulatory agency, the Department of Petroleum Resources (DPR), and the relationship between the regulator and the regulated. This research brought into significance key challenges faced with reference to compliance with environmental regulations in Nigeria. It also highlighted the role partnerships across all levels of government is central to filling

the human resource/ capacity gap currently experienced in the sector. The thesis in recommending a strategy for enhanced compliance with environmental regulations and emphasized the need for community participation in the broader regulatory function. This research also recommends clear intent of policy and regulatory outcomes as important driving factors to ensuring enhanced compliance with environmental regulations in the oil sector in Nigeria. Research however notes regulatory capture as a threat that can impede full compliance to regulations as well as the multidisciplinary role of several oversight agencies in the oil sector in Nigeria with recommendations addressing these identified challenges.

Key words: regulator, environmental regulations, professionalism, compliance, community partnerships

CHAPTER ONE: INTRODUCTION

1.1 Introduction

Chapter 1 outlines an overview and the context of the research. It explains the key concepts of this study while giving the rationale and background for undertaking this research. It also introduces the links between concepts and theories that have been chosen to explain compliance and non-compliance with environmental laws in the Nigerian Oil and Gas sector as a phenomenon observed with direct reference to environmental regulations and standards used in the sector. This introductory chapter presents the aims and objectives of the research, main research questions, methodologies and key contributions to knowledge. Lastly, it also highlights the research assumptions, scope and overall structure of the thesis.

1.2 Research Rationale

Nigeria is considered a major player in the international oil and gas industry, as the number 1 oil producer in Africa, and the 6th largest oil producer in the Oil Producing Exporting Countries (OPEC) (Klare and Volman, 2004; Nwilo and Badejo, 2006; Lubeck et al 2007; BP Statistical Review 2019; World Energy Outlook 2019). This position puts international focus on the country and its activities in the global oil and gas exploration map. See BP Statistical Review 2019 – Position of Nigeria as an oil producer in relation to other African countries.

Table 1 - Proven Oil reserves at end 2019 in AFRICA

Countries	Volumes	Global %
Algeria	11.3	0.7%
Angola	8.4	0.5%
Chad	1.5	0.1%
Republic of Congo	1.6	0.1%
Egypt	3.3	0.2%
Equatorial Guinea	1.1	0.1%
Gabon	2.0	0.1%
Libya	48.4	2.8%
Nigeria	**37.5**	**2.2%**
South Sudan	3.5	0.2%
Sudan	1.5	0.1%
Tunisia	0.4	◆
Other Africa	3.9	0.2%
Total Africa	**125.3**	**7.2%**

Source: BP Statistical Review 2019

The following table below shows the volume of oil production in barrels per day and Nigeria as highlighted is number one producer in Africa.

Table 2 - Oil producing countries in Africa

Countries	Volumes	Global %
Algeria	1510	1.6%
Angola	1534	1.6%
Chad	101	0.1%
Republic of Congo	333	0.4%
Egypt	670	0.7%
Equatorial Guinea	190	0.2%
Gabon	194	0.2%
Libya	1010	0.9%
Nigeria	**2051**	**2.2%**
South Sudan	131	0.1%
Sudan	100	0.1%
Tunisia	53	0.1%
Other Africa	320	0.3%
Total Africa	**8193**	**8.6%**

(in thousands of barrels per day)

Source: BP Statistical Review 2019

The national oil and gas business environment in Nigeria therefore attract attention as investors study and scrutinize laws and regulations governing the sector in line with current international financial investment criteria (Thompson and Cowton, 2004; Weber, Fenchel and Scholz, 2008). This is very pertinent today, as one of the considerations which international finance institutions consider is the environmental sustainability of projects especially in developing countries. What determines corporate transparency is to understand the environmental and societal due diligence process the International Finance Corporation (IFC) uses. These processes cover a range of requirements seen in the following criteria used for granting loans;

(a) good assessment and management of environmental and societal risks

(b) international labour and working conditions

(c) demonstration of resource efficiency and pollution control

(d) acceptable re-settlement process due to physical displacement resulting in economic loss from land negotiations

(e) respect and consideration of indigenous people and their culture.

Depending on the exact magnitude of the project, other requirements maybe considered for example if project is a green field (WHO, 2006, 2011). Banks are also currently seen as development enablers because mega projects are now viewed to cause environmental damage and change to the natural environment (Smith, 2004, Piotroski and Smith, 2004). On the national level, environmental advocates around the world also watch with keen interest how the sensitive Niger Delta is managed with regard to the observable and measurable benefits for the people in that region (Human Rights Watch, New York, 2003). Most of the country's oil business is done within the diverse and sensitive ecosystem of the Delta

region. The map below shows the oil producing states in Nigeria.
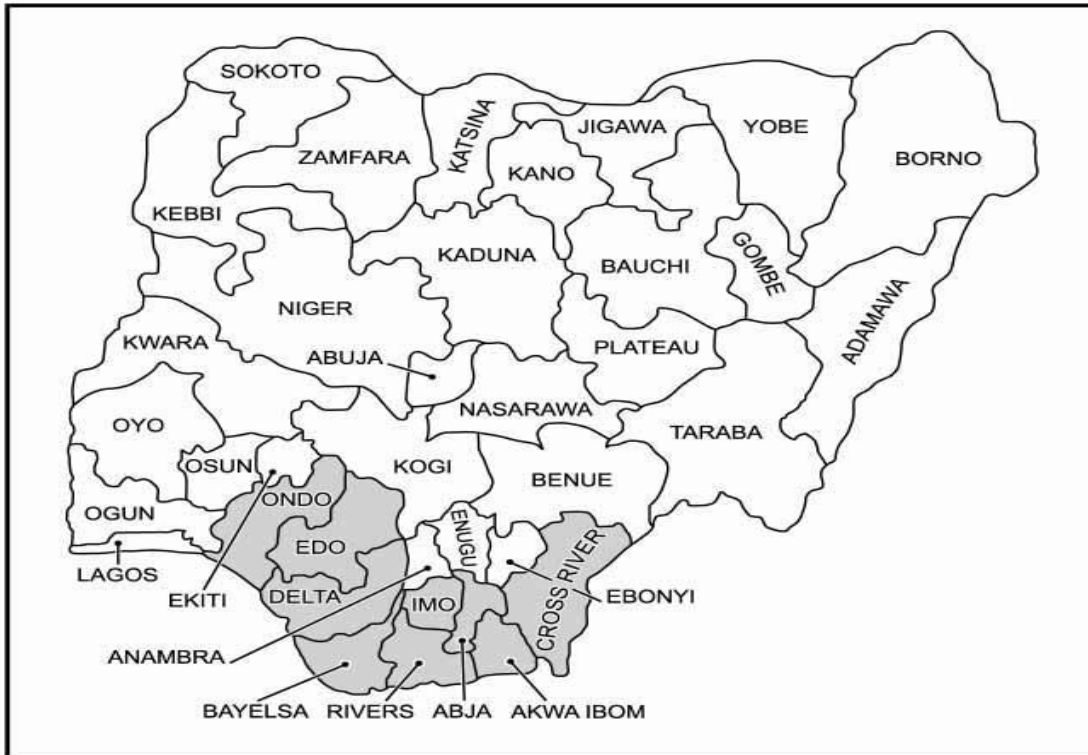
Figure 1: Map of Nigeria showing the oil producing States
(Source: Maps of the World, 2016)

When the "Ogoni report" on oil pollution status in the Niger Delta was made public in 2012, (UNEP 2011 report on Ogoni land), such a study should have been carried out by Nigerian regulatory bodies not an international agency. A compendium of environmental studies covering spill and impacted sites and the corresponding data should have been the document that would have served as a national reference document for the said UNEP report. Having several agencies with oversight functions on the environment in the country, one wonders why it took the UNEP Ogoni report to show the degree of impact arising from oil exploration activities in Nigeria. The Ogoni report revealed information and data that should have been domiciled in the country if there was agency collaboration. Unfortunately, there is currently no compendium of environmental impact or evaluation assessment carried out in the Niger Delta region nor a regional study done in-country after so many years of oil exploration. Such a vital document should have

been obtained from the sector's regulatory agencies in Nigeria. National Environmental Standards and Regulations Enforcement Agency (NESREA) sets environmental standards, National Oil Spill Detection Agency (NOSDRA) focuses on spills especially 2nd and 3rd tier spills while the Department of Petroleum Resources (DPR) regulates the oil sector. Information on the state of the environment currently available in Nigeria are from these agencies, individual company monitoring reports and isolated academic studies. These may not give a holistic picture of the current status of environmental degradation in the region under focus. All oversight agencies on the environment in Nigeria should now collaborate to have a data repository of all the weekly, monthly and yearly monitoring reports that would give an insight into changes in environmental parameters for the country as it relates to impacts arising from oil and gas operations. This type of database is what would be useful to make scientific claims about oil and gas impacts in Nigeria. Nigeria is a world exporter of crude, earning over 9.4 trillion Nigerian naira yearly making the commodity a major source of income for the nation according to the Central Bank of Nigeria's economic fourth quarter report, 2018 (www.cbn.gov.ng). The country being a mono product economy (crude oil) makes it difficult to properly enforce compliance to environmental regulations. Oil exploration started commercially in 1958 in Oloibiri, an area not known globally except through records of devastation and neglect (Osaghae, 1995; Peets, 2004; Eweje, 2006; UNEP Ogoni report of 2011). The Federal government of Nigeria therefore in its bid to build confidence and in line with global principles for environmental preservation (Bullard and Warren, 2005), signed international environmental treaties and conventions to align its national environmental policies and laws to focus on the sustainability of oil operations in the region with a view towards ecological protection and environmental preservation (Sands,1992; Haas and Keohane,1993; Susskind,2014; Sands,2018). Unfortunately, the reverse has been the case raising questions of what went wrong in Nigeria. The map below shows the Niger

Delta Region indicating the main fields, pipelines and export terminals.

Figure 2: Map showing fields, pipelines & export terminals
(Source: Niger Delta - Diercke International Atlas, 2017)

Though several environmental regulations, guidelines and laws currently abound in the world today (The Brundtland Report 1987, p. 47; Redcliff, 2005, 2007; Hopwood, Mellor and Brien, 2005; Sand and Peel, 2012), environmental pollution continues to be a major concern among world leaders and investors. Similarly, in Nigeria there are key legislations based on the Nigerian Constitution of 1999, and the Petroleum Act of 1969 (Appendix A – Key legislation). Appendix I is a list of Petroleum laws from 1956-2011. There is also the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria, (EGASPIN; 2018) which regulates the oil and gas sector (see Appendix B
– Extract from EGASPIN). These Guidelines were f i r s t issued by the Department of Petroleum Resources (DPR).

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• "As one of its statutory functions, the Department of Petroleum Resources is required to ensure that petroleum industry operators do not degrade the environment in the course of their operations. To effectively carry out these regulatory activities, the Department has been developing environmental guidelines and standards since 1981. These cover the control of the pollutants from the various petroleum exploration, production and processing operations," (EGASPIN).

Furthermore, while there is rapid industrialization and globalization which is an accepted growth process for any nation, the situation in Nigeria puts the country at an economic disadvantage. Nigeria as a country has indeed witnessed tremendous growth from oil exploration activities which started in 1914. At that time, very little was known about environmental issues and how human development activities interact with and distort the environment. Current environmental laws in Nigeria today have not protected the environment especially in the oil producing areas nor the people of the Niger delta region (Fig, 1).

There have been several documented instances and records of negative impacts due to environmental pollution in the country. For example, Shell's Boma manifold blow- up (2009), Shell's Bonga oil spill (2012) and Exxon Mobil spill (2012) readily comes to mind. The latter spill reached the shores of Lagos several kilometers away from Eket, a South Eastern part of Nigeria, where the spill occurred (Aluyor 1988; World Bank Study 1990; Salau, 1993; Akobo, 1998). All these incidents arising from oil and gas activities drew global attention not only to the concerned companies but to Nigeria as a people and country. The BBC in its media report of 2010, says Nigeria is the 'World oil pollution capital' (bbc.co.uk) According to many commentators, there continues to be environmental degradation as recent records show (Aluko 2004; Jike, 2004; Aigbedion and Iyayi, 2007; Uyigue and Agho, 2007; I b i b a , 2 0 0 8 ; O s a - E d o h , 2 0 0 8 . This therefore questions, the effectiveness of current environmental laws, regulations and standards designed to protect and safeguard the Nigerian environment and its people from such negative impacts. Scholars have argued the intent of environmental laws (Petts, Herd and Gerrand, 1999; Mokeiver, Gadenne, 2005) as well as their role in ensuring the sustainability and preservation of the environment. Where the intent of regulations is not fully understood by stakeholders, it becomes obvious that compliance will be less than optimal as seen by the reports on environment degradation in Nigeria stated earlier.

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In attempting to understand compliance and the reasoning behind non-compliance, some scholars have examined the style of regulation while institutional reforms have been the focus of governments globally, particularly in Nigeria (Uttig, 2005; Thurber et al 2011). There have thus been several oil and gas reforms in Nigeria (Okonla- Iwela and Osafo- Kwaako, 2007; Opanachi, 2011). These reforms which included institutional ones did little to change non-compliance with environmental regulations which has led to the current and increasing state of environmental degradation in Nigeria (Ake, 1985; Thurber, Hults and Heller, 2011). For example, the lead agency, the Department of Petroleum Resources (DPR) has had within a space of 16 years (1992-2008), eight directors through these reform efforts (see Appendix C - DPR Organogram- www.dpr.gov.ng)

Regulations are to be complied with and regulatory styles used by regulators have been linked to compliance as argued by Gunningham, (2010) in his analysis of enforcement and compliance strategies. Though scholars like May and Wood, (2003) have supported this link between regulatory style and compliance, May and Winter, (1999, 2011) however argued that 'no technique, style or approach a regulator uses can improve compliance without leveraging on moral judgement.' These arguments, though worthy of consideration, can hold only if several aspects of compliance are considered. It would appear though that the literature on compliance focuses on standard setting and single compliance goals without due consideration to other variables that may influence regulatory conformity. Literature also focused on government mandatory enforcement requirements (Parker, 2006; Winter and May, 2001). The use of mandatory approaches by government has been said to be the central role of government and regulators. Furthermore, the challenges faced by using the styles or approaches proposed by the above authors have not been fully understood as there was no empirical evidence to back the claims made. This research aims to fill this important gap by highlighting the difficulties in ensuring compliance from both regulators and the regulated in the Nigerian context regardless of styles used. According to May (2005), compliance is pivotal to effective regulation and is a complex concept that warrants further investigation, and this will be discussed later in the research. The initial legal and regulatory regime in Nigeria was based on colonial laws that applied to small-scale operations. The first official laws, which established a basic framework for oil and gas exploration and

production in the country, consisted of the Petroleum Ordinance of 1889; followed by the Mineral Regulation (Oil) Ordinance of 1907, which stipulated that only British companies would be allowed to explore the Nigerian resources (Omorogbe, 1987). The first concessions were granted to the German Bitumen Company in 1908, and Shell D'Arcy Petroleum Development Company in 1938. Since 1959, more international oil companies entered the country including Mobil, Gulf, Agip, Elf and Texaco/Chevron in both offshore and onshore areas of Nigeria (NNPC). The current regulatory framework in Nigeria includes over 90 Petroleum Acts drawn primarily from the principal legislation, the Petroleum Act of 1969. A compendium of Nigerian Oil and gas laws from 1956-2011 is included in this report - Appendix I. These key oil and gas related legislation did not particularly focus on the environment but on product handling and transportation.

The Environmental Guidelines and Standards for the Petroleum Industry in Nigeria was first issued in 1991 long after oil operations started. The EGASPIN was reviewed and amended in 1991, 2007 and 2018 (See Appendix B - Extract from EGASPIN). The Department of Petroleum Resources (DPR) as the main regulator for the oil and gas industry in Nigeria, administers these EGASPIN regulations, however these Guidelines were initially put together by the collective effort of the industry. These are specific guidelines that address environmental requirements and aspects of oil extraction in Nigeria. This document has been put in place via policy changes, recommendations and amendments to existing Acts which were derived from the 1969 Act.

The compilation of standards and operating limits into a single document served as a reference point for the operators in a bid to further strengthen existing laws and assist the industry with environmental compliance.

Part 1(4) states the objectives of the EGASPIN as follows:
- "(a) Establish Guidelines and Standards for the Environmental Quality Control of the Petroleum Industry considering existing local conditions and planned monitoring programs.
- (b) Provide, in one volume, for the operator and other interested persons a comprehensive integrated document on pollution abatement technology, guidelines and standards for the Nigerian Petroleum Industry.

- (c) Standardize the environmental pollution abatement and monitoring procedures, including, the analytical methods for various parameters."

Despite the plethora of regulations, however, there is still the general perception of sub-optimal and in some instances, no compliance with environmental laws and regulations in Nigeria. The current compliance levels with the environmental regulations which this research attempts to estimate has further questioned the effectiveness and authority of regulatory agencies mandated to monitor oil and gas activities in Nigeria. It also queries the presence of other oversight regulatory agencies saddled with the same environmental mandate. For example, the National Oil Spill Detection and Regulatory Agency (NOSDRA), Nigerian Maritime Administration and Safety Agency (NIMASA), Federal Ministry of Environment (FME) are all federal government agencies with oversight functions in the oil sector in Nigeria. There is also National Environmental Standards and Regulations (NESREA) established by law in 2007. This agency is mandated to ensure a cleaner and healthier environment for Nigerians. NESREA is also under the Federal Ministry of Environment. All these agencies have one mandate and that is to protect the environment however, they all seem to work independent of each other It should be noted that oil exploration started well before environmentalism became known in Nigeria (Agbola, 1988). It is also noted that environmental issues in Nigeria were treated on an ad hoc basis (the environmental surveillance team pre- KOKO DUMP era). Because of the ad hoc nature of environmental monitoring in Nigeria, 14,000 tons of toxic wastes was dumped in a small fishing village in the southern part of Nigeria called Koko by an Italian business man (Ihonvbere, 1994; Ogbodo, 2009). Before this time, there was no clear policy direction for oil industry pollution or the impacts that arose from its activities. There were some Acts like the Land Use Act of 1978, the Petroleum Refining Regulations of 1974, however, they appeared disjointed and none specifically for environmental preservation and protection. After the Koko incident as it later referred to, the Nigerian Government produced a National Policy on the environment (Emeseh, 2004). In the same vein, when the mandate of a government agency is questioned and challenged by the regulated entity as is sometimes seen in the Nigerian oil sector, this impacts on the implementation and mandate of the agency in many ways. It now depends on the regulatory authorities to craft ways of enforcing and

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ensuring compliance to the regulations set by the agency. This research focuses not on regulatory institutions or the laws but on the enforcers of regulations to bring about compliance. As one top government functionary/ex- Shell Vice President aptly pointed out "it is about the people" (ex-Shell, VP Gas; former Director, DPR).

People hold strong and different views about regulation, however, many according to Orbach, 2012) do not know the meaning of the word "regulation". How environmental laws have evolved over the years, the emergence of the regulatory agencies and the factors that contribute to the adherence of the statutes for the preservation and conservation of the Nigerian environment have in one way or the other contributed to the recorded compliance levels to environmental laws in the Nigerian oil and gas sector. According to Emesah, (2006) and Fagbohun (2010), the conflict between the environment and the quest for development by the Federal Government of Nigeria (FGN) threatened to tear the country apart. However, to prevent and control environmental degradation, the government of the day developed a national environmental policy via use of science-based standards at the time. NESDREA was enacted in 2007 to further strengthen the environmental standards used in the country. In 1988, the Harmful Wastes (Special Criminal Provision) Acts followed, and then the Environmental Impact Assessment Decree (EIA Decree, no 86) in 1992 soon after. The framework for environmental legislations saw the birth of the Federal Environmental Protection Agency Act of 1988. Therefore, one can say the laws and guidelines for the protection of the environment during the early days of oil and gas activities existed. However, the question of compliance to these laws leaves much to be desired according to several documents and reports available (Osuno, 1982; Adegoroye, 1994; Ogbonna, 2002; Edu, 2011; DPR oil spill reports – www.dpr.gov.ng).

As the industry is technologically driven, it implies that monitoring of the industry should largely be based on technology in order to keep pace with increased industry operations particularly with environmental protection. This is because most oil operations in Nigeria are in the swamp and mangrove areas that are remote and difficult to access by regulators.

In Nigeria today, the traditional direct 'command and control' type of regulation is used especially in the oil sector being traditionally heavily regulated, the perception by

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industry stakeholders is that compliance is questionable. The consensus among other stakeholders in the oil industry attribute the recorded environmental degradation to deliberate flouting of existing laws and regulations and the total neglect of environmental considerations in oil and gas operations by the operators (Adegoroye, 1994; Eweje, 2006, 2012). There is currently no compilation of oil industry non-compliance records in the public domain by any regulatory agency except records within the agency including DPR (www.dpr.gov.ng; www.nosdra.gov.ng. Similarly, compliance issues only come up in the news when there are environmental mishaps reported by individuals and by the community corroborates the above statement of non-compliance disclosure. Non-compliance communicated to the companies are sometimes negotiated or ignored. Attention to the environment was not a priority in the early days of oil exploration in Nigeria, particularly as the thrust of the government was revenue generation for the development of the country and how this could change the lives of the Nigerian people. Revenue from oil proceeds still makes up about 80% of revenue for the country (Akpan, 2009; Obi, 2018). Therefore, there is now an urgent need to critically examine compliance methodologies and identify inherent gaps that are affecting environmental compliance and address them in the Nigerian oil and gas sector. Another reason apart from the consideration of the environment that makes this research important is the fact that oil and gas projects when delayed, can incur avoidable costs. These costs sometimes change significantly due to non-compliance penalties and sanctions by the regulatory authorities. There are also reputational issues for the defaulting companies. For example, when Shell lost face with the public during the 1995 Brent Spar incident in the UK (Neale 1997: 93-103). Companies try to avoid negative publicity due to branding issues (Moore 2001; Van Yoder 2001) and irreversible reputational damage. In developed countries, company shareholder perception is highly regarded. This is applicable also to governments around the world and the image they project as a nation. There is in addition, community agitation and legal costs associated with settlements and compensation associated with major accidents and events. These are exacerbated by environmental non-compliance which most communities would capitalize on to draw attention to their plight.

Inconsistent compliance methods employed by some oil and gas operating companies are another area of focus considered in this research. Some companies do more in

terms of compliance while others do very little (Gunningham et al 2003). The question therefore is, why do some companies over comply and how does this affect compliance levels in general? Actual compliance to regulations then becomes based on perception rather than specific parameters. The effect is that overall compliance falls (Almand Mckaee, 2006). Arguments on the intent of

regulations and not methodology have been given as an explanation of this observation. Another perspective is that corporate behavior towards compliance has shown a complex interplay between style of regulation, time of regulation and sanctions. Kagan (1994) in his study of over 160 companies concludes that there are many queries about enforcement styles and actions used by enforcement agencies in ensuring compliance with environmental regulations. What scholars have thus concluded is that agency philosophy and inspector behavior are as diverse as theory and practice. Many theories in the past have been put forward about enforcement strategies (Scholz, 1984; Braithwaite,1985; Hutter 1989; Kagan 1994).

However, one that directly focuses on what actually happens in practice is that put forward by Nancy Frank's (1994) theory of inspector behavior. Based on these views, literature suggests a flexible and varied approach to compliance (Sanderson, Seidi and Roberts, 2013). For example, performance-based regulation focuses on the outcome and makes room for innovation and competiveness (May, 2003). This is because it has been established that a one- size- fits all approach had the weaknesses of being too rigid (Bennear, 2015). Regulators can be held more accountable if non-compliance by operators is made public. Their regulatory performance can then be assessed and evaluated based on the number of infractions especially long standing ones that can be found in the Nigerian oil and gas sector. According to Coglianese, (2016) a mixed compliance strategy was advocated as the traditional "command and control" regulation was adjudged costly and constraining. The UK better regulation framework is an example of a flexible regulatory approach. This risk-based approach was also adopted by the United States and Norway. A flexible and discretionary approach applied in enforcement brings focus to the regulator, regulator style, expertise and professionalism including regulator traits and philosophy (Kagan, 1989; Parker, 2006; McAllister,

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2010). It is upon the above studies that this research builds to further the compliance debate.

1.3 Problem Statement

Compliance with environmental regulations has been of great interest to organizations, scholars and governments all over the world not only in the oil and gas sector but in all areas of life especially sectors that have direct environmental impact on humans (Paehlke, 2000; Williams, 2011). Despite the attention given to regulations, regulatory and institutional reforms, a gap still exists in literature on how regulators can impact and ensure sustainable environmental practices in the Nigerian oil industry as well as in other developing countries. The challenges aimed at achieving compliance with environmental regulations in the oil and gas Nigeria therefore needs to be examined and investigated further to understand where the shortcomings are. This will enable necessary policy adjustments and focus where needed in the key areas of regulatory roles by the regulators in the oil sector. Compliance with environmental regulations can sometimes be evaluated by the state of the environment and the assessment of environmental impact in sensitive areas across the country (Eweje, 2006). Thus, the evidence of non-compliance can be found in the impact reports of the Niger Delta region. There are numerous studies on environmental degradation arising from oil and gas exploration activities in Nigeria as earlier stated (Osuno, 1982; Oluwole, 1996; Eweje, 2006; Chukwuezi, 2006; UNEP 2011). However, the role regulators play in the compliance matrix is silent in these reports and this seems odd as regulators are mandated by law and have the statutory responsibility to ensure compliance by the regulatory position they hold. This research thus suggests that reforms without due consideration and the focus on regulators, the style of regulation, and holding regulators accountable may be the missing link in compliance. Compliance with International Environmental Agreements (IEAs) currently also takes center stage in the Organization of Economic Co-operation and Development (OECD) and its 34-member countries (www.oecd.org). These agreements have been used to guide global companies operating away from their home countries about their environmental obligations in line with best practice. However, these agreements are not enforceable because they are voluntary and are termed soft laws (Ahmed and Mustafa, 2016). OECD recognizes the impact of extractive development activities in developing Third World countries around the globe thus

attention is being paid to the style of operation of these companies. Amongst scholars however is the debate about the relationship between corporate behavior and compliance with environmental agreements at the national and international levels (Carrol, 2003; Murphy, 2005). Reinhardt (2008), in his analysis of economic rationale for 'beyond compliance' behavior for example, states that some firms see value accrue to their businesses and they are better positioned to manage their risks in legal requirements. This makes good economic sense as the cost of compliance is a factor to be considered with increasing legislation both at national and international levels (Stewart and Templet, 1989). Scholars and thought leaders ponder on this not only in the oil and gas industry, but in all industries and sectors of economic importance.

From the above therefore, the role regulators play in ensuring compliance is however not fully researched. For example, in a careful review of some major incidents in the oil sector, the regulator role is silent. Assumed duties are known but no acceptance of responsibility in the incident. For example, the Macondo (GoM) incident in the Gulf of Mexico, United States of America (USA) in April 2010, had minimal mention of regulators in their post-accident report. Reviewed post-accident reports lay emphasis on safety infractions and the lapses of the operator and contractors in adhering to the stipulated safety codes. However, oil and gas incidents all over the world have very far-reaching impacts on the environment, sensitive wildlife and the health of the people who survived. The same can be seen with the ExxonValdez oil spill of 1989, the Bophal Union Carbide release of 1984 and reported incidents in Nigeria. In the aftermath of major accidents around the world, an inquest is demanded by the government to know the companies involved. Furthermore, the specific roles played by the regulator in the incident or lack thereof, is not at the forefront, or is never mentioned. It is historically assumed that the regulator is infallible and as such greater focus and indictment or blame go to the operators. However, in 2010, the Montara Commission of Inquiry following the blow out oil-spill, criticized the regulator for its minimalist regulator style. The commission noted that the regulator failed to sanction the poor safety standards and practices the company deployed for years. This oversight can be attributed to lack of capacity and resources to regulate. This incident also highlighted the gaps in regulatory role thus the regulated are not always to blame. This research aims to examine the role regulators play in non-compliance issues and scrutiny of their key responsibilities and functions.

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In examining the Boeing737Max8 incidents, the findings from the inquiry (www.ag.gov.au/cca) stated that oversight functions of the regulator were questionable. As with highly technical industries, codes and procedures are well written and continuously evaluated to ensure safety of assets and personnel. Training and change management for new processes and new technology are central to ensuring that personnel are adequately versed to handle operations with safety systems strictly adhered to. In the above incident however, the regulators failed to observe the shortcoming in the safety philosophy adopted by the airline operators. Regulatory functions being bureaucratic sometimes results in just ticking the boxes thus overlooking and documenting concerns that may have been picked up in prior audits. Feedback mechanisms could also have contributed to the gap identified in the regulatory role.

Generally, governments, including Nigeria, have always focused on legal, institutional reforms and agency creation to solve regulatory lapses without much focus on the effectiveness of regulators (Adefulu, 2008). An example was a recent environmental summit held in 2017 to address current e n v i r o n m e n t a l issues and challenges in the Nigerian environmental space which was organized by the Nigerian law makers, House of Representatives Committee on Environment and Habitat (HRCEH), with the intent to "overhaul the legislative framework for the Environment in Nigeria". This national stakeholder summit on Environmental Law and Policy took place between the 3rd-5th October 2017 in Abuja the capital of Nigeria. This high-profile event brought together law-makers, the academia and the public, under one umbrella to discuss policy change in reviewing and developing environmental laws that would address environmental issues in the country. The primary objective of the summit was to bring strategic stakeholders who would contribute to the development of an appropriate legal framework for the environment. The researcher was in attendance and observed that papers were presented primarily by the academia. While this was laudable and the first of its kind in Nigeria, the absence of regulators and other key stakeholders to share their practical experience and challenges points to the gap which this research attempts to highlight and study. Understanding regulations, their purpose and intent need to be fully appreciated by the people whom the regulations are for. The regulated must perceive

value in the regulations to embrace it if compliance is to be assured. Thus, the first step towards ensuring compliance is the acceptance of the regulations as legally binding.

The regulator and the regulated sector are key stakeholders when matters of compliance and environmental regulations are reviewed however, attention is mostly only on the regulated which was noted in the literature reviewed. Focus is often with the regulated community. Situations such as this also point to the question of who has authority and responsibility in ensuring environmental compliance in Nigeria. This research argues that there should be shared responsibilities and that the regulator be held more accountable in delivering compliance.

The Federal Government of Nigeria (FGN) in attempting to address environmental compliance in the sector created regulatory agencies to oversee and monitor oil and gas activities. Some new agencies were created without recourse to existing ones. Therefore, some of these agencies have overlapping functions while other roles and duties are duplicated leaving the regulated entities overburdened with high compliance costs. Multi-duplicity of agencies does not promote compliance by the profit-making International Oil Companies (IOCs). To expect companies to voluntarily comply is contrary to the profit - making model of business enterprises. The DPR, the National Oil Spill Detection and Regulatory Agency (NOSDRA) and National Environmental Standards and Regulations Enforcement Agency (NESREA) are example of agencies with oversight functions on the Nigerian environment and o f t e n w i t h overlapping functions. This duplicity and overlap of function are further discussed later in chapter five. Moreover, based on the nations 'federal character policy', agency staff is recruited into Federal agencies based on political connections, state of origin and influence rather than on experience and capabilities. This is despite the highly technical outlay of oil operations and expertise displayed by international oil firms. Global oil companies have the resources to train their staff and frequently use subject matter experts (SMEs) in their operations. This is not the same within the Nigerian regulatory agencies as the regulatory agencies do not have formal engagements of subject matter experts working with them as IOCs do. Regulators come from very diverse educational backgrounds and grow on the job hence are often not up to speed technically with the operators who are very well trained in key critical aspects of oil and gas operations. This disparity in

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expertise stems from adequate funding of the regulatory agencies. The oil companies have more hands-on field staff therefore they have a better appreciation of exploration work unlike the regulators who come from a wide spectrum of non-oil related disciplines. Furthermore, operational hands-on courses are dependent on the sponsorship by the operators as they bear the cost of operations in the joint venture agreements signed. This situation is however beginning to change as heavy dependence on the IOCs has the tendency to bring about regulatory capture. Regulator expertise in monitoring has an impact on regulatory functions therefore apart from legal reforms, the experience and expertise of regulatory teams are very important elements to consider with staff recruitment in the oil industry. This is very necessary to keep up with the fast-evolving industry and the increasing activities in the oil sector.

Whenever regulators in Nigeria are questioned about environmental incidents in the country (Bonga oil spill in December 2012, Chevron Nigeria Limited (CNL) rig blow out, the K. S. Endeavour in January 2012, Exxon Mobil spill in Eket, May 1st 2010), there still exists, a general lack of accountability of the regulators when issues of non-compliance come up. In fact, the only time regulators are questioned by the law makers are during dissatisfaction with company activities by host communities or when compensation is not paid to the host communities in a perceived 'fair' manner after an environmental incident or mishap. Communities are represented by elders and village chiefs in Nigeria and they negotiate the service-level agreements (SLA-SLO) with oil operators on behalf of the community. These agreements usually do not have wide consultations with the youth therefore are signed off without much consideration of the general demands of their young people. Tension then arises when there are not enough jobs that later result in restlessness and conflict with the operating companies. Some of the conflict centered on oil-spills, involve damage to assets and shutting down of operations thus resulting in drafting armed police to the area. Upon intervention, it is observed that the communities feel aggrieved as victims reject the compensation by the companies.

There appears to be some knowledge gap between the regulated and regulators in Nigeria, this therefore questions and puts a burden on the delivery of the mandate of

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the regulators. Similarly, knowledge about oil activities within the legislative arm of government does not enable the legislators to adequately question or monitor the activities and functions of the regulators as their oversight mandate stipulates. Thus, legislators in Nigeria come with pre-conceived ideas about regulatory roles and expectations. Besides, regulatory agencies are just one aspect of the supervisory functions that lawmakers oversee on behalf of the people. Recent training of Nigerian legislators to educate the policy makers on the workings of the industry was undertaken in 2017 by the DPR (www.dpr.gov.ng). Several interpretations can be read into this close association which can be termed regulatory capture. However, it is important for shareholders to properly align with common regulatory goals. Despite the myriad of international treaties and agreements on the environment, there remains much to be understood with respect to acceptance and the voluntary steps in addressing environmental compliance by corporate companies recorded across the globe. Literature suggests a relationship between corporate behavior and compliance but fails to empirically relate regulatory reforms carried out in countries with compliance challenges (Gunningham and Thornton, 2005). Companies being profit driven calculate costs and benefits (Stewart and Templet, 1989; Kreuze and Newll, 1994; Mitchell, 2007) and are guided by costs when evaluating compliance with environmental regulations while there are other companies and business enterprises who see environmental considerations as an important component to be taken on board by their business (Ghisetti and Rennings, 2014). Whichever way it is looked at, overall non- compliance with environmental regulations and laws generally remain largely not investigated in Nigeria. The cost of non- compliance can be huge (Downs and Jones, 2002; Maxwell and Decker, 2006) in developed regions of the world, however sanctions and fines in Nigeria are not considered appropriate for non-compliance in Nigeria. This will be further discussed in chapter two. Reputational issues, legal fees and compensation to affected persons and communities are considered astronomical as reversal and damage to corporate image can take years to restore (Exxon Valdez -1989; Shell versus Ogoni; BP Macondo 2012). All these contribute to the compliance decisions of companies. The full effects of damage to sensitive environmental ecosystems may never truly be known and this makes compliance even more critical and important especially in a sector like the oil industry in Nigeria which accounts for over 80% of the country's revenue to date (Asagunla & Agbede, 2018; www.cbn.gov.ng). An overhaul of the entire regulatory framework in

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Nigeria is now more imminent given the current global oil crisis, climate change goals and targets, and the important role the oil and gas sector play in the economy of Nigeria as well as internationally. There is now an urgent need to assure sustainability of the environment and field operations which can be stalled by environmental incidents resulting from non-compliance to environmental regulations. Nigeria needs to ensure that the private sector and all stakeholders make progress in line with the Paris Agreement Conference of Parties (COP) negotiations and the United Nations 7th objective on the environmental sustainability of the sustainable development goals of the United Nations (UN) and other Sustainable Development Goals (SDGs) milestones. This is most crucial if Nigeria is to meet the set Climate Change targets of 2030.

1.4 Conceptual Framework

Regulations and compliance with any type of directives often present elements and complexities not totally understood by scholars (Scholz, 1984; Lock 1991; Bloor, Samson and Baker, 2013). Compliance in this study examines how compliance levels can shift as there are no direct measurements of compliance levels in Nigeria except through perceived notions based on stakeholders' experiences and interpretations. According to Raustilia (2000) however, the effectiveness of environmental regulations can be measured by compliance with laws, however total compliance may be an indication of weak regulations. Thus, understanding the purpose for which regulations are set can contribute to compliance. The factors and the conditions under which compliance occurs will be examined further in the research.

Without compliance with environmental regulations, the essence and benefits of the set rules cannot be fully achieved in addressing sustainable development in all sectors of the global economy. This is also applicable to Nigeria. In fact, as the Bruntland Report (1987; p.43) stated, the development activities of developing countries have left the environment severely compromised. Also argued by Aluko (2000), the sustenance of the environment needs a multidisciplinary approach as all stakeholders must be involved in environmental sustainability efforts.

The figure 3 below highlights the relationship between the sustainability model for long term environmental sustenance and capital growth (Lozano, 2008; Kuhlman and Farrington, 2010).
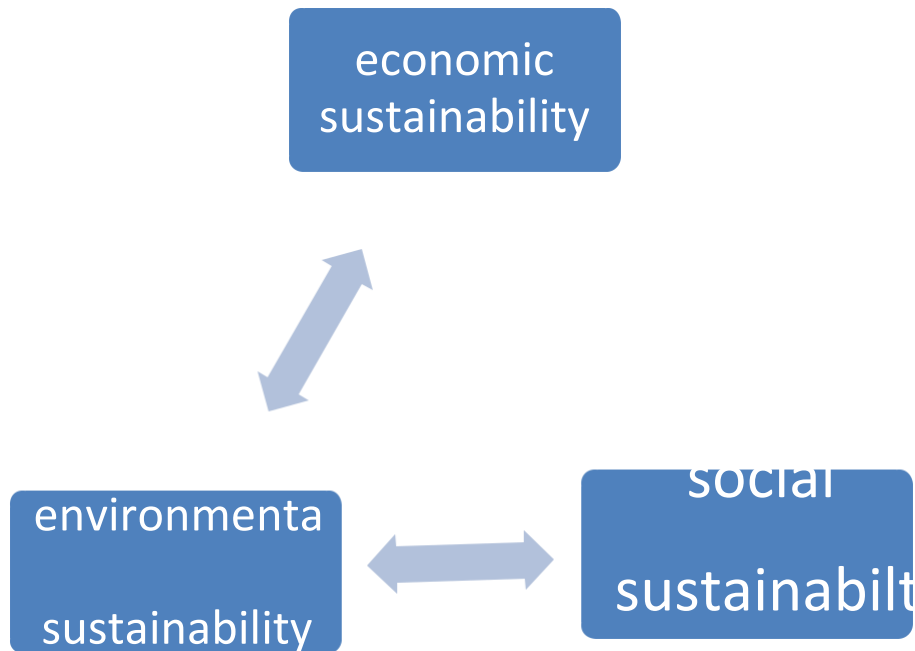
Figure 3: The Three Dimensions of Sustainability (*Source: Carson, 2002)*

The above representation has however been criticized for being over simplified, though it communicates the general sustainability message. Thus, economic sustainability alone without consideration of social and environmental sustainability will not solve modern day developmental challenges. This is because there are three dimensions to sustainability regarding the valuation of the environment (Carson, 2002).

- Economic sustainability – Shell has divested its interests in the Niger Delta region of Nigeria and the implication of this is, loss of revenue both to the conglomerate Shell, and Nigeria (Babatunde, 2012). The Niger Delta no longer being conducive for oil

operations, has impacted not only on the much-needed revenue for the Federal government but also on the environment with oil assets which are now abandoned in-situ. Most economic activities in the region have been halted and indigenous people in those areas seek income from activities they are not familiar with. Reputational issues and other situations like security of personnel, kidnapping and illegal crude refining activities further pollute the environment. Effects of environmental non-compliance therefore has demonstrated very far reaching outcomes that were never anticipated.

- Social sustainability- Normal living conditions and social activities are almost non-existent in the oil operating areas of southern Nigeria. The impacted areas are no longer habitable, and all forms of social activities halted. Communities have been displaced with many having a loss of identity, health and safety compromised, and the environment grossly impacted. From the photos attached below, pipelines are not buried and the buffer area not clearly marked so families live within close proximity of these pipelines.

- Environmental sustainability-The Nigerian environment can no longer sustain the ecological damage occasioned by years of oil field environmental abuse arising from oil exploration and exploitation activities. For example, the spill resulting from the Total offshore blow out in 1980 saw about 400,000 barrels of oil spilled while the Shell Forcados Terminal tank failure was estimated to have spilled over 500,000 barrels of crude (Adelana, Adeosun and Adesina, 2011). Baird (2010) in his estimation puts the cumulative Niger Delta spill volumes at 13 million barrels of crude. It should be noted that minor spills are often not recorded as they are considered insignificant by operators. However, the cumulative effects cannot be ignored. Considering the sensitive environment this is happening in, the environmental loss can only be imagined. Remediation of the impacted sites has also been left unattended therefore the distortion of the Nigerian environment continues to date. The right to a healthy environment seems unattainable and the hope of protecting the people from further environmental incidents appears far- fetched. This situation further justifies this research which addresses the long -term effects of non-compliance to environmental laws and its antecedent social and negative economic consequences.

Figure 4: Environmental Pollution in the Niger Delta
(Source: Niyi, Information News, 2013)

Non-compliance with laws especially in Nigeria, have had far reaching consequences and these infractions have costs that can be avoided. With the current low oil prices, companies need to pay closer attention to the environmental laws and regulations that govern and guide their activities regardless of the country they operate in. Shareholders all over the world now demand more in terms of environmental stewardship and the oil sector being heavily regulated (Hale, 2002), remains a high-profile economic activity. Environmental non-compliance instances are now also promptly put in the public domain with the advent of instant access to the media. There is now more awareness of people and community rights when compared to the past. Companies thus must be aware that attention and focus on oil exploitation activities will only get magnified with global interest in environmental protection (Young 1999). Climate change and other current trends in the environmental space also emphasize the need for compliance efforts by players in the oil and gas sector particularly in Nigeria with the long -standing media publicity of the Ogoni land and its travails.

Compliance as a concept and the lens through which it can be better understood can take different perspectives as observed in literature (Kyngas et al, 1998; Thomas, 2017). The chosen lens for better understanding of the concept in this research is the regulator and attempts to add to existing compliance theories. Focus on the regulator as a missing but key link in the regulatory framework will help appreciate the enormous challenge regulators have in ensuring compliance. Research will also bring to the fore; the value regulators can bring to companies with regard to compliance. This value addition has never really been delivered to operating companies due to the perception corporations have about regulators. The conceptual framework highlights focus areas of the research which includes regulation awareness, understanding, style and types. Compliance implementation, sanctions and compliance motivations are reviewed in Nigeria and internationally.

Examination of the regulator is necessary because of the various ideological differences underpinning law and regulations and their impact on people. This is not very novel as much attention and sociological studies on regulation had always focused on generic and basic levels of regulation. Ayres and Braithwaite (1992); Braithwaite, (1992) for example focused on maximizing compliance through a single regulatory goal which was to examine the effects of adopting several regulatory mixes to improve compliance. This laid the foundation for further research in regulatory compliance by other scholars.

This study therefore attempts to scrutinize the concept of compliance by examining other variables and providing empirical evidence of the effect of regulator/ regulated relationship on compliance. Other variables examined include the operating environment, compliance methodologies of operating companies, and regulatory autonomy while paying attention to how the regulations are implemented and their effectiveness in the Nigerian hydrocarbon sector. This research argues that compliance will not automatically happen without full appreciation of these extenuating factors and the relationship between the regulated and the regulators especially when regulations came into being in Nigeria post exploration activities in Nigeria.

Closer scrutiny will also be made of the impact of the much talked about Petroleum Industry Bill (PIB) which according to Iledare, 2010; Odiase-Alogimenle, 2014; and Montclos, 2014, did not bring the expected results in Nigeria because of the lack of

political will on the part of government. This bill has been in the making for over 12 years. There was however an attempt at reforms when undeveloped fields owned by the IOCs were allocated to nationals in 2007. However, the lack of technical skills in the country led to the benefits of this reform not being truly felt as foreign partners were again sought to manage these fields. The PIB was meant to better manage the Nigerian Oil Industry but as it stands today, only the governance part has been signed off due to the splitting of the bill into parts for easy passage. There have also been fragmented reforms in the sector from 1988, 2000, and 2007 (Adelana et al 2011). Financial transparency and corruption remain endemic in the Nigerian oil industry and this is contrary to the aims of the PIB and global best practice (Gonzales; 2016). Recent developments of the PIB and related petroleum legislation will also be scrutinized in line with this thesis.

Compliance as the concept under review is considered by this research to be driven by the four key elements highlighted above namely; regulations, implementation, and regulators and operating environment. They are key variables that can and often impact compliance outcome.

- Regulations: there must be availability of the laws and awareness of same by the regulated for compliance to occur. Though generally assumed to drive compliance, understanding and acceptance of regulations are important to the compliance matrix. Policy formulations must be seen to be addressing the anomalies and societal problems to be corrected. With the laws in place, its adequacy and effectiveness become tested against set goals and aims. Other factors considered with regulations include the mandate of the regulators and the style of regulation and will be discussed in discussion chapter.

- Implementation: The effectiveness of laws is based on its implementation of the regulations. Implementation therefore refers to the steps taken by the regulated to ensure compliance. This is often under the guidance of designated regulatory agencies. Designated regulatory agencies representing government are sometimes perceived to know more than the regulated community thus they supervise the implementation of the laws as this is connected to regulatory role. Where adequately funded and equipped, government mandates and roles are clearly articulated and communicated to all stakeholders for effective rule making. Resources are needed for such effective

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implementation of regulations. Monitoring programs and outcomes must also be made transparent to promote confidence in the role which regulators play.

• Regulators: In representing government, regulators are expected to carry out their regulatory functions fairly and without any political influence. In the oil industry where high value is placed on the resource to be managed for the benefit of the populace, (in this instance oil) transparent and accountable performance is key. Thus, the first step in having an effective regulatory system lies in agency set-up in addition to having the right caliber of regulators with expertise who will make up the agency. Regulators are mandated by the government to ensure compliance thus they must be perceived to drive compliance.

• Operating environment: Lack of good governance has been listed as one of the ills in countries that are not able to provide social, economic and environmental benefits for its people. This inference being applicable to Nigeria, and available reports especially in the public domain and media, show that regulatory compliance is often skewed and inconsistent with what obtains in the developed regions. In this context therefore, compliance variables and levels is influenced by the operating environment. This research is not about a review of the laws and regulations which falls under legal research but about compliance with the laws, corporate and regulator behavior, implementation of the laws and specifically about the role regulators play in ensuring compliance. The lens through which compliance is examined is carried out in this research by examining the mandate of the regulator and how they regulate.

This research also examines government's role and current institutional structure as it affects the regulatory role in Nigeria. Perceptions of the regulators, trust and compliance methods used by operators in Nigeria as highlighted in the conceptual framework form the basis of this study and how regulation is perceived in Nigeria by the different stakeholders identified in the Nigerian regulatory space. The two key concepts represented in Figure 5 above shows some variable that impact on the effectiveness of regulations and the outcome of compliance. These variables have been found to be inter-connected with various degrees of impact on the chosen concepts as discussed in chapter 5.

1.5 Research Aim

The aim of this research is to examine and review regulatory compliance with existing environmental regulations in the Nigerian oil and gas sector. The aim is to understand the applicability of the set laws, effectiveness of the laws, challenges if any, in enforcement and implementation of the laws. Other focus areas include the regulator role in ensuring compliance with these regulations.

Regulatory styles, reforms and how the regulator can influence compliance underpins better understanding of compliance concepts and theories. Since compliance cannot be measured by one factor alone this research draws the link between the variables that are key to ensuring compliance in the context of the Nigerian oil and gas sector.

1.6 Research Objectives

With the aim of the research identified, objectives of the research include the examination of regulations and compliance, two concepts earlier identified which are needed to better appreciate how compliance with environmental regulations come about in the Nigerian oil industry. The objectives are as follows:

a) To confirm the availability, awareness and effectiveness of environmental regulations used in the country.

b) To evaluate compliance levels across the value chain in the Nigerian hydrocarbon industry. This will help determine perceived compliance levels by the various stakeholders in the country.

c) To understand the challenges, if any, faced by industry players with regards to compliance with environmental regulations in the oil industry in Nigeria.

d) To understand how the industry is regulated. e) To obtain best practice that would work in the Nigerian oil industry and propose a workable strategy for compliance with environmental regulations in the oil industry in Nigeria. The above aims align with the methodology adopted for this research and through the experience of the selected research participants, new knowledge is drivable from the data to be collected. The chosen methodology dealt with in chapter three aligns with the philosophical stance of the researcher.

1.7 Research Question

The main research question underpinning this study is '**Why is there no compliance with environmental regulations in the Nigerian oil and gas industry'?**

1.8 Research Methodology

The empirical methods used in traditional law research will not give the result of contributing to laws as it applies to compliance (Wulf 2016). In line with the research aim and questions, which seeks to explain compliance and the absence of or reasons to non-compliance with environmental laws in Nigeria, an empirical legal approach using a social science qualitative research methodology was adopted. In this way, better understanding of a legal concept using empirical data to explore, investigate and provide meaning which is grounded in theory was used (Strauss and Corbin, 1990; Bauer 2000; Cane and Kritzer 2010). This interdisciplinary approach is taken from the social sciences and would enable scholars in other disciplines to understand and appreciate this study (Eisenberg 2011). Critical issues considered for this research are the reliability, validity and credibility of the data and the results obtained. Analysis from the interview data and the use of legal documents interpreted and applied to the observed phenomenon were evaluated to propose a workable framework for compliance with environmental regulations in the Nigerian oil industry. A systematic method of data collection, data analysis and interpretation of interview transcripts is the key characteristic of this empirical legal research. As May (2001 p.158) asserts that review of documents alone does not reveal social reality but points meaning to the reality that maybe under investigation.

The main purpose of this empirical analysis, therefore, is to explain variations of key concepts different from the norm and to support empirically causal inferences (Pearl, 1995; Gopnik, 2012). To extend the meaning to the concept of compliance and why compliance with environmental regulations is non-existent, an inductive interpretivist approach was used (Denzin and Lincoln, 1998). This approach focuses on investigating a phenomenon and evaluating a concept which in this instance is compliance. Accounts though recognized to be subjective, of carefully selected research respondents from the industry and from seven (7) categories threw more understanding on the observed phenomenon (Klein and Myers 1999; Bryman and Bell 2007). Respondents from the

seven categories were the key sampled informants (Patton 1990) as they gave further insight to the studied concept. Their interpretations of events through semi-structured interviews and analysis of publications, journals, industry records made it possible for the researcher to develop constructs about compliance and methodologies used by the oil companies. The chosen research method will also assist in determining if there is compliance or not in line with the main research question. It also enabled the examination of the regulator role in compliance in the Nigerian oil industry.

Examining and interpreting the experiences of people through the interview process is influenced by their beliefs, values and perspetives (Blaike 2000; Travers 2001) in each context (compliance in the oil and gas sector) and location, (Nigeria). Other authors using this same approach found it useful in collecting personal experiences similar to the phenomenon under study. The semi- structured interviews conducted helped in identifying the links between regulators, corporate behavior and compliance with environmental regulations in Nigeria (Whiting 2008). This approach presents the flexibility that is used for expanding or reducing research questions, follow-up and confirming spoken words and sentences said during the interview process. The preliminary interview conducted at the start of the research set the tone for the methodology chosen and helped in crafting the research questions used. Scholars that have used this method (Kvale ,1996; DiCicco-Bloom and Crabtree, 2006) have used semi-structured interviews to contribute to a body of knowledge that is both theoretical and conceptual like this current research. This is based on the meanings arising from the interviewee's life experiences regarding the topic. Similarly, semi-structured interviews helped the researcher understand how the interviewee experienced the phenomenon under study.

Respondents interviewed included regulators (government), international oil companies (IOCs), Marginal Field Operators (MFO), the academia, community representatives and service contractors were also interviewed. Two groups that emerged included regulator turned operator (retired regulator who owned and operated a marginal field) and Operator turned Regulator (by political appointment, an operator appointed to head the regulatory agency- DPR). The emergence of the last two configuration of informants gave a very rich narrative (Lincoln and Guba 1985; Blaike 2000) as the concept of compliance was discussed from two different perspectives by the same person. The

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research approach aided the reduction of researcher bias in the data as she was part of the phenomenon investigated at the start of this research. The groups so identified were adjudged to have deep and expert knowledge and experience about the subject matter.

Most of the chosen persons had over 30 years' experience in the Nigerian oil sector and aided in forming the constructs and framework for compliance with environmental regulations in the Nigerian oil industry. Identification of the groups also gave a much-needed holistic approach and different perspective to the research focus. These respondents were also selected by the positions they held in their companies and the years in the companies they represented. Most were personnel who represented their companies at top level and decision-making meetings. Research bias was further reduced by selecting respondents outside the set criteria and will be explained in the discussion chapter. Data analysis was primarily through content thematic analysis (Neuman 1991) and identification of themes supported the use of the interpretive approach adopted for the research. This is a descriptive presentation of qualitative data (The systematic analysis of themes derived from the collected data enabled the researcher to fully appreciate the several opinions and viewpoints to deduce explanations for the reason for non-compliance with environmental regulations in oil and gas operations in Nigeria. The methods of data collection, ethical considerations, reliability and credibility are further discussed in detail in the methodology chapter.

1.9 Research Scope and Assumptions

The concept of environmental sustainability and its transition to give new meaning to economic sustainability directly, not only put focus on global oil players but questions the operations of oil and gas companies around the world. In Nigeria where 80% of government earnings are derived from oil exploitation activities (Obi, 2012; www.cbn.gov.ng) direct economic advantage to the people in sensitive oil rich areas is linked to the environment and how it is protected and preserved. Where there are negative environmental impacts, it is perceived that there is no compliance to environmental laws and regulations. As such, there cannot be sustainable economic growth compared to countries that have imbibed good environmental management practices. Measurements of compliance (Dragomir, 2018) can be problematic to corporations and regulators alike as compliance can be total, partial or exceeding the

regulatory requirement. Compliance to regulations generally occur on two levels; national and international levels. Regarding non-compliance in Nigeria, for example, a spill or an environmental incident is often known by the outcry of the host communities which alerts the regulators as detection of environmental mishaps is usually through company self - reporting which has been perceived as less than accurate. Similarly, spill reports have been found to be not accurate to avoid remediation costs. Sometimes regulatory audits discover unreported spills while other environmental impacts maybe are left undetected for months or years (Human Rights Report 1999). Undetected spill impacts are unfortunately a normal occurrence in Nigeria. The continuous gas flare is another example of health impact not addressed for years in the country. Traditionally, literature focuses on institutional and legal reforms and the situation is no different in Nigeria, and this can be relevant as stated by several authors (Okonjo-Iweala and Osafo-Kwaako, 2007; Aigbokhan, 2008; Okpanachi and Andrews 2012). Factors that affect compliance directly are not typically researched together as this study attempts to do. Each variable of compliance is often looked at individually to better understand what drives compliance. This research assumes that there are several factors that impact compliance and that these factors can be examined together to give a further understanding of the concept. The argument that the environment in Nigeria can be better conserved and preserved through better compliance with environmental laws has been investigated and several scholars have linked the two (Eweje 2006; Ladan 2012). That is, enhanced compliance to environmental regulations resulting in environmental conservation and protection. However, some defined factors of non-compliance remain largely unclear except when examined through institutional and regulatory reforms. Unfortunately, some of the anticipated changes arising from several institutional reforms have not been positive over the years in Nigeria as seen from the current state of environmental degradation particularly in the Niger Delta region of Nigeria. Gunningham (2003) went a step further to investigate regulatory styles and mixes while corporate behavior and compliance philosophy has been attributed to compliance, non-compliance and sometimes over-compliance anomalies (Gunningham, Kagan and Thorton, 2004). Their study explains how social license can be the basis for compliance while corporate behavior can be influenced by tightening regulatory requirements and asserting political pressure (Kagan, Gunningham and Thorton, 2003). Community involvement in

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environmental performance of operators have been known to push operating companies to comply and this is also observed in the Nigerian context.

It is often assumed that compliance was an immediate and natural fallout from laws and regulations. It is also assumed that regulators would use effective implementation mechanisms to ensure compliance. These assumptions are not often the case as compliance reports show around the world. Review of non-compliance incidents in the Nigerian oil industry shows clearly that despite clear and specific laws, compliance does not necessarily follow. This does not only apply in the oil and gas sector but in all areas of human endeavor.

What makes non-compliance matters particularly worrisome in Nigeria, is the attitude towards compliance of big corporations and companies some of which, are quoted on the international stock exchange. Companies spend billions of dollars on their environmental stewardship campaigns and adverts showcasing their commitment to sustainable operations, but their method of compliance suggest that this is just a publicity strategy to portray the company as a responsible corporate entity that cares about the environment. Accordingly, examining the regulator role is necessary to better understand compliance especially in Nigeria as there has not been a formal way to address regulator defaults and lapses apart from reforms as mentioned above.

This research fills the gap of compliance theory and concept by reviewing the links between compliance and regulators, methods of compliance, expertise and skills of the regulators with specific reference to compliance. Political interference in compliance and agency independence while examining the regulatory environment to establish key factors influencing corporate behavior to compliance is undertaken. Assumptions of this research therefore are as follows: (a) Regulators mandated to ensure compliance are a critical aspect of compliance theories, (b) Compliance methods adopted by companies need to be further evaluated as this often does not fully show compliance as it should,

(c) The cost of project suspension arising from environmental non-compliance can be reduced by collaborating with regulators on compliance issues, (d) As regulatory compliance functions can be highly discretionary, a standardized code of conduct for regulators entrenched in ethics and transparency will ensure compliance in the Nigerian oil and gas sector.

1.10 Significance of the research and Contribution to knowledge (a) Significance of the research

This research is relevant and important to fill an academic gap in Nigeria on the role of the Nigerian regulator for compliance with environmental regulations in the oil and gas industry. It will bring significant value not only to Nigeria but globally as project delays arising from suspensions due to environmental non-compliance will be greatly reduced if not eliminated completely in this period of global low oil prices. This is the first study of current compliance status in the Nigerian oil and gas sector from a regulator's perspective. Research also highlights the dynamics of regulatory compliance practices in the oil and gas sector in Nigeria from a regulatory standpoint. Regulatory functions should be done in a business-like and professional manner as opposed to being carried out as a government function perceived by stakeholders as highly bureaucratic, unprofitable, unprofessional and out of sync with modern business ethos. This is important because regulations and regulatory reforms carry a huge public cost which often is not properly and adequately articulated.

This research extends the compliance theory by examining Nigerian corporate compliance methodologies, motivations and compliance decisions in the oil and gas sector. Regulators can therefore use this knowledge more strategically to influence compliance in a positive way. Since regulators and their regulatory functions are essentially government initiatives, and therefore non- profit, it becomes imperative to standardize the way regulators regulate and ensure that there is respect for the regulator. Projects can also derive benefit from the skills and expertise of regulators (current and retired) and so reduce project costs by leveraging on regulators expertise on a case by case basis. Though there are measurable compliance indicators, regulators should be held accountable for non-compliance and not only operators as is usually the custom. Lastly, the perspectives and feedback of key oil industry personnel can be used to improve the policies and laws in other areas that are deficient for the benefit of the industry particularly in upcoming oil exploration regions around the world. Regulatory Impact Assessment (RIA) of existing laws and guidelines evaluates the performance of existing rules which could benefit from assessing the positive outcomes of this research (Kirkpatrick and Parker, 2004; Radaelli, 2009). The documented feedback could form part of the systematic appraisal of environmental regulations in Nigeria.

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(b) Contributions to knowledge

The main contribution to knowledge is the feedback from Nigerian oil industry experts which has been used to determine regulatory compliance and its variables. Research has presented in a holistic manner the challenges faced by both operators and regulators in terms of compliance. It has also presented solutions to these challenges which have been examined in this work. This research recognized the value regulators with certified skills and expertise bring to projects in the oil and gas sector in Nigeria. The solutions and strategies can be applied in other non-oil sectors. In addition, factors including institutional and regulatory reforms, trust and respect for the regulator, well drafted laws and environmental regulations, political and agency independence all contribute positively towards compliance with environmental regulations.

This study highlights the dynamics and complexities of corporate behavior and compliance decisions as key elements which regulators can leverage to drive compliance generally and specifically to environmental regulations. A proposed framework for the use and engagement of regulators (to reduce project cost) is given in this research to further illustrate how compliance can shift positively. This research also highlights the link between the regulatory resource gap (shortage of agency personnel) and the involvement of community participation. Communities can therefore participate in regulatory roles in selected remote areas where access is difficult. Thus, personnel gap is addressed if properly planned and managed.

Finally, this research shows the relationship between the expertise and skills of regulators and compliance. It recommends the adoption of regulating the regulator as a key factor in making regulators more responsible rather than simply empowering them by law to monitor and supervise the sector. The feedback from the stakeholders across the value chain in the Nigerian oil and gas sector presents a valuable tool in future policy strategies for regulatory coherence in Nigeria.

1.11 Thesis outline

The structure of the thesis is as follows:

Chapter 1 gives an overview of the research and highlights key aspects of its aims, objectives, methodologies, research scope and assumptions as well as research questions. It gives a brief description of the conceptual framework for the study. The chapter concludes with a summary of research findings, significance and contribution to knowledge.

Chapter 2 outlines the literature review and gives a contextual background for the research. It explored the literature to identify the focus of the research within the context of Nigeria and regulator role and influence on compliance. This chapter presents a critical assessment of compliance theories and concepts, international environmental agreements, challenges of environmental management implementation, sanctions, and corporate behavior and compliance motivations. It examines the meaning of regulations, intent and the understanding of regulations in the context of compliance.

Chapter 3 describes the design and methodology used for the research with justification of research approach. Philosophical stance of the researcher is also presented. The methodology chapter outlines the different methods used in data collection, categories of respondents and how data was analyzed. Data collection strategy, identified bias, research credibility and ethical considerations considered for the research was also detailed in this chapter.

Chapter 4 presents research analysis and findings with respect to the research questions. This chapter outlines how collected data was analyzed, interpreted and presented in a manner consistent with an inductive explorative research.

Chapter 5 presents a detailed discussion on the analysis and findings of the data. The discussion leveraged on the professional background of the researcher who at the start of the study was part of the phenomenon investigated. The discussion chapter outlines how the findings fits and, in some instances, differs from literature. This chapter presents how the research questions are answered. It details new concepts that further explains compliance.

Chapter 5 shows how the variables are linked to bring about enhanced compliance as shown in the results and research data. There may be some bias in the discussion as the researcher was part of the phenomenon though categories of the respondents helped in reducing this. Similarly, the analysis of the data using thematic content analysis ensured less interference with the data.

Chapter 6 presents an example of regulator/operator collaboration to further strengthen the argument for skills and expertise for regulators in enhancing compliance in the Nigerian oil and gas sector. This strategy can be applied in any sector where compliance is expected in measurable levels. It also outlines the proposed framework for regulatory compliance. It presents the peculiarities of the diverse and complex nature of the industry where several other supervisory agencies without technical knowledge and expertise play a part in monitoring and supervising the same sector. This chapter also makes recommendations for compliance enhancement by critically reviewing the need for use of subject matter experts (SMEs) in critical regulatory roles, collaboration with the regulated community bearing in mind regulatory capture, ethics and a code of conduct for regulators who are perceived only as enforcement agents. It identifies areas for further study formal and periodic regulatory impact assessment, environmental leadership and community partnerships in monitoring compliance with environmental regulations. Community involvement is being recommended to address core issues that directly affect host communities, indigenous and local people who feel the impact of environmental degradation the most.

Chapter 7 is the summary and conclusion of the research report. It gives an overview of all the chapters and highlights key statements arising from each chapter. The limitations of the research are presented in chapter seven and suggests areas for further research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Nigeria now boasts several environmental laws specific to the preservation and conservation of its diverse ecological landscape. In the early days of oil exploitation and exploration, the immediate pre-occupation of the Nigerian government was revenue generation to meets its infrastructural, health, educational and governmental needs. In pursuit of the country's economic development, Nigeria focused on national advancement with little regard for environmental sustainability (Eneh, 2011). As earlier stated in chapter one, environmentalism was not as widely established in the country as it is now. Today, there are several regulatory agencies with the mandate to ensure environmental sustainability in the developmental processes of nation building (See Table 3 below for regulatory agencies). Despite this however, compliance with environmental regulations is perceived non-existent in the Nigerian oil and gas sector (Imoobe and Iroro, 2009; Adekola, 2011; Peters, 2015). This situation is unsustainable both economically and environmentally, due to the very diverse and sensitive ecological nature of the Nigerian habitat. With the current low oil prices, oil and gas projects in the country must be delivered timely to avoid the added costs which often arise from non-compliance fines and sanctions. Furthermore, these projects must be carried out in environmentally sustainable ways to ensure that minimal impact is made on the environment. This research attempts therefore to fill the gap in compliance debates which is taken from the normative perspective. It can be termed compliance with regulations without coercion. The normative approach was adopted because prior to now, the command and control (C and C) regulatory style which is traditionally used in the industry has not brought compliance with environmental regulations. The C and C regulatory style has also been known to be counterproductive as asserted by May and Winter (1999).

This chapter presents a detailed review of extant literature on regulatory compliance that forms the theoretical basis for this study. The research approach adopted ensures that the researcher is grounded in the views and insights of known researchers and authors in the field of compliance and regulation (Blackie 2007; Braithwaite, 2008; Gunningham, Kagan and Thorton 2009; Parker and Nielson 2009). This chapter also explores the links between the variables of compliance and other issues associated with the concept under review, for example sanctions, enforcement, compliance motives and

implementation. Past studies have argued regulatory types and styles, corporate behavior or motivations that drive compliance (Ayres and Braithwaite 1992; Nielsen and Parker (2009). Derived from the literature and the theoretical concepts therein, the links between regulations, compliance and the other variables mentioned above deepens the understanding of compliance and what drives compliance decisions. This research focus is on regulators as literature is limited to the role they play in regulatory compliance within the context of the Nigerian hydrocarbon sector. Therefore, the key concepts in this research is examined as a means of extending the debate on regulatory compliance in the Nigerian oil and gas industry today. Thus, the main purpose of this research is to investigate and further understand the factors that affect compliance decisions by operating companies especially when they operate in regions with little or no regulations as it was in the early days in Nigeria. This review thereby highlights the importance of compliance with environmental regulations by operating companies in Nigeria especially as their exploration activities are mainly within very sensitive ecological regions of the Niger Delta environment.

Table 3: Key Regulatory Agencies with Oversight Functions in the Oil Sector

Regulator	Regulatory Scope
Ministry of Petroleum Resources (MPR)	Oil and gas (Administrative)
Department of Petroleum Resources (DPR)	Oil and gas (Technical)
Nigerian Investment Promotion Commission (NIPC)	Investment
National Oil Spill Response and Detection Regulatory Agency (NOSDRA)	Oil spills
National Maritime Administration and Safety Agency (NIMASA)	Maritime sector
Nigerian Content Development and Monitoring Board (NCDMB)	Local content
Federal Ministry of Environment (FME)	National Environment
Nigerian Custom and Service Board (NCSB)	Immigration
National Environmental Standards and Regulatory Enforcement Agency (NESREA)	National Environmental issues
National Petroleum Investment Service (NAPIMS)	JV Commercial

(Source: Researcher Generated, 2019)

2.2 Environmental Pollution in Nigeria

Environmental pollution and its effects on people and the environment have been the focus of world leaders and scientists for more than two decades now (Rio Conference 1992; Nordhaus and Shellenberger, 2007). Since the 80s, such global concerns and the earth's climatic changes have made researchers and scientists question man's survival on planet earth. This led to the climate change adaptation debates and initiatives witnessed across the globe. Climate change discussions have now taken center stage in environmental circles.

This research therefore attempts to investigate compliance and the decisions that drive compliance as a means of addressing these observations about environmental pollution in the Nigerian hydrocarbon sector. Photos below show typical examples of pollution in the water and gas flaring near the local communities.

Figure 6: Air and Water Pollution in the Niger Delta
(Source: Sweetcrudereports, 2015)

This research however acknowledges the tremendous benefits and positive economic growth international oil businesses have brought into the country and the region. There have been several innovations and technological benefits to the people of Nigeria. Indeed, several nationals have benefited from working and servicing the oil sector as service contractors. These and other growth indices can also be attributed to the presence of international oil companies. However, it has been at a huge cost to the environment and this cannot continue without being holistically addressed within the

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sector (Omofonmwan and Osa-Edoh, 2008; Eneh, 2011). Regulations have been used to provide both social and economic benefits by driving environmental sustainability, the safety of man at home and in the workplace (Guningham and Johnstone, 1999).

Regulations are also essential in financial services and in providing services to man such as provision of healthy environments and clean habitats. Thus, social regulation is assumed to help provide services like transportation, housing and energy utilities using a wide range of frameworks (Hutter, 1997). It can therefore be said that regulations have come to stay. However, this research argues that attention must be given to all aspects of regulatory frameworks adopted by governments to achieve defined objectives for the people. This should not happen only through policy making by reviewing laws and statutes via regulatory reforms but in ensuring that these laws meet set goals and targets with clear implementation guidelines. Chapter two therefore explores compliance motivations and strategies as perceived by other authors in the field and as used by international operating companies (IOCs) especially in Nigeria. This is because compliance with environment regulations by IOCs operating in Nigeria was observed to be different from the way they operate in developed regions- Ogoni Report 2011. The importance of compliance with environmental regulations is heightened especially as exploration activities are usually within very sensitive ecological regions of the world (Kadafa, 2012; Onyebuchi and Nenibarini, 2017). For example, Nigeria has been ranked fifth in the world for ecological diversity (Steiner, 2009). Nigeria has also been indicted by failing in its obligations to protect the rights of its people to a healthy environment. These obligations are said to be breached by inadequate monitoring and enforcement of oil exploration activities (Amnesty International, 2009). This is because Nigeria is a signatory to the International Convention on Economic, Social, and Cultural Rights (ICESCR) and the African Charter on Human and Peoples Rights (ACHPR).

Events in the Niger Delta region support this indictment by the various reports on the activities of the oil companies operating in the country (Amokaye, 2012; Oshwofasa et al, 2012; Nwankwo 2015). Research therefore explores the different perspectives of compliance theories and concepts to further understand why international oil operating companies in Nigeria do not comply with environmental regulations as stated in its statutes. Review also examines the influence regulators have on compliance as developed

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in the conceptual framework in the previous chapter. Assumptions are that the adequacy of regulations will bring about compliance with national environmental laws and regulations and that implementation of these laws would be seamlessly carried out by both the regulators and the regulated community. It is also assumed that the emergence of other agencies with oversight functions in the oil industry would strengthen the existing regulatory framework and improve compliance status in the sector. World environmental reports on Nigeria have proven these assumptions wrong (World Bank, 1994; Uyi-Ojo, 1996). The OECD 2000 report similarly highlights the capacity challenges in implementing environmental regulations especially in Third World countries. Omokaye (2012) argues for the impact environmental governance has on regulating the Nigerian environment. Issues of bureaucracy in government agencies and their inability to work together for a set goal was also cited as a cause of non-compliance with environmental regulations in the country. His study therefore supports the OECD report that highlighted attributes to capacity, institutional and resource limitations and impacts of environmental governance on the Nigerian environment. This relates to adequate funding of the agencies and duplicity of functions across oversight regulatory bodies in Nigeria. Lastly, with an overview of the environmental issues in the country, and its impact on development and the lives of the people, this study then presents a framework that worked to bring about compliance to a guideline that for years was not complied with.

2.3 History of Environmental regulations in Nigeria

The protection of the environment in Nigeria is encapsulated in chapter two, on *Fundamental Objectives and Directive Principles of State Policy* of the 1999 Nigerian Constitution. Section 20 in Chapter 2, states: "The State shall protect and improve the environment and safeguard the water, air and land, forests and wild life of Nigeria". Prior to the 1999 constitution, there was a general lack of awareness of environmental issues, protection or development in Nigeria particularly before oil exploration started in the 1950s. The public were limited in their knowledge of biodiversity, environmental conservation and sustainability. The populace lacked understanding of pollution and pollution control measures. Similarly, the government of the day was focused on developmental projects for the benefit of the Nigerian people. Little was it known that

development and the environment were inter-dependent and interlinked, so this led to the slow emergence of environmental laws for environmental sustainability. The Koko incident of June 1988 brought about some degree of environmental awareness to Nigeria. The incident was the dumping of about 40 tons of toxic waste in a s mall remote village called Koko in the then Delta State of Nigeria by an Italian company (Ihonvbere, 1994; Ogbodo 2009). This event prompted the Federal Government of Nigeria into action by immediately setting up the Federal Environmental Protection Agency (FEPA) through Decree 58 of 1988 and 59 (Amended).

The FEPA Act became the primary environmental protection law in Nigeria (Ilebgune, 1998). This was after the promulgation of the Harmful Waste (Special Criminal Provisions) Act through Decree 42 in 1988 (Aina, 1991; Ogbodo 2009). This agency became responsible for the 'protection of the environment and biodiversity conservation and sustainable development of Nigeria's natural resources in general and environmental technology, including initiation of policy in relation to environmental research…' This mandate as stated was not clearly defined nor were the mechanisms properly articulated. This may have been due to lack of relevant data then. Before this time, Nigeria had no institutional arrangements or mechanisms to tackle environmental protection and enforcement of environmental laws or regulations in the country (Omorogbe, 2001). There were no defined and articulated national policy objectives for the Nigerian environment. In fact, there were no direct or defined roles for the oil and gas sector at the time. Meanwhile oil exploration and exploitation has started in 1958. Environmental issues were before then handled in an ad hoc manner (Ogbodo, 2009). However, according to Ogbodo (2009), local and international treaties became adopted. It can therefore be said that environmental protection in Nigeria was reactionary in the early days!

Today, however, Nigeria boasts of adequate and robust environmental laws and regulations which are fit for purpose and which benchmarks favorably with those from developed extractive regions. Despite this, compliance with these regulations is low both in perception and in compliance records obtained from the lead regulatory agency in Nigeria (www.dpr.gov.ng). Non-compliance measurements in the context of this study have also been recorded via negative environmental incidents in the country. Of note also, is the long-standing environmental non-compliance in the sector which include

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discharge of produced water in non-discharge zones (Obire and Amusan, 2003; Ofuani, 2011). For instance, in January 1998, about 40,000 barrels of oil from an ExxonMobil offshore platform was spilled hitting the coastlines of Lagos several kilometres away. In the same year in March, 20,000 barrels of crude was released from a Shell facility in the brackish water mangrove area and this destroyed the livelihood of the communities in this area (Human Rights Watch, 1999, New York). These incidents attracted media attention and agitation from the affected communities who, however, were more concerned with compensation from the oil companies than they were with the environment. This as mentioned earlier, was due to a lack of environmental consciousness and understanding by the locals.

Several studies show that the Niger Delta region of Nigeria has been consistently impacted by oil operations and environmental degradation continues to date (Eaton, 1997; Bronwen, 1999; Nwilo and Badejo, 2005; Ugochukwu, 2008; Aghalino, 2009). In a court case on gross pollution by Shell in 2001, (Ebuku, 2008), an NGO representing the interests of the community made the claim that the Federal Government being in JV partnership with the international oil companies are to blame for the degradation of their land. This allegation in principle is correct as the Nigerian government holds 60% of the JV contract. This allegation further buttresses the failure of existing regulatory framework in addressing environmental issues. Regulators represent and carry out government's directives therefore failure to get the operating companies and the government JV partners to comply with the laws results in failure to protect the environment. Environmental loss in these regions may never fully be quantified nor assurance of the environment restored to its natural state. This land degradation which is yet to be fully addressed by the Federal Government of Nigeria focuses international attention on the commitment to environmental standards used by oil companies. Response to the plight of the local communities who have been deprived of a healthy environment is also a deep concern to many. For example, the much- p u b l i c i z e d Ogoni restoration is yet to be fully underway due to funding mechanisms and other community related issues like oil theft and illegal refining activities (Mmon and Igbuku, 2015).

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Nine years after the UNEP report, the country struggles with the commencement of the clean-up in Ogoni land. However, implementation of the report remains a key challenge due to political interference and other interests including political influence on clean-up activities. Again, commitment of government to providing a healthy environment to its people is questioned. The lead regulatory agency, the Department of Petroleum Resources (DPR) and several other regulatory agencies with oversight functions in the oil sector make it necessary and imperative that the environment be preserved and protected in line with Sustainable Development Millennium Goals (SDMG) of the United Nations.

Estimates of Nigeria's proven reserves range between 37.6 billion to about 40 billion barrels at the current production rate of about 2.2million barrels per day (Ross 2003; www.nnpcgroup.com 2017; BP Statistical Review 2019). This makes Nigeria the largest oil producer in Africa and the 11th largest in the world (US EIA, 2010). The continuous gas flaring in the Niger Delta and adjoining areas and the shift of the gas flare down date by government further compounds the heating of the atmosphere and release of greenhouse gases (GHG) and air pollution (WHO 2003; Ite, and Ibok, 2013; Giwa, 2014). However, these changes in flare down dates by government (from 1984, 1985, 2007, 2008, 2010, 2012, and now 2020) sends the wrong signal to the industry in terms of compliance with laws that can mitigate environmental pollution.

Environmental regulations have been present in Nigeria since 1979 (Associated Gas Re-injection Act 1979), however, these have not been enforced (World Bank report 2013; Konne, 2014). Gas flaring continues to date. Continuous gas flaring in Nigeria has caused financial losses, asset destruction and habitat loss to the people, government and the operating companies. Using the normative compliance theory for developing a conceptual framework, this research therefore examines the adequacy of environmental regulations in Nigeria, its effectiveness and the regulatory styles used by regulators in the sector. It also examines the role regulators play in ensuring that compliance to environmental regulations is enhanced according to the mandate given to them by the Nigerian government. Research therefore focuses on the regulators and the question of compliance ownership.

There are currently ten other regulatory agencies with oversight functions within the oil and gas sector in Nigeria. Despite reforms in the current legal and institutional framework in the country, pollution continues unabated. Please see Table 3 (above) for a listing of other regulatory agencies and their various mandates. This research therefore aims to consider the applicability of developed conceptual constructs while furthering compliance debates derived from literature.

The Nigerian oil and gas regulator whose mandate it is to ensure compliance have come a long way since the early days of commercial oil exploration in 1958. The then British colonial administration put up the Mineral Oil Ordinance 1914 (Raji, 2014). This rule was concerned with the control and ownership by the British Crown over mining and oil rights not the preservation of the environment. Considering the rapid growth of the oil industry in Nigeria, a change in regulatory strategy as evidenced by the recent passage of the governance section of the Petroleum Industry Bill (PIB) in 2017 is evident. This bill had been in the making for over 15 years and so confirms the complexities of oil operations and interaction with its different stakeholders. The passage of the Petroleum Governance Industry Bill (PGIB), is a pointer to the fact that more reforms and restructuring of the sector in needed. However, good governance has been established as the basis upon which real institutional change will be built for the growth and sustainability of the Nigerian oil industry.

Compliance performance by any regulated industry is important to justify the huge financial commitments of governments around the world in setting up these agencies and providing the necessary resource for regulatory work. Conformity to environmental regulations is also critical in the conservation and protection of the environment in sensitive eco-regions like the Niger Delta in Nigeria and such ecologically sensitive areas. For example, in the Amazon forest, another eco-sensitive area of the world has been plagued with long drawn-out court cases due to claims of environmental damage to its land (Alston, Libecap, and Muller, 1999). While some authors have focused on mapping society-based regulation at local, national and international levels, (Selznick, 1969; Majone, 1994; Braithwaite, 2008) this research attempts a different perspective and focus. Environmental regulation in Nigeria started with the regulatory agencies adopting the command and control in line with the Decrees and Acts that brought about

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the laws, however not much compliance was achieved as the state of the Niger Delta environment and water pollution shows.

2.4 Research Contextual Background and Assumptions

The oil industry is generally thought to be one of the most regulated industries in the world and Nigeria is no exception (Pierce 1983; List and Coo 2000). The problem however is that despite the plethora of laws and regulations in the country, the level of compliance with environmental regulations in the Nigerian Oil and Gas sector appears non-existent (Winter and May 2001; Kwon and Seo, 2002; Friesen 2003). The Ogoni Report by UNEP (2011) which details the effect of oil spills over the years has drawn attention to this problem in a way that has made it very easy to appreciate the degree of impact non-compliance with environmental regulations and laws can do to a country (World Bank Report, 1994; Uyi-Ojo, 1996; Eweje, 2006). The UNEP (2011) report was the government's response to the allegation of the neglect of the region and environmental pollution that has subjected the Ogoni people to significant hardship and health hazards (Amnesty report, 2006). Even though this longstanding pollution has also cost the government the much-needed revenue for development projects, not much has been done in terms of the remediation of the region. One billion naira has been earmarked by the Nigerian government for the clean-up as estimated and recommended by UNEP, however, nine years after the report, actual clean-up has not commenced. If things were done right in the first instance, this money would have been saved in the first instance by government. Though the Nigerian government attempted to address the environmental issues by creating and establishing other agencies like NOSDRA (National Oil Spill Detection and Response Agency), the literature suggests that these efforts are grossly inadequate (Konne, 2014). None of the regulatory agencies in Table 3, have initiated an independent post impact assessment of any of the impacted sites in the Ogoni region for comparative assessment. Agencies in Nigeria rely mainly on submitted monitoring reports from operators though monitoring and inspection activities usually involve participation of personnel from government agencies. Independent field assessments of impacted areas are important in establishing the authority and leadership of the regulator and thereby give voice in cases of dispute. It can also be argued that the lack of public access to monitoring data and other relevant information

demonstrates a lack of capacity and transparency on the side of government to address pollution of the environment by oil companies operating in Nigeria. It is on this premise that this research bases its argument and proposes a modification in regulatory framework and functions.

The researcher recognizes the existence of several other agencies with oversight functions in the Nigerian hydrocarbon sector, however, this study focuses on the lead regulatory agency in the country, the Department of Petroleum Resources (DPR) whose core mandate is to regulate, supervise and monitor all activities in the Nigerian oil sector. The research therefore is not about a review of the governing environmental laws but how industry stakeholders interact with the laws and what motivates compliance with environmental laws in the Nigerian oil and gas sector. The theoretical framework developed forms the theoretical basis of the literature review and underpins the arguments developed for the conceptual framework developed in chapter one. This research also examines the regulatory style, perception of the regulator by the regulated, the operating environment and the relationship between the two parties as it effects compliance. This review and the researcher's professional background and knowledge about the subject is relevant in that it further illuminates' insights from compliance scholars and from the research itself. It is assumed that the awareness and availability of regulations will bring about compliance with national oil and gas environmental laws.

It is also assumed that the operators understand the regulations; and that regulations and the implementation of the environmental regulations would be carried out by those the regulations were meant for. Another assumption is that the emergence of several regulatory bodies to strengthen the existing regulatory framework in addressing these environmental issues in the industry will improve the Nigerian environment. This has not happened despite government working at all levels to ensure environmental sustainability through application of laws and regulations. This is based on environmental reports on Nigeria (World Bank 1994; 1996; Uyi-Ojo, Godwin 1996). Therefore, the several components that make up the regulatory system are examined to confirm if they fit for compliance to take place. In the oil sector in Nigeria and globally, economic and social regulations are used to ensure delivery of social services which

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include energy, water and a healthy environment. Regulations to address environmental problems include international conventions and laws. Nigeria is also a party to the African Charter on Human Rights and Peoples Rights (ACHPR), which makes the obligation more imperative for environmental preservation. However, the international legal framework from which rights to health and a healthy environment apply, do not uphold the links between health and a healthy environment in Nigeria (Fung, 2006). Arising from the above, this research argues that the onus is on the government to assure safety and rights to environmental health of its people. The Nigerian government in this context and as viewed by the people in the communities are the regulators in the regulatory agencies. These regulators are considered 'government' as they are the closest representative of government the communities will see and ever encounter.

2.5 Theoretical Framework

The theoretical framework identifies the major concepts in guiding the research process and directs where the focus should be (Clark, 2006). It is the road map and plan that will assist in situating the research based on what other scholars have done. To understand this observed behavior, which is at variance with global international operating practice, relevant literature has been reviewed. To therefore advance the debate on regulations and how it effects compliance in the context of compliance with environmental regulations in Nigeria, the theoretical framework shown in figure 7 was developed. Please see figure 7 below. This research thus investigates regulatory styles, implementation of regulations, sanctions compliance concepts and compliance motivations. This review further highlights the aims, objectives and provide answers to the research questions as stated in chapter one. The theoretical basis of this research having identified the key concepts, attempts to understand better the complex interplay between regulations and compliance. Review of the literature and of studies done by other authors in the regulatory field guided the research methodology used in developing a proposed change in strategy for compliance thereby filling the identified gaps in regulatory compliance.

According to Parker and Neilson (2009), most policy research is difficult to carry out because firms will not readily disclose their basis of compliance. Nor will they willingly hand over compliance records to a third party for review. As a regulator and an insider at the start of the research, the position held by the researcher provided an advantage in gathering useful information from oil industry personnel and aided access to some restricted and confidential data from the regulatory agency. For a research such as this, literature and compliance records obtained from organizations alone would be limited in revealing the motives of compliance by corporations in the Nigerian oil industry therefore, a qualitative interpretivist approach (Thanh and Thanh, 2015) was adopted as earlier stated in chapter one. This is because according to the authors, there is a strong connection between an interpretivist paradigm and qualitative methodology therefore document review combined with the experiences obtained from research respondents helps to uncover realities as they exist in the world. However, to fully understand the motives of compliance for example, data from interviews gave more insight into what happened in the early days of oil exploration. This chosen approach of seeking specific information helped in giving multiple views about the phenomenon being investigated as reality can be obtained from people's perceptions and experiences (Schwartz-Shea, 2011). In this research, context is important (Willis, 2007) as reality is often socially constructed. Therefore, what might be applicable in other developed regions might not necessarily work in a developing country that this research focuses on. The post-positivist stance relies on a single truth which is objective in nature rather than a subjective view consistent with the interpretivist approach. This research approach also confirmed evidence from official documents used as opposed to other studies which were based mainly on assumptions. One such assumption used by other authors is that businesses can be made to comply and that regulations will always meet their goal (Haines, 1997;2011). This assumption did not clearly state how compliance will happen, and this presents the gap inherent in the literature as there is need to delineate policy making from implementation teams. Methodology of this research which is discussed in more detail in chapter three is about finding out directly from key players through their spoken words and experiences, reasons that could be attributed to this observed phenomenon. This approach therefore aided the reconstruction of a complex world as presented by the participants. Thus, theory grounded in data gives a plausible explanation about the observed phenomenon (McLeod, 2001). Furthermore, as would be

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seen in the next chapter, analysis is towards theory development and not theory testing (Holloway and Todres, 2003).

This research can be said to be evidence based and would be useful in regulatory implementation to propose regulatory reforms from studies that have been carried out by other researchers (Parker and Neilson; 2009). Moreover, an interpretive research aims at understanding the meaning, motives and intentions of everyday life of people in a given context (Blackie; 2009-89). To carry out this research, a theoretical framework developed below was used to explain how firms comply with the laws, why they do certain things and how they interact with regulators (Genn 1993; Haines 1997; Gunningham et al 2003; Silbey et al 2009).

Regulations
- Regulatory Style
- Institutions
- Implementation
- Sanctions

Compliance
- Rational Choice Theory
- Normative Theory
- Motivation
- Enforcement
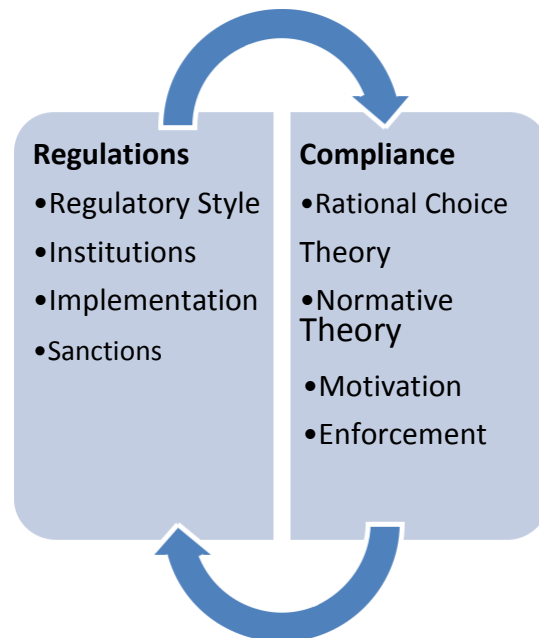
Figure 7: Theoretical Framework (Generated by the researcher)

The conceptual framework developed in chapter one by the researcher and from the understanding and background knowledge of the researcher about regulatory compliance, guided the way this research was carried out and afforded deeper meaning and understanding of regulatory compliance concepts and theories. The above theoretical framework (figure 7), directly linked to the conceptual framework (chapter one), gives a roadmap for the literature reviewed and is discussed in detail here. This framework also outlines the perspective which this researcher used to frame the research.

2.6 The Nigerian Regulatory Framework

A regulatory framework can be defined as instruments used to control externalities and markets (Bartie and Voss, 2007). This maybe in the form of administrative procedures, institutional set up and applicable laws that are used to govern the activities of the area and of the regulated (Payne and Majela, 2004). Agencies set up by government and personnel (those who act on behalf of government, that is, regulators and the law makers) carry out and follow administrative procedures that help attain set targets and goals to the benefit of the populace. Regulations, laws, guidelines and other legal instruments are mostly used to reach set objectives through monitoring and continuous assessment of rules. It is the interplay between the given instruments and the regulated that form the chosen framework for this research.

The Nigerian regulatory framework is an embodiment of the institutions, persons or state that formulate polices and standards to ensure conformity to laid down rules as set by government. Global interests in regulation have increased in recent years due to the lack of effective implementation of existing regulatory regimes especially in developing countries with reference to the extractive sector. The OECD (2000) further argues that the lack of capacity has largely contributed to regulatory failure thereby resulting in massive environmental degradation, poverty, movement of displaced persons in such regions. This statement is supported by the empirical study of ethics and the corporate governance framework in Africa (Roosouw, 2006). His study suggests that though there are governance frameworks in place in Africa, the reality however is that they may not be strong enough to affect the kind of changes required to be termed good governance practice. Therefore, as with the case in Nigeria, the presence of agencies and regulations

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alone will not and has not yielded expected environmental compliance levels. Policies which are set out by any government to address several interests must balance the social, economic and environmental aspirations of the country (Mitchell, 2005).

The command and control style are the most commonly used in Nigeria though this has translated to some deregulation and the use of market forces. This statement is explained by the partial deregulation of the downstream sector by 2012 in Nigeria (Ibanga, 2005; Odularu, 2008; Kalejaiye, Adebayo and Lawal, (2013). Other authors have highlighted the benefits of flexibility of the regulatory style for efficiency and self-regulation which the United Kingdom (UK) and the United States of America (USA) have adopted (Gunningham and Sinclair, 2002; Baldwin, 2005; Grabosky, 2012). The 'Better Regulation' initiative established in the UK in 2007 which was initiated in 2006, implies that more regulations are not needed, rather regulatory improvements and good policies. In a country like Nigeria which has evolved over the years to the present day, this assertion aligns with the research position that changes must be made to address the regulatory gaps inherent in the identified framework currently in place. While the above strategies have been used by the regulatory agencies in Nigeria over the years, no holistic documentation of the outcome of these strategies has been done. One can therefore argue that they have not been effective thus, have not been helpful in securing compliance in the hydrocarbon sector in Nigeria. There have however been some improvements in operational activities with reference to spill incidents since the issuance of the EGASPIN.

In the early 90s, the DPR developed an environmental improvement initiative by jointly developing the EGASPIN with the industry as a way of improving compliance with environmental regulations with the first edition of this document printed in 1991. This joint effort, as can be seen from events of environmental degradation, has not produced enhanced compliance from the oil operations as expected. The EGASPIN, is a compendium of environmental guidelines and standards with clear though prescriptive ways of addressing environmental issues related to the oil and gas sector. This document set effluent limits, monitoring and audit timelines for every aspect of oil operation from conception to field development and abandonment. This initiative was widely applauded by the industry who were part of the team that benchmarked the set

limits against global standards. The signing and launch of the document by the then Honorable Minister of Petroleum demonstrated Federal Governments' support and backing of the document and the objectives it represented.

The EGASPIN therefore, was meant to encourage and influence at company management level, and in a collaborative manner, compliance with environmental regulations without prejudice to already established standards used in the industry. This document helped to simplify environmental requirements as it was necessary for local environmental conditions to be incorporated in compliance matters in Nigeria. The 1969 Petroleum Act from which other laws were derived, set the legal framework for this document. However, this approach though laudable, failed in its objective to reduce environmental degradation within the oil operational areas in Nigeria nor did it drive compliance. This research therefore seeks other approaches. An approach that will not police the industry but rather assist and collaborate with operators to achieve set environmental targets and goals. This research argues that the normative approach is a surer way to reap the benefits of oil development for the developmental goals of any country. In Nigeria, it would appear that environmental regulations are not fully accepted which has thus led to the current state of the environment. This statement is made because as a regulator the researcher witnessed instances where companies challenged the regulations (produced water discharge guideline). Other areas of non-acceptance especially in recent times, has been the compensation rates for effected communities whose land has been impacted. The oil operating companies now blame negative environmental impact arising from oil operation activities on vandalism and sabotage (Aroh et al, 2010). While this may now be true, it was not always like this in the early days of oil exploration in Nigeria. The implication of this is that spills are no longer properly documented as they should have been. Shell for instance reported 1640 bbls of oil spilled during the Bodo spill of 2008 while it is on record that the pipeline was repaired after 70 days of the spill.

Furthermore, oil operators did not pay attention to the 'Precautionary Principle' which recommends caution in activities especially when the outcomes of such actions are not fully established scientifically (Jarosinska and Gee, 2007; Jacobs, 2014; Persson, 2016). This statement stems from the various evidence of oil devastation in the sensitive Niger

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Delta region. When such risks are assessed, the nature and distribution are considered. Alternative actions may be reviewed, however in the case of oil exploration in Nigeria, adequate and proactive steps should have been put in place to help mitigate the impacts of drilling in sensitive areas. In the early days of oil exploration in Nigeria, (1950s) little was known about how the long-term effects of oil spills would have on the environment and on human health thus this principle should have guided oil operations at that time. Similarly, immediate clean-up of impacted sites pending full investigation to determine actual culprit were not done according to the ('Polluter Pays Principle'). This principle in environmental laws puts the burden of payment for any environmental damage or the costs associated with pollution is on the polluter who sometimes could be more than one (Zahar, 2017). At other times, it may not be easy to identify the polluter as the rules of identifying the polluter can be problematic. This however does not undermine its validity. In Nigeria, this principle applies and is embedded in the Harmful Wastes Act of 1988. NESREA's mandate can ensure that polluters bear the cost of clean-up of polluted sites in the Nigerian oil sector by imposing liability of oil spills on the oil companies operating in the Niger Delta. However, as stated earlier, the identification of polluters was not easy especially in the early days of oil exploration. Today, finger printing of the spilled oil addresses this challenge. Lack of compliance to these principles has thus led to the accumulated impacts as detailed in the Niger Delta region report. The above principles are provisional instruments in environmental policy (Jacobs, 2013). These principles are enshrined in international law and applies when the root cause is not established scientifically as in the case of the Niger Delta spill incidents (Wynne 1992; Jackson and Steingraber, 1999). The polluter pays principle encourages companies to address pollution in their immediate environment regardless of who polluted the environment to avert further impacts on the environment. As the principle was not adhered to, it resulted in several years of soil degradation that would takes years and one billion USD to address as recommended in the Ogoni region (UNDP 2011 report). The above principles are often not adopted by companies because it does not clearly state what actions should be taken when precautions are needed. This is one of the criticisms of such soft laws.

This research argues therefore that, regulators have a shared responsibility in ensuring environmental regulations are being complied with and in the resultant effects of non-

compliance in Nigeria. The questions that need to be answered are, 'why even after the negative environmental impacts catalogued have the companies not been decisively mandated to clean up the region?' and 'why was the polluter pays principle not emphatically applied? This is an international requirement though termed controversial with no clear definition (Foster et al., 2000). Today, the trend in global regulatory approach tends towards a risk-based approach therefore Nigeria needs a paradigm shift in this regard which could come from a rework of current regulatory framework.

2.7 Regulatory Terms

(a) Regulation

Regulations and laws are used by governments to manage the economies of their countries through investment, innovation, to open markets and increase competitiveness in business (Hantke-Domas, 2003). They are said to govern and protect the rights of citizens and aid in the delivery of public goods and services. Thus, regulations and their use can help improve the quality of life, social cohesion and the rule of law. However, they come at a cost which is often borne by both government and the people (Hahn, 1998; 2005). More of the costs to those whom the regulations are meant for, the regulated community who are compelled to abide by the rules and enabling laws. According to the OECD regulatory policy outlook (OECD, 2018), though governments are committed to regulatory quality which implies compliance and citizen inclusion in the law-making process, this has not always been so (one can therefore say) that non-achievement of meeting regulatory objectives is due to the traditional way of focusing on institutions and selected laws. This research seeks to focus on the enforcers of regulations and their ability to ensure compliance taking into consideration fast technological changes in the Nigerian oil sector.

Sustenance of economic growth is one of the key results of an effective regulatory regime thus, economic regulation as government intervention is often considered with great interest (Majone, 2002). Viewed critically therefore the presence of rules and laws must be applied in a fair and transparent manner to drive compliance as these rules will t h e n be readily accepted (Ernst, 2019). However, there is need for the laws to be enforced to achieve the purposes for which they were set in the first instance.

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The enforcers also must be committed to properly articulate implementation of the regulations. On the other hand, deregulation which implies fewer laws and government intervention, sometimes aid companies do more with reduced costs. That is, private enterprises with less government intervention are said to do better in competitive markets (Igbuzor, 2002).

Other authors have argued otherwise and claim that less regulation, reduces corporate environmental responsibility (Graafland, 3019). However, regulations are often not as simple nor as straight-forward as they are written from experience.

The collapse of Enron in December 2001 demonstrates that regulatory failures are not a problem with developing countries only. Reports question the role self-regulation plays especially when companies withhold critical information or do not give full reports as expected (Watkins 2003; Swartz and Watkins, 2004). Capacities of the agencies become essential in a fast-changing corporate climate. According to Barton and Barrera-Hernandez (2006), there is less confidence in negotiations and voluntary regulations like self-regulation hence the involvement of government and inter- government

initiatives. This was said to reduce costs for governments and increase competitiveness for companies thus making regulations more effective. Regulatory agencies are therefore now required to do more and innovate. Inter- government organizations like the Organization for Economic and Community Development (OECD) focused so much on reforms to help governments and member countries improve regulatory quality which brings about innovation and competition. These reforms in their simplest form was to meet the objectives of rights to a clean environment (OECD report 2005). The concept of regulation can be better understood by their various definitions.

Regulation can be defined in several ways depending on the chosen perspective and the person defining it. A general definition of regulation is that, it is a principle or law that is used with or without the coercive power of the law. Baldwin (2012) defined regulation as a way of government control arising from market failures. This definition was upheld by Mitnick, (1980); Majone, (1989) and Ogus, (1994). This definition arises from economic, legal and social perspectives. Selnick, (1985), however in his definition, defined regulation as a 'sustained and focused control exercised by a public over

activities that are valued by a community'. This definition appears to have been embraced by many scholars (Gunningham and Grabosky, 1998; Harlow and Rawlings, 2009). However, this research argues that, regulatory agencies particularly in Nigeria, do not have a focused control over the regulated because in the oil industry in Nigeria, the oil companies have the control due to their influence, financial and human resources. They even provide resources to government regulatory agencies and sometimes dictate or influence when inspection audits are to be carried out. This situation therefore negates the sustenance of focus or control on the regulated community as defined by Selnick, (2005). Furthermore, whereby other players apart from the regulated firm, influence regulations, as with the Oil Producers Trade Section (OPTS) a strong lobby group made up of oil companies operating in Nigeria, a deliberate state of influence is not achieved by the regulatory bodies which erodes the control and authority of any government agency. Because of the size of their operations and network, the OPTS, has evolved into a strong lobby group within the oil sector in Nigeria.

They wield their influence and are perceived to have easy access to the highest government authority including the President of the country and its Ministers. As such, sanction decisions by the regulators can be overturned. This lack of political will by the government and lack of control by the regulators therefore impact on the sustained focus on the regulated as regulators do not want to lose their jobs. Regulators have been known to lose their jobs based on professional decisions taken by them on the job. The Department of Petroleum Resources for example has had 11 directors within a space of sixteen years (1992- 2018). The frequent changes at the Departments' headship has not augured well for the independence and authority of the agency.

The OPTS is made up of twenty-eight oil operating companies in Nigeria concerned with protecting their business interests, including influencing regulations that may affect their operations and survival as a business entity in Nigeria (www.opts.com). Often, this body has the influence and political leverage in Nigeria to challenge and delay compliance to environmental regulations they deem too costly to comply with. An example is the discharge of produced water in sensitive areas in Nigeria. This regulation which can be found in the EGASPIN has been sparingly complied with when compared to what obtains in the North Sea and the Gulf of Mexico (GoM), (Nwosi- Anele and Illedare, (2016). The

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'fate and effect' industry-led study which seeks to establish scientific justification of the no-discharge zone is yet to be concluded. Similarly, despite the clear provisions as contained in Section 20 of the Nigerian Constitution which puts the responsibility of handling waste on the operators, non-compliance by operators shows a lack of regard for national environmental regulations in Nigeria. From experience as a regulator, regulations cannot be applied on an ad hoc basis if it is to be relevant or to the dictates of the regulated. So Selnick's (1985) definition is flawed in this regard as there is hardly any control over the activities of the regulated in Nigeria. Black, (2002) defines regulation as a sustained and focused attempt to alter the behavior of others to produce an outcome dictated by standards. Oil operators have not changed their behavior towards environmental compliance in Nigeria. Barton (2006) however states that regulation is a process used to alter behavior by restricting activities through facilitation and that without guidance, change would not happen. This definition is considered more embracing as the regulatory role is a process which continues if the activity in question is on-going. In this research therefore, regulation is termed as a facilitative and guiding process which can only come about through the expertise of regulators in a self-funding agency where accountability and transparency is its ethos. Thus, building on the definition stated by Barton et al (2006), this research defines regulation as a focused guiding of the regulated to achieve compliance. Regulation can be used to direct, manage or control the activities of a person or an organization. As a tool, regulation can be legal or non-binding. The study of regulation is interdisciplinary as it involves law, economics and social studies (Baldwin, Scott and Hood, 1998; Baldwin and Cave 1999; Scott, 2003). However, Glaser and Shielfer, (2003) assert that regulations came about because of political influence and lapses in economic efficiency. They further claim that regulations emerged because courts failed in adjusting to economic changes and were more discretionary. Present-day regulatory role however is based largely on discretion and regulators have also been seen to apply discretion due to the multiplicity of situations and applications. Some scholars have termed this type of discretion, 'incomplete law' (Pistor and Xu, 2005) while Posner (2008) claims decisions made by courts are uncertain. This therefore puts some burden on those who administer the laws or regulate and change behavior. Business activities impact on society; thus, the key purpose of regulation is to influence, regulate or correct activities for social and

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economic benefits. Governments at all levels must therefore work to ensure environmental negative impacts.

Regulations in the oil and gas sector are both social and economic as they work to ensure delivery of energy while ensuring government revenue is assured as per the agreement with operators. It is a public intervention which affects the operations of markets (Prosner, 1997). Other authors however have argued against this type of intervention (Vogel, 1996; Lev-Faur, 2008). They claim there should be no interference with market forces and markets should dictate business activities. In the research context however, regulatory functions are carried out by public agencies over activities valued by a country (Selznick 1985). These regulated functions are largely controlled by the government whom they represent. All fields of human behavior now apply regulations to guide, control and monitor human behavior, and are now said to be excessive. This has given rise to deregulation in line with market forces. However, the world's financial crisis of 2007-2009, especially in the Western world has seen more regulations created (Vogel 1996). Though regulations can be used to control monopoly, political influence is a factor not to be ignored especially when the stakes are high as in extractive industries like that of Nigeria. Excessive regulations as earlier stated however, gave rise to deregulation and more stringent regulations for example in the financial circle because of its impact on people generally.

Regulations are therefore set to give and set standards for uniform behavior and are said to be less expensive. Regulations are also better in determining rights as opposed to law courts (Sheifer, 2010). Littlechild, (1993) asserts that regulation is one of the most efficient way of protecting consumers against monopoly. In the oil and gas industry, monopoly does not arise due to the nature of the resource and the role of government in providing social services such as energy. In this thesis therefore, regulation is defined as a facilitating process where stakeholders work together to ensure compliance for the long- term benefit of all.

Critics of regulation (Revesz, 1997; Hahn 2004) claim that resources are best left if individuals act based on market forces. Stigler, (1975) addressed the risk of regulatory capture. The validity of this argument can be seen in developing countries like Nigeria whose focus is on development rather than the environment. However, the long-term

benefits of compliance with environmental regulations are often unquantifiable. Other critics argue the legitimacy of rules and the economic cost associated with regulations when compared to the calculated benefits with emphasis on the score card analysis method used by Hahn and Parker, (2003). Hahn (2004) however asserted that the benefits of regulations far outweigh the costs to government when the economic analysis is used in environmental policy formulation. Thus, without acceptable and appropriate pricing of public goods, for example, environmental goods, there will be no markets and the public will be left at the mercy of the rich and powerful (Ogus, 1994). Therefore, regulations are essential to address market failures and to produce efficiency (Stiglitz, 1982). Regulations can also be a burden on economic activities with regulatory institutions being too bureaucratic.

However, if there are no standards there would be no level playing field and no information to guide operations in the given environment. Regulation and its meaning do not often outline its intent in simple language, nor does it outline the process and that is a flaw. It should not be assumed that regulations are understood unless their intent is clearly outlined, and this requires expertise. This maybe one reason lawyers are often used to break down regulations for ease of compliance. The regulatory role therefore in this research necessitates expertise and a facilitating stance in regulatory functions. Regulatory governance is now the current trend in the application of regulations (Minogue, 2004; Lobel, 2012; Turker, 2012) and this is recognized by the author as a

better strategy. Regulatory governance challenges the assumption that regulators have superior knowledge and expertise. In Nigeria for example, new technologies are obtained from the regulated by virtue of their strong financial strength and home country support (Lobel, 2012). Attention to governance is considered a welcome approach by policy makers and the drivers of regulations. Governance forming part of the regulatory framework, should therefore be accountable for non-compliance. In defining regulation therefore, it is relevant to consider the country's sensitivities and sensibilities to have regulatory success.

(b) Compliance

In its simplest form, compliance is the response to regulation according to Fletcher (1989, p. 453). The dictionary definition states that compliance is 'the action or act of complying with a wish or command' (Wikipedia). It is acting in accordance with or the yielding to a desire, request, condition, direction; a consenting to act in conformity with; an acceding to something (Aronson, 2007). Compliance could be individually achieved or be said to be collective as in the case of firms. These definitions imply an agreement between two parties. It also means one party is perceived to be superior to the other as there is a goal set by a nominated party while the other meets the objectives. According to Aronson (2007), compliance attributes being flexibility and adaptability bring clarity to the expectations of the regulated which is not often mentioned in compliance discussions. Though the author's work is in pharmacology, these attributes could be applied in different settings. This is explained by the way regulations are expected to be implemented. In the first instance, compliance is a continuous activity. Secondly, the regulated should be able to adapt to changes in the laws which as seen, could be different from known norms. In science as with highly technological sectors, rules and regulations are usually derived from the outcome of operations or application of the new technologies. Dunbar (1981) in his argument, asserts that compliance is only accepted when the expected act is completed. This scenario is often different from what obtains in Nigeria as it may be argued that 'intent to comply can be taken as compliance'. Some operators in the oil industry in Nigeria, adopt this stand simply because, they have demonstrated intent to comply. Regulators are often perceived to be superior and to know more, as drivers of compliance by the regulated party. From a behavioral perspective, compliance is said to have many attributes which makes the two parties aligning in intent to achieve the desired outcomes.

To be compliant therefore, it is important to understand the intent of the regulation and the regulatory environment as this research argues that both intent and regulatory environment affect the way compliance is viewed and achieved. Understanding of the rules is key as this assist in developing strategies that will meet set regulatory goals and targets. Furthermore, as stated in chapter one, this research examines the interaction of persons with the law and the factors that bring about compliance to regulations in a given setting or country. Compliance with regulation therefore can be a measure of how

effective regulations are, though as argued by Raustiala, (2000), full compliance can be an indication of weak regulations. On the other hand, could the environmental regulations be too stringent for compliance? Most literature focuses on the inability to comply with regulations and the unwillingness of actors to obey rules (Borzel et al 2012: 456). This is not always true. Other studies talk about compliance through behavior change (Lange, 1999; Purdie and McCrindle, 2002). The author argues that compliance with the rules on paper are often different from what is seen in the field as can be said with the compliance methodologies of operating companies in Nigeria. Other studies of behavior towards compliance argue the way operators interact with the regulators which ultimately determines how they will be regulated (Reed, 2008). This research agrees with this conclusion as there is a relationship between the regulated and the regulatory agencies though it may be one party being superior to the other. In Nigeria for example, due to the funding situation and dependence on the regulated for certain resources, the regulated tend to determine audit dates and inspections. Pautz (2011) in her study however argues that trust must be inherent in these relationships to get good regulatory outcomes. Literature is limited in the way the above regulator/ regulated relationships are built and this research fills that gap.

In a purely objectivist approach, the circumstances under which compliance occurs is explained (Parker and Neilson 2011). The interpretivist approach which this research adopted is based on the methodology identified in Chapter one, compliance is considered as an ambiguous and complex activity. As stated in Chapter one also, the various perceptions of compliance and the motivation to comply can be used to explain compliance outcome.

Like regulations, compliance with regulations means different things to different persons and can be amorphous. To the man on the street, compliance indicates conforming to set rules as much as possible. Regulations are not absolute however, compliance with set standards tends to be specific with specific targets and does not often consider the behavior of individuals.

(c) Motivations that are shaping compliance

Compliance is often driven by motives and the several interests that firms may have (Burby and Paterson, 1993; May and Winter 2001; Guningham, Kagan and Thorton, 2003). Economic and social motives are reasons that firms may have to comply with regulations as affirmed by Levi-Feur, (1988); Tyler,(1990); Burby and Paterson, (1993). Other motivations include 'ability to comply' as well as normative motivations. Each motive to compliance is relevant especially when a company seeks to obtain approval and respect from their direct stakeholders (Braithwaite, 1989; Winter and May, 2001). This can be seen especially in Nigeria where operating companies operate near the host communities or when the image and brand of the entity is at stake. Apart from shareholder perceptions there has been increased demand for accountability and stewardship from the public in recent times. Furthermore, operating companies want to be viewed and accepted as corporate entities operating in a responsible way. However social motivation can be problematic if companies have been perceived as not complying with rules by regulators and their direct stakeholders or not meeting certain expected obligations in some cases. For example, in Nigeria, especially in Port Harcourt and Warri, towns in the Niger Delta, operating companies have company housing estates with 24-hour electricity and good roads while the rest of the town is left in darkness according to International Crisis Group (ICG, (2006); Human Rights Watch). This situation which can be observed to date set in motion tension between the operators and the communities which lingers to the present time. Social motivation should have prompted the companies to act fairly in the early days to avoid the environmental issues that developed in terms of soil degradation and pollution. Unfortunately, they did not, thus social motivation therefore does not align with the analysis of Scholz, (1984) and Braithwaite, (1992). Social motivation deals with the relationship in this case between the host communities and the operators. This motivation is expected to produce purposeful and goal-oriented social actions towards their hosts. Instead of social motivation influencing companies to comply with the laws as expected or be encouraged by host communities, the operating companies sought to influence high government officials as a means of manipulating regulations or sanctions when they arise.

      (i)   Social Motivation

A strong motivation for compliance is often socially induced. This is because of the value the said regulations are perceived to bring to the regulated. CSR is one such example. Environmental regulations meant to benefit the populace should also induce compliance because of the benefits but only if those benefits are understood and witnessed. However, environmental goals and objectives when not specific and clearly communicated, would lose any value and motivation would be lost as it appears to be in Nigeria. As earlier stated, Nigeria at the start of oil operations did not have properly coordinated and articulated environmental laws. Furthermore, regulations must be fair, cost effective and have legal backing for acceptance by the regulated parties (Hammitt, 2000; Posner, 2003). Environmental compliance in Nigeria remains sub-optimal because the regulators do not understand the complex interplay between motivations and compliance. They also may not be aware of the effect motivation has on compliance. That is, by being able to know the underlining motivations companies must comply, regulators can incorporate that information into the regulatory style to bring about enhanced compliance. According to Winter and May, (2001), it was posited that awareness of regulations, regulator style of enforcement drive compliance. Their study asserts that flexibility not force, or a coercive approach would yield better compliance rates. While the researcher agrees with this, social motivation has greater potential to bring about flexibility for enhanced compliance if there is understanding of how motivations influence compliance and the intent of the regulations. In Nigeria, the laws are mainly prescriptive so leveraging on motives to drive compliance can help regulators determine when to tighten the reins to make companies comply (Vogel, 2005; Neilson and Parker, 2008). These authors argue that most companies want to be socially recognized as good corporate citizens.

For instance, a company concerned about its brand as most companies are, can be threatened with making their non-compliance public to elicit better compliance from them. The researcher once used this method as a last resort when a company operating in Nigeria continued to seek waivers for non-compliance. There was no demonstrated plan to comply and this became quite awkward for the regulatory agency. This strategy worked and got the company to eventually comply with a long-standing environmental compliance issue. Had the pressure of going public being

applied earlier, the company being an international one would have complied as their motive was to appear as a responsible corporate entity! Furthermore, proper understanding of regulations by communities is helpful as they are often crafted in legal terms. If operating companies know that communities are aware of the compliance requirements, they may be socially motivated to comply to the environmental regulations that guide their operations. The social motivation would have been heightened because the communities would have been able to challenge their unsustainable activities. As a research respondent observed, 'the laws are there, but the companies do not want to comply'. This research argues that there can be flexibility in regulation when there is a demonstrated commitment by the regulated to comply with rules and guidelines with evidence of budget approvals and timelines signed off by both operator and regulator. This strategy has also worked with the DPR though it is not the best option as parties can renege on agreements. However, it is a move in the right direction. Thus, firms that may not have the financial capacity to comply with environmental regulations, giving them this consideration then become motivated to comply. As asserted by Gray and Scholz, (1991) and Braithwaite and Makki, (1991) firms who want to be perceived as good corporate entities, calculate their motivations to comply, and thus the normative and social motivation of compliance comes into focus. Therefore, knowing what motivates regulated entities at any given time during the operation cycle should aid regulators in driving compliance. This particularly applies in instances of retrofitting equipment for compliance purposes which occurs in most cases in Nigeria and other developing countries as environmental regulations may came after the fact as earlier stated. Social motivation however holds true if the said community hold the companies involved in high regard. Companies typically want to be recognized as being responsible but when the communities have no voice to express their grievances about environmental pollution, the social motivation hypotheses become flawed. An example can be drawn from a major oil operating company in Nigeria that discharged produced water in a 'no discharge zone' for years with the excuse that the waste-water was treated. The Nigerian regulation is very clear on expectations from operating companies, but this international oil company chose to discharge its produced water in-situ. Wastewater, treated or not, is a waste. Communities not

being aware of the internal treatment processes, would simply perceive this as an activity that pollutes their environment. And it would be reported as such.

Shell and ExxonMobil for example operate within proximity to host communities and are perceived to be better corporate entities as these companies tend to go a step further especially with respect to Corporate Social Responsibilities (CSR) programs. These programs are sometimes interpreted by the public as compliance with environmental regulations but a closer look at this reveals otherwise. The long-standing dumping of produced water in the Qua Iboe River in Eket, Akwa Ibom State in Nigeria, raises a lot of questions about the company's compliance commitment to environmental stewardship and business model. This argument is that, though the wastewater was said to be treated, the Nigerian regulators on regular planned audits had on several occasions reported the treatment equipment non-functional. The researcher had personally participated in facility audits where this happened. It took the company several years to construct a pipeline 8km outward from the 'no discharge zone' to meet the specific regulation as stated in the EGASPIN. This was a demonstration by the company towards complying with the 'produced water' regulation, though standard was not fully met. This situation went on for years because the locals lacked the capacity to understand and appreciate the environmental regulations and its implications. The host communities were therefore unable to link these unsustainable actions nor verify claims made by the company. At first glance, these companies may be said to be in total compliance with environmental regulations, but their compliance motivation is more financially motivated. It is therefore easy for companies to capitalize on the knowledge gap found in developing countries but under the guise of corporate social responsibility activities, be said to have a high compliance rating.

Furthermore, in the Nigerian context, oil operating companies, particularly the international ones, do not have reputational issues with their host communities and as such, the social motivation does not apply as damage has already been done to the environment. The involvement of Shell in Ogoni land and the resultant negative image did not motivate the oil giant to immediately initiate clean-up and restoration of the impacted region in Ogoni land. Rather, Shell, left events to spiral out of control.

The influence of social motivation can be said to be low or non-existent in Nigeria, while on the global scene, this was the driving force. The international backlash eventually made the company make promises to take up contingency measures and remediate impacted sites in and around their operational areas in Nigeria (www.spdc.com; Mmom and Igbuku, 2015). However, in the defense presented by Shell, there was no evidence of a clean-up certificate issued from the regulatory agency if indeed any was given. Shell would have definitely shown this as confirmation of the approval obtained from the regulators for the process used. Records within the regulatory agency however show that restoration work was carried out, though the methodology used was not approved by the regulator.

The normative theory as understood, is not applicable here as the oil companies in Nigeria failed in the first instance to do the right thing in complying with environmental regulations even when they were available. This then questions the hypotheses used by May and Winter, (2001) in their analysis. Oil and gas companies are expected to have corporate policies that require compliance with national laws and regulations and where this is not available, use globally acceptable oil field practices. There are also international conventions and treaties signed by companies who have international businesses away from their homes. These guidelines and laws often do not command compliance as these international treaties and rules are known as soft laws and are often voluntary (Hillgenberg ,1999; Boyle ,2006). However, the application of good faith and moral judgement may be considered to support such laws. International environmental laws are not enforceable, and the companies know this which explains why some international companies want to obey only national laws where available and applicable.

Hutter, (1997) on the other hand, recommends the use of formalism in motivating compliance as this would explicitly outline compliance expectations to the regulated community. Kagan and Bardach, (1982) however, argue against this because excess formality would tend to alienate the two parties. This research agrees to some extent with the two positions thus, a balance needs to be achieved by the regulatory agency as both the regulators and the regulated have the same goals. This common goal is

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expected to bridge shortcomings found in the above theoretical positions, which is formality and flexibility.

In compliance as observed practically, there is often a long-term relationship between regulators and the regulated therefore, any extreme formal stance should be avoided (May and Winter, 2000). Formalism in the Nigerian context would work if regulators are recognized and supported by the government they represent or by the power the statutes grant them. Also, the regulatory agencies should have full autonomy without depending on the regulated for any assistance to carry out their functions, as is observed. Regulators in Nigeria are not given full recognition, nor are regulatory decisions upheld because sanctions are frequently overturned by the 'powers' that be. It is observed that no regulator for example has been recognized with national honors despite the contribution made in the sector. Most are technocrats that have served their country meritoriously over thirty years in many instances.

In the downstream sector for example, oil marketers are businessmen and women who hire technical staff to run their businesses while they take all the decisions as sole proprietors of their businesses. They often have strong ties with top government authorities which puts a lot of pressure on the regulators in compliance matters. The dilemma faced by regulators who want to keep their jobs further erodes the authority on the regulated and this will be further explained in the chapter. Furthermore, in that the Nigerian regulators seek resources from the regulated, there is a disparity in maintaining a professional relationship with the regulated over time. This situation has been seen to facilitate regulatory capture where clear official lines of interaction are not defined. This brings about a lack of respect for the regulators thus the social motivation for the operator is further eroded to enhance compliance.

Social motivations have been established to enhance compliance with environmental regulations especially in developing countries, however authors like Winter and May (2001) posit that enforcement styles are key as enforcement in these countries has traditionally been based on the deterrent method. However, if awareness of the laws is recognized as relevant, then other non-deterrent methods must be used. This statement agrees with the study conducted by Winter and May, (2001; 2005). This

is because the compliance must be facilitated, and guidance given to the regulated in line with current trends in regulatory functions (Graham and Woods, 2006). Current regulatory trends look towards voluntary compliance and self-regulation, however, these styles cannot be sustained nor would it be possible to expand beyond a certain group (Andrews et al,2001).

In the Nigerian oil and gas sector for example, the industry has a wide mix of players. International oil companies, national companies and the downstream players consisting of individuals and businessmen and women who simply seek ways of making quick money arising from government policies. The crude oil import license and government petrol-subsidy regime comes to mind. Details of the import license requirements is detailed on the agency website, www.dpr.gov.ng for applicants. Facilitation of the regulator process therefore can only be done by an agency that has the expertise and knowledge needed to educate the regulated community to see the benefit and returns on the cost of compliance invested in their operations. It has been suggested that firms' financial considerations must be considered to drive compliance consistently (OECD, 1997; EIM/ENSR, 1995). This is however said to be more relevant for small businesses. When compliance is calculated as being too costly based on the size of the enterprise, there are push-backs as earlier argued by (Nijsen, 2003). This is because compliance often have hidden costs. Therefore, for a company to comply, they want to know and factor in that cost upfront. Being profit oriented, compliance cost is a key consideration (Nijsen, 2008). Regulations that are focused on sustainability and tailored to align with the needs of the regulated party becomes more acceptable and compliance is much easier (Thurik, Grilo and Audretsch, 2007). Research on regulatory compliance by companies (Braithwaite and Makki, 1991; Gray and Scholz, 1993) arrived at these same conclusions. These scholars posit that for profit -oriented businesses, cost of compliance is a key determining factor for compliance decisions and strategies thus regulators must be aware of this. Some big multinational companies still do not comply even when they can afford to. Their compliance style is to demonstrate a semblance of compliance. This will be discussed in this section under 'operating environment'. Furthermore, awareness and use of client's motivations for compliance by regulators is helpful for driving adherence to regulations. Thus, this research therefore builds on the

normative framework whereby compliance is done willingly once benefits are clearly seen by the regulated. A normative philosophy can be achieved if there is proper understanding of the regulations and utility value calculated to be more than compliance costs for the business (Stigler, 1970). The above arguments help to remove regulatory complexity which impacts on compliance.

(ii)   Ability to comply with regulations

Another motivation to compliance is the 'ability to comply' by the regulated as well as the implementation or monitoring capacities of the regulator. Motivation to comply by companies can be influenced by the fear of detection by the regulators which is their ability to monitor and detect defaulters. Compliance as earlier indicated is not complete until regulatory implementation steps towards compliance have been established. Several processes are involved in compliance therefore the 'ability to comply' can be assessed and measured if needed. This motivation is therefore applicable to both the regulated and the regulators. As can be seen in the Nigerian context, the environmental status in Nigeria as said earlier, is an indication of poor implementation of the regulations as well as lack of monitoring and the audit capabilities of the regulator (Ugochukwu and Erte, 2012; Konne, 2014). This variable which can be termed capacity strengths has been highlighted by the theoretical framework used for this research as being central to compliance. This gap has also been mentioned in the OECD 2000 report on Third World countries, where capacity gaps were found inherent in a national company. A lack of technological tools and financial resources that match that of the operators is a key government challenge (Markell and Glicksman, 2014). Other factors include governance and human resource disposition especially with the aging workforce currently experienced in the Nigerian oil sector. As argued by Gunningham (2009), and as seen by passage of the Governance Petroleum Industry Bill (GPIB), governance which deals with how resources are allocated to the regulatory role, in the environmental context can no longer be overlooked. Governance also involves fairness and transparency in the regulatory role. A recent audit of the Nigerian National Petroleum Company (NNPC) showed

lack of capacity of the staff. Though this study was not on the regulatory agencies however, most of the core DPR staff started their career with the NNPC. They were the staff of the Inspectorate which domiciled within the NNPC before they were pulled out to be part of the Ministry of Petroleum Resources. The monitoring capabilities of the regulatory agencies could also be attributed to the rapid growth in the sector. At the start of oil operations in the early sixties, there were only six international companies operating in the country. This has grown to over 90 companies including the indigenous oil companies (www.dpr.gov.ng).

Though the 'ability to comply' cannot be directly measured unless one has full information about company budgets and staff competencies, the indicators are usually derived from defaults in compliance over time. Organized workshops and joint audits between regulators and operators in Nigeria, highlight the lack of understanding of environmental regulatory requirements by industry contract staff involved in field activities. The United States Environmental Protection Agency-US-EPA (EPA 305-F- 09-

1) through its reforms has recorded improved compliance by educating the regulated on its expectations and this strategy can be widely used to improve compliance to environmental regulations globally. In a highly technological sector like the oil industry, where the best personnel are employed, it is critical that regulatory intent and outcome is understood. Furthermore, innovation is continuous thus regulations and compliance strategies should match these changes to keep pace with emerging technological advancements in the sector.

Other variables that influence compliance behaviors and motivations include fear of detection and sanctions. Though company budgets can be estimated through work programs and company annual reports, the capacity of the regulated and the regulator can only be inferred in the case of the Nigerian oil industry through performance of compliance and effectiveness of the monitoring capacity of regulators. Most regulatory oversight agencies in Nigeria have personnel that started their career as

freshmen without prior knowledge about oil and activities. Staff have never seen a rig or engaged in field activities prior to their being regulators nor do they have any knowledge about oil exploration and exploitation. This is because personnel are pooled from different educational backgrounds to learn on the job. They learn on the job and with such varied backgrounds, linking field activities with regulatory outcomes and functions, sometimes prove tough. Short training is provided however, this has been proven not to be enough to bridge the knowledge gap when compared to the regulated who are multinational companies with higher funds and training budgets.

Regulatory functions are multidisciplinary in nature; however, the Nigerian regulator is expected to compete and match the expertise of the companies who use Subject Matter Experts (SMEs) in their operations. Apart from understanding global oil and gas business and having some knowledge about oil exploration, there must be passion and commitment for the job as regulators. There is currently a huge knowledge gap in the oil industry as older hands retire therefore capacity challenges will be expanded. This dearth of capacity and core experience which has negatively impacted on the oil sector will be heightened as regulatory agencies struggle to train staff in the emerging innovation for the sector. Thus, if the regulator is perceived to lack the requisite skills and knowledge to police the industry, there is often no incentive by the regulated to comply or go beyond meeting the minimum regulatory requirements.

(iii)   Economic or material motives of compliance
          Economic or material motives as identified by Kagan and Scholz, (1984) are typical of profit- making entities therefore, oil companies whose business has huge financial outlay can be said to be economically motivated when faced with compliance decisions. However, if compliance with the said regulations can be demonstrated to have clear benefits, compliance will happen because compliance costs will not be a financial burden that must be avoided. Therefore, regulators must be able to deliver the values of compliance to the

companies, especially in Nigeria, if compliance is to be increased. This is because, compliance is seen as an added and hidden cost.

Environmental compliance usually involves added operational cost often not considered nor accurately calculated at the conceptual stage of field development due to changes in design or unexpected operating conditions like change in location or policy. Furthermore, exploration and production teams are often made up of engineers who have limited knowledge about the relationship between safety and the environment or how production waste can interact with the environment to impact negatively on water, air and the soil. It is often at the review stage that this comes up especially when the environmental teams are not involved in the conceptual review of the project. Some environmental impacts are observed long after operations stops. Some companies operating in Nigeria have been seen to store drill waste for years because the environmental impact of drilling was not timely factored into their project delivery. Simply, dumping the waste at treatment facilities as recorded in the Nigerian oil industry, is not enough based on the 'cradle to grave' principle. Waste involves, collection, treatment and final disposal to meet regulatory requirements with all stages involving costs. Environmental impact takes years to manifest so there is push back when these requirements came up after operations started in Nigeria. Operations continued for several years without laws, thus it was not fully anticipated or welcomed by the operating companies. From the researcher's experience as a regulator, when the synergies and links between oil exploration and the environment are explained to the oil operators, and the intent of the regulations put forward, the economic motive sometimes changes to a normative motive. That is, acceptance of the laws as legitimate and complying with the regulations as the right thing to do. It should be recalled that environmental regulations and consciousness came into force in Nigeria well after exploration activities started about thirty years after, so one can argue and

conclude that the oil companies in Nigeria as a profit making entity did not have a calculative motive (Winter and May, 2011). Nielson and Parker (2012) on the other hand, argue that economic motive aligns with the rational choice theory of compliance which calculates the consequences of compliance (March and Olsen,1998; p949-950). In Nigeria, there are no serious consequences for environmental non-compliance as can be seen by the many years of gas flaring in the country. Remediation of impacted land across the Niger Delta region has been uncoordinated or minimal over the years (Aigbedion and Iyayi, 2007). No company to date has had its license revoked due to environmental non-compliance. There are currently no public non-compliance notices by the DPR on their website. This would have demonstrated transparency to the public. This is despite the massive degradation in the Niger Delta region. Furthermore, at the start of oil exploration, the impacts of non-compliance were not easily visible, however, the negative impacts continued over the years resulting in the UNEP report as illustrated (UNEP Report, 2011). Toxicological testing though was conducted on water bodies and the soil in nearby vicinities by operating companies, negative impact was never concluded in those reports until the Ogoni report came out, UNEP report (2012). Companies never admitted to the fact that their operations impacted on the environment until recently. The country largely relies on research conducted by the academia and not until in the 1980s were stakeholders including the academia became involved in oil business post- Koko incident in south west Nigeria as highlighted in chapter one. Scientific evidence of the effects of non-compliance with environmental regulations by the regulatory agencies would have changed economic motives held by most companies operating in Nigeria. This has not happened, due to funding constraints. Therefore, oil companies have set motives and behaviors and these are driven by cost. Mitchell, (2005) in his study of compliance in the Climate Regime project, confirms that flexibility by the regulators can alter the logic of consequences and appropriateness for long-term compliance.

However, this change can only be aided by firm demonstration of intent to comply by the defaulting companies. One could argue further that the calculative position of oil operating companies in Nigeria is in line with the logic of appropriate norms and behavior (March and Olsen, 1989). This statement is consistent with profit making organizations. A closer examination of the Joint Venture (JV) contracts in Nigeria, which is based on agreed terms of cost sharing in oil field development often finds the Nigerian government defaulting on its cash call payments which is government 's share of its investment with the operators. Compliance with environmental regulations is often delayed because companies cite this as an excuse as environmental considerations are not calculated early in the field development plan. Economic motivations as a valid theory, does not in this instance favor compliance. Regulators who drive compliance need to understand these motives and know how this position can shift through being aware of relevant operational information to prevent stalling of compliance longer than necessary as in Nigeria.

(iv) Normative motives

It is argued that normative motives of compliance acts on the moral judgment of the regulated (May and Winter, 2001). This motive focuses on the individual doing the right thing or acting in an appropriate manner (March and Olsen 1989). Normative motives are often identified with groups that have an identity as one can relate to oil companies. As alluded by Wenzel (2007), the oil companies would fit into such a group as they are a separate and easily identified group in this context. However, the motivation to have a sense of duty or to be honorable in doing the right thing, that is comply with environmental regulations, was absent in the early days of oil exploration in Nigeria. There could be several reasons for this as group norms are not always aligned (Gezelius, 2002). The Islamic fanatics chose to kill though killing is not an established Islamic teaching. In practice, the respect for laws and legal

authorities and accepting the laws as fair all contribute to normative motives for compliance (McGraw and Sholtz, 1991; Levi, 1997). According to Sutinen, (1998), normative motives align with the ideological philosophy of the regulated entity. Tyler (2006) further states that the regulator must be a legitimate arm of government instruments in enforcing the law. He argues that with legitimacy established, the focus of the regulated will no longer be on the laws but on constituted authority. In Nigeria where there is no collaboration between the different government regulatory agencies, which puts a question mark over agency legitimacy, thus there is not much respect for the regulators. Therefore, the focus of oil operators is on the laws and how they can be complied with or not. This confirms Tyler's (2006) argument which claims that perceived legitimacy encourages compliance. Considering the recalcitrant behavior of some operators, one questions how much respect there is for national rules and the regulatory agencies in the country. Normative motives are also associated with internal values or the brand value businesses carry. While these theories may apply in developed countries, the absence of knowledge and appreciation for environmental dynamics and how they can influence or enhance better living for the populace, aids non-compliance particularly in a country that needs revenue for development. Thus, the companies can easily mask or change the motives for complying with environmental regulations. In Nigeria, it is the social and economic motives for compliance that are visible when compliance with environmental regulations are considered. Whatever the motive, it takes an experienced regulator to use these motives for compliance and harness the same for compliance. However, according to Frey (1997), it is difficult to uncover compliance motives as these are not often external. Compliance motives help to understand why and under what circumstances companies are more prone to comply which the research attempts with undercover.

In his study to examine the different compliance motives of businesses, Neilson and Parker, (2012) found that most businesses demonstrate several compliance motives but the most intrinsic motive is the economic motive which ties in with most business models. Coglianese and Nash, (2006); Guningham, Kagan, and Thorton (2003) however argue that despite the motives identified above, some companies go beyond and over comply. Evidence suggests that the above argument is true in highly competitive environments and for companies with strong international brand image. However, there are variations to this truth as will be explained later. This research argues that free health checks and community-based end of year activities are more CSR activities than environmental compliance activities. Global companies in developing countries use these CSR activities to promote their brand as an environmentally responsible company. Some of such highly visible activities like drilling bore holes to provide water for a remote community can be miss-interpreted to mean compliance with environmental laws by the communities. Other companies comply where their actions can be very visible publicly while key environmental regulations are left or ignored. For example, some international oil companies in Nigeria, fail to apply for a drilling permit while they have complied with every other requirement (DPR internal compliance records). This is a paradox difficult to explain. Finally, compliance motivation may be influenced by size of operation, location of operation, like country or region and capacity to comply as stated by one of the respondents "the small sized mum and dad companies that do not understand the implications of the regulations are not likely to comply unless under the threat of sanctions". Multinationals comply in their home countries but may comply selectively in remote areas like in the Niger Delta regions of Nigeria or in the Amazon where the regulatory framework is weak. These locations need special logistics arrangements. Several motives have been established for enhancing compliance with environmental regulations especially in developing countries. Availability of laws, ability to comply, enforcement style and sanctions in addition to economic and material motives (OECD report, 2011). Regardless of the motives, compliance motivations can be shifted or changed depending on the regulatory style and regulatory environment in question. Compliance motivations are as varied as the situations studied and are perceived differently by the parties involved. The normative motive therefore is not one that drives compliance in Nigeria, however evidence suggests that it can be a driving force in compliance if such regulations are fair, transparent and strong institutional regulatory

frameworks are in place. This research argues the use of regulators to address this gap. Not only rely on legal and institutional

2.8 Compliance Concepts and Theories

There are two main models of regulatory compliance; the rationalist model is the deterrence model which attempts to change behavior and punish non-compliance (Kuperan and Sutinen, 1999). They however argue that, only one side of compliance behavior is shown in the deterrence model in their study of fishermen This change in behavior is achieved through the logic of behavior which is by calculation of the consequences and appropriateness (March and Olsen, 2004). These consequences are in terms of fines and sanctions. Actors in this instance, consider the different consequences to an action before they comply (rationalist approach with compliance). They consider the appropriateness of actions to be taken by individuals or firms to comply based on the legitimacy of the set rules as the normative approach would. The normative stance considers what is right and morally acceptable instead of self-interests. These assumptions do not consider the actors mandated to ensure such compliance. While the rationalist theory focuses on deterrence and enforcement, the normative approach seeks ways to assist the firm to comply. It is based on the normative theory that this research attempts to extend to the compliance theory. The research questions developed and detailed in chapter one first seeks to confirm the adequacy of regulations in the first place and then to understand the firms' understanding of their obligations. This researcher believes it i s the responsibility of the regulator to ensure and enhance compliance. Though regulatory frameworks consider the available relevant rules be obeyed and the regulatory bodies elected to carry out the regulatory role, not much mention is made of the regulators, the principal actors in the framework. This research therefore fills this gap.

The two theories can be applied to both international and national regulations. This is consistent with the command and control (C and C) regulatory style used in Nigeria. The normative model, which is collaborative in nature, seeks to prevent non- compliance by assisting the regulated to comply. This research seeks to further the compliance debate on the normative model based on the conceptual framework developed earlier. In the

Nigerian oil sector, both models are used because the regulator collaborates with the sector especially regarding environmental regulations which came long after oil exploration started in Nigeria. The fact that the country depended primarily on oil revenue, it was important to see it succeed. The regulator was initially part of the national oil company, NNPC. This arrangement therefore saw the two stakeholders working very closely together. And at the time and until recently, it was said that 'oil must flow'. The rationalist model which aligned with the command and control (C and C) regulatory framework however has not improved compliance, going by the environmental records of the country. This is because, regulatory style has always been reactive, confrontational and hard (Sparrow 2010). This model and regulatory style was inherited from the early days of colonization which was mainly prescriptive. The form of rules was long winded words known to be repetitive, and prone to several interpretations. In some instances, parts of the regulation were contradictory, and this saw many companies meeting minimum standards.

Another factor that can be assumed to contribute to the disregard for compliance in the country could be that the oil companies at the inception of oil exploration in Nigeria had a clause in their agreement which made renegotiation void (ICG 2006). This in the long term, although protecting their investment, gave the IOCs a much greater protection than was necessary. It could therefore be argued that this type of investment assurance may have contributed to the companies not paying attention to environmental policies in the country.

The normative model of compliance is therefore based on the logic of appropriateness as suggested by March and Olsen (1989). The law is in this instance, perceived as just, fair and appropriate. Aryes and Braithwaite, (1992) however argue that regulatory design must address specific issues thus when they are not delivering the intended purpose, there is need for reforms. Braithwaite, (2002) further maintains that how the regulated behave gives an indication of assessing the effectiveness of current regulations. However, Sheehy and Feaver, (2015) argue that focus should not only be made on why the regulations are formulated but on the behavior of those to be regulated as each component is dependent on the other. They further assert that the relationship between the identified attributes would help the regulatory design. This research agrees with this as the assumption that regulations would automatically bring

about compliance is not valid. This is because the acceptance of the law is essential as can be seen with traffic laws. The implication of non-compliance is very evident. One could argue that, international oil companies have more awareness of the risks associated with non-compliance as these laws were imported from developed regions. The influence of the other factors needs to be taken into consideration. Issues like culture, politics and the operating environment would all influence behavior towards compliance especially when operating in a new environment. In Nigeria for example, economic considerations are deemed to be the overarching factor therefore a gap in the normative model. Whereby the companies maybe said to want to comply, the government at the time was more interested in the economic fallout from oil exploration. Therefore, it is argued that the behavior of oil companies operating in Nigeria changed as there were no envisaged consequences of non-compliance. Thus, behaviors that determine appropriateness of consequences should drive compliance (March and Olsen, 2011). This position in the literature throws more light on corporate behavior regarding compliance. What is missing is regulator behavior and agency set up. According to Lunderburg (2013), and his 'goal framing theory', there is need to account for multiple motives rather than a single motive. Most companies have different reasons for not complying and this research argues that in addition to the already identified motives as stated above, the model should include the regulators themselves. All the factors or compliance variables interact and as such compliance prediction is difficult to calculate.

2.9 Implementation and effectiveness of Environmental regulations

'Regulations are only as effective as their implementation'. This phrase was repeated several times by most research respondents. The relevance of any law or regulation is dependent on its effectiveness as also stated by Allot (1981), when laws are viewed in isolation, the consequences of non-compliance may not be seen as serious as they should. Non-compliance with environmental regulations can have multiple effects sometimes not directly related to the regulation, like the breakdown of law and order in the Niger Delta region (Ohwona and Okiriguo, 2017). While regulation is to control economic activity especially where there is market failure or its likelihood, this research argues that its implementation is key to its effectiveness (Breyer, 2009). Some authors however argue against this type of intervention (Vogel, 1996; Lev- Faur 2011, 2012;

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Stigler 1975). Stigler (1975) for instance states that resources should be left to entities competing in normal markets due to the cost of regulation, the time involved and the possibility of regulatory capture. He further argues for the minimal role of government in the regulation of property and regulatory regimes. Cantor and Parker, (1994) argue that regulations do not adjust for agency differences. This research agrees that differences in agencies have the tendency to overburden the regulated community as seen in Nigeria. For example, the Environmental Impact Assessment (EIA) requirement needed for new projects by several oversight agencies is one requirement demanded by all the agencies rather than having a single reference point (www.dpr.gov.ng). Companies operating in the Nigerian oil industry therefore carry out different impact assessment studies to suit each agency rather than one study being accepted because each agency has a slightly different mandate. This adds extra costs to the project timeline and the implication is that due to delays some operators do not carry out the study but source reports just to get their permits. Moreover, once the permits are obtained, these EIA reports are never referred to until much later when there is pollution or a query. In effect, the purpose of the regulation is not fully met. A way to correct this is to ensure the regulators are aligned in their requirements and recognize the submitted study, provided it addresses their individual concerns. The differences in the mandate given to these agencies do not align with the overall regulatory goal, therefore each agency demands that the EIA study be carried out under their specific guidelines. However, government needs to set up institutions so regulatory implementation could be aligned across the identified agencies. Moreover, how these agencies operate, and their funding should be independent of government to give the regulators the full authority and power to regulate. The above argument buttresses the claim by the public choice critique of regulation because it asserts that actors seek to advance their own interest rather than the interests of many. Regulated companies tend to mount pressure on the regulators which leads to regulatory capture (Stigler, 1975; Carpenter and Moss, 2013). This is when permits are delayed. Regardless of the position taken, regulations have come to stay. For example, environmental regulations are necessary as clean air and water are not often priced in market transactions because they are termed public goods (Portney, 1994; Wu, Babcock 1999).

Deregulation contrary to some, has in fact brought in more regulations due to the services that are delivered by some players especially in Nigeria. The downstream sector in Nigeria is deregulated. This has not reduced the use of regulations to control their activities rather, because of the very wide characteristics of the players involved, more regulations have been laid down to sanitize the sector. What is at play, is the different types of regulations adopted by society and they include self-regulation. It is therefore assumed that the implication and intent of environmental regulations in Nigeria are understood and fully accepted and endorsed by the sector. However, the level of environmental degradation particularly in the Niger Delta region shows a different picture. The regulators whose mandate it is to ensure compliance have come a long way since the early days of oil exploration and exploitation in Nigeria as far back as 1958. Considering the rapid growth in the sector, it would now appear that there must be change in the regulatory strategy if the benefits of environmental regulations are to be achieved in Nigeria. The effectiveness of any regulation can be measured but how the regulated comply and meet the regulatory requirements is another question. The compliance methodologies of companies have been seen not to be very transparent. Some authors believe that companies readily comply with regulations when there is a high likelihood of detection or if there are stiff sanctions for defaulters (Stigler 1970; Miller and Anderson, 1986). Easy detection of non-compliance is not applicable in the Nigerian context due to resource shortfall. Regulators in Nigeria lack the ability to independently carry out spot checks as required therefore detection of violations is hindered. When detection capabilities are low, companies tend to relax, and this affects the monitoring of the implementation of the regulations by the regulators. This situation has thus impacted on the effectiveness of the laws. Waste management and handling of oil field hazardous waste in Nigeria are carried out in remote areas of the country where helicopters and special vessels are needed to access these areas. None of the regulatory agencies have this resource so they depend on the regulated for passage. Apart from the awkwardness of this situation, this facilitates regulatory capture (Stigler, 1971). When the operators arrange passage, they also use the time to window dress their operational facility to mask or cover non-compliance. This peculiar situation has contributed to some long-standing environmental compliance issues in the Nigerian oil sector.

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Other environmental non-compliance issues include the 2002/ 2005 effluent discharge requirement as stated in the EGASPIN (See Appendix B). This guideline stipulates 'Prohibition of produced water and water-based drill cuttings/ fluids discharge into onshore, nearshore and zero-discharge zone (defined as areas less than 12 nautical miles from shoreline and greater than 200ft water depth. Due to non-compliance and scientific justification of this rule, a 'fate and effect' study was initiated in 2009, seven years after the requirement was communicated to the industry. This study however had a lot of funding challenges due to the estimated cost and budgetary bottlenecks from the Joint Venture (JV) partner, in this case the Federal Government of Nigeria.

In a joint industry meeting, between the DPR and the industry, to review produced water discharge situation, the response and position from the operators, represented by the OPTS, stated that, 'the current compliance solution requires huge cost and time to achieve. Furthermore, international practice and scientific studies by industry demonstrate minimal environmental impact'. This was held as an excuse to defer expenditure for compliance. See also the paper co-authored by the researcher and Exxonmobil in 2012. Please see Appendix E. This study was hurriedly put together after the company was indicted of non-compliance with the zero-discharge requirement in the zero discharge sensitive zones in the country. This compliance methodology will be further discussed in chapter five.

The above position statement by the OPTS was considered a huge blow to the regulatory authority in response to the non-compliance status continuous discharge of water-based drilling mud in the no discharge zone of the country. Non-compliance with environmental regulations in Nigeria by the operators appears to be more normal than not. However, it can be assumed that the regulator not being able to carry out independent monitoring assessments in line with their mandate, gave the oil operators the confidence to make the above statement. The photos below show a waste management facility in a remote area of Nigeria, without proper facility set up as the floors were not adequately prepared. Waste oil can be observed seeping into the nearby environment. Due to the remote location of this facility, it is difficult for the regulator to track their operations in line with standards set up by the regulatory agency. Furthermore, waste collected from oil operating companies in this facility for treatment have been found dumped in the nearby environment (Ayotamuno et al, 2002). Other similar facilities are routinely used by oil

companies operating in Nigeria on the premise that they carry the official 'license to operate' by the DPR. No other due diligence is carried out on the waste facilities which further poses a different type of challenge to the industry and the environment. Some unscrupulous vendors obtain the 'permit to operate' but with no functional facility. The oil companies use them without confirming the capabilities or physical equipment owned and operated by the companies they contract to carry out this sensitive and important work of managing their waste. The highlighted companies, upon getting a contract from an operating company, simply turn around and dump this waste thereby impacting the environment. However, based on the principle of 'cradle to grave' which puts responsibility on the owners of the waste, lack of due diligence by the operators makes

the environment suffer a massive impact.

Figure 8: An operational waste management facility in Nigeria (Source: Photo by Researcher during Field inspection, 2015)

These photographs show total disregard of the conditions issued by the Department to operators of waste management facilities. This particular location is so remote that the regulators were alerted to its presence by the communities. Access was not easy for the regulators. However, upon request for a drilling permit by the company, photographs were taken and fully reported to the department. The following photo showing seeping of oil from the waste facility into the immediate adjacent environment.

Figure 9: Oil pollution from waste facility into the environment in Nigeria (Source: Photo by Researcher during Field inspection, 2015)

The above photographs show a clear case of operational non-compliance which cannot be blamed on the operators entirely. Before any facility can operate in the oil and gas sector in Nigeria, several requirements must be in place, as outlined in the DPR provisions for such facilities. This facility discovered by DPR staff on another field inspection with obvious non-conformity to the laid down guidelines demonstrates the typical challenge faced by the regulator and the attendant impact such slips have on the environment and the host communities. There, are several other facilities which may not be in the records of the department, but which are being used by operating companies in their daily operations. Therefore, with such an indictment on the regulator, it weakens the regulator's authority and calls into question how effective the agencies are to monitor and implement their regulatory roles. Therefore, in examining the effectiveness of regulations, one must consider the motivation and intent of the regulation and most importantly, how these regulations would be monitored for compliance. The regulatory implementation processes and the outcome of compliance must all be taken into consideration as compliance must align with the goals set by the regulations.

2.10 Enforcement of Environmental Regulation

Enforcement can be defined as the set of activities used by the state or its competent authorities to ensure that the regulated comply with laws and regulations and who can be prosecuted through civil, administrative or criminal justice (www.inece.org). The dictionary defines enforcement as 'the process of making sure that people obey something such as a law or rule' (Cambridge dictionary). Enforcement ensures that the regulated community implement and meet their obligations in order to achieve the set goals as articulated by the government. This is more so if behavior change is expected. It also implies a continuous activity by the enforcer which could be by giving information and assistance. Therefore, one can technically say there is a relationship between the regulated and the regulatees (May and Winter, 2005). This research therefore refers to the various actions adopted by the regulatory agencies as enforcement processes in order that the regulated become compliant. Enforcement actions include but are not limited to inspections and audits, warnings and sanctions (May and Burby, 1998). However, a distinction is made in the agency strategies and inspector style. In Nigeria for example, the enforcement style is based on the command and control philosophy adopted via the first set of regulations which are principally prescriptive in nature. Thus, each regulator would have a style of enforcement which is based on inspector background, training and values. As earlier noted with the varied background of regulators employed into regulatory agencies in Nigeria, enforcement styles are likely to be regulator based rather than agency based. Kagan (1994) posits that agency disposition which involves, its responsiveness, formality and legal application of the rules all have an impact on the enforcement approaches used by its officers. However, these positions are not as clear and as distinct as implied by the two authors (Kagan, 1994; May and Burby, 1998).

Similarly, there is another philosophy which can be adopted to ensure result-oriented compliance which is different from rule-oriented compliance (Shover et al, 1984; Reiss, 1984). This research argues that, enforcement style or approach cannot be fixed but must be multidimensional in approach (Grabosky and Braitwaite, (1986). This position is taken by the researcher, essentially from the discretional nature of regulatory functions and the formal administrative nature of regulatory agencies. Enforcement

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measures are therefore necessary with the current increase in environmental problems globally. In agreeing with May and Winter (2001), stricter enforcement is needed more so when the necessary compliance assistance has been provided. Strategy is more pertinent with the trans-boundary implication of the environmental impacts recorded around the world. One such impact can be seen in the effects of climate change. Therefore, enforcement efforts must be regionally based with regional data and information sharing.

Most oil activities occur within the Niger Delta region with its vast mangrove and fish population making the area one of the most ecologically diverse regions of the world (Amnesty Int'l 2009). Shell is the largest oil producer in Nigeria with about 32,000 square kilometers operational area. Many of its pipelines are surface ones and within range of homes and swampy terrain. There are special logistic arrangements needed to get to most of the locations. The regulators do not as at April 2017 have the capacity to visit and monitor operations in these areas without full passage from Shell. Yet they are expected to regulate activities and monitor operations in all oil and gas facilities. Such monitoring deficiencies does not aid compliance thus the case of sanctions does not even occur. There are currently different approaches that could be adopted by regulators and this depends on the philosophy of the said agency. If they are flexible enough to leverage and partner with other oversight agencies or on the communities in the area it will give vital information to the regulators. A trend of no sanctions makes the agency appear weak as is perceived of the DPR.

With this insight, effective regulatory enforcement and strategy is needed in the Nigerian regulatory space to ensure compliance. Enforcement can be effective not only by laws but by ensuring that the cost of non-compliance is higher than not taking action to comply. The question of 'rule compliance' and 'outcome compliance' is central to the position taken by this research. When a review is taken of the sanction styles used in Nigeria, it becomes worrisome that agencies are more focused on the rules than they are on the outcomes. This is because, despite the several regulations and statutes in the country, environmental degradation remains an issue and will continue to be so unless the effectiveness of the laws in ensuring the objectives of the rules are put in focus. That is, more focus to be given to 'outcome compliance' which produces results.

Furthermore, review of international environmental laws (Appendix D: international conventions) does not give much promise either as this is principally based on recommendations by member countries that sign into the agreements reached. Signatories to the treaties are not obligated to comply with the said laws. In Nigeria for example, these laws have not helped the country because according to Orji (2012) they have not been ratified by the National Assembly. He further argued that the Nigerian constitution does not clearly guarantee the rights to a healthy environment for its people. For example, the World Charter for Nature (WCN) is concerned with pollution prevention and remediation should it happen. These international laws have never been enforced in Nigeria because they are not enforceable but assist judges take decisions when there are international disputes. However, company's attention could be drawn to them and depending whether the said home country is a signatory, enforcement based on moral judgement can be used. Thus, the weakness and limitations of the international agreements.

Most international law instruments are soft laws (Dupu, 2013) which are not legally enforceable and do not impose binding agreements on signatories. These international laws are contemporary laws that aid multilateral relations especially when there is cross boundary pollution. They try to regulate and serve as a watch dog for international oil corporations around the world especially those who operate outside their home country. The relevance of these laws in national environmental matters is thus limited. The oil companies know this and so act strictly in line with what is available in-country. In Nigeria, where environmental regulations came long after oil was found, it made the situation complex even more so as the government was more interested in revenue for the country's development. However, in 1997, the OECD established guidelines known as the Declaration on International Investment and Multinational Enterprise (1976) but this soft law document lacked enforceability and scope to allow use or pass as an international environmental regulation. It could be argued that as the guidelines were mere recommendations by member countries because these countries saw them as voluntary rather than legally enforceable laws. Therefore, it is the responsibility of those who own the environment and those with the mandate to regulate activities that could impact the environment that can ensure compliance with available national laws.

Effective enforcement measures are also now necessary given the increasing environmental problems which have transboundary implications. The offshore and deep offshore operations in Nigeria readily come to mind. To this effect therefore, enforcement efforts are best when there is regional cooperation and information sharing.

Though this has been highlighted earlier to breach the personnel gap in the oil industry, the strategy of regional cooperation works when partnerships include the universities and Non-Governmental NGOs (NGOs). As observed in Nigeria, the resources to carry out independent scientific studies come to mind. NGOs can act as the voice of the communities provided there are no other vested interests. For example, the East African Network for Environmental Compliance and Enforcement (EANECE), helps to link fifty government agencies in Africa for sharing experiences and best practice across the sectors. Nigeria, with several oversight regulatory agencies in the oil sector, could create such alliances for enhanced compliance to set environmental regulations in the country. Such collaboration could fill personnel gaps and resources currently lacking in effective monitoring and enforcement.

2.11 Sanctions

As defined by an Italian author, Forlati Picchio, "A sanction would be any conduct that is contrary to the interests of the State that serves the purpose of reparation, punishment or perhaps prevention and that is set out in or simply not prohibited by international law" (Decaux, 2008). Sanctions can be defined as acts of punishment of an offender with the aim of enforcing regulations. They are used when non- compliance with rules and legal obligations are recorded. Though complex in concept, sanctions remain the main tool used in deterrence for wrong and unacceptable acts. There is currently limited explanation of how and if sanctions work as a deterrent because known assumptions appear to give different outcomes. However, in the context of the Nigerian oil industry, being a mono product economy, sanctions are not often used. Where they exist, they appear as a slap on the wrist due to the gross inadequacy of the proposed penalties.

For example, under the Petroleum Act, defaulters are said to pay N100.00 (USD 0.62) or six months' imprisonment paid to the Federal government as fines as issued by the DPR. Similarly, the penalties for gas flare are not punitive enough to be called sanctions

as they have failed to end gas flaring in the country to date. Companies rather pay the fines than spend money to retrofit or obtain the technology that will address gas flaring. Therefore, sanctions must be costly and be economically not an option to be paid by defaulters. Traditionally, legal scholars advocate sanctions as a means of inducing compliance (Tyran and Feld, 2006). Offenders are said to be deterred by sanctions and it is assumed that its effectiveness is directly proportional to its severity (Schwartz and Orleans, 1967; Polinsky and Shavell, 2000). This assumption is based on the premise that people as rational beings, calculate the costs and benefits of breaking the law. In the Nigerian oil and gas industry, the sanctions for non- compliance are so low that companies rather pay than put in place steps to comply. Others who oppose this view (Sunstein, 1996; Posner and Rasmussen, 1999; Posner, 2000), however argue that non-deterrent methods also produce compliance. This position is opposed as there is no empirical evidence to support this (Scott, 2000; Adler 2000).

The right to a healthy environment is a fundamental human right and is now guided by regulations. However, as can be seen in most cases of environmental liability, damages against environmental damage can be problematic to apply due to the duty of proof (Boyyay, 1974). In examining the preventive effects of sanctions on offenders, Glaser (1964) posits that prison terms for example do not reform prisoners regardless of the term served. According to the results of his study, most offenders were recidivists. This interpretation can be related to the downstream sector in Nigeria where monitoring is a challenge. Therefore, regardless of how many times filling stations are sealed for regulatory infractions, there will always be that operator that will be willing to take the risk of being sanctioned. This is despite the occasional unannounced inspections and station closures which are made very public (www.dpr.gov.ng). This situation therefore questions the deterrent effect in changing compliance behavior or conforming to the norms of society.

2.12 Operating Environment

Compliance with rules and regulations can be influenced by the region of operation or circumstances of the activated norm. Environmental regulations in Nigeria were derived from the developed and established oil regions like Norway, United Kingdom (UK) and the United States of America (US). These imported regulations based on scientific

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approaches have been in use in these regions for many years. However, the IOCs/operators in Nigeria question the transposing of these same regulations in Nigeria as no actual field studies were carried out in-country to determine their full applicability. For instance, the 'precautionary principle' which advocates caution when in doubt of the envisaged impacts that may arise from actions yet to be scientifically evaluated should be followed. Therefore, the above argument by the IOCs is not tenable.

To buttress this argument, a paper co-authored by the researcher points to the way's companies defend their compliance status as earlier mentioned. This study was carried out by an operating company when the DPR challenged their continuous dumping of water-based mud in designated 'no discharge areas'. Environmental impacts often take years to manifest depending on the impact components. With water- based muds which have been classified as having low toxicity, the objection raised by the department then was imminent change in sea bottom environment. The ocean floor is home to diverse benthic and fauna species and Nigeria is being ranked 5th in eco-diversity. Therefore, this continuous dumping

of water-based mud was a major concern. One could argue that approval issued for the study by the DPR endorsed continuous discharge. However, with the information available at the time and the technological gap inherent among the operators and regulators, some lapses are bound to occur. This study outlined in the above paper is faulted based on the duration of impact identification. See Appendix E for a copy of the SPE paper on drilling mud discharge.

Similar situations abound in regulatory practice where the technological advantage of multinational companies influence regulatory outcomes which negates the purpose of environmental goals and objectives especially in developing countries. This capacity gap has been identified in literature through studies such as those conducted by the OECD (2000a and 2000b). Based on this observation and the direct experience of the researcher, it therefore becomes necessary to note that operating environments do have an impact on regulatory and compliance outcomes.

2.13 Summary

Today, regulations will only become more stringent as technology and information evolve in today's global village. There will therefore be no room for complacency by

companies operating in environmentally sensitive regions. It is only a matter of time before social licensers demand more than available regulations do. This can however happen if all stakeholders, particularly the regulators, pay closer attention to the vulnerability of the environment and work with host communities and grass root people to ensure environmentally sustainable activities by oil operating companies. It has been generally believed that companies meet regulations when there is a very high likelihood of detection or stiff sanctions for defaulters (Stigler, 1970; Miller and Anderson, (1986). In Nigeria, though the laws are there and well spelt out, the inability of the regulators to independently carry out spot checks, creates a situation where detection of violation is limited. Non-compliance with regulations are usually by repeat offenders, depending on the company as most companies do not report non-compliance in Nigeria. Evidence suggests that the use of deterrent methods (command and control), without the detection capabilities of the regulators, negates the regulations. This research attempts to highlight the ways the current regulatory framework can be reviewed to address the compliance levels in the industry across the value chain in the oil industry in Nigeria. This approach will ensure that environmental non-compliance is no longer prolonged as is currently the case with the 'produced water' regulations which came into being in 2002. For example, the East African Network for Environmental Compliance and Enforcement (EANECE), is an initiative that seeks to respond to environmental enforcement challenges across Africa (Dill and Kopsick, 2014; Pink and Bartel, 2015). It is a regional cooperation that helps link fifty government agencies for sharing experiences and best practice across the African continent. In Nigeria also, and with several oversight regulatory agencies in the oil sector, this model could create such alliances for enhanced compliance to set environmental regulations in the country. Such collaborations could fill personnel gaps and resources currently lacking effective monitoring and enforcement.

Environmental regulations are currently extensive in Nigeria as confirmed by Ogunba, (2016) and by majority of the research respondents. The country however lacked environmental regulations for the oil industry years after oil exploration started though Nigeria had signed on to several African environmental conventions. Some of these included the African Convention on the Conservation of Nature and Natural Resources (ACCNNR, September1968); Convention for the Protection, Management and

Development of the Marine and Coastal Environment (June, 1985; Convention on the Ban of the Import to Africa and the Control of Trans boundary Movement and Management of Hazardous wastes within Africa (January, 1991) and others. This apparent lack of focus on environmental concerns could be traced back to the colonial days when the interest then was to secure access to the natural resources of the colonies and promote trade in order to facilitate the economic growth of their home countries (Brastspies, 2015). This situation has not changed much as most oil companies are profit driven and so additional costs to meet environmental obligations often bring about a push back.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology and methods used in this research. The research approach is further explained as well as all steps taken during the data collection process. It presents the rationale for adopting an 'empirical inductive qualitative approach' (Strass and Corbin 1990) which was deemed most appropriate in answering the main research questions from chapter one. According to Byrman (2005), the different schools of thought i.e Denzin and Lincoln (1994); Miles and Huberman (1994); Marshall and Rossman (2010) state that the multidimensional nature inherent in qualitative research must be taken into consideration when carrying out data analysis. Mostly used are systematic approaches of inquiry involving rigorous data collection and analysis. In this constructivist approach therefore, Strauss and Corbin (1990); Creswell, (2009); Denzin and Lincoln, (2011), rich data reveals participants' thoughts and feelings, intentions, and actions as well as context (Geertz 1973). This chapter highlights the primary strength of the research approach used which helped in exploring the topic in- depth (Glenton and Carlson; 2011).

Methodology discusses the links between qualitative research and empirical legal research as it is now used. This chapter furthermore justifies and explains the criteria for participant selection in detail. The approaches used for data collection and data analysis are outlined in this chapter while issues like bias and credibility are further highlighted. The researcher's ethical considerations are also described. Semi- structured interviews consistent with qualitative methodology were used in this research (May, 2001; Whiting, 2008). This research carried out an evaluation of official documents from the lead regulatory agency in Nigeria (the DPR) as well as a critical review of industry and academic publications related to the topic under investigation. Meeting proceedings from the agency were also reviewed. These documents were reviewed when as a regulator during my job as the head of the environment unit at the department. A selected case in which both the regulator and the operator worked together to shift compliance was used to demonstrate how compliance through collaboration between the regulator and the regulated enhanced compliance to regulations in the oil industry. This chapter explains the research methodology (design and philosophy), methods, the research participants, and other issues such as ethics and preliminary data analysis.

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3.2 Research Methodology

(a) Research Methodology Design This research is mainly qualitative in nature but also involves a large degree of empirical research. Empirical legal research as the name implies, and as argued by Reverz, (2002); Cane and Kritzer, (2010) is not only about reviewing legal documents but how people interact with the laws, based on several factors which must be considered in empirical research. This research, accounts for variations and factors that can create bias, insights from several and different groups of players which were sought rather than approaching answers to the research questions from one group. Reverz (2010) claimed that as judges in giving judgment were often influenced by their political ideologies, researchers must be innovative and note the dynamics of situations when conducting empirical research. This research as earlier stated, is not about interpretation of the laws and regulations but focuses on how the Nigerian oil industry reacts to environmental laws and statutes, also on the regulator and company environmental stewardship. Thus, empirical legal research came into focus when it was discovered that the outcome of judges' court decisions were based not only on strict interpretation of the laws and legal requirements but on their understanding of the laws, which is often influenced by the judge's social background and political bias (Baldwin and Davis, 2003; Ruger et al, 2004).

The above reasons subsequently changed the way legal research is currently perceived and how it is applied to research. Some authors claim that theoretical models can now be tested empirically so the law focuses on real life public policy and social psychology. For example, Flores (2017) in his study, showed that policies are more likely to influence behavior while other authors have proposed that punitive laws can shape people's attitudes. This chapter considers the approach that supports the research philosophy design and approach. It also discusses specific methods used in data collection that enabled the researcher to elicit specific information from the participants as related to the research questions. This research does not seek general information about the current status of compliance with environmental regulations in Nigeria, but instead focuses on determining the cause of perceived low compliance levels. It also attempts to further understand the factors that contribute to compliance and non-compliance specifically. To achieve this therefore, the compliance methodologies of some companies

were investigated. To empirically provide answers to the research questions as highlighted in chapter one therefore, specific persons in the oil sector in Nigeria were sought. The sampling strategy used in sample selection was explained; data collection steps taken; data management, data interpretation, analysis, and research bias are further presented in detail later in this chapter. The main research question used in focusing this study was "Why does compliance to environmental regulations by oil and gas companies operating in Nigeria appear sub-optimal despite the plethora of laws, regulations and guidelines that currently exist.

(b) Research Philosophy

A research philosophy can be defined as the way new ideas and reasoning can be constructed or structured from older concepts in a way that will be accepted as the truth. Guba, (1990, p.17) puts philosophy as a basic set of beliefs that guide actions. Sanders et al (2009) define research philosophy as "the development of knowledge and the attributes of knowledge." In other words, can this "new" knowledge be tested, and can it be accepted as the truth? It is generally understood that areas which relate to this research are based on the philosophical stance of the researcher and so deal with how reality is viewed (ontology). Furthermore, research philosophy also relates to how this knowledge is acquired (epistemology). Thus, the position and understanding of the researcher on what can be real, guided the choice of methodology used for this research. According to Guba and Lincoln (1985), 'new' knowledge must be verifiable, and a relationship should be established between the known and the unknown. In reflecting on the chosen philosophical stance therefore, the chosen methods focused on the research questions and the phenomenon under investigation (Holden, and Lynch, 2004). The background of the researcher and the reasons for undertaking the research are also considerations in the chosen methodology.

The research philosophy of this study thus assumes that new knowledge can be constructed from a systematic review and interpretation of people's experiences (Patton, 1991; Al-Tinay and Paraskevas, 2008). This phenomenological approach studies how people view their experiences and the interpretations that can be given them. Smith (1998) argues that an interpretivist philosophy uses the philosophical stance of the research and research queries the low levels of compliance to

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environmental regulations by oil and gas operating companies in Nigeria. This constructivist philosophy, Lincoln and Guba (1985) formed the basis of methodology choice and considered the way reality is viewed and knowledge acquired and that there can be many truths. As stated by Sofear (1999) qualitative research methods are valuable in providing a rich description of a complex phenomenon. This inquiry then calls for the experiences of players in the sector thus requiring data collection through interviews and the interpretation of these experiences to bring about new knowledge that was not there prior to now. Another assumption is that unanticipated questions arising from the research can be answered due to different perspectives and realities of world views or philosophies. This interpretative approach argues that it is only through a subjective interpretation of people's experiences that reality can be known (Schwandt 2001 p.296). It follows then that the analysis of this data, after interpretation in an acceptable manner will reveal new information that will answer the main research question.

The said philosophical stance is important as it helps the reader better understand why and how the research is conducted to answering the research questions (Denzin and Lincoln, 1994). Therefore, knowing the assumptions taken by the researcher aids acceptance of the study by the reader. Thus, philosophical assumptions otherwise known as paradigms (Lincoln and Guba, 2011) can be broadly classified into four areas; what is real (ontology), what is relevant, the values new knowledge holds and lastly, how these are obtained (epistemology). All these through qualitative methods are said to shape the narrative interpretation of spoken words.

The above philosophical position used within the empirical legal framework was necessary to understand the way laws and regulations were perceived by the oil industry in Nigeria. It is emphasized that the environmental laws themselves are not under review in this research. Rather, it is the way people react and relate to the various factors of compliance.

The purpose of empirical methodology and analysis also lies in the explaining and in the support of causal inferences of the phenomenon under study (Pearl, 1995). This research therefore adopted the use of a qualitative approach in answering the stated research questions and the specific information needed on compliance levels observed in the Nigerian oil and gas sector. The concept of compliance under review also

necessitated further understanding why compliance levels are so low in Nigeria when some of the companies operating in Nigeria are coming from regions and countries such as the United Kingdom, the United States of America, Norway etc. that have zero tolerance for environmental unsustainable practices and operations.

According to Denzin and Lincoln (2003), the systematic method of data collection and interpretation will allow better insight into factors that drive compliance and how regulators can bring about better compliance in each sector. To reach this conclusion of using a qualitative methodology therefore, it was important for the researcher to reflect on the paradigm to be used in gathering this knowledge as philosophical awareness and reflection increases the quality of a research such as this.

 The chosen inductive interpretative paradigm which is termed "belief systems" by Guba and Lincoln (1985) guided all the steps taken by the researcher in this study as it is mainly exploratory and explanatory in nature. But as argued by Chalmers (1999), a paradigm is not a philosophy by itself until it can be applied to social science theory. Traditionally, the ontological and epistemological position of the researcher influences her choices by the way she sees the world and reality (ontology). The researcher's perception of new knowledge (epistemology) also enables better understanding of the chosen methodological steps and decisions (Burrel and Morgan 1979). Research philosophy also considers the relationship between the researcher and the phenomenon under study (Guba 1990 p.18). In this research, the researcher's ethical bias and professional background contributed to the frameworks (both theoretical and conceptual) that this study is based on. This position therefore suggested the use of an interpretative method of exploring and seeking new knowledge about compliance. This stance assists in the exploration of new insights without imposing or bringing prior knowledge as a regulator to the research (Black,2000).

Being part of the phenomenon investigated, the researcher tried to be objective though this was difficult at the start of the research. However, her position enabled her gain access to some restricted documents and helped in understanding better what the interview participants were saying during the interviews, as argued by Wolcott (2008). Therefore, the chosen philosophy by the researcher had some influence on how the research study was designed and carried out in answering the research questions. This philosophical position helped the researcher in aligning the assumptions made while

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investigating the studied phenomenon. The accepted theoretical assumptions through the chosen philosophical position helped focus the lens through which inquiry is investigated. Having assumed the regulator as a key part of any regulatory framework, this study focuses on the regulator and not on regulations or institutions.

This epistemological position embracing new knowledge interpreted from people's experiences is far different from the positivist reasoning that acknowledges only a single undisputable truth based on facts. According to Schwandt et al (2007), the justification of knowledge therefore is one that is inductive and interpretative in nature. There are several truths depending on how interaction and human activities are interpreted. It is one where reality can be interpreted in several ways depending on the perceptions and professional background of the researcher to uncover underlying events as it relates to compliance.

Lincoln and Guba, (2000); Schwandt, (2007) further posit that the chosen constructivist approach can give several truths depending on the enquirer. These 'truths' can then be presented as facts. Though this position has been challenged to be subjective and socially constructed through interaction, the identified patterns and behaviors can be used to determine truths. For this research therefore, the choice of using qualitative research methodology was informed by the specific information needed on regulatory compliance with regard to environmental regulations in Nigeria and the need to understand better how compliance and regulations are perceived by 'managers' in the oil sector in Nigeria.

A preliminary review of compliance documents showed that some companies and managers see the need to comply while others do not. What factors drive the decision to comply and how the companies comply all need to be understood to appreciate why current levels of compliance are observed in the Nigerian oil sector. This phenomenological approach as stated by Patton (1991) brought on deep reflection by the researcher as she worked as a regulator at the start of the research. This is because she was part of the phenomenon studied doing the research. The context within which each participant "experienced" compliance was critically examined and reviewed as objectively as possible by the researcher. Preliminary investigation showed that non-compliance by both the international and marginal field operators, to environmental

regulations continue to plague the oil and gas industry in Nigeria and indeed all economic sectors that have government agencies monitoring their activities. In this light therefore, this research hopes to develop a practical framework that addresses compliance elements not explicitly found in the literature and its challenges and then proposes recommendations that will see a positive shift in environmental compliance. The systematic nature inherent not only in data collection but in data management and interpretation of textual materials makes qualitative methodology accepted in many cross disciplinary fields (Lincoln and Guba 1985; Miles and Huberman 1994; Lincoln 1995). Some scholars have however argued its lack of merit due to the use of people's experiences and not facts to create new knowledge (Merriam 1998; Denzin and Lincoln 2003). Though subjective in nature, use of interview accounts give better insights into people's experiences than review of documents alone. Therefore, the qualitative approach from the above considerations was judged the best methodological approach.

3.3 Research Methods

(a) Justification for Qualitative Research Methods

The purpose aims and objectives of this research were carefully reviewed to enable the researcher to decide on the most appropriate methodology to be used. As the research is phenomenological in approach (Patton 1991), (namely, understanding the meaning of people's experiences as earlier stated) it means therefore that arising from the reflective and philosophical awareness of the researcher, the qualitative approach seemed best suited for this study. The researcher agrees with the basic idea that as words describe our reality and the experiences of people are conveyed through spoken words, meaning can therefore be created in a convincing way (Lincoln and Guba (1985); Maykut and Morehouse, (1994).

Though assumed to be subjective in nature, reality is what each person perceives it to be (Schwandt, 1990, 2007). The researcher's belief is that knowledge can be derived from making sense and giving meaning to people's experiences and perceptions. This made the use of carefully selected participants apt as used in qualitative methodology for enquiries such as this (Kahlif et al 2008).

Furthermore, qualitative methods are often used to explore meanings of social behavior as recounted by individuals who have experienced the phenomenon directly (Miles and

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Huberman, 1994). Therefore, reality in this context can be socially constructed (Bryman, 2016). This is reflective of the development of knowledge, which must be tested with the ability of this knowledge being transferable (Maltend, 2001). Schanaiberg (1977) do not however agree with the transferability of qualitative studies especially in the medical field. They argue that validity and relevance of results are more important. Mays and Pope (2000) on the other hand maintain that results from qualitative studies can be transferred just as in quantitative research but in a different way and suggest triangulation and documentation of the methods used clearly explained and outlined. Triangulation as asserted by Bryman (2004) establishes credibility to a study using an independent way of confirming data obtained in each research. This research aligns with Bryman (2004) and to demonstrate validity, has selected an actual case to show the outcome of regulator collaboration in compliance. This researcher agrees with the assertions that interpretation of meanings can be transferred beyond the context in which studies are carried out. With the chosen framework and in line with the research objective, if the same methodological steps are followed, the meanings from this qualitative approach can be transferable. The worldview of a social constructivist philosophy then implies that reality can be constructed and is characteristic of qualitative methods.

Quantitative research methods on the other hand, use large representative or random sampling which allows for probability testing (Creswell 2002; Creswell and Creswell 2017). As opposed to quantitative research methods, the sampling strategies used in qualitative study uses purposeful (Patton 2000) or theoretical sampling. Location is not totally controlled and there is no hypothesis testing in qualitative research. Both methods are very different, and this is one of the fundamental differences between the two methods. Another key difference is that while quantitative methods are stepwise and pre-determined, qualitative research is flexible and iterative (Meadows and Morse, 2001; Myres, 2011). According to Byrne (2001) and Fossey et al (2002) findings from qualitative research are not viewed as facts but as descriptions situated within a given context. Therefore, qualitative methods have a wide applicability. They are rich descriptive narratives of a complex phenomenon which is not often totally understood. This is not so for quantitative research which deals with facts that are often verified to be exact.

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During this research, it was found that in conducting analysis in qualitative research, the researcher was better off having good and thorough knowledge about the subject matter to be able to retrieve information that is relevant and key to the inquiry. Total objectivity in qualitative research is often a topic of debate amongst scholars (Frank, 1997; Ahern, 1999). Generally, there cannot be complete objectivity in research therefore, in qualitative research, there is a need to be open and sensitive to the data collected and to always acknowledge one's bias. Often this bias cannot be fully accounted for but must be stated clearly. At the start of this research, working as a regulator, required me to shift my bias into a more distant role to appreciate the feedback from the chosen respondents. The distant position adopted was further aided by the researcher heading a different unit away from the Health, Safety and Environment (HSE) Unit in the department. The new unit, which was the Public Affairs Unit, furthermore, gave the researcher a bird's eye view of the stakeholder's perception of regulators and direct access to feedback from the various stakeholders in the industry. Given that qualitative research does not test hypothesis, nor does it try to control variables, one major strength is that the use of qualitative methodology brings different perspectives in a complex social inquiry.

A critical setback of qualitative methodology, however, is that external factors cannot be reconstructed so those influences cannot be measured. For example, there were fewer regulators in Nigeria in the early days of oil exploration and the influence it had on regulatory compliance cannot be measured when seeking meaning in people's experiences. Similarly, the effect on the number of operating companies at the time of people recounting their experiences cannot be measured. These are factors that may have impacted the way people viewed and experienced compliance.

(b) Chosen Research Methods

According to McNeil (2006), and Patten and Newhart (2017), research methods are steps and processes used in conducting research while methodology refers to the whole process and the reasoning behind the choice of methods used (Bryman,1984; Guba and Lincoln, 1994; Mason,2006; Babour, 2013). The choice of methods used lies within the theoretical and conceptual perspective of the research and context of the inquiry (Denzin and Lincoln, 1994). This approach does not restrict the choices made in the way the social phenomenon is examined. However, Bryman (2004) cautions that this may not be so. In arguing for using more than one method, validity, of the study is helpful. This is because social experiences are often multi-dimensional thus having several perspectives to a problem can be useful. The research methods include grounded theory through an inductive approach of review of documents, interviews and use of an example to illustrate a collaborative effort between the regulators and the operators which helped in securing compliance positively (Rubin and Rubin 1995; Scholz and Tietje 2002).

In this research, the semi-structured interviews in which questions were asked of participant's experiences was done using a dedicated phone recorder. The use of the phone rather than a tape recorder made the interview process less formal as the phone was discreetly placed on the table unlike journalists who typically use a tape recorder. The respondents were however informed about the recording in line with the Robert Gordon University (RGU) graduate school guidelines. The interview setting was also informal, away from an office and location agreed with the research respondents. This made the participants relaxed, however this did not in any way make the interview exercise less important. Attention was paid to the tone and expressions of the participants and was noted in the researcher's journal. The relevance of noting this was to capture emotions and the true feelings of what was being said. Though interviews were informal, it was necessary to maintain some level of seriousness in the discussions. Though feelings cannot be quantified, it brought depth to the spoken words. The interviews were later transferred onto a mac laptop and later to the cloud for easy playback and transcribing without loss of content. It was very important to be able to secure the content as was recorded and immediate back up was done with the original recordings kept in a safe place.

The recording of the interviews on a dedicated phone, afforded the preservation of the raw data and there was no interference with the researcher's personal perspective (Flick 1999). The recordings were transcribed in a structured manner as recorded (Kowell 1995). There were several interactions with the data by the researcher through several play backs and listening before actual transcription to enhance familiarity and reliability of the transcribed material.

Thematic content analysis (Anderson, 2007; Talmy, 2011) helped in capturing unexpected words and phrases and this helped the researcher explore further those emergent themes. Observation notes were kept but found not to be useful as they gave no real value to the analysis except in buttressing spoken words. The observation of emotions helped the researcher appreciate more the feelings the participants brought to answering and relating their experiences. There were several reviews of industry documents by the researcher while she was still in service which helped in accessing specific non-compliance instances in the industry. The researcher also had access to compliance registers and company reports sent to the lead regulatory agency in Nigeria-DPR. A review of the above reports was primarily to obtain official compliance information holistically in the oil industry in Nigeria. One such document which clearly showed a company's inability to comply with environmental regulations was the "waiver requests" sent in by operating companies for produced water dumping in restricted areas as detailed in the Environmental Guidelines and Standards of the Petroleum Industry in Nigeria (EGASPIN). The "waiver application", sought justification for not complying with the given environmental request and requested a time frame within which the said regulation would be complied with. Though not often admitted by the companies, these waiver approvals were maintained for years without committed efforts to comply and without recourse to the environment (www.dpr.gov.ng)

To further illustrate the role of the regulator in promoting compliance, a carefully selected collaborative example was used in this research and will be discussed in the next chapter. In line with Yin (1994) this method helped in giving more understanding about compliance which in this case was within a given context and location.

The chosen example on compliance achievement presented, highlighted an actual instance where regulators interacted with operators in a long-standing non- compliance issues in the oil industry in Nigeria to transform compliance levels positively. It is worthy of note that there are several other instances of non- compliance like the moribund 'produced water' industry study which is yet to be addressed positively.

Another approach used for this research was a review of global accident reports emanating from regulatory non-compliance in the oil and gas industry in line with the above chosen research inquiry. An example is The Deepwater Horizon incident (Macondo incident 2010) which happened in the United States Gulf of Mexico which this researcher critically reviewed to establish the role regulators played before and after the incident. The key reports reviewed include the government report. This review was carried out to highlight if any of the factors (or lack of), contributed to compliance with laid down requirements on the offshore location. The decision to analytically review this document was to reduce researcher bias while conducting this research. As argued by Yin (2014), different data sources provide a variety of information which can be further verified. This strategy helped in external validation of the research (Golafshani,2003) and in establishing credibility of the research (Bryman 2004). This is an independent way of confirming results obtained. The result of the review is presented in the analysis chapter. Thus, the use of more than one method of data collection helped in strengthening the study and gave in-depth understanding to the emergence of themes (Dey, 1993; Bryman and Burgess, 1994). This further supported the empirical approach which aims to explain variations observed in the data and inferences seen which are related to the research topic.

3.4 Research Participants

(a) Categories of participants

According to Yin (1998), selecting several and diverse participants gave the much-needed variety of sources and varied information on the phenomenon that could be investigated in an acceptable manner to derive new knowledge. Participants were not randomly selected (Silverman 1993) but selection was deliberate and purposeful (Patton

1990) as the intent of the research was to gather specific information via perspectives and people's experiences on a given subject matter. This research did not seek general information but perspectives in compliance to environmental regulations as stated in chapter one and as indicated in the research questions.

The selected interview participants were mostly involved in environmental or related activities in the field, had over 10 years' experience in the industry and most held positions of authority in their respective organizations. They also participated in field inspections and audits, close out and debriefing meetings after contingency and drill exercises with the DPR. Some represented their companies at industry meetings while others were the owners of the companies. It is noted that some operating companies were owned by businessmen who had no technical background though they employed experienced staff with the right experience to run the company. The OPTS as a group was not interviewed rather individual members of the groups whose opinion reflected the overall perspectives of the OPTS as the individuals had held various positions within the group or headed sub-committees within the OPTS organization.

Their perspective was valuable as the views from individual members of OPTS represented the man in the street. This deliberate strategy was to ensure richness of data and reduce bias as much as practically possible. The OPTS secretariat directed the researcher to the individuals of the group as they advised these persons would have the technical knowledge needed to answer the research questions.

Apart from having knowledge about the industry, another assumption was that selected individuals had a genuine concern about the environment and would like to ensure better compliance for the protection of the environment which would enhance the image of the company they worked for. It was noted that some selected participants had changed positions from the time they were identified and the time the interview was conducted as is normal in organizations. Though unusual, this further gave richness to the data collection process as same persons were able to bring different perspectives into the discussion by virtue of their re-deployment within the company. As it was established that the researcher was very familiar with the topic researched and the activities of the companies under study, it helped in developing a seamless and expert interview process Gummessson (1999). The crafting of the questions enabled the participants not to see

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the interview as another work meeting but as a discussion between two experts, therefore they were relaxed and not pressured to say what the researcher wanted to hear (Weiss, 1995). This is particularly useful in interview methods such as this to reduce the bias and influence the researcher may have on data collection.

The credibility of the research was seen from the selected participants who were mostly middle and top-level managers with vast experience in the industry. The participants needed no favors from the researcher thus they were positioned to give their honest reflections with reference to environmental compliance and the research questions asked. Some had played dual roles in the industry for example, two participants had played the role of operator and regulator at high levels while others had held the position of operator and service provider. Interviews were carried out with the following participants and in the categories as the table indicates below.

Table 4: List of Participants (showing categories and years in industry)

Participant Codes	Role	Category	No of Years in
RR032	community rep	Community	>40
RR030	Financial	Community	>15
RR029	offshore rig personnel	Operator	>15
RR028	Commercial	JV/Govt	>20
RR027	Ex-Regulator -DPR	Regulator	>35
RR026	E & P Sub-contractor	Service Contractor	>15
RR025	E & P Operator	JV/Op	>20
RR024	E & P Operator -Exxon	JV/Op	>15
RR023	E & P Operator -Exec	JV/Op	>25
RR022	Head HSE	Marginal field operator	>20
RR021	Head gas Shell, Ex- Director DPR	Operator/Regulator	>30
RR020	Head Legal Unit DPR	Regulator	>20
RR019	Ex ED ExxonMobil – Exxon	JV/Op	>35
RR018	Ex Shell/MFO	Marginal field operator	>30
RR017	Contractor/Service Provider	SC	>10
RR016	ExxonMobil – government interface	JV/Op	>28
RR015	HSE mid-management Staff	MFO	>15
RR014	HSE staff	Regulator	>20
RR013	Shell - HSE Lead	JV/Op	>20
RR011	CNL – Head HSE	JV/Op	>20
RR010	CNL – Engineer HSE	JV/Op	>10
RR009	Ex-NNPC (now waste management owner/contractor)	JV/Op	>40
RR008	Environmental Consultant	JV/Service Contractor	>15
RR007	Lawyer (Exxon Mobil)	JV/Op	>15
RR005	University Prof	Academia/Community	>25
RR004	Regulator	Others	<10
RR003	Student/intern	Others	<5

(Source: Generated by the Researcher)

(b) Selection of participants

The criteria for participant selection which was to achieve a specific purpose is detailed earlier in this chapter. They were selected mainly because of what they know about the industry or were assumed to know as well as gather what would be credible, therefore it adhered to the purposeful sampling techniques of Patton (1990, p.184); Gantt and Collingridge, 2008). The main rationale for participant selection was because the personal and professional experiences of the individuals selected aligned with the conceptual framework of the research. Their experience and exposure to the studied phenomenon made them most suited as participants for the research. Furthermore, the positions held in the different companies and their HSE background also made it possible to gather relevant and valuable information about compliance with environmental regulations in Nigeria. Specific knowledge about the industry in terms of operating with environmental guidelines was the focus of the research. The wide range of perspectives obtained from the respondents facilitated the analysis of the data gathered via the interview process. This method as well as other information gathering, and document review methodology helped in providing a logical account of the phenomenon which in this study is compliance with environmental regulations in the oil sector in Nigeria.

Criteria for the chosen participants were predetermined by the researcher based on the research questions and on the earlier pilot interview to ensure that only those with relevant information about the studied phenomenon would be interviewed. The developed criteria included: ten or more years in the oil and gas sector in Nigeria, (b) position held in their company, (c) experience and expertise in the industry. The last consideration was subjectively determined by the position the selected participants held in their companies and their years in employment. It was difficult to assess expertise, however, as the interview was not to evaluate their technical competencies, it was concluded that the determined criteria were adequate. The interview process was primarily to enable the chosen participants recount their experiences and for the researcher to gain insight into their perceptions about regulation and compliance. The

management positions held in their respective companies enabled them to give better understanding of company decision making processes and the reasons and factors that contributed to their company's compliance decisions. Some research respondents were able to give some historical background of the way regulatory functions happened in the past. This was considered useful to this research as the relationship between the regulators and the regulated was also sought by the researcher. Thus, the strategy used here assisted in providing a convincing account of the observed phenomenon which was deemed very important for this research as the researcher could be called to question even after she left service (Curtis et al 2000).

This research is relevant as it provides the current status from key stakeholders, of compliance in Nigeria which can be used to understand what is going on in other oil extractive countries especially new ones and those in transition. It is also useful because the empirical data used in this research would aid policy formulation in the oil and gas industry. There was a careful review of the criteria developed for research participant selection, however this strategy did not come without challenges. As will be seen in the table showing details of the research respondents, some interviews were conducted offshore in the field.

Some participants did not have the expected knowledge about the subject matter as assumed at the time of their selection. For example, a top management staff member of an IOC did not have much knowledge about the subject matter and gave very sketchy and general answers to the posed questions. She was selected because she was top management and often represented the company in compliance meetings when non-compliance occurred in the company. However, her lack of in-depth knowledge was discovered during and after the interview was conducted. Another respondent was more concerned about solving a non-compliance issue within his company. The experience of the researcher however helped in steering the discussion to the purpose of the research and interview process. Therefore, the assumption that all the key participants had full knowledge relevant to the study did not hold. Deeper meaning and assumptions of how regulations work vis-a-vis compliance highlighted through digging deeper into people's experiences was done as there was overall good knowledge about the subject of inquiry by the researcher (Gummesson, 1999).

Table 5: Details of Interviewees

S/N	Respondent	Code	Date	Place
1	VOI 029	RROP/JV	16–09–2014	Offshore platform
2	VOI 028	RRGOVT/JV	04–09–2014	office
3	VOI 027	RREXREG	28–08–2014	Agreed meeting place
4	VOI 026	RRSC	24 –08–2011	Airborne Plane
5	VOI 025	RROP/JV	20-08- 2014	Office
6	VOI 024	RROP/JV	18-08-2014	Agreed meeting place
7	VOI 023	RROP/JV	18-08-2014	office
8	VOI 022	RRMFO	15-08-2014	office
9	VOI 021	RROP/JV/GOVT	14-08-2014	office
10	VOI 020	RRREG	24-08-2014	office
11	VOI 019	RROP/JV	08-08-2014	Coffee shop
12	VOI 018	RRMFO	06-08-2014	Coffee shop
13	VOI 017	RRSC	06-08-2014	Coffee shop
14	VOI 016	RRJV/OP	04-08-2014	Coffee shop
15	VOI 015	RRMFO	02-08-2014	Coffee shop
16	VOI 014	RRREG	21-07-2014	Office
17	VOI 013	RRJV/OP	10-12 -2013	Airport
18	VOI 012	BLANK	14-11-2013	
19	VOI 011	RRJV/OP	13-11-2013	Office
20	VOI 010	RRJV/OP	13-11-2013	Office
21	VOI 009	RRSC	03-11-2013	Coffee shop
22	VOI 008	RRENVC	06-10-2013	Coffee shop
23	VOI 007	RRACA	13-09-2013	Field assignment
24	VOI 006	RRCOM	13-09-2013	Airport
25	VOI 005	RRCOM	13-09-2013	Airport
26	VOI 031	RRCOM	23-02-2012	Office
27	VOI 032	RREXREG	02-01-2012	Coffee shop

(Source: Generated by the Researcher) See Appendix H for a list of audio files – these recordings are in the possession of the researcher.

(c) Access to Participants

Access to participants in the Nigerian oil and gas industry was pivotal to carrying out this research. There was a preliminary reaching out to some identified participants to test the interview questions and strategize for access to the carefully and purposefully selected interviewees (Patton 1990; Gnatt and Collingridge 2008). This early identification was to ensure that selected persons had the relevant knowledge about the subject matter as this research is not to obtain general answers but specific information about compliance in the oil industry in Nigeria. Answers obtained from the pilot questions guided the scoping of the final interview questions used for the research. The list of participants identified during the preliminary interview stage, showed a range of industry players which helped in deciding on the use of semi- structured questions rather than a structured interview style. This was to enable variations in questions given the different backgrounds, and positions held by the interviewees. However, one of the strengths of semi-structured interviews is the flexibility of the questions that can be asked to elicit relevant information from the participants. The same overarching questions were posed to all respondents with necessary modifications where needed.

Access to selected participants which cut across the value chain of the industry was not a problem as the researcher was at the time in full employment as a regulator in Nigeria. Another way the participants were reached was at industry meetings and seminars. Seeing the researcher as a colleague greatly facilitated access to the selected respondents. This was a huge advantage and contributed to reducing the time allocated for this activity. The researcher was aware of the possibility of bias, therefore was careful to ensure the process was voluntary and not coercive to keep the process objective and less biased. At the start of each interview, the researcher was upfront with the research aims and objectives of the study as well as the interview process. It was clearly explained that the interview would be recorded as ethically required and guided by the university rules. This procedure was critical to the research as the researcher held a position that could be perceived as intimidating. As the head of the HSE unit of the regulatory agency, which falls within the scope of the research, it was important for the participants not to feel pressured to be a respondent. Therefore, to confirm voluntary participation in the research, the consent form hereto attached was

duly signed by all research respondents. Two participants declined as earlier mentioned and no reason was given. Please see Appendix F for a sample of the consent form.

The trust established between the researcher and interviewees from both government and the industry are mainly as a result of working in the same industry for many years. The perception acknowledged by most participants was that the researcher had earned the respect of the industry as she headed the Health Safety and Environment Unit of the lead oil and gas regulatory agency in Nigeria. This helped in bringing credibility to the study and the intent of the research. To improve compliance with environmental regulations in Nigeria and by extension, globally. Because of this cordial working relationship and respect for the researcher, it was not necessary to write formal letters to companies. This also demonstrated trust between the researcher and the participants which was a factor that facilitated access to the research participants and obtaining their full cooperation in the study.

As stated in chapter one, most of the participants were those who had worked for more than ten years in the oil industry while some headed the Health Safety and Environment (HSE) unit of their companies. They were glad to participate as research respondents and give their honest views about the questions asked. They also saw this request as a working meeting which had the potential to address compliance challenges in the industry. Arising from the above, it was mutually decided that an informal setting was good to conduct the interview and this according to Whyte (2003) made the participants more relaxed. Some of the interviews were conducted at various locations like the airport, on the plane and on a noisy rig due to the very mobile nature of oil workers. Though most of the respondents agreed to speak with me, it was not very easy to track them for the agreed meeting. Most of the interviews, however, were at the mutually agreed locations. This informal setting also afforded closer observation of their body language and emotions which was noted. The chosen location of the interview agreed with the participants made the interview process more like a discussion and not a formal meeting. This enabled the participants discuss more openly about areas that were not thought of by the researcher for example, like culture in compliance. The informal nature of the meeting place further helped in opening a lot of the operational challenges faced by the operators which never came up in industry meetings prior to this interview

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meeting. For example, political pressure in using contractors who may not have the requisite equipment and technology in carrying out technical oil and gas contracts. The researcher considered this show of trust and openness useful as it helped in gaining better insight of the subject matter. Confidentiality of interviews was assured as names were not asked during the recording but were noted by the researcher. It was also communicated to all the participants that names would not be used in the transcribing process but codes in line with the guidelines from the university graduate school. Many participants surprisingly were eager to discuss the topic. It was assumed by the researcher that this meeting presented an opportunity for them to explain and justify the decisions made by their companies on compliance.

A total of 27 participants were identified and two of these declined after a time frame was arranged. Four other participants were selected outside the criteria used to select the key participants to extend the scope and to get their perception about the subject under focus. These participants had less than 5 years' experience in the oil sector, so their perception was noted but not recorded.

3.5 Sample Size

In qualitative methodology sample size matters, therefore in qualitative research, samples are generally smaller in comparison to quantitative research as earlier stated in 3.3. There was no pre-determination of sample size in this research however interviews stopped when no new information was added from the interviews. The interview process stopped when repetitions occurred in the recounts heard by the researcher. Mason (2010) argued that frequencies are not key, but the relevance of data is. Crouch and Makenzie (2006) also stated that the richness and meaning of data was crucial not the ability to generalize using large sample size. This research sought specific information on the availability and effectiveness of environmental regulations in the Nigerian oil industry thus specific feedback was needed from the interviews.

Though different participants had varied experiences about the subject under investigation, it was important that there were no continuous repetitions (Glazer and Strauss 1967). This assertion guided the researcher in stopping the interview process

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after 27 samples. This included the extra persons interviewed when the scope was expanded.

 The use of identified experts in the industry to get information necessitated the use of a modest number of participants as pointed out by Grover and Kechl (2003). Not only were these considered to be experts as used in this research, they were highly respected persons in the industry. Two of the participants at different times, headed the lead regulatory agency in Nigeria- the Department of Petroleum Resources (DPR). Trust, respect and confidence in the researcher helped in securing these top-level officials for the interviews and in participating in the research. This brought credibility to the research and the samples selected. In addition, the use of more than one method did not warrant the need for too many participants as too much data had the tendency to be overwhelming and meaning could be lost in the data so collected (Lee, Woo and Mackenzie 2002). The researcher stopped when she confirmed through continuous study of the transcripts, that there was nothing new being said especially by representatives of key stakeholders in the industry.

Because the data was collected in late 2014 and there was a gap of four years from that time to the final analysis of the data and submission of the thesis, additional persons were sought to validate data previously obtained. Seven additional informants were carefully interviewed though only one recording was made. The others were telephone interviews and exchange of text messages. Notes of the discussions were referred to in the analysis to update previous data collected in 2014. It was considered important to confirm relevance and alignment of earlier themes. A respondent representing each of the earlier categories interviewed was selected for the validation of data in 2018.

Table 6: Additional list of respondents

S/N	Participant code	Designation	Organization	Years, in industry	Role in organization
1	RR ExNNPC	Retired NNPC	CPI	35y	Hd Finance
2	RR REG	Govt Regulator	DPR	10	HSE midmgt
3	RR REG	Govt Regulator	DPR	<5	HSE junior
4	RR MFO	Business owner		>5	CEO
5	RR CON	Business owner		>20	CEO
6	RR OPER/IOC	Govt/REG interface	SHELL		
7	RR MFO	Staff Margina Field		>20	Head HSE

(Source: Generated by the Researcher)

The additional respondents interviewed were not recorded except for one person who was the JV Government interface with regulatory agencies. The return to the field was essentially to obtain current status of the industry as per the research enquiry. Notes were taken in this second batch of interviews. Findings will be discussed in the next chapter.

3.6 Research Ethics and Bias

(a) Research Ethics

Ethics was strongly considered and noted in this research as the researcher was part of the observed phenomenon and an observer (Gummenson, 1991). Therefore, the dual nature of the researcher posed some challenges throughout the duration of the research. Having an insider view of the agency raised some ethical questions of disclosure of agency lapses however; the research was initiated on ethical considerations and values which the researcher attached to the subject under investigation.

There was confidentiality assurance, as provided by the guidance of the Graduate School, which entailed the signing of the confidentiality form by all participants prior to the interview process. Participants were given full information about the research as defined by Nijhawan et al, (2013 p.1) who stated that in line with the informed content process, participants are required to understand the purpose of their action and voluntarily give consent or withdraw it. The selected participants were informed about the purpose for which the information would be used and given the opportunity to stop should they decide to, even after the interview process had started. No participant exercised that right. Use of names of individuals was strictly avoided throughout the research process nor were there discussions with other colleagues at any industry forum. All the above steps were strictly adhered to by the researcher.

Having secured the trust and confidence of the participants, and still being a regulator at the time of the research, it was important that the researcher stood by the confidentiality of discussions. This was more relevant in this research as participants could lose their jobs or be embarrassed as asserted by Denzin and Lincoln, (2005). There was no pressure put on any individual to participate and a voluntary consent form was signed by all while ensuring that they all understood the consequences and possible use of the research (May, 2001). The additional selected respondents were interviewed though not recorded as this secondary exercise was to update the earlier recordings and status of the phenomenon. Please see Table 6 above.

To ensure ethics were maintained always throughout the research process, ethical principles and management of data was strictly followed. For example, participants had the right to stop the interview process at any point and had the right to review their contribution.

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None exercised that right. All interview recordings were kept safe and secure in the dedicated phone used for the recording. See Appendix H for a list of audio files – these recordings are in the possession of the researcher. There were no close ended questions asked nor the use of multiple-choice questions and this afforded all the participants the opportunity to express themselves within the boundary of the research. Older participants had a higher tendency to veer off track during the interview process.

(b) Research Bias

Though Gummesson (1991) wrote about 'institutional knowledge' and the role it played in research, prior knowledge of the research subject added some advantage to the research in that it helped the researcher appreciate certain aspects of regulation and corporate decision-making strategies peculiar to Nigeria. For example, there are some cultural differences in the way money is expended in both countries. While it is normal to disburse money directly to the host communities in Nigeria by national companies for CSR programs and community environmental work, foreign companies are strictly guided by the financial regulations of their country. Some operational locations require informal negotiations with village heads for remediation works and similar environmental studies around their host community. This exercise is easily done by national companies while foreign companies cannot allocate monies without due approval in line with strict financial approval from their home office. Therefore, delays in response to minor environmental field works occur. Such delays are sometimes interpreted by the oversight monitoring agency as unwillingness to comply with national laws. Furthermore, the joint venture arrangements delay approvals from government for funding of environmental activities not previously budgeted or incorporated. This again has been observed to bring about some level of non-compliance by the operators. This was more evident in the sense that monies were owed by government thus making the operational cost too high for their joint venture partners. The regulators are usually not privy to some of these agreements. The above explanation has helped highlight other considerations taken by the operators affecting compliance, for example organizational structure and cost and financial approval (expenditure) when compliance costs are high or unbudgeted. All these issues contribute to the complexities and synergies in compliance methodologies and processes employed by companies operating in Nigeria. To help minimize bias, the researcher avoided discussing any pre-thought

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theories especially with the participants. Selective perception (in qualitative) was minimized by projecting the researcher as a colleague and downplaying the regulating role she held at that time of the research and interview process. The researcher had to be mindful of her dual role without bias throughout the research period. Glaser and Strauss (1967) argued that theoretical sensitivity assists in the objective change in paradigm based on findings by the researcher. Lateral thinking Morse (1994; Gummesson, 2006) on the other hand enabled the researcher to have deeper meaning to what was already known (De Borio, 1971). To further reduce bias, there were several presentations to my supervisory team as required and mandated by the Graduate School.

3.7 Data analysis and transcription

(a)   Data analysis

The method used in analyzing data collected in this research was in line with the systematic process of data collection and management recognized for qualitative research. Data reduction and management was done manually rather than in the familiar way of utilizing the data management software Nvivo. This was with the low familiarization of using computer software for data management. The researcher was also convinced she had enough understanding of the manual data analysis method to analyze the data.

As the study had a strong descriptive style and is highly interpretative (Lincoln and Guba, 1985; Blackie, 2000; Cohen and Crabtree, 2006) data collected was first analyzed by a data reduction process through identification of themes. Direct quotes of were used to explain observations arising from the informant's experiences (Blaikie, 2000:251-252). Thus, there was constant interaction with the data collected which helped in the identification of issues that presented a link between the research subject and factors that may fully explain how compliance levels are perceived and can be enhanced (Lazarsfeld and Barton, 1979).

Table 7: Steps taken in content thematic analysis for research

S/N	Steps taken	Process
1.	Data transcription	Engagement with data by repeated listening to the recording (Riessman,1993). Notes taken; patterns identified in line with research aims and questions.
2.	Initial code generation	Initial codes generated from data which aided organization of data into groups or categories (Tuckett, 2005). Codes had relevance to the phenomenon under investigation in different degrees.
3.	Theme identification	Themes are more closely related to the research questions and this informed the way data was analyzed.
4.	Data reduction/condensation	Categories created to aid data management. Some themes were dropped.
5.	Data crystallization	22 Key themes derived from the categories in step 4 above.
6	Synthesis of data	4 overarching themes selected to understand the phenomenon under investigation. Overarching themes used for data analysis. Assumptions considered and explained.
7	Findings and Analysis	Chapter 5 and 6 of report

(Source: Generated by Researcher)

The steps outlined above is supported by the strength of empiricism which builds on a cyclical, comparative and interpretative inductive approach. The data reduction involved a constant reference to the recordings and continuous reading of the transcripts to identify relevant words and phrases in each interview. These formed the codes and themes presented.

The raw data was first analyzed through open coding which is to determine the relationships and assumptions that inform the respondent's views of the world in general

and the phenomenon under investigation (McCracken, 1988). Taylor and Bogdan (1998) assert that this process is the first step researchers use in interpreting their data. According to Dey, (1993), coding involves subdividing the data and assigning categories. These codes help in tagging and reducing huge chunks of data for example, into manageable phrases or paragraphs connected to the research and they often come as categories (Miles and Huberman, 1994). Seidel and Kell (1995) confirm that these codes help in identifying patterns and common themes which in turn help in constructing meaning across the data set. This data reduction process was the result of the initial interpretation and organization of the data (Tesch, 1990). These phases attempt to focus on meanings inside the research context or to what may be meaningful to a wider audience (Gough and Scott, 2000).

Identified codes helped the researcher go beyond the data examined and compared while putting the research question in focus. This as argued by Ely et al (1991) assisted in theory building. This collective step is known as 'the constant comparative method of analyses' proposed by Glaser and Strauss (1967). Constant comparative method is often assisted by the researcher's professional background brought to the research (Strauss and Corbin, 1990). Thirty-four (34) themes were initially identified from the interview transcripts. These were further reduced to twenty-two (22) sub-themes, then 16 and later into categories from which the four main over-arching themes were obtained. Other steps taken in this inductive methodology involved the identification of patterns and concepts not previously considered but having relevance to the overall research question and objectives.

Useful information that provided some perspective to the research questions was also noted and integrated into the data analysis process. For example, the joint venture agreement between the oil companies and government and the delayed payments which impacted on compliance decisions and how this can be reviewed to accommodate environmental incidents is a case in point. This could be considered a systemic issue as can be seen from the codes under that category. Following the initial coding, themes were identified as relevant to the research in terms of enquiry and context (Braun and Clark, 2006). These were further reduced by categorizing them to produce the intermediate thematic map. A further scrutiny of the map involved identifying the key relevant themes as four. Pattern coding (Miles and Hubberman, 1985) was used to

assign codes to key words and phrases of the collected data that were relevant in order to answer the research questions.

Analytic data comparisons (Newman, 1991) allowed developing assumptions based on existing theories. It also involved identifying links within the data itself. In line with the theoretical framework developed for this thesis, organization of data into key themes and categories as they were identified formed the basis of data management as proposed by Ritchie and Lewis, (2004: 262).

(b) Data Transcription

All the interviews were listened to several times before transcription to familiarize the researcher with the process of transcribing and this was done manually (Coffey and Alkinson, 1996). To identify and preserve the identities of the participants, codes were assigned to each interview file (Dey 1993). This step enabled the researcher to maintain the confidentiality of the respondents while recognizing relevant ideas and concepts which had links or relationship within the dataset, and this enabled going beyond the data itself. The time spent on each transcription was between 2-4 hours.

Though non-verbal cues were noted, they did not form part of the transcription for this research. It is noted that in some instances, spoken words often elicited from the interviewees helped in the process of collecting more information needed during the interview, as argued by Baldwin and Davis (2003). Some scholars (Cohen et al,2011) however see this as a weakness as several interpretations could be given to these non-verbal nuances. In this research, attention was given to information that was useful and relevant to the research inquiry. Secondary information was used with care as the motive behind some of those types of information could not be verified for example, newspaper articles and information from non-profit organizations (NGOs) and pressure groups like Amnesty International (AI). A recent report by Amnesty International, will be discussed later in the thesis.

Interview recordings were kept in the original phone device used (this device is still available for reference), laptop and on the school H drive. Because of the triple back up, the data was not lost even after the H drive was mistakenly deleted by the university IT unit. See Appendix G for a List of the Audio files- the original recordings are available and in possession of the researcher. The confidentiality of the respondents was ensured

as only the researcher has access to the laptop and phone used to collect the primary data.

3.8 Data Coding

The main task of coding was the finding of relationships, categories and assumptions that brought about the descriptions as told by the participants in recounting their experiences on the subject matter (McCraken, 1988). In distilling the data which involved data reduction, the meaning within the research context is identified and this process ensures that the reader can relate to the identified patterns (Gough and Scott 2000). Initial categorization of codes to help facilitate the identification and understanding of emergent issues followed as the next step. Grounded codes were also derived from the initial categories formed which involved identifying themes that were new and not previously considered when discussing the concept of compliance with environmental regulations in the oil industry. For example, "the communities" as a factor in compliance was not considered but appeared relevant in driving compliance based on the mention within the context of the people being first impacted when there is non-compliance resulting in environmental pollution. The categories identified were those obtained from the participants (Strauss and Corbin, 1990).

To further ensure accountability and transparency in the analysis process, the audio transcripts have been preserved over the years and can be retrieved from the first time the transcription was done. Transcripts are attached in appendix H. Leaving an audit trail and being able to return to the original text according to Guba and Lincoln (1998) lends credibility to the research. As data was managed and coded by the researcher and no software used, the background of the researcher was put to the test as it entailed deciding important codes to use or to leave out. The application of previous knowledge and creativity is supported by the assertion of Coffey and Atkinson (1996).

From the codes generated, it was important to distil the data for manageability as the open codes seen in **figure 8** (below) were taken as too broad. To better understand what the data was, a further data reduction was done by creating categories that had relationships within the data set. This categorization assisted in the reduction of the 34 codes (Fig 8) to the identification of 16 themes representing not only considering occurrence of words in the first instance but of relevance to the research enquiry. Words

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that were also surprising or out of place were also considered and they were used in focusing the research. The sixteen themes were further synthesized to give a clearer picture and were considered more closely related to the research enquiry however chosen based on occurrence as in content analysis.

The resulting four overarching themes which by frequency occurred more than fifteen times were chosen as the key constructs to be used for the analysis in chapter four. However, content analysis does not only consider frequency, but also the meaning in relation to the context of the research. The final four themes were considered things that can be directly observable and were the main constructs which was used to interpret the collected data. The four most frequently occurring themes were *community partnership (collaboration), regulator professionalism (regulator capacity), compliance methodologies (compliance), and system and infrastructure (systems)*. Please see Figure 10 showing the main themes. Thus, the selected thirty-four codes from the collected dataset were reduced via a data reducing process to twenty-two codes and then four to aid better management of the data. The four main themes were obtained by considering the frequency of the words and this is represented graphically below.

Table 8: Relevant codes from transcribed interviews

Interview Codes	
Incentives	Laws to protect community
Risk-based regulations	Regulations
Clear regulations	Resources
Prescriptive style	Knowledge of the laws
Engagement	Compliance
Subject matter experts	Enforcement
IT platforms	Political will
Regulatory intent	Grass root people
Bureaucracy	Compliance levels
Regulatory style	Regulator responsibility
Regulatory leadership	Adequate laws and regulations
Regulator independence	Monitoring
Regulatory support	Regulator capacity and knowledge

Cost-benefit analysis	Collaboration
Performance	Implementation
System environment	Improvement of DPR
Respect	Sanctions

(Source: Generated by researcher)

The graph below shows the twenty-two key themes derived from the above codes.
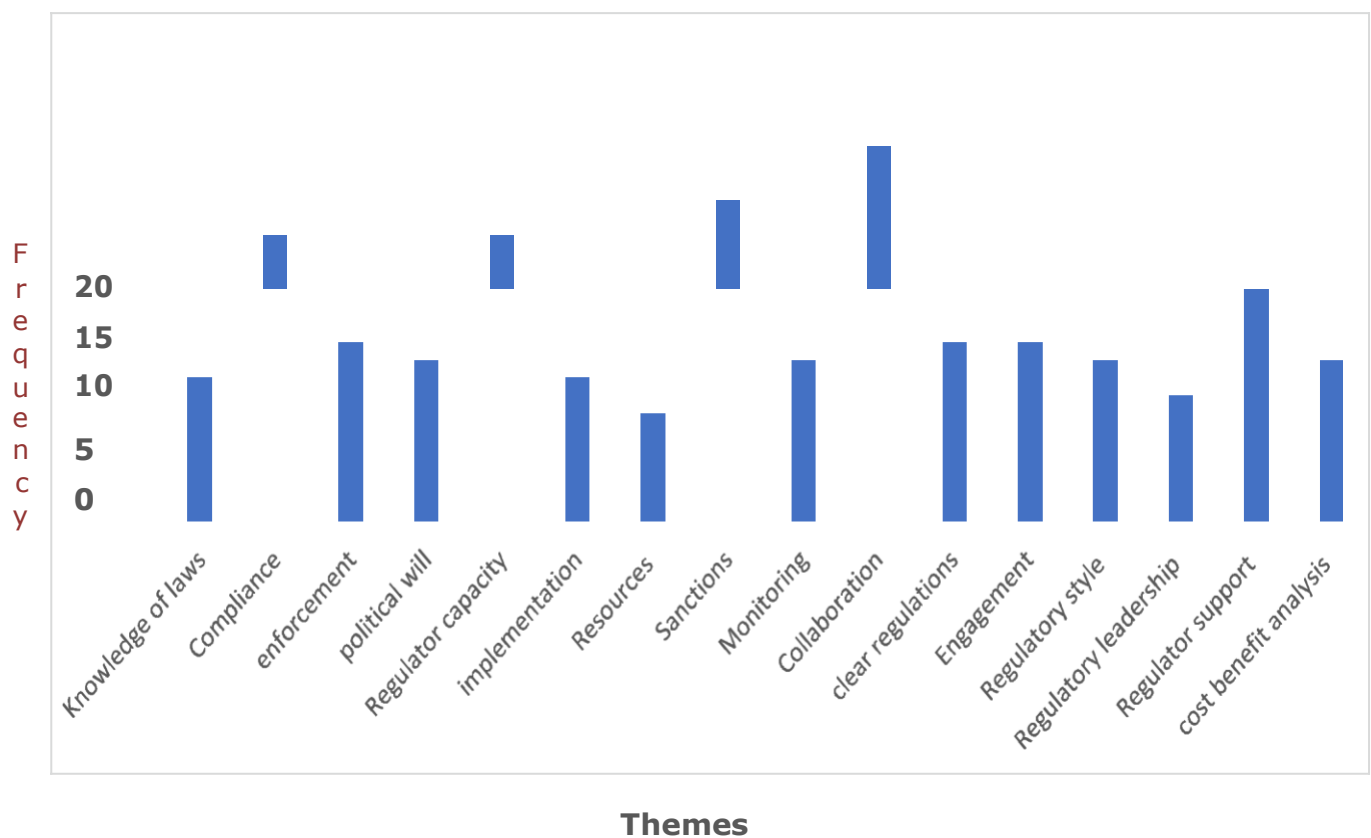

Themes

Figure 10: Graph showing frequency of themes (Source: Generated by researcher)

From the twenty-two themes derived above (Figure 9), four overarching themes in the graph (figure 10) shows the four highest frequencies . These overarching themes were used to explain the experiences of the participants. This is consistent with the grounded

theory approach as the data collected for this research aligns with the aims of the research. The themes and categories that were identified are linked with each other. Please see the Figure 11 below which further explains the way these categories are linked.

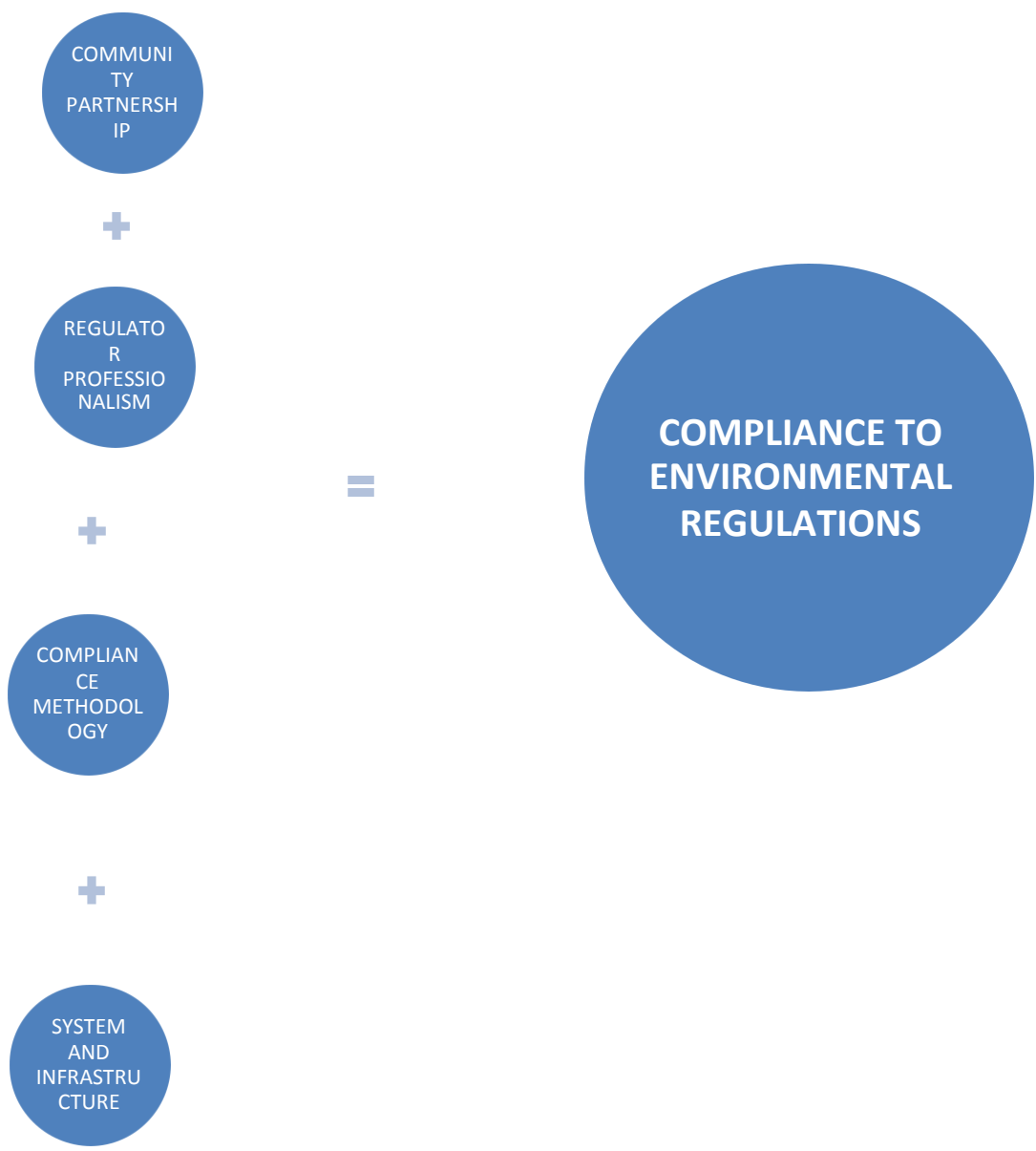**Graphical Presentation of main themes and occurrences**

Figure 11: Thematic Map with 4 Key Themes (Source: Researcher generated)

3.9 Trustworthiness of the Research

According to Guba and Lincoln (1989), clear and accurate descriptions are important for the acceptability of research work by others. It is important that a reader relates easily with the transcripts and where questions are raised, the original scripts can be referred to and explanations made to explain any inconsistences. As stated earlier, in this chapter, all transcripts have been carefully transcribed and attached for reference. In analyzing the trustworthiness of the research, the author recommended the terms credibility, transferability and dependability. In addition, this researcher sees applicability of the result findings a value to trustworthiness. Based on (table 9) below, the following are discussed. This research is deemed credible due to the quality of participants carefully selected to narrate their experiences about the phenomenon under study. The selected criteria and the actual persons interviewed can be referenced as thought leaders in the sector and they held positions of high regard in their respective companies and businesses. They were not seeking any favors due to the position the researcher held at the time of the interview process. It was therefore assumed that true and honest descriptions were narrated by these participants (Guba and Lincoln,1989). Self-awareness and self-reflection by the researcher were done frequently to assure the researcher of the real intent of this research and this was to bring improvement to compliance levels in the oil and gas industry in Nigeria.

A second measure of credibility was to review interview transcripts with the participants. This was not done in this research due to the very busy nature and constant travel and change in the positions of the participants. However, a careful review of the several categories the participants belonged to, was varied enough to assure credibility. The several categories of informants aided reduction in research bias.

The dependability of the research is based on the fact that there is an audit trail and this can be verified. Sandelowski (1989) confirms that "a research can be said to be auditable when another researcher can clearly follow the decision trail used by the researcher".

 The transferability of a research is when the results can fit into another context outside the one under reference. By providing accurate contextual details, other researchers have the opportunity to decide if this is possible (Reinharz 1983; Guba and Lincoln 1989).

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Table 9: Criteria for trustworthiness

Criteria	Quantitative paradigm	Qualitative paradigm
Truth values	Internal validity	Credibility
Applicability	External validity	Transferability
Consistency	Reliability	Dependability

Source: Adapted from Guba and Lincoln (1989)

Excerpt from the Reflective Memo (2017)

As my research progressed, I realized that the word 'compliance' meant different things to different people. Depending on the person's understanding, position and the role they play within an organization, people's perception changed. For some, it is simply a demonstration of showing compliance. That is to say, as long as one could demonstrate that he or she can comply and not the actual process that leads to compliance. For others, it is a task and a responsibility to abide with the laws in order to add value not only to themselves but to the society at large. Many however see it as an added cost to be avoided. Therefore, it may be correct to say that most people perceive compliance to be a burden. While it may be safe to assume that regulations and laws once in place will be complied with, it can be argued that understanding the intent of the law is a prerequisite for full compliance as the law or regulation states. Business owners are concerned about operations and profit, however not being mindful of the laws governing their operations can have some impact on their bottom line. Unless the full implication of non-compliance is understood and appreciated, compliance will continue to be seen as an added cost to operations or business. Regulators whose mandate it is to ensure compliance to regulations must see their job as a responsibility to make the regulated community accept compliance as an added value to sustainable corporate model. Compliance with environmental regulations must not be selective or only addressed when there is a high tendency of being detected. This philosophy should help entities guard against negative environmental impact and bad reputation. Regulations must be understood, accepted as fair and cost effective for enhancing compliance and the benefits they bring.

3.10 Research limitation

It was assumed that all the participants had full knowledge about the phenomenon, and this was not so. However, the majority had good and rich narratives based on the criteria used for interviewee selection. As the researcher believed regulatory work was aimed at service delivery, few regulators were interviewed. To reduce the bias of only interviewing older and more experienced participants, there was an extension of the scope to include few participants with less than 5 years' experience in the industry. Generally, compliance has been seen to mean different things depending on the person's understanding, position and the role they play within an organization. For some, it is simply a demonstration of showing compliance. That is, as long as one can demonstrate that he or she can comply and not the actual process that eventually leads to compliance. For others, it is a task and a responsibility to abide by the laws in order to add value not only to themselves but to the society at large. Many however see it as an added cost to be avoided by any means. So, it may be correct to say that most people perceive compliance to be a burden. Until the full implication of non-compliance is understood and appreciated, compliance will continue to be seen as an added cost to operations or business. Regulators whose mandate it is to ensure compliance to regulations must see their job as a responsibility to make the regulated community accept compliance as an added value to sustainable corporate model. Compliance with environmental regulations must be seen and accepted as part of all operations and not selective or only when there is a tendency of being detected. This philosophy should help entities guard against negative environmental impact and bad reputation. Key to ensuring compliance in all facets of business are therefore in professionalism, expertise and stakeholder partnerships. Further practical limitations of this research are outlined in the concluding chapter.

3.11 Summary

The methodology chosen for this research was based on a qualitative approach whereby the experiences of carefully selected respondents were sought based on criteria. The assumption was that they had deep knowledge about the industry and the inductive interpretative perceptions would produce new knowledge from which the research questions as stated in chapter one would be answered. Secondary data was from the

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review of industry and agency reports, also from observation in the field as the researcher was still a regulator at the start of the research.

Chosen methodology was based on the philosophical stance of the researcher who believes that truth is varied and diverse and as such, could come from different perspectives. As asserted by Glaser and Strauss (1986), the experiences of the carefully selected participants indeed brought several perspectives about the phenomenon under review.

The interview data was analyzed using content thematic analysis. Transcription and identification of themes was carried out manually. All recorded interviews were transcribed by the researcher. The assigning of codes and identification of themes was based on the assumption that it was acceptable to ascribe relationships of key words and phrases with the main concepts of the research. This enabled the data to be used to provide an accurate explanation of the phenomenon under study derived from spoken words as presented by people.

CHAPTER FOUR: FINDINGS AND ANALYSIS

4.1 Introduction

The focus of this research is not on laws but about how people and corporations perceive and interact with laws and regulations in Nigeria. It is also about regulator- regulated interface and relationship. The research is therefore focusing on regulators and the regulated with regards to compliance with environmental regulations. The findings from this research are based on the primary data obtained, review of documents and instances of first-hand experience which the researcher witnessed while working as a regulator. The analysis of data brought forth key constructs that is used to answer the research questions and assisted in further understanding of the phenomenon under study.

4.2 General Findings

The regulatory arena has changed from what it used to be since the 70s and 80s when regulation exploded in the United States (Pitzer, 2006). It is now more professional in scope requiring expertise and is more technologically driven (Miller, 2008). Global interest in regulations has increased due to the lack of effective regulations of multinationals especially those operating in developing countries (Newell, 2000). This research has highlighted some of the reasons why this maybe so. Compliance with environmental regulations is assumed to be non-existent in the Nigerian oil industry despite the robustness and adequacy of environmental laws in the oil and gas sector as reviewed in chapter two. The affirmation of the availability of regulations came from the literature and also from the research participants interviewed across the value chain of the oil industry in Nigeria. These affirmations are reflected in several quotes as reported. Acceptance and endorsement of environmental laws were however not embraced by all research respondents because some expressed the lack of scientific background to support the regulations. This was a surprising outcome given that the guidelines were jointly developed.

The regulators found this as an excuse to delay compliance or not to comply at all in some instances. Arising from the industry assertion that regulations were not scientific, several industry-led studies were initiated. Two of such was the produced water study led by CNL and air quality study led by Exxonmobil. This was a welcome move by the industry to have in-country studies that would provide data that would inform regulatory

decisions. However, till date, these studies have been stalled. The expected leadership from the IOCs appeared lacked the will to drive this to a conclusion.

This research in one of its findings, brought up the need to ensure that stakeholders buy into the intent and policy making of regulations.

Some respondents claimed environmental regulations used in Nigeria particularly in the oil sector, were imported from other regions of the world so it should not really apply in-country. A reason for importing regulations could be given by the fact that after the 'Koko' incidence of toxic waste dump in 1988 as earlier explained in chapter one, Nigeria wanted to have some working laws in place. Similarly, oil exploration activities were on the increase from the 1958s when it was explored commercially by more entrants into the oil industry. Some other respondents claimed also that the Nigerian environmental regulations were stricter than in their home countries. However, most of respondents confirmed its robustness and adequacy for use in the country. Despite the adequacy and its awareness by industry stakeholders, however, there is no compliance to the environmental regulations in the oil sector as written. The massive oil degradation in the Niger Delta regions of Nigeria as seen in chapter one is evidence. The overwhelming feedback of adequacy of environmental laws was surprising to the researcher. Even with non-availability of laws in the country, international oil companies (IOCs) have a reputation of global operational excellence regardless of where they operate. Sadly, operational excellence has not been demonstrated in the Nigerian situation. It is also confirmed that most companies have an internal compliance mechanism in line with what obtains in their corporate home offices. Most of these policies can be found on their website and company reports for example for Chevron more information can be found at www.chevron.com

4.3 Specific Findings

International oil companies have a 'global operational practice' that drive their businesses towards best oil field practices and environmental sustainability in the oil industry. However, what is found in the Nigerian environment is that the environment is greatly impacted, and that this situation has been like this for years without any move by the IOCs to address and correct it. Though environmental regulations came long after oil exploration activities started, the degraded Niger Delta environment (mainly from oil

pollution) would not have degenerated to its present critical condition (Efe, Ogban and Horsefall, 2005; Agbaire and Obi, 2009; Giwa, 2014). One of the most damaging environmental activities is 'gas flaring' with over 155 flare sites in the Niger Delta region alone despite modern technology to eliminate gas flaring (Rahimpour, Jamshidnejad,and Joker, 2012). The Nigerian government in its efforts directed the oil companies of the need to come up with gas projects as a means of reducing gas flaring which impacts negatively on the environment (DPR guidelines found on www.dpr.gov.ng). Some companies have subsequently embarked on gas projects and gas utilization within their operations; however, gas flaring and environmental impacts persist in Nigeria. Recent international interests in the environment and the way the extractive industry carry out their operations led to the establishment of Extractive Industry Transparency Initiative (EITI) (Haufler, 2010). Nigeria is now a signatory to this initiative which makes it imperative for the current level of compliance to change positively. The Nigerian Extractive Industy Transparent Initiative (NEITI) also serves as a watch dog for all extractive activities in Nigeria (Okeke and Aniche, 2007). NEITI is thus considered a third-party regulatory agency.

This chapter presents the findings from the qualitative thematic analysis of data collected from 27 interviews through semi-structured interviews (Miles and Hubberman, 1994; May,1997). This includes the analysis of the additional 7 interviews done in 2018. This second set of interviews was done between July 2018 and December 2018. The analysis of the 7 additional interviews held in 2018 was to validate existing data which was obtained in 2014. These findings were further triangulated through review of official documents and reports which highlighted compliance drivers and enablers.

Suffice to say that during the research, several themes were identified, which emerged from the data presented and were summarized. The excerpts from t he interviews were used to enhance the general understanding and insight of the studied phenomenon in social terms and in the context presented. This analysis is thematic in nature (Braun and Clark 2004) and employed a highly thick description style (Lincoln and Guba 1985; Blackie 2000). This method allows the use and inclusion of direct quotes from recorded interviews (Myers and Newman 2007) to appreciate the experiences of the research participants and as recounted by the researcher. According to Blackie

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(2000), "interpretation of what is going on and for the researcher to produce analysis and explanations……"

Also, according to Riesman (2005), the identified themes must be causally related and relevant to the research questions. These themes relate to the patterns found in the data using content analysis as well as identification of key words that further described observations which may be used to explain and interpret the phenomenon under study. One key advantage of content analysis is the flexibility of the method. Other reasons for using content thematic analysis are that the process can be easily understood, and it can generate insights that could be easily missed by theme identification alone. Although Qualitative Data Analysis (QDA) software was not used in this research even though they are more efficient in managing and processing textual data, attention was paid in preparing, analyzing and interpreting the data collected as guided by Mason (1994); and Maltreud (2001). The data collection process was deemed robust in that having seven groups of participants with a total cumulative experience of over 100 years in the industry helped in giving a highly rich description of their experiences. Content thematic analysis supports this as it can summarize key features of a large body of data (Braun and Clarke, 2006; Vaismoradi et al 2013). The similarities between content analysis and thematic analysis is that they look across the data, philosophical background and pay attention to both description and interpretation in the context of the data.

The following highlights the overall data analysis process (transcription, management and analysis), the main questions, and the key findings from this exercise.

4.4 Data Analysis process

(a) Data transcription

This study involved the collection of data mainly through interviews with key stakeholders in the Nigerian oil and gas sector. The information obtained was then transcribed into written form for closer study. As Bailey, (2008) puts it, "Transcribing appears to be a straightforward technical task, but in fact involves judgements about what level of detail to choose (e.g. omitting non-verbal dimensions of interaction) data interpretation (e.g. distinguishing 'I don't no from 'I don't know') and data

representation (e.g. representing the verbalization 'hwarryuhh' as 'How are you?' (Bailey 2008). Some of the guidelines that were followed for the preparation of the transcripts as stated by Mergenthaler and Stinson's principles (1992:129-30) included keeping as close as possible to the narratives which meant paying attention to punctuation and keeping the text in a way that can be used both by humans and the computer. As close to verbatim transcripts was produced and effort was made not to prematurely reduce the text. It is noted however that the data would never fully capture all that took place during the interview process (Kvale 1996; Poland and Pederson 1998:294). Emerson et al (1995) has this same sentiment given the interpretative and analytical decisions constantly made by the researcher in the process of data analysis. As the researcher was also interested in showing variations in how the phenomenon was framed and as experienced by the research participants, lengthy text was used based on the level of analysis that was done (Drisko, 1997: 190). This analysis benefited from the use of content related material.

Codes were assigned (open coding) to the transcribed interviews of the participants (Strauss and Corbin 1998) and data collected with a view to protecting and safeguarding the identities of the research participants. Codes are elements within the data that form a theme which is an attribute or concept that can organize groups of ideas or words which can be used to answer questions in research (Boyatzis, 1998). Codes reduce data and helps in identifying areas of interest and helps in developing constructs. Themes therefore contain codes that have a common point of reference. They often have some degree of commonality that holds ideas together in an area of investigation (Aronson 1995). A theme therefore is a pattern found in the information that describes or helps to organize observations or aspects of the studied phenomenon. In line with confidentiality, identification codes were assigned to the research participants with alphabet and numbers which corresponded to the number of the recording and category of the respondent to identify each person interviewed. Thus, different codes were assigned to the different persons. For example, **RR031** represented the first interview in the community category. Full respondent's codes can be found in Table 4. There were thirty-four relevant themes.

The first step in the content thematic analysis is the interpretation of the textual data which was done by looking at key words, lines and paragraphs. This method of identifying, analyzing and noting the patterns which are themes forms the background of thematic analysis in that these identified themes helped in the interpretation of the research topic (Boyatzis 1998; Joffe and Yardley,2004). Thematic analysis done in this research did not hold any prior theoretical framework rather it helped in reflecting the reality as narrated by the respondents. Themes identified captured something interesting or unique which the researcher concluded was important to the research questions. The themes reoccurred in different but clear meanings across the data set. It should be noted that prevalence of codes did not make it relevant. A theme is considered one because it was seen to capture something important and this was based on the researcher's judgement. Theme identification was used to give more insight into the phenomenon even if it was prevalent or not (Braun, Gavey and McPhillips, 2003: 249).

The inductive approach used in this analysis owes its use to the epistemological and philosophical stance of this researcher in that the themes were strongly linked to the data (Patton, 1990). Analysis was data driven and was related to the main research question. Themes were explicit and there was a progression from description to interpretation and finally theorizing (Please see Table 8; Figures 10 and 11, above). This progression saw the themes being interpreted as derived from a constructionist paradigm (Burr, 1995). This theorizing underpins what is contained in the data. Arising from the researcher's epistemological belief, meaning can be theorized. This is because there is a direct relationship between people's experiences and meaning so the research epistemology guides what can be said about the data collected and the phenomenon investigated. Theme identification was followed by the data reduction process whereby c o r e themes were grouped and later categorized (Tuckett, 2005). Data reduction however started when the researcher, as argued by (Miles and Huberman 1994), felt saturation and thus stopped further interviewing.

As key themes were identified, they were extended to fit the context of the research. This pattern coding step (Miles and Huberman 1994) is based on the researcher having some prior knowledge of the data and initial thoughts (through the pilot interview

process). This manual process of data analysis helped the researcher through constant reading of the transcripts become familiar with the depth of the data. The approach to reading the data in an active way is most appropriate for interpretative analysis whereby meaning could be derived from the participant's narratives. However, it is the subjective meanings and social reality of the researcher that is central in this analysis as the text may have several meanings. Thus, meanings in this analysis are conveyed through the text which are derived from spoken words.

The codes generated from the interview transcripts are listed and can be found in Table 8 above. These themes were first generated from the actual data and the participants words used during the interview process. The generated themes (Strauss and Corbin 1990) were seen to align with the approach of looking at the research questions, literature and the spoken words from the transcripts. Themes from the codes were first grouped into categories. This is by identifying the codes that had similarities and relationship with each other and the research topic. However, it is the subjective meanings and social reality of the researcher that is central in this analysis because text may have several meanings. Themes in this context, bring out the essence of the participants experiences which was then interpreted to make sense to others.

From the relevant thirty-four codes generated, four overarching themes were selected to answer the research questions based on the frequency and their relevance as they appeared in the raw data. This selection leverage on content, however, analysis did not depend only on the number of times the codes appeared but on how words were spoken, by whom and its relevance to answering the research question. In this constant comparative method (Dye et al, 2000) adopted patterns were identified from the identified themes, categories of themes with salient meanings and the relationships between them were categorized through inductive reasoning. For example, in the theme 'community partnership', there is engagement, corporation between all levels of government and awareness. Again for 'compliance methodologies' being a key theme, issues like clear regulations, selective compliance, unendorsed methods and waivers to delay compliance becomes relevant and connected to the research questions and objectives. Hence themes refer to a pattern and to something directly observable. Other

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categories that were formed included those that made up the themes 'regulator professionalism' finally 'system and infrastructure'.

For 'regulator professionalism', issues like capacity, respect, expertise and science-based regulations becomes relevant in the context of this research. Same can be said about 'system and infrastructure', a theme where, political will, regulator independence and funding of regulatory agency are important. All these were derived from the spoken words of the research participants and through categorization, these sets of codes were reduced to a theme 'system and infrastructure'. This synthesis and putting the codes into key themes helped in answering the research question which is about compliance failure. Community partnership as a key construct was synthesized from codes as follows; engagement, grass-root people, awareness and laws to protect the people. As earlier stated, frequency of codes was not the only consideration. In assessing the damage of environmental impact, communities were identified as the most vulnerable therefore, community partnership became relevant and useful in understanding the phenomenon. All the codes under the key themes all give some insight into the meaning that derives from the participants experiences as narrated.

The constant comparative method used here there enabled the researcher to articulate the participant's perspectives while staying close to the construction of the world as narrated (Maykut and Moorehouse 1994; Lincoln and Guba 1985, p 334-341). As argued by Taylor and Bogdan (1984) the constant comparative enables the researcher to develop constructs which are refined into their relationships with the developed concepts.

The research analysis was done inductively, thus information providing some perspective into the research questions was noted and integrated into the data process. There was constant reference to the recordings and continuous reading of the transcripts to identify themes and patterns in and within transcripts. These steps draw on the strength of empiricism that is cyclical, comparative and also on the interpretative qualitative approach.

4.5 Data Management

As indicated by Miles and Huberman (1994: 45), data was easily accessible and was of high quality as a dedicated equipment was used, a phone. The dedicated phone was used for the recording and interview recordings was saved on the laptop used exclusively by the researcher. There was no accidental over recording and all recordings were clear, audible and did not deteriorate after repeated use. All documented transcripts were preserved. Further data management steps taken by the researcher included having two copies of the transcript material, each interviewee was labelled (assigned codes) please see Table 4 for easy identification and reference. The data was collected from September 2012 to September 2014 and kept intact over the years ensuring no interview data or recordings was lost. However, in December 2018, seven more interviews were conducted to validate the earlier data collected (Table 10). This was to confirm any changes in the perspectives previously gathered from the interview. All signed consent forms were kept in line with the agreement and there was opportunity for the research participant to stop at any time during the research process should the need arise. As information was of a highly sensitive one, the information gathered were kept for cross checking and peer briefing which was done later during the research period.

To ensure the accuracy of the transcripts, each transcript was carefully reviewed for accurate capturing of the words spoken by the interviewees. This proof reading was done solely by the researcher who carried out the transcribing and who was by this time familiar with the related terminology as well as the linguistic terms used by the research participants. Some other author, Kvale (1996: 163), recommended the use of two typists to transcribe however this would not have worked unless the person was trained and familiar with the research topic.

4.6 Steps in Analysis

Codes were initially assigned (open coding) to the words, phrases and sentences (Strauss and Strauss, 1987; Corbin, 1988) as spoken by the participants. Axial coding is looking at the related issues before the selection of the core codes.

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Open coding required keeping an open mind and not influencing the data. The identified codes related to the overarching themes. The codes also helped in the forming of categories which aligned with the research questions. From the collected data, key words, lines and paragraphs relevant to the research questions and to the phenomenon under study were noted. These codes were studied and constantly compared with other codes before categories were assigned in other manage the data set.

Categories helped in the organization of the data. It also reduces the complexity of the collected data and gives an opportunity to relate the several events noted by the researcher. Codes as explained above in data reduction and management. The process of coding and matching spoken words and sentences had some background bias of the researcher and the knowledge brought to the research.

From the new constructs developed, it becomes obvious that both the regulators, communities and operators had challenges in complying with environmental regulations in the Nigerian oil sector. These challenges are discussed in the next chapter.

The second round of interviews though limited in number had representation in all the previous categories selected (see Table 10). Information gathered at the second round of interviews pointed to the fact there was some improvement in the relationship between the regulator and the regulated however, there was still a lot of work to be done by the regulator. The perception of some key stakeholders also noted the rule of government as being central to the success of the regulator mandate. The funding of the agencies was still an issue that impacted on compliance. Agency personnel get more training and there is enhanced focus on capacity building, however expertise without the right tools and resource to work with negates the process of strengthening the establishment. The above process of categorization which stems from the research data is facilitated by previous knowledge of the researcher (Dey, 1993 p.100). These category formulations reviewed themes which were grouped into bigger themes and corresponding sub-themes. Data analysis focused from on the data and on theoretical assumptions and the research questions not on the researchers view. The emerging framework enables deeper analysis and several truths could come forth thus the flexibility of this methodology stated earlier. Repeated cycles of coding helped in the overarching themes being identified Bazeley (2009, p.8). This process of referring to the data several times, enabled the researcher with her experience and background knowledge determine what to use and what was not relevant. This application of

knowledge supported the assertion made by Coffrey and Atkinson (1996). As the social phenomenon which in this research context is compliance, the created categories were seen to be related to each other. This then helped in the explanation of the experiences heard as heard from the research participants.

The task of data reduction helped in organizing the data such that meaning within the research context is identified and to ensure that it is easily understood by others (Gough and Scott, 2000). Please refer to Figure 10 and 11.

The main task of theme identification was in the finding of relationships, related categories and bringing the assumptions within the descriptions as narrated by the research participants (McCraken, 1988). The research objectives aided the analysis of the answers given by the participants which was coded for theme identification. A review of the objectives is given below

Review of research objective

The data analysis followed from the research objectives which are reviewed below. Research objective one (RO1)

- **RO1** was aimed at confirming the availability and adequacy of the environmental laws in the country's oil and gas sector. Answers from the participants helped in assessing the relevance and robustness of current regulations and if they were fit for the purpose to which they were put.

Research objective two (RO2)

- **RO2** sought to evaluate compliance levels across the value chain in the Nigerian hydrocarbon sector. This helped in providing the perceived compliance levels as given by research respondents which is a representation of the various stakeholders in the industry.

Research objective three (RO3)

- **RO3** was to understand if any, challenges faced in complying with environmental regulations in the oil industry in Nigeria. As it was assumed compliance was non-existent.

Research objective four (RO4)

- **RO4** was to evaluate how the industry was regulated. This was also to examine the relationship that existed between the regulator and the regulated. It also afforded the opportunity to evaluate the regulatory style and how regulators were perceived in the industry.

Research objective five (RO5)

- **RO5** to get from the industry players their input for best practices in the industry as the research respondents had varied experiences as it related to the research questions. This objective helped in articulating the proposed research recommendations for compliance with environmental regulation in the Nigerian hydrocarbon sector.

4.8 Findings

The above objectives and key overarching themes within the interview data guided the findings derived from the analysis presented. As stated from the previous chapter, different narratives from the research respondents enabled the identification of the various codes which represented the various issues with compliance to environmental regulations in the oil sector. However, it was beyond the scope of this research to explore and examine all of them. Of the thirty-four (34) relevant themes originally identified (Figure 8), sixteen themes initially were selected which was later synthesized into four over-arching themes used to explain the observed phenomenon. These four themes were selected to give interpretation to the participant's experiences and can be explained using the sub-themes identified. Some direct quotes maybe used for clarity and explanations. Data from the research was reduced by inductive reasoning and comparing the themes with others from the various categories thus resulting in 22 themes. The graphical presentation of the twenty-two themes further explained how the overarching themes came about. Those four themes appearing more than five times were deemed relevant to give answers to the research questions. This data synthesis helped in the management of the raw data set collected for this research. Key direct quotes have been compiled to reflect the four overarching themes as identified and were

used for the write-up of the report findings. Research questions and objectives as reviewed above helped in the interpretation of the observed behavior and to trace the reasons why compliance to environmental regulations were sub-optimal in the Nigerian oil industry today. The four overarching themes which emanated from the interviews are:

- Community partnership
- System and infrastructure
- Professionalism of the Regulator
- Compliance methodology

These themes bring out the reality of the participants' experiences which is interpreted to give a plausible explanation of the enquiry.

(a) Community Partnership Communities are the most directly impacted when there is an environmental problem. Compliance with environmental regulations was perceived low or at best average across all the groups of participants interviewed. This can be taken to mean that the regulations are not effective though claimed by all to be adequate and comparable to the developed countries from which they were lifted. Some research participants felt this was because the communities were not involved in the policy making process and in the monitoring of oil activities. They felt since the community and grass roots people were not aware of the regulations even though they were the most directly impacted, this contributed to compliance being low. They argued that, though there were state and local government environmental agencies, there was no synergy among the agencies creating the way for irresponsible operations by the operators which in turn has adversely impacted on their health, livelihood and the environment.

The following direct quotes supports the above submission.

- **RR05 ACADEMIA** "I was saying that these laws are made to protect the people, grass root people. The people at the receiving end. The people who receive these environmental problems. I don't think we have done far enough to help them".

- "Unfortunate, I don't think we have done enough to get them educated. Most of them do not know these laws exist. What are they expected to do! If they have a problem they don't know where to run to. So, at this point, education. Education of the laws is not adequate".

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- **RR09 ExJV/OP** "Awareness has to be created where a universal operating standard is set. Made known to the local people. When I say local, I don't mean young people running around the whole town. A standard local government environmental department, a standard state and federal environmental agency.

 As you go down, the communities are the most impacted".

- **RR013 OP/JV** "As the communities become aware of environmental impacts, rather than settle down and see how they work with the industry and see how the industry can improve, they feel they should hold the industry to ransom until you pay. If you hold me to ransom, I cannot improve. But if you are my partner, you can say if DPR says measure daily, community can say I want five (5) times and then you do it twice because the community wants more than what the regulator says".

- "But if the community hold you, and say you have polluted their environment, the only thing you can do is prove it or decide to do mitigation which is what they have stopped".

- "The second challenge is about security. You have to add more security to the facility so any additional study you want to carry outside the perimeter fence, you cannot do it. Because you are not safe. You have to make do with incomplete data on your environmental monitoring. And those are the challenges".

The above quotes from respondents clearly show how ignorance of the laws and regulations by the local people negates the efforts of the companies who want to ensure that they put in place processes that will help them comply, that is, carry out studies that may serve as reference points in their monitoring exercise. Understanding the import or the elements of environmental regulations can only re- enforce and strengthen existing laws set down by the regulators and the government. If the operators know that the community people have good knowledge of what should be done and how their operations can alter their natural habitat, they would be more careful and pay more attention to operational activities that have the capacity to impact. This aspect was not considered even by the researcher prior to this research. This is because the community are often perceived as an entity that would not understand the technicalities of oil and gas operations. The only time community representatives are considered is during the public hearing and during oil spill and compensation matters when their immediate environment is impacted. Thus, communities are often associated with compensation

matters which is after the impact on their environment has occurred. It is apparent that this thinking must change. Community involvement can even make existing regulations stricter going by the statement of RRO13 above. As the environment adviser of his company, he has direct interaction with the communities and observes the lack of understanding by community members which deprives them of demanding better environmental standards from the operating companies. This type of knowledge acquisition will be of great value to the regulating agencies and to the host communities in demanding environmentally sustainable operations and immediate remediation when land is impacted. Currently in Nigeria, this is not so.

- **RRO13SHELL** "When you want to do an EIA and you (the regulator) give us the guidelines from scoping to estimating impacts, how we avoid and mitigate, it requires having engagement sessions with the communities. Some of the time, we see the community saying 'stop telling us about environment, you are going to pollute our environment we know, give us money, give us project. The real discussions will not happen. And when you want it to happen, the community think you want to cheat them so the real discussions don't happen. That is why it is important getting the grass root to understand the importance of regulation and why certain activities around environmental management are being done".

From the above quotes research argues that partnership with the communities is important and critical to driving compliance in the Nigerian oil sector. It should not be assumed that all stakeholders know the regulations and the importance of regulatory actions. In a developing nation such as Nigeria, the intent and purpose of environmental regulations should be well spelt out considering the little awareness on environmental matters by the citizenry in Nigeria. Therefore, this research argues that there can never be enough resources thus, leveraging on the community and grass roots people being the 'eye' and voice' of the environment, will surely go a long way in environmental protection. Ensuring that communities partners with regulatory agencies has been known to bring tremendous benefits to compliance and agency functions. There is also need for engagement between all levels of government as stated by one of the respondents. Furthermore, collaboration between the several regulatory agencies with oversight functions in the sector would help with data sharing and optimal use of available resources for regulatory functions. Shared resources will also give credence to

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agency individual mandate thus closing the gaps that may arise from working independently.

- **RR09EXJVOP** "There is no defined responsibility, the Ministry of Environment, the directional regulator, in this case the DPR. There is conflict between them. As I can see, the States are not involved and so the communities, community meaning, local government. You have everybody involved in this environmental quality assurance".

- "The community do not know much about environmental standards. The DPR alone cannot stay in Abuja, Lagos in the State capital to enforce the standards. I would think that if a proper environmental enforcement unit in the local government, who understands what the activities are and there is collaboration between them and the State and the industry."

The above narratives from environmental practitioners all point to the importance of community partnership and proper appreciation of industry activities by the locals and how it effects or interacts with the environment. Reinforcing sustainable environmental practices at both local and at state levels will bring a paradigm change in the hearts and minds of local communities.

Though some companies have been said to do well with regard to compliance, more still needs to be done. Engaging host communities during corporate social responsibility (CSR) initiatives is different from educating them on environmental matters as it affects them and how they can contribute to preserving the environment. Having the communities actively participate in environmental monitoring especially in remote locations will ensure the operating companies do the right thing and use the right equipment and technology in their operations. Most of these communities need special transportation to reach and the agencies do not have the resources to get to these remote areas without logistic support from the IOCs. This is one area where the communities can fill that gap. Being on ground understanding the environmental issues of concern, community reps can collect samples and ensure it gets to the agency.

Company CSR activities sometimes reduce the attention the environment deserves. It has been observed that it is much cheaper to carry out community projects which often are not sustainable than to put processes in place to protect the environment in the long term. Most of the schools and hospitals built by the operating companies have no electricity or water so these projects are not sustainable. The schools are without

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teachers and the environment is impacted thus their livelihood compromised. Remediation and environmental studies cost money as it may involve new equipment and technology. Companies being profit driven are reluctant to spend money unless it is necessary or when benefits are clearly seen. Thus, I argue that grass root involvement in environmental matters is key. Equipped with relevant knowledge about environmental impacts and dynamics, communities can insist on cleaner technologies and green innovation which can sometimes do more for the environment than the regulator's mandate. This is because communities are directly affected, as they live in the oil operating areas and feel the negative impacts unlike government officials who come and go back to the city. Furthermore, environmental consultants who are contracted by oil companies to carry out scientific studies will pay more attention to field work if the grass roots people are aware of the impact that can occur in their environment.

In fact, from one of the narratives above, communities would be the first to call out and alert the agencies should there be an environmental issue and this in turn can reduce environmental damage in the country. The awareness of environmental issues by the communities and having all levels of government at the EIA scoping meetings can help in the putting together of the impact assessment studies thereby adding great value to these studies, most of which are now desktop due to cost or time constraints.

The value community partnership and engagement bring to the table should be considered as a cost reduction because they know the terrain better. Having a full complement of regulatory functions at Federal level, without due support for local and state levels appears counterproductive as this type of arrangement can indeed create jobs for the locals if done in a strategic and systematic manner.

This research therefore opens an area that has not been focused on in the literature regarding driving environmental regulations. An operating company will be mindful as this recommendation ties in with the deterrence model of compliance as argued by Kuperan and Sutinen, (1998); Sutinen and Kuperan (1999). They assert that engagement changes the actor's behavior and is a means to prevent non- compliance. The above shows the importance of continuous engagement between all levels of government and community engagement. Community partnership involves the three tiers of government working together for the same aim and purpose. It also means working with other agencies that might have oversight functions in the oil sector. The

recent black soot that has enveloped the city of Port Harcourt, Nigeria in the past four years (2016 -2018) points to the fact that, there was a gap in communication between the oil regulating agencies and the federal forces who destroyed the illegal refineries used for refining stolen crude (www.vanguardngr.com ; May 2 2018). Though a problem was being addressed by government, a greater far reaching environmental problem emerged out of the direct burning and dismantling of those illegal refineries. This situation could have been avoided if there was good communication and partnership between all levels of government including the armed forces that carried out the exercise. This analysis also brought to the fore a key concern whereby the state and local government agencies do not have any direct regulatory control of the oil sector. They are also not involved in oil and gas audits or monitoring activities except when there is an environmental issue or incident. The oil operating companies sensing this gap, would then rather engage with the government agencies individually to cover their tracks because they know there is no communication between the three tiers of government agencies. This research therefore argues that to close this gap, it is important to have the same level of funding, and training for all levels of government personnel involved in regulation and to ensure that there is seamless communication for effective compliance monitoring in the HC sector in Nigeria.

The analysis of community partnership in regulatory roles thus highlights the need for better awareness and understanding of the environmental regulations by all identified stakeholders involved in the sector. This also applies to those who offer services in the sector, for example service providers and contractors. There have in many instances, been service contractors who default on their delivery because of a lack of understanding of the basic requirements expected going by industry standards. When community grass roots people are aware and are made to understand the implication of environmental stewardship and ownership, the local habitat will be better off. The benefit of community inclusion will bring about tighter controls even over what is stipulated in the national laws and industry environmental guidelines. This is because communities would want the best protection for their immediate environment, and they understand that some negative impacts can be irreversible. The proposed format is to explain in simple language the synergies that happen and can occur when manmade activities and other developmental activities occur around them. Community grass roots people should be

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perceived as a useful resource and an added value that can be used by government. They can provide information which is only known to them but may be useful in policy formulation. In addition to the above, the impacted sites and its remediation remains a contentious issue in Nigeria today.

- **RR20REG** "In the areas of clean up and remediation, it has also been a problem. Even the regulators have not been empowered to check and ensure that the impacted areas are remediated. Ogoni land which up to now has not been remediated. This is evidence of non-compliance".
    - "Provisions should be made that any aggrieved community should be able to take company to court. The laws do not specify compensation parameters. It does not specify compensation parameters ……" (repeated for emphasis")
    - "It is being subjected to the wimps and caprices of the judges, so judges just award compensation. The communities, the people that are impacted ….their interests have not been adequately taken care of in the law".

The above quote indicates clearly the need for host communities to be involved in matters of policy formulation and law making. Host communities and the local people feel the direct impact of pollution from all aspects of oil exploitation. Some of the impacts take years to remediate therefore, arbitrary compensation rates are not in line with the known economic valuation of the environment (Mathieson and Wall, 1982). Participation at all levels of government will close the knowledge gap which can stem the tide of unsustainable operations in the industry especially in remote areas not easily accessible by the regulators. In compensation matters, the locals have better knowledge about their environment and the real economic costs of the diverse habitat of the flora and fauna found in these regions. Some species maybe highly valued and beneficial to humans.

The current environmental condition in the Niger Delta could have been avoided if communities were recognized as license issuers. The Nigerian Oil Spill Monitor is a recent platform by NOSDRA, the lead regulatory agency on spills for the country, puts spills between 2005 and 2015 at 6600 spills. This is a welcome initiative in making spill records transparent and available to all. However, with the recent illegal refineries

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around the regions, identification of spills arising from legitimate oil operations becomes difficult until this activity stops. The planned remediation of the area by the Federal government will also be hindered if the artisanal refining spots are not addressed.

Another important aspect to awareness of environmental regulations by community grass roots people borders on compensation when there is an environmental mishap or impact from oil operations. Operating companies sometimes fail to give adequate compensation, nor do they conclude with planned remediation/ clean- up programmers. Reason is because the grass roots people do not know much about environmental remediation activities and standards. This situation can be reversed, and compliance enhanced when there is knowledge and support given to the grass roots people. The environment in turn can be properly protected and companies held accountable because there would be good information about their activities which the agencies can use. Thus, environmental consciousness and awareness by the locals is a key determinant to compliance with environmental regulations. This research therefore argues the urgent need for grass roots inclusion in environmental activities and mechanisms as it relates to the habitat. This should be provided in simple language as this will make the companies be more aware of their operations particularly in sensitive areas around the world.

- **RR20REG "**The area of punishment…It has been criminalized. That is, the defaulter ….upon conviction, you know is subject to imprisonment. For example, the Managing Director of Shell or ExxonMobil is not going to be prosecuted in Nigeria. We don't have the will. The political will to do that".

This statement shows that communities have to speak up for themselves. They are responsible for their well-being as government invariably has not been able to protect the communities over the years.

(c) System and Infrastructure

One situation that plagues most Federal agencies in Nigeria is the necessary tools and manpower needed to carry out its designated functions. Most agencies are poorly funded, and the staff are not trained in specific technical areas needed to perform the roles and duties they are set up for. The researcher herself after being posted to

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head the public affairs unit, was trained after having spent three years on that assignment. Without the necessary certification and training, regulatory role becomes a challenge. This situation cuts across other agencies in the country. This is the impact the system has on delivering on regulatory mandates by oversight regulatory agencies. In such a highly technical area as the oil industry is, it is very pertinent that regulators be given specific training in key areas of oil operations. As regulators and as those to supervise and monitor the sector, they are expected to know more and be experts in their respective areas. However, the operating environment, which is known as 'the system', the country itself and the lack of infrastructure negates this expectation. The following direct quotes supports the above submission.

- **RROP/REG "**We have a serious challenge with implementation. You (regulator) must understand the law and believe in it. You must be protected by the system. That is where respect comes in. Nobody is going to undermine you. The regulator must never be undermined. You must like your job and believe in it and be contented and never be undermined".

"It is unfair to saddle people with what they don't understand**"**. This statement is from a respondent who was part of an international oil company (operator) and later became the head of the regulatory agency. His perspective which is from both sides, gives a clear narrative of how the regulators are perceived and how the system has affected their regulatory functions. He identified the flaws in the regulatory set up which is made up of people who are expected to carry out specific mandates of regulating the oil sector, but who however, has not been adequately prepared nor trained for the roles they are meant to do. He further states that "At the end of the day, you have serious systemic issues".

- **RRExREG "**You need to empower the regulators".
- **RRJVOP "**The way we do the leadership of agency in Nigeria is too political, I must say. If the environment agency in the UK is going to recruit its Director General it is going to publish it in the newspaper, it is going to raise people, the best environmentalists. The criteria, requirements, the qualifications, in fact when they unveil the person, you will immediately know the direction where the industry will go. But the

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situation in Nigeria, where it is the government, the President shops …the President just puts one person there…

- "It does not give the kind of visionary, passionate, leadership that we need to drive it. We need to put somebody who understands it".

- **RREXJV/OP** "A situation where the regulators says 'I want to come on Thursday, send me two cars, I have four people coming. Send me two cars to come and pick me up'. That doesn't make sense. You do your work. Get the tools you need to do your work. Show up there and do your work. That will keep everyone on their toes".

The above narratives show the independency of the agency without any influence from the head of Government. And that the agencies are not adequately funded to carry out their activities which impacts on compliance. A respondent speaking both as an operator and a regulator refers to this as a 'serious systemic issue'. Government in its wisdom and with a high sense of responsibility in addressing environmental challenges in the country, has set up these agencies. However, without proper and adequate funding for the agencies, the roles and the efforts of the regulators remain ineffective. The Norwegian regu l atory framework has t hree government agencie s comprising o f th e National Oi l Company (NOC) for its commercial interes ts, the government minis try for pol icy formulatio n and a regul atory bo dy for oversi ght and t echnical input . Th is clear separatio n of functio ns may appear the bes t option for de veloping coun tries . However, a rece nt stu dy suggests these type of models work bes t where countries h ave a h igh institutional capacity i n terms of e xpertis e and good go vernance(Col lin, 2003; Al - Kasim, 2006) Though regulators in Norway sometimes seek for passage to offshore locations in specific cases like in Nigeria, it is no t a case of total depende nce li ke it is in N igeria .

Setting up any regulatory framework costs money and unless the government is committed to funding the agencies, and /or allows the agencies to be self-funding, these types of scenario occur. This does not instill much respect, neither are the regulators taken seriously in their jobs. However, there is some change in this as the agencies are gradually becoming self-sufficient. Thus, some companies still use this strategy by providing resources like hotels and logistics to endear the regulators to themselves. It

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therefore takes a much-disciplined regulator to focus on the assignment of objective audits and inspections and not be influenced by these overtures. The above system whereby resources are obtained from the operators, is a strong pull for regulatory capture as argued by Stigler (1975).

Apart from the above, the regulator is not recognized or respected by the government as some have been undermined publicly. It was earlier mentioned in this thesis, the high turnover of directors within the DPR. Please see the organogram of the agency (See Appendix C). This political intrusion does not allow for continuity of agency programs or projects as each new director has his allegiance to the political benefactor. This research therefore argues that not having technocrats, coupled with the political influence for the headship of agency leadership has in no small way impacted on compliance to environmental regulations in Nigeria.

Regulators represent government as they are mandated by government to ensure oil operations are carried out in an economically and environmentally sustainable way. The DPR as earlier stated, is the lead regulatory agency in the oil sector in Nigeria. Their specific role encompasses the monitoring and supervising the oil petroleum industry operations to ensure that they are in line with national goals and aspirations under issued licenses, permits and leases. According to the mission statement of the agency, they are committed to 'entrenching world class professionalism, accountability and transparency'. These statements are used by the public and other stakeholders to rate and rank the department in the discharge of their duties. However, the required support from government is not evident

- **RR021OP/REG** "Beyond the individual, that is the people, the system, the environment must also enable you. So… that is adequate tools. You tell me to go and regulate an FPSO but don't have helicopters……You must have adequate systems in place. You must be able to talk to people with the touch of a button. That is the infrastructure for enforcement and technology for enforcement. If you don't have it, then you are wasting your time. You cant blame the guys".
  - "You must be protected by the system and that's where respect comes from. So when people see that you are pushing the law, they respect you and such that

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nobody is going to undermine you. You must never be undermined. The regulator must never be undermined. Because once you do that, you are finished, you can't do anything any longer. You will say the one I pushed, the same person has gone around and gotten out of it. So it doesn't work that way. So those are the key aspects of …. You must like your job, you must believe in it, you must be contented, and you must never be undermined".

- **RR017CON\SP** "Today, the regulators professionalism is not protected. Absolutely no! I think that is the challenge. If the Managing Director (MD) knows that the regulator can get him out of the job, he will do the right thing. • The MD of an IOC can have direct access to the Minister. And ehm…. What happens at the end of the day? The career officer does not want to lose his job. At the end of the day, it is independence. How is it done in Norway? How are they empowered? What makes the IOC take reports from the Norwegian regulator more seriously than that of the Nigerian regulator? "

All over the world, oil corporations form a strong lobby group which is no different in Nigeria. In Nigeria, there is the Oil Producers Trade Section (OPTS) of the Lagos Chamber of Commerce and Industry (LCCI). They are a sub group within the LCCI which is an umbrella association of businesses that have come together to promote their common interests. The OPTS is an Oil and Gas Advocacy group. It is made up of the major local and foreign oil companies with a licence to operate in Nigeria. They currently have 28 members and the cooperation between them make them a strong voice in oil and gas matters. The OPTS therefore represents the interests of members even with regard to compliance of regulations. They support each other but do not discuss or share competitive information with each other (www.opts-ng.com). In

2017, the group marked their 55th anniversary showing they have been in existence almost as long as when oil exploration started in Nigeria. This clearly explains the easy access of oil company MDs to the highest level of government which civil servants do not always have.

This above narrative also infers that in a system and environment where the regulator is respected and given recognition and support by way of funding and provision of

adequate tools and infrastructure, there is bound to be better implementation of the regulations which drive compliance.

The other aspect of system and infrastructure is the country's huge dependence on the natural resource –oil. Nigeria is a mono- economy nation and as such 'the oil must flow'. This is a statement often used to counter regulators when sanctions are slammed on non-compliance. There is a powerful lobby group (the OPTS) that have succeeded in making themselves relevant to the Federal Government as their cardinal mandate is 'provide a forum for advocacy in relation to government policies, laws and regulations that impact the Nigerian oil and gas industry'. When regulations are seen to be overtly costly or more demanding to comply with by the group, these regulations are challenged by the OPTS.

Recognition also comes from ensuring a reasonable level of continuity in the headship of the regulatory agency.

• **RR013JV/OP** "So what we are looking for is having great professionals sit there and having these professionals have free hand and the resources they need to drive it.

• **RR007COMM "**One of the biggest challenges is the government. Pipelines are assets owned by government yet you have to fight for years before attention is given to operational issues."

• **RR015MFO "**In this decade, we ought to have a scientific basis for … to say why we need this regulation and why we don't need this regulation. I have not seen anywhere where there is a DPR or FME sponsored study"

Recognition also comes internally from what the regulators do. As professionals and technocrats, a solely sponsored scientific study to back up the current regulations would go a long way in promoting and recognizing regulators for their expertise and knowledge. Currently, all industry studies are jointly sponsored with the IOCs being main financial contributors. The regulators should have a special fund allocated for such studies especially for those areas that are key to the preservation of the environment being the custodian of reports over the years. These reports should be able by this time to form the basis of revised or new regulations that can stand the test of time. (i) Resources for Regulatory Role

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Regulators represent government as they are mandated by government to ensure oil operations are carried out in an economically and environmentally sustainable way. The industry has grown since the early days of oil prospecting in 1958 to the present day and the magnitude of operations now include downstream, mid-stream operations, indigenous and marginal field operators. This situation has stretched both the human and material resources required to police and monitor activities in the sector.

- **RR09EXGOVJV/OP** "I believe the regulators are limited by resources.
- **RR08EnvCON "**Yes, the regulations we have are effective. Also we need to improve on the effectiveness. So now I am going to talk about the improvement areas. The first improvement is the strengthening the capacity of the regulators to implement the regulations"
- The regulators need to have the capacity to enforce the regulations. Here DPR staffing. You need to have the right people, the right structure, the right training and the right knowledge to implement and enforce the regulations, • In fact, I would call for a complete overhaul of DPR. A complete overhaul of the DPR. To further make it nimble. A nimble organization to implement and enforce environmental regulations. So that is the first thing".

Most of the regulatory functions are currently carried out manually and are paper based, requiring people to physically be involved rather than the use of technology which can give real time monitoring. This then takes up time that would have been used to focus on operators that have a higher tendency to flout the regulations.

As alluded to by one of the respondents, even the permit system often takes days which impacts on operations. These delays can also be mis-interpreted by the operating companies to mean that some gratification is required to get the permits. Some companies offer incentives by way of trying to get support from the regulators and it takes a very experienced and disciplined regulator to quickly identify such actions that are not work related.

Lack of adequate resources from the government puts a huge burden on the limited human resources to cover the areas needed via monitoring and audits. This situation

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also puts the regulator in an awkward position as they depend on the operators for flights and safety kits to carry out their field assignments. This tends to reduce the 'teeth' the regulator has. Because the regulator is not properly equipped, the monitoring is weak.

(ii) Political interference

Politics has its place, but in very highly technical economic activities, there is great meaning to allow technocrats do what they are paid to do without any political influence. In the Nigerian oil industry, professionals over the years have held the industry together and have worked tirelessly for years ensuring that the nation's resources are managed in a sustainable way and the benefits that accrue to government are not compromised. However, there are occasions when political pressure negates and undermines the authority of the regulator. This could have some effect on them taking full ownership.

- **RR017SC "**A situation where the IOC of a company has access to the Minister.
- **RR025JV/OP** "I don't think there has been any serious example or any company that has been given punitive measures that would have served as a deterrent to other"
- **RR007Com** "Our biggest problem is the government".

To have a strong regulatory agency in the world, government must hand off. Once the technocrats in an agency are not allowed to work independent of government, there are often. It is recalled that though the companies had warned the government about pipeline replacements, nothing had been done. In a 2014 BBC report (bbc.co.uk) Shell was told according to court reports of failing pipelines, but it did nothing until the Bodo spill occurred. Also, according to Adefulu (2008), he claims that the relationship between the DPR and Nigerian National Petroleum Company (NNPC) the government JV partner to most oil ventures in the country, makes it difficult to sanction the government. This he further added, suggests regulatory capture.

There have been several instances of non-compliance which had been brought to the attention of the government but had never been addressed. Rather, there has been

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buck passing and blaming from oil companies to their JV partners leaving the DPR totally helpless.

(c) Regulator Professionalism

(i) Regulator capacity and expertise

Regulator role globally calls for expertise as they are perceived more knowledgeable and are viewed as having more information and data. They are perceived to be highly educated so this means that they must be at par with the regulated party in terms of knowledge, expertise and resources. This unfortunately is not always the case with the Nigerian regulator.

• **RR029JV/OP** "They often ask questions which clearly shows that they do not know and are seeking to get information themselves."

• **RR014REG** "There is lack of capacity on the side of the regulator. They are not on top of things. We are not keeping pace with their operations"

• **RR024JV/OP** "There seems to be no timely feedback from the regulators after an inspection and this now makes it look like the audits are just to generate activities".

• "If the companies have taken effort to do something, and there is no feedback mechanism….It makes it appear as just going through activities".

• **RR032 EXREG** "It falls back on the regulators to do their job. If regulators cut corners and don't do what is needed

The above statements from independent industry personnel attest to the knowledge and capacity gaps inherent in regulators nominated to carry out regulatory roles. Even the regulator questioned confirmed the lack of control regulators have on their mandates. As earlier stated, most regulators employed come with backgrounds, some of which may not be scientific and are immediately without training put to monitor highly technical areas of the industry. The lack of technical skills is easy to notice.

(ii) Respect for the regulator

Though the Federal Government of Nigeria contributes 60% of its share in the Joint Venture (JV) agreement with its partners, adequate resources are not available for the regulators to carry out their functions as mandated (Adefulu, 2008). The dependence

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on the operators for use or space in their helicopters and other materials to do their job tends to put the regulator in a very awkward position. Unlike in other climes where regulators just appear without notice at platforms for inspections, the Nigerian regulator due to lack of adequate resources are compelled to draw up an inspection time -table in order to carry out statutory audits and inspections. As one operator said,

- **RR013SHELL** "24 hours is enough to set everything right and when you come, all is ok. Until the regulator can carry out spot checks……
- **RR019ExJV/OP** "When regulators come not fully kitted for their assignment, they lose respect" You lose your respect".
- "Our monitoring process is weak. Very weak by the regulators. And so because it is weak, the incentive to comply isn't there"

The above statement shows how the operators perceive the regulators in terms of monitoring. The exercise is taken as a routine activity thus the operating companies simply go through the auditing and monitoring process and it is business as usual.

(d) Compliance methodology

Operating companies in Nigeria tend to equate CSR with environmental stewardship. It is therefore necessary to stress that the two are very different and serve different purposes. CRS activities are highly publicized by IOCs and it is often used to equate environmental commitment to the communities. This has been so because of the lack of knowledge and understanding by the communities. This submission queries the long unaddressed impacts in the environment. Though companies may claim to remediate impacted sites and use community members to carry out the clean-up jobs, due-diligence needed in the selection of qualified environmental contractors used and this is often questioned. Furthermore, due to the lack of monitoring tools e.g. helicopters for regulators to independently access operational areas for spot checks. Thus, companies prefer to elaborate on their CSR programs rather than focus on environmental matters thus leaving the environment short changed. However, with the confirmation that these laws abound and are adequate, the companies are still not proactive in adopting environmentally sound practices in their operational businesses.

(i) Costs of compliance

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The companies are primarily profit-making entities; therefore, operators consider the cost of compliance especially environmental compliance which may not yield immediate and visible results.

- **RR015MFO "**In regulatory regimes, you have to look at the cost benefit of the regulations. So, you have costs to the companies for complying. And then the benefit to the environment. But are these balanced?"

Every pipeline must be pigged every two to five years according to laid down regulations in the industry. However, if government is not able to fund or service its financial commitment through cash calls (JV contracts), where is the money for compliance going to be sourced from? According to Arrow et al (1996) economic analysis are now used for the development and evaluation of regulations. It is now more relevant now than ever due to limited resources and falling oil prices. Key factors considered for compliance costs is having enough data and information in policy formulation.

Cost benefit analysis according to economists should be the criteria for evaluating environmental regulations. However, fairness of the regulations may not be measured by cost. Therefore, it becomes very difficult to calculate the real benefits of regulations against the costs. Often operators would question the costs put into complying when others are not seen to be doing the same. Operators want to see value in the regulations and justify the financial outlay for compliance to their business.

(ii) Science based regulations

Regulations are meant to correct or improve a situation and so the regulated look for value in any given regulation. In Nigeria, most regulations are culled from regions that have had experience in oil and gas operations. Though operations are the same, the environment is different and simply lifting regulations without any attempt to investigate local implications and eco interaction in Nigeria have made the oil industry in Nigeria question the authenticity of some regulations they are to comply with. Other regulatory regimes will be discussed in the next chapter.

(iii) Leadership in compliance

Compliance with t he full intent of the regulation in mind implies there is understanding of the regulations and the expectations of the regulator. Some companies show no leadership despite public claims of sustainable and responsible operations in the mission statement. They comply with the ones that do not require much expenditure while other areas are left unattended. They repeatedly ask for a moratorium which should enable them to comply, but this often drags for years. Companies tend to comply with the requirements that can be easily complied with and leave those requiring retrofitting due to change in technology or laws. Selective compliance does not show leadership.

4.9 Summary

As earlier stated in chapter three, the analysis of data and transcribed text was not based on frequency alone but on relevance to the research enquiry. Community partnership for example did not feature a lot of times, however, its relevance came forth because of how it was mentioned and by whom. The environment from the records of degradation merits focus on the communities. Furthermore, this research has linked their absence in participating in environmental monitoring with compliance and how they can collaborate with the regulators to further enhance compliance. Several challenges from both the regulators, operators and other stakeholders clearly highlights the need for enhanced partnership in order to achieve compliance in the sector. Effective and systematic collaboration has been demonstrated to drive compliance in the example highlighted thus is advocated for the Nigerian oil and gas industry.

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CHAPTER FIVE: DISCUSSION

5.1 Introduction

This chapter discusses the key findings and gives a critical assessment of the results derived from the analysis in Chapter four. This discussion attempts to align analysis with results using the identified themes to answer the research questions as stated in chapter one. This section links the importance of this research to the existing body of literature and highlights the main constructs developed from the analysis of the data collected. Oil operating companies often have corporate policies and strategies that enable them to comply with national laws and regulations. When local regulations are not available in–country, corporate entities are required to refer to international r e g u l a t i o n s or global best practice (Edgar, 2005; OGP Report 6636/210). However, global best practice is not often well defined nor specific. Secondly, most international agreements are soft laws and not enforceable therefore compliance lies with the regulators in any given country. All the major IOCs have a mission and vision statement which commits to environmental sustainability. However, this has not been the case regarding companies operating in environments with weak regulatory framework (Joseph 2012). Evidence in Nigeria shows standards of environmental operations by oil companies not in sync with the statements used by companies to promote their environmental stewardship (www.exxonmobil.com ; www.chevron.com). The following are the key constructs derived this research, which will be briefly discussed here.

5.2 Importance of environmental compliance in the oil and gas sector

The southern part of Nigeria, referred to as the Niger Delta Region (NDR) boasts of one of the richest wetlands in the world (World Bank, 1995; Ebuku, 2005; Adekola and Mitchell, 2011). It is considered the home of the widest variety of aquatic, and terrestrial plants and animals. However, the present day shows massive soil degradation, continuous gas flaring and water pollution to the extent that human existence is threatened in these areas. Gas flare, oil spills and water pollution are environmental issues the grass root people deal with daily. Indigenous people rely heavily on their

environment for a livelihood so despite huge oil finds and revenue accruing from oil production, the people of the Niger Delta Region remain poor. The natural environment is distorted and remains so for years. These negative impacts are mostly from oil operations in the said region and are largely due to non- compliance to environmental regulations in the oil sector. The current environmental status in the region calls for urgent attention by the Federal Government of Nigeria that is responsible for ensuring protection of the environment and the health of its citizens. This chapter discusses the results from the analysis done in chapter four and proffers reasons for non-compliance with environmental regulations despite the robustness of the regulations used in the country. Research data and its analysis confirms that environmental regulations in Nigeria benchmarks adequately with those of other developed oil producing areas however, compliance is perceived sub-optimal. The following discussion focus on the identified contributory factors to these low levels of environmental compliance.

5.3 Discussion of the four key themes

Four key themes were identified in the data analysis from the previous chapter and could be said to be enablers of compliance as obtained from this research. The four key constructs as they impact on compliance will be discussed and a strategy based on the four factors will be proposed to bring the desired compliance levels in the Nigerian oil industry.

The overarching themes are Community Partnerships, regulator professionalism, compliance methods of companies and infrastructure and system.

Starting with the system, this refers to the country where the governance structure is weak and political will and interference does not allow for agency autonomy and independence. Braithwaite (2002) in his analysis of tax compliance elaborated on the novel approach of meaningful community-government partnerships which can be applied in this context. Other areas where this type of partnerships have worked is in the health sector with where compliance is essential for best results in community health (Taylor et al, 2016)

Regulator professionalism can be questioned if implementation of regulatory programs is not achieved. Regulatory capture may also be an issue if regulator capacity is established. It is assumed that regulators pursue public interest to

address market failures or monopoly, however, other authors argue that self-interest, self-gratification and personal wealth often come to play (Farber and Frickey, 1988). These can be acquired through their regulatory power.

Regulatory capture can also happen when there are no clear rules for environmental protection as in the Nigerian context. Oil exploration technologies principally came from other regions (Portman, 2013) as can be also said off the coast of Israel where new laws and jurisdiction guidelines were not given the technological implications. Thus, negotiating the laws as is sometimes seen in Nigeria, in favor of the operators can be interpreted as regulatory capture. According to Stigler, (1971); Zhang et al, (2017), the strength of environmental regulations depends on the capacity of the regulator and their willingness to regulate. Whereby the regulator becomes slack and intentionally reduce the force of regulation, they are termed as being captured. This situation results in more damage than good for the environment (Staszewski, 2010; Graham et al, 2011). So regulatory capture is a phenomenon that should not happen under any circumstance. In Nigeria, there may be the tendency to tag regulators as being captured, however, it is noted that due to the mono-economic nature of oil for Nigeria, oil remains the main source of revenue and environmental regulations can be negotiated to allow oil revenue for development projects. Regulators in the Nigerian situation and context are more prone to capture due to their heavy reliance on oil operators for passage to carry out their statutory functions. Regulators can also be captured when the style of regulation is not participatory or consensus based (Hey et al, 2009). Regulatory capture can be problematic because government is often influenced not only by politicians but by big corporations that operate in poor and developing countries (Zhang et al, 2017; Kamp et al, 2017). In Nigeria therefore, strategies that can curb capture include capacity building of the regulators as identified as lacking in the data and interviews collected.

On the other hand, excessive regulations as a result of overcapacity could also be a problem as reported in the OECD review report of 1995. Compliance methodology of the companies was also an issue with some stakeholders because of issues like absence of clear regulations. The intent of environmental regulations was debated as the regulations were not tagged science based. After a long period of reliance on standards from other climes, the industry wanted in-country studies that would form the basis of the regulations used for environmental protection particularly in the oil

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sector (**RR022**). One factor which was not often considered by the regulators is the cost of compliance. As stated by one of the respondents (**RR019**), retrofitting often took a longer time to implement and consistency of purpose for this was needed from the regulators. The country in not adequately equipping the regulatory agencies, created institutions which lacked the authority and independence to drive environmental compliance to a level that would protect the environment. Thus, a multi-stakeholder framework as suggested by this research fits in with the work of previous Hey et al (2007) and Bostrom et al (2015).

Having community partners in regulatory monitoring offers the opportunity for an independent assessment of environmental compliance. However, this would start with raising the environmental consciousness of the populace.

The multiplicity of agencies and overlap of functions in the environmental space can also be addressed when all levels of government particularly at community level is addressed. Memorandum of Understanding (MoUs) and inclusiveness of the grassroot people who are the most impacted and vulnerable to environmental impacts will close the gap which the government attempts to close by creating more agencies. More agencies are not needed but better collaborations between all stakeholders is advocated. Companies who over comply with regulations often bring on new technologies ahead of rule forming and thus lead in some compliance areas.

However, if other operators lag in compliance, it negates the overall intent. This statement stems from the new and latest technologies that operators willingly bring into exploration which sometimes leave the regulators behind in understanding operability of the innovation. It must also be emphasized that agency personnel are pulled from varied educational background and are trained on the job. Operators on the other hand engage subject matter experts and certified technical staff for their operators to ensure there is little or no down time. These are the complexities inherent in regulating highly technical sectors thus call for use of subject matters experts in regulatory role is advocated. The perception of the research respondents and the direct interactions of some operators with regulators point to the fact that regulators lack the understanding of oil business which impacts on their role in regulating and monitoring oil and gas activities (**RR024**), (**RR019**). These factors

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discussed above build on the normative theory of compliance. This theory argues for change in behavior or the logic of appropriateness as suggested by (March and Olsen, 1989). Literature suggests legal and institutional reforms to drive and improve compliance to regulations generally. These strategies have been used all over the world and is seen to be effective in developed regions. However, in a developing world like Nigeria, certain considerations must be made. These adjustments to those proposed in the literature build around the results derived from the overarching themes in the results. This motivation for change can be derived from other regions like the United Kingdom where the focus is in improving the outcome of regulation which the European Union (EU) embraced (Brouhei, 2015). The better regulator sought to reduce compliance costs while creating better regulations and value to consumers. Views of stakeholders were sought in assessing regulations and its benefits in the study of the impact of existing regulations. This initiative cut across the UK and the USA in that it addressed economic and political globalization and hybrid legal systems (Wiener, 2006).

At the start of oil exploration and exploitation in Nigeria in 1958, the industry was not monitored and regulated as it is now. Hence oil companies prior to the establishment of the Federal Ministry of environment (FME) and subsequently, the Petroleum Inspectorate (which evolved into the Department of Petroleum Resources DPR) operated on best oil field practice. In fact, there were no focused environmental laws at that time. The Federal government was mainly interested in the revenue that would come for the development of the nation. Several years later, operating companies now see compliance with environmental regulations as an added cost to operations. The budget for environmental management is often added on a needs basis rather than being incorporated into the conceptual stage of projects. Governments all over the world contend with limited resources to empower and equip the regulatory agencies set up to change social ills. This could be in terms of budgets, expertise, personnel and tools to regulate. Some scholars in Canada, France, Britain and America however have noted the need to incorporate and use alternative policy instruments to strengthen their regulatory institutions (Howlett and Ramesh 1995). They however stated that in using these alternative routes, attention must be paid to its recognition and authority, or voluntary nature, which could be a major concern in Nigeria. This is because as stated by one of the participants

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- **RR014REG** "the companies just don't want to be regulated"

Even with established mandates, the oil companies' push back when it comes to environmental regulations. That notwithstanding, whatever the manner of partnership, the outcome of the partnership will surely be different based on the chosen strategy (Hewlett; Ramesh 1995). Whatever the outcome, or partnership used in Nigeria, there will be an added benefit as more eyes will be on the environment. This type of partnership will give the communities a sense of belonging and ownership and it will increase trust between the communities and the operating companies. Rather than see the oil companies as outsiders coming only to pollute their environment, they will work with them in ensuring that the consultants used by the companies do the field study as agreed. Though capacity and monitoring resources are enough reasons to adopt this strategy, coverage in remote monitoring areas is another reason for partnership with communities and at all levels of government for enhancing environmental compliance. This will also ensure the same environmental standards are used across board. Another reason for the researcher's argument, is a fast response to environmental emergencies when they occur. Empowering community and grass root people creates the needed resources to address and contain spills and other impacts pending when equipment and materials, the regulators and government officials arrive on site.

This research argues for the added benefit of regulatory enhancement by partnering with the communities and the grass roots people in the host communities. This is because they bear the brunt of environmental impacts. Secondly, community and grass roots people are a useful resource in ensuring compliance in that standards are met by companies operating in remote areas that often cannot be reached by regulators due to lack of resources in the form of helicopters. The community and grass roots people, if made to understand the regulations and how it affects them can indeed add value to environmental management in the country. Further to the above, state and local government environmental protection agencies are made up of local people and so the partnership modalities need to be carefully streamlined. Clear responsibilities are needed to assure that this arrangement would not be abused but used to check and monitor oil activities in the remote areas of the nation. These community people feel

the direct impact of oil operations in the form of gas flaring and water pollution. This is stated by one of the research respondents as follows.

- **RR09 EX-JV/OP** "There is no serious monitoring. Because the regulators are limited in the resources. There are no defined responsibilities. The Ministry of Environment, the directional regulator in this case the DPR, there is a conflict between them, as I can see. The state is not involved and so the community, community meaning local government. You have… everybody is involved with this environmental quality assurance. The communities don't know much about environmental standards. There are no punitive…, there are no obvious sanctions, sanctions are not been applied either at the state level, local level or federal level." While some authors (Newis and Fortis, 2012) have argued the effectiveness of multilevel and participatory governance, this research has brought to the fore, the added advantage of having such a set up in Nigeria. Caircross (1992); Arora and Carson (1996); Gallop International Institute (1997) in their study linked community consciousness with people willing to pay more for products sourced in a more environmentally sourced manner therefore, if the communities take full ownership of their environment, the more recognition Nigeria will have for sustainable resource extraction. Though in this instance, the environment is the subject of discussion and it is not a commodity but a public good, the people are more likely to monitor how operations are carried out and what happens to the environment in relation to their livelihood. This research therefore agrees that with the authors involving community people directly with environmental sustainability can change the behavior of companies and make them more diligent in the methods they use in their operations. Secondly, these impacts are more easily detected by the local people because they live in these environments. The regulators only come and will return to their offices after such inspections. The environment can never be over protected. Some research respondents wonder how environmental regulations without input from those who are directly impacted can work when they are not involved and adequately compensated.

- **RR020REG** "This non –inclusion of defined compensation rates in the laws in Nigeria ultimately puts the communities at a disadvantaged position. To have buy-in from the communities and to get full commitment from them for partnership, the

government needs to address their needs when there is displacement or environmental impact on their land. Though not many community people were interviewed, three industry people made up for this as they were retired persons who now see themselves as community folk living in their community after retirement. They have made a passionate plea for community involvement emphasizing that this would help in policing and checking the notorious activities of some operating companies particularly in remote locations. Currently, it is only when someone with environmental awareness goes or lives in these communities that environmental issues are flagged up for example the Koko toxic waste dump of 1988. Ken Saro-Wiwa an environmentalist highlights the damage and injury done to the Ogoni people and it is his knowledge which resulted in his advocacy for environmentally sustainable operations in the Niger Delta region. Companies operating in Nigeria take advantage of some of these knowledge gaps of community people and the lack of collaboration and communication between government agencies to commit all manner of environmental atrocities and defend their position. Blame is not only for the international companies because some indigenous companies have also been found to carry out actions that question their integrity. For example, some Nigerian service companies have been found to bury drill cuttings in remote areas of some villages rather than collect, contain and subsequently treat them to the set limits as stipulated in the regulations. It often takes a vigilant villager to alert the authorities of this unwholesome act and sometimes, waste such as this, remains buried and undetected for years. Most regulatory agencies do not have enough personnel or resources to monitor every inch of the environment which therefore makes community inclusion in the regulatory role a good strategy. The above discussion emphasizes the four key themes as important components for compliance in Nigeria.

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5.4 New theoretical framework

Derived from the above discussion, the new constructs that advance the compliance debate include the importance of the role of the regulator as a key factor towards ensuring compliance. Other important factors directly linked to the Regulator include *Community partnership, Professionalism of the regulator, Support and recognition, and operating environment.* This is illustrated below (**figure 11**) as a new framework for compliance.
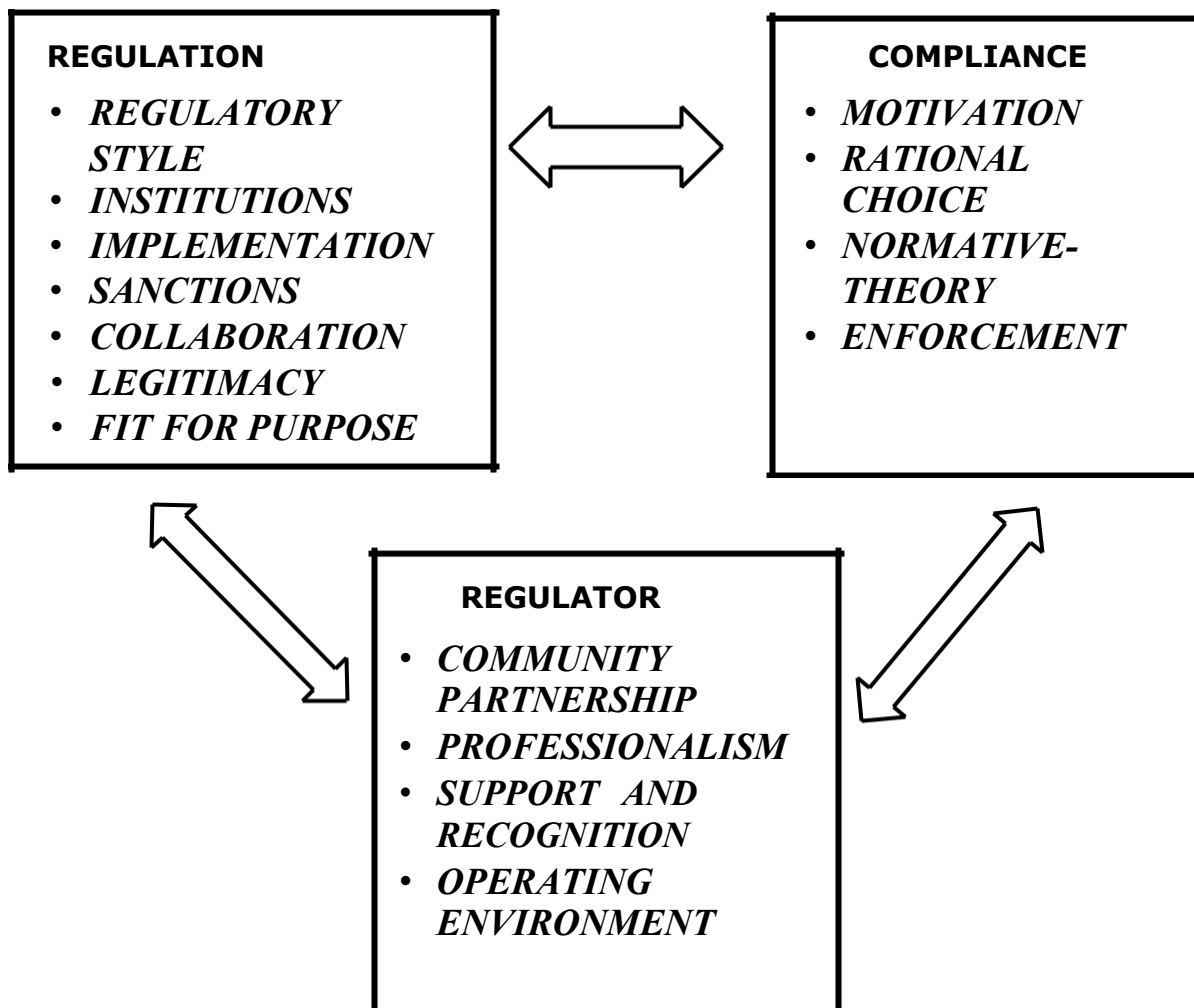
REGULATION

- *REGULATORY STYLE*
- *INSTITUTIONS*
- *IMPLEMENTATION*
- *SANCTIONS*
- *COLLABORATION*
- *LEGITIMACY*
- *FIT FOR PURPOSE*

COMPLIANCE

- *MOTIVATION*
- *RATIONAL CHOICE*
- *NORMATIVE-THEORY*
- *ENFORCEMENT*

REGULATOR

- *COMMUNITY PARTNERSHIP*
- *PROFESSIONALISM*
- *SUPPORT AND RECOGNITION*
- *OPERATING ENVIRONMENT*

Figure 11: New framework for compliance

(Source: Generated by the Researcher)

5.5 Summary

This research contributes to the existing regulatory compliance framework by arguing that though regulations exist and there might be some compliance, without how the regulators drive compliance, the out remains minimal. Regulators must be professionals with expert knowledge on the sector they monitor. They must be supported and recognized by the government with less political interference in carrying out their duties. The following chapter highlights the recommendations for this study.

CHAPTER SIX: RECOMMENDATIONS FOR COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

6.1 Introduction

The purpose of this chapter is to highlight the specific recommendations derived from the findings and discussions in chapter four and five of this research. Some of the recommendations refer to current practices in use in the Nigerian oil sector. However, the implementation of the given strategies has been fraught with many challenges which should be reviewed to align with the overall aims and objectives of having environmental regulations in the oil industry. This research has therefore presented an analysis of the concept of compliance through the perspective of a regulator as the lens for substantiating the concepts under review in the Nigerian context. It has also highlighted challenges inherent in complying with environmental laws and regulations in Nigeria. This research examined how the industry is regulated and the main style of regulation in the oil sector. The challenges thus presented in chapter four by the oil industry stakeholders can be considered factors that contribute to non- compliance with environmental regulations in the Nigerian oil and gas sector. It reviewed aspects of compliance enablers not found in literature with such insights that constitute regulator professionalism and expertise as strong determinants to compliance in a regulated sector. This is substantiated by the OECD report of the World Bank (2002) which reviewed the regulatory reform in the United Kingdom, though public consultation was used to achieve efficient and better regulatory initiatives.

In the UK model, policies and tools identified to reduce compliance burdens have been consistently used in the said reforms. One such mechanism is the inclusion of the public in policy development. This research however used the 'regulator', the people mandated to ensure compliance as the focus of reform in Nigeria. It hereby makes the following recommendations outlined below.

6.2 Research recommendations

Recommendations of this research highlights challenges with compliance to environmental regulations in Nigerian oil sector that could be attributed to many factors both from the regulator and the regulated community. The following recommendations therefore addresses strategies not only for the above parties but also for government and the communities who for purposes of argument are termed 'informal regulators.' Communities here include the NGOs who have a stake in green sustainability initiatives across the sector and in the country.

(a) Recommendations for the government

It is generally accepted that every government endeavor to protect its citizens by ensuring the conservation and preservation of its environment. This is done through applicable laws and regulations and the setting up of appropriate agencies to oversee this mandate. To have world class regulatory agencies therefore, adequate funding, total independence from government, support and recognition of the regulator is needed. Regulatory agency authority must not be undermined under any guise in order not to weaken their mandate or

lessen respect for the regulator by the regulated community.

Easy access to the country's topmost leadership by the oil industry's powerful lobby group or by politicians was observed as undue influence on regulatory roles. Having sanctions and fines over-turned by government is seen as undermining the authority regulatory agencies and legal structures in the country. This research therefore recommends total autonomy and independence of regulatory agencies from government to be effective in its mandate of enshrining compliance.

The recruitment system for staff positions in regulatory agencies should take cognizance of expertise, experience and professionalism of individuals that would work in the agencies. This study in recognizing the federal quota system for national representation in federal agencies, however strongly advocates the basis of merit and expertise in such a highly strategic sector as the oil and gas industry.

 Agencies must be self-funding to ensure the independence of agency from government and the regulated parties. A self-funding agency will have the needed independence and authority to run its affairs in a transparent and in a more businesslike manner thus cutting out the bureaucracy associated with government institutions. Total political

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independence for regulatory agencies is recommended to drive agency effectiveness and compliance to the nation's regulations. Furthermore, the Federal Government should put in place, a formal right of compliant to improve the country's regulatory quality and in line with the Principles of Good Regulation 1998.

Frequent change in the leadership of regulatory agencies underscores efforts towards continuity and sustainability of reforms and programs that could bring real benefits to the nation especially in the areas of the environment. Agency leadership should not be political to promote transparency and accountability in line with global governance systems. The passing of the PIB is thus recognized if implemented.

Regulations should reflex current realities therefore there should be a minimum time frame for review of enabling laws to promote compliance. The laws of the country are far outdated to make any significant change in the industry as it currently stands. Thus, a regulatory impact assessment of existing regulations from agencies should be presented to evaluate effectiveness of legislation used in the country.

(b)   Recommendations for the communities

Communities and other relevant stakeholders (including NGOs) both at local and state level, must be aware and understand oil and gas activities going on around them. To protect their environment host communities must also be aware and understand the environmental guidelines put in place by government for the conservation of the environment. In the license to operate (LTO) given to operators by the communities, they must request to be part of the policy making instruments which empower the communities to understand compliance methodologies and requirements from the regulators. This approach can strengthen and enhance compliance at the grass roots level often classified as the most vulnerable. Being part of the policy making system would ensure fair compensation for damage to their land where remediation efforts fail. Communities must learn to look at long term benefits and less on immediate gains arising from oil field operations. There should be a focus on environmental sustainability rather than CSR projects which is the main responsibilities of the Federal Government to its citizens. Understanding of oil and gas operations will give respect to the locals and indigenous people.

Recommendations for operating companies

(c) Companies with good governance structures are perceived as good corporate citizens with a high level of responsibility and resources to comply with extant laws of any country they are operating in. This means that every effort is made to ensure companies comply with national regulations. Compliance methodologies by operating companies should be transparent and align with regulatory outcomes. Furthermore, compliance methodologies must be

approved by all relevant regulatory authorities in the given country.

Where no national laws or guidelines exist, global and best oil field practices must be adopted and used by international companies undersigned and accepted global conventions. Selective compliance and/or over-compliance to avert or delay compliance with certain regulations should be discouraged as this impact on the overall image of the company. Waiver requests are often accepted in good faith by regulators with the understanding of compliance within the times and conditions set in the waiver application. These waivers are not to be used in perpetuity as a means of avoiding compliance especially in the environmental space, neither should they be taken for granted. While recognizing all efforts to comply with environmental regulations, operating companies should be aware that extractive activities are in the limelight globally.

(d)   Recommendations to regulators

The effectiveness of regulations is only as good as its implementation. This research thus recommends clear implementation mechanisms to be adopted by the regulatory authority. This mechanism must be agreed and signed off by both parties and must be strictly adhered to weed out free riders. Regulators must also make good of their commitments to the operators for agreed timelines and spring no surprises. Monitoring must be consistent and feedback on audits and other deliverables timely given to operators to command respect as regulatory professionals. Well documented and monitored feedback must be maintained as there is no excuse for non- compliance to linger for many years as it currently stands in the Nigerian oil industry.

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> Monitoring activities should be consistent to be taken seriously by the regulated community.

Heavy reliance on the regulated by the regulators for passage to carry out their regulatory functions should not occur. Where they happen, instances should be justified and documented. Over reliance on the regulated as this research argues diminishes the regulators authority and often results in regulatory capture as earlier discussed in previous chapters. This research recommends continuous engagement and information sharing as essential to compliance and enables the regulated comply to set regulations as required. The use of antecedent publicity is advocated with its success in the UK Better Regulation initiatives.

Compliance performance reports of operators should be made public to demonstrate transparency and fairness in regulation. The use of publicity in compliance monitoring may also show the independence of the agency from political control or influence. Furthermore, a monitored feedback mechanism and a right to compliant platform is a veritable platform for regulators that can be used for assessment and evaluation of regulatory functions.

6.3 Recommended Collaborative Approach to Regulatory Compliance

There are seventy discovered straddling oil and gas fields in Nigeria, which require joint development or unitization arrangements between the respective parties. However only five companies had signed Unitization and Unit Operating Agreements (UUOA) to develop their fields as single units. The other companies have not reached agreements on how to jointly develop their fields. This situation as stated by the authors (Egba, Bekee, Oriafo, Dosumu, 2016) had the potential to lock down the much need barrels of oil to meet the goal of 40m barrels of oil projected by the country for 2020. One reason alluded to this non-compliance was a lack of proper understanding of the need to have a single combined tract extraction in line with the 2008 Unitization Guideline, issued by the DPR. This guideline was for a long time not complied with.

Unitization is a process whereby oil migrates between two locations and so oil does not lie within one block. It took the collaborative efforts between the operator and the regulators to shift compliance positively thereby creating a win-win for both operator

and the Nigerian government. This example of compliance was chosen to further illustrate how partnerships and collaboration between the regulator and the operator can enhance compliance to existing regulations. It is noted however that this exercise was successful as both the regulators and the regulated companies were committed to resolve the issue. There collaborative efforts resulted in resources and time being set aside for training on unitization as well as allocating time for the workshop as it involved key staff from both sides. As alluded by one of the research respondents, the guideline had been in place for a long time, since 2008, without compliance to it. Compliance recorded after the collaboration increased significantly as stated by one of the research respondents (**RRREG**).

Deriving from the success recorded in securing compliance to the unitization directive of the DPR, this research hereby highlights this strategy used by the legal team of the agency to showcase how collaboration was used. The collaborative effort was agreed and driven both by economic motives and the mandate given the regulator to ensure reservoirs are sustainably managed by the operators. This strategy was initiated by the DPR regulators when it was discovered that operating companies with straddling fields were not complying with this requirement and this had a huge potential to damage the specific reservoirs in question. One of the key mandates of the regulator is to ensure oil extraction without damage to the reservoir. Another consideration was the need for enhanced reservoir management by oil operators.

The basis for unitization in Nigeria was established in section 48 of the 1969 Nigerian Petroleum Act, and the Petroleum Regulations (Drilling and Production) 1969. These have since been amended by the 2008 Unitization Guidelines issued by the DPR (www.dpr.gov.ng). These 'Guidelines' are legal instruments which seek to remove the destructive competition between owners of straddling fields brought on by the rule of capture (Ong, 1999). Without this legal control, the first party or owner of the field aggressively develops the field without due consideration of the other owner. The unitization instrument therefore enhances field recovery, lowers costs in sub- surface and infrastructure and prevents the proliferation of wells (Deemer, 2004). Through these measures, premature and aggressive depletion of the reservoir is reduced, and the field can be commercially profitable in later years rather than early abandonment

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(Libebag and Wiggins, 1985). Economic implication of this guideline notwithstanding, the identified companies failed to see the tremendous value of resource sharing and improved fiscal terms associated with complying with this regulation. This constructive example of compliance illustrates the advantages of a collaborative regulatory style, which both the regulator and regulated entities highly valued. This proposed regulatory style is relevant to this thesis and should be recommended as it would be instrumental towards enhancing compliance with the environmental regulations in Nigeria and other extractive regions around the world.

6.4 Research Implications
(a) Theoretical implications

This is the first time in the history of Nigeria that the lead regulatory agency DPR is being examined on regulatory approaches towards compliance with environmental regulations within an academic context. The feedback on compliance and regulatory role of the regulators focused on the relationship between the regulators and the regulated operating companies. This study was carried out across the value chain of the oil and gas sector in Nigeria. It explored compliance in the context of environmental regulations in the oil sector in Nigeria as a developing country. This research recorded the experiences of oil industry experts across seven categories in the oil industry value chain. Research respondents had over 100 year's cumulative experience in the oil industry in Nigeria and abroad.

Research on theoretical aspects of regulation, as discussed in chapter two, suggests professionalism and expertise of the regulator as a key driver for compliance to environmental regulations specifically. This research further advocates community partnership as a key determinant of enhanced compliance having recognized the personnel and resource gap in monitoring remote areas of oil operations in Nigeria. Prior to this time, regulatory efforts laid principally with the Federal agencies, leaving the grass root people vulnerable to environmental impacts as a result of lack of direct oversight in these far to reach places. Community inclusion in regulatory role, would also address the compensation issues that deprives the locals adequate recognition and

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compensation due to continuous pollution of their environment arising from unsustainable oil field operations and activities.

Several studies on regulatory agencies, indicated in the literature review in chapter two also suggest efforts in establishing world class regulatory agencies be systematic, consistent and transparent without government influence. However, these are mainly possible in developed countries such as the UK, US and Norway where regulators and the agencies have undergone several reforms over the years. Furthermore their industries are now almost self-regulated. For many developing countries, creating new regulatory agencies without due regard to existing ones creates higher costs for operations which in turn puts a higher compliance burden on the regulated community. It also creates conflict and duplication of mandates at costs the government cannot afford to spend. This research highlights the shortcomings in the regulatory environment in Nigeria as discussed in detail in the next chapter. The theoretical underpinning of this research suggests the following recommendations which are captured in the concluding chapter.

• To advance professionalism of regulators in Nigerian oil sector, this research recommends establishing a code of practice as a way of standardizing regulatory functions, as a key driver to compliance in the Nigerian hydrocarbon sector.

• To close the knowledge gap, this research also recommends that Subject Matter Experts (SMEs) who specialize in critical oil and gas areas should be consulted for use in regulatory agencies to match the expertise of operating companies in Nigeria. This allows for mentoring young professionals within the agencies, knowledge sharing and to ensure compliance mechanisms are in line with global standards for the implementation of regulations.

• To enhance an open and transparent feedback mechanism as a means of regulatory legitimacy and fairness is also proposed to endear respect and trust between all stakeholders. Compliance records of operating companies should be in the public domain and should be reflected in the annual reports of the regulator as a means of promoting independence from political influence in the Nigerian Oil Industry.

(b) Research implications for Regulators

Regulators are often perceived by the outside world as a group of officers that have expert knowledge of the sector that they regulate. This implies a high level of professionalism and expertise is demanded in carrying out of their regulatory functions as well as transparency and fairness in their role as regulators. Evidence from the success and enhancement of compliance in the straddling fields regulatory regime in Nigeria which had been violated by operating companies over the years, suggests the use of collaboration and partnering with operators in shifting compliance positively. The shift in compliance recorded with the straddling field guidelines was achieved by the commitment by both the regulator and the regulated entities. Enhanced compliance as demonstrated herein resulted from the understanding of the implication of the laws.

6.5 Summary The above recommendations will be highlighted in the next chapter which also concludes this research. One cap does not fit all situations therefore stakeholder engagements are key. There must be a balance in addressing the simplification of regulations which will reduce the burden on businesses while conducting ex ante, impact assessment of new regulations.

CHAPTER SEVEN: CONCLUSIONS

7.1 Introduction

This research has examined compliance with environmental laws in the oil and gas sector in Nigeria and not about laws and its review. It focused on the way operators and regulators viewed and complied with set environmental regulations in the Nigerian oil and gas sector. It examined the interaction between the regulators and the regulated community within the Nigerian regulatory space and how this influenced compliance in the oil sector. Five research questions from the main research question stated in chapter one was used to review and examine current environmental regulations and compliance with existing the laws as written. The questions arising from the main research question which is "Why is there no compliance with environmental regulations in the oil and gas industry in Nigeria" are:

• What environmental laws and regulations exist in the Nigerian oil and gas sector?
• How is compliance perceived in the industry?
• What challenges if any, exist in complying with environmental laws in the oil industry in Nigeria?
• How is the industry currently being regulated in Nigeria?
• What global best practice exist for environmental compliance?

7.2 Addressing the Research Questions

To answer the research questions therefore, a comprehensive literature review was carried out and this helped in the choice of a qualitative methodology adopted for the study. The literature review focused on the regulations and compliance concepts, its meaning and applications. Semi-structured interviews, review of documents such as industry reports and some restricted government official documents were also used. An example of a collaboration success between the regulator and the industry was presented. This collaborative model is an acceptable way of securing compliance and can be used in any sector or country in the world. When governments roll out rules and regulations, they are to be complied with because such rules were meant to address a

social problem or address markets. Besides resources have been put in place to enact those laws and set up agencies to ensure compliance with the regulations. According to Banks (2004) the highest costs to regulations is the responses towards regulations that may indicate its ineffectiveness or attempts at reducing its social goals. Therefore, all efforts, by both the regulated and the regulators must be put at ensuring compliance. Initially this researcher was part of the phenomenon under investigation, which allowed for some direct field observation. All these assisted the researcher in evaluating the regulatory styles used by the regulators, compliance motivations of operators and challenges faced by both the regulators and the oil operators across the value chain of the Nigerian oil industry.

(a) Adequacy and Effectiveness of Environmental Regulations in Nigeria

The first research question focused on the existence of environmental regulations in the oil and gas industry in Nigeria. Chapter two gave an overview of the regulatory framework which served as the basis of this investigation. Appendix B is an extract of environmental regulations currently used in the Nigerian oil industry. The above question helped to determine the existence and awareness of environmental regulations by various stakeholders in industry. This question further helped in evaluating the adequacy and effectiveness of the said regulations as written. It was important to establish the existence of environmental regulations and its availability because compliance starts with having regulations in place. Regulations are often put in place to achieve goals of correcting social ills identified or to correct market failures. As indicated in chapter one, the Koko incidence of 1988, prompted the government to focus not only on economic growth but also on the then evident environmental challenges and gaps in the country. Prior to this time, environmental matters were carried out in an ad hoc manner. Furthermore, with the increase in oil exploration activities in the country, it became necessary to have coherent and specific laws for the protection and preservation of the environment in Nigeria. This research thus concludes the availability and adequacy of environmental regulations suited for operations in the Nigerian oil industry as currently presented in the EGASPIN document, Acts and laws.

(b) Compliance levels with environmental regulations in the oil industry in Nigeria

The second research question asked how compliance was perceived with regards to the environmental regulations in the oil sector in Nigeria. This was asked from the different categories of participants cutting across the oil and gas value chain. This thesis concludes that compliance to environmental regulations was perceived low by all the stakeholders questioned. This research therefore argues that due to the gross degradation of the environment coupled with the failure of the industry to remediate all identified impacted areas, compliance is rated below average in the Nigerian oil and gas sector. Though some companies were perceived to have high compliance levels than others, the general perception was that compliance is low. This study discovered that multinationals represented in this research ranked themselves high on compliance. They believed they were complying with the environmental regulations in the country. Evidence on ground is different and this is as far back as the 70s. Service companies which includes contractors and other sub-contractors also ranked the IOCs high on compliance. However, the community representatives and the regulators ranked the oil companies low on compliance. The reason could be because the regulators work closely with oil companies in their operations and sometimes even participate in projects together thus know more about how the regulations are applied. Regulators are also privy to operational reports and incidents therefore have first-hand assessments of their activities through the periodic planned audits and inspections carried out. Similarly, communities are directly impacted by the outcome of non- compliance to environmental regulations in the country which is pollution of their land, waters and air. Communities bear the full brunt of these impacts thus their low rating is more aligned with the perception of the regulators. Furthermore, review of restricted documents from the regulatory agencies detailed long standing non- compliance issues in the industry as earlier stated and some of these environmental issues exists today. A good example is the continuous flaring of gas into the atmosphere. All these were stated for the low compliance rating. Further to this, the Nigerian government's continuous change of gas flare-out dates since 2008

has also contributed to the perception of non-compliance to environmental regulations in the country. Though some efforts have been made in terms of inclusion of gas utilization programs as a condition for the approval of new oil and gas projects, impact to the air quality is still on going. A stall in the mutually agreed industry 'air quality study' led by the industry makes it difficult to ascertain the level of damage to the air. This is particularly worrisome because of the people who live around the flares daily. More important is the health of the communities being compromised by this continuous emission of gas and the associated heat. The recent gas commercialization program by the federal government of Nigeria in 2018, though laudable can be interpreted as a recognition of the non-compliance and a strategy to address it via economic means. This thesis highlights the Gas Re-injection Act of 1992 which was promulgated early enough to have greatly reduced the incidence of gas flaring and loss of revenue to the government. The availability of technology to mitigate or reduce gas flare has also not been utilized by the industry. Finally, this thesis confirms that social motivation has not encouraged companies to stop gas flaring in Nigeria.

(c) Challenges faced by oil and gas stakeholders towards compliance with environmental regulations

The third research question was to elicit challenges, if any, in complying with environmental regulations in Nigeria. The research outcome highlighted the several challenges faced by both the operators and the regulators and other stakeholders in the industry which were discussed in the findings chapter four.

(i) Understanding of environmental regulations

The main challenge identified by this research was understanding of the environmental regulations and their intent as is currently presented. It is argued that clear understanding of the intent of the environmental regulations facilitates its implementation and compliance. Thus, understanding of regulations should not be assumed because that is a flaw in regulation. Regulations are usually presented in legal parlance thus, understanding of its purpose may be lost to the many people. This research showed that the oil companies had challenges with understanding their responsibilities towards environmental stewardship. The wrong

remediation processes used by Shell for example, demonstrated a lack of understanding of the intent of remediation and the expected outcome of remediation requirements as stated in the EGASPIN. The success recorded from the collaboration whereby, the regulators worked closely with the operators to better understand the unitization requirements is a pointer to this. People do well what they understand and accept regulations as fair and legitimate. The delay in the remediation of impacted sites within the oil company's operational areas can be interpreted by third parties to mean lack of understanding of the requirements or a lack of acceptance of the regulations as presented in Nigeria. There is therefore urgent need for this situation to be addressed by government. It was also highlighted that its presentation made it not too easy to locate relevant laws when needed for operations. Therefore, this research calls for regulations in simple clear language more so as community partnerships is advocated.

(ii)   Use of Information Technology (IT) platform for the regulatory role

This research highlighted the lack of modern information technology platforms used by the Nigerian regulators in carrying out their assignments as a key challenge to operations particularly in the offshore areas of operation. A few research respondents mentioned the long delays in getting feedback from the DPR and how the use of IT can help facilitate that. Use of IT can facilitate and reduce bureaucracy in regulatory work. Currently, the DPR relies on the facilities of the operators to contact the DPR field offices. In fact, a DPR staff is permanently stationed on an operator's platform offshore, to monitor crude offloading into designated export vessels. This activity can and should be done remotely from the DPR's office. Going by today's standards, this can be said to be retrogressive. The use of IT platforms has the potential to reduce downtimes in operations needing approvals from the regulators. Being a fast-paced industry and one that operates daily 24/7, it is important to have quick feedback, fast and reliable communication links and access to the regulators when needed. Currently, only the oil and gas industry service

permit (OGISP) is carried out digitally and as such, applications can be applied for and obtained online in the comfort of the office. While the DPR is applauded for these initiatives, more needs to be done in terms of using IT in all its monitoring functions. This is more needed especially in critical field activities as mentioned above. IT platforms and real time monitoring enables quick access to reports for confirmation of reports provided by companies. Data and evaluation of operational requests especially when rigs are on long standby periods thus incurring high costs the company cannot afford to lose. IT use reduces financial investment in the long run and will free up time for the regulators to focus on other high-risk assignments that specifically need their physical presence. A lack of timely feedback has been said to have a negative impact on compliance as the operator subsequently would adopt a relaxed stance with adhering to environmental regulations in the industry. Therefore, as safety considerations are highly technologically driven, environmental regulations will do well to follow the same way. E -monitoring is therefore highly recommended for regulatory roles in the environmental space.

(iii)   Multiplicity of regulators to collaborate on overlapping functions

Another challenge brought out by this research is the multiplicity of regulators with oversight functions in the Nigerian oil industry particularly the due to the lack of collaboration and alignment of their requirements from the operators. This lack of coherence has increased the cost of compliance thus demotivating compliance to set environmental regulations. Regulatory agencies should use the same criteria upon which field studies are conducted rather than have companies carry out two or more of the same studies for each agency. The EIA studies are of particular interest here. For a sector already buckling under the weight if low global oil prices, this is an important outcome of this research that needs to be urgently addressed by the industry. Single EIA requirements across regulatory agencies advocated and its continuous evaluation with regards to the proposed project will give more value rather than its use as a permitting document as is currently done.

(iv)   Regulatory expertise

Regulatory agencies need to show and demonstrate knowledge of the synergies between field operations and the environment via scientific studies. A lack of scientific basis for current environmental regulations used in the industry is a challenge that was discovered by this research. Though current regulations were lifted or borrowed from advanced and matured oil operating regions, it is now imminent for the DPR to have science backed regulations to justify the costs and other resources needed to comply with environmental regulations in the country. The academia is usually a key stakeholder in this regard, or they may be funded to carry out specific studies as is done in other operating regions. Environments are different across the world and the result of environmental impacts are very likely to be different. This research has emphatically highlighted this challenge and asserts that addressing this gap which will bring respect to the agency and compliance to laid down environmental rules and regulations in the oil sector.

(v)   Regulatory capacity

A very important challenge brought forth by this research and which calls for some serious attention is the lack of capacity of the regulators. This observation cuts across the several oversight regulatory agencies in the oil industry. This research ties this lack of capacity to respect for the regulators. Regulators usually lead in the regulator-regulated relationship and are expected to know more given their vantage position of overseeing several industries and operations. Regulators have the added advantage of gleaning knowledge and lessons learnt from different operators which builds on their capacity and expertise. However, this research in bringing this challenge to the fore indicates a gap in the capacity of the regulator when matched against the industry they regulate. This challenge is considered by this research a contributing factor to compliance with regulations. As the industry is a specialized area, if perception by the regulated community is that the regulators have limited knowledge, they are likely to have superior argument on compliance issues. Related to this

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challenge is the tendency for regulatory capture of regulators because of their heavy reliance on the operators for resources. Use of SMEs may help bridge this gap as it is the norm in specialized sectors. Capacity gaps was also found amongst the new entrants into the industry especially within the HSE units of these companies. Due to this lack of knowledge about environmental requirements, compliance has been impacted. As discussed in the discussion chapter, contractors and sub- contractors lack the financial capacity to keep their staff up to date with new technologies and information in the sector.

(vi)   Regulatory Resources

Systemic and infrastructure deficits within the regulatory agencies have been confirmed by this research as a challenge that impacts on compliance with environmental regulations. Country systemic issues include corruption, lack of transparency and can be equated to the operating environment whereby sanctions slammed on operators for environmental infractions are sometimes reversed by higher authorities. Political influence on agency leadership appointments and staff recruitments all point to a flawed systemic process and governance structure in the sector and country as a whole. All this is said to reflect lack of government support for regulatory roles and functions discussed in chapter five. In setting up regulatory agencies, the key aspect of agency funding must be assured and not compromised. In the early days of regulatory activities, regulators had their helicopters used for logistics and that commanded a lot of respect for the regulatory agencies. Compliance to set regulations in the sector was better with the operating companies. However, with time and dwindling financial support from the government, regulatory functions became more epileptic. The current lack of resources can be said to contribute to the effectiveness of monitoring by the regulators. Therefore, the recommendation proposed in the previous chapter for use of community partnerships and strong collaboration among all levels of government becomes relevant. Difficult and remote oil operating areas that are not easy to access will subsequently be visited by engaged community partners in the

region. This would facilitate direct independent access to these project areas without any support from IOCs. The trained locals under the guidance of the regulatory headquarters will fill in the information needed for agency decision making. This research therefore argues that clear delineation of functions across all government regulatory agencies and partners involved in regulatory role has strong potential to bring about compliance. This is because independent, unplanned inspections and regulatory functions is the hallmark of effective monitoring capacity of regulatory agencies.

(d) Regulatory style in the Nigerian oil and gas sector

The fourth research question focused on how the industry is regulated. This research has highlighted regulatory style being as linked to compliance. The current prescriptive style and the command and control method has not yielded expected compliance to environmental regulations as highlighted earlier in the research. An attempt at collaborative style with the unitization requirement, produced almost total compliance as explained in chapter 6, therefore, a change to a collaborative regulatory approach is presented by this research outcome. This research recognizes the use of discretion especially with waiver requests by companies. Attention must be paid to the type and duration of the waivers given for compliance as some companies use this strategy to delay or avoid compliance. Though discretion is acceptable in regulatory roles, however, caution is needed. The collaborative approach can be used at all levels of authority within the organization and its use is advocated.

(e) Global Best practices in the oil and gas sector

The fifth research question sought out global best practices that exist for compliance to environmental regulations. Since the existing regulations were found to be at par and bench marked with other developed oil and gas regions of the world, it was evident something was still missing. There are several best practices for the oil industry generally. However, one of the key global principles for enhanced environmental management

is the EIA requirements which has now included an additional focus known as Strategic Environmental Impact Assessment (SEIA). This new concept describes a process of conducting impact assessment studies that considers government policies, programs and development plans which will aid the overall development of any given area in a wholesome and holistic manner. SEIA will help in addressing regional and cumulative impacts over time which is not currently being carried out in the industry. Approval for individual EIAs for new projects are currently being done however, this practice has since been used simply as a permit requirement with no reference to the document after obtainment of approvals by the operator. SEIA process if formally adopted for use in Nigeria, will aid the assessment of ancillary developments as well as monitor cumulative impacts which can be used to monitor several developments around a given geographical area or region like the situation in the Niger Delta. Another best practice is the Precautionary Principle (PP) which was cited in chapter 2 to proactively address environmental pollution whereby scientific outcome of impacts may not be known. This globally acceptable principle is yet to be fully applied in the Nigerian oil and gas industry. While there is yet not scientific basis for environmental regulations in the country, this acts as the option for environmental conservation. This research has achieved its aim and objectives set out in chapter one by answering the research questions as outlined in chapter one of this report. This research has made contributions for the further understanding of compliance to environmental regulations in the HC sector in Nigeria. It has provided an overview and assessment of the regulatory framework and has developed constructs towards driving compliance in the country as presented in Chapter five. Recommendations arising from these constructs have also been highlighted in the previous chapter. This research asserts that the current legal framework is not enough to address environmental pollution in the oil industry in Nigeria and further states that the deficiency does not lie with the laws or regulations. As a start, there must be proper understanding of the current environmental regulations and its intent. There must be scientific basis for the acceptance of the said regulations for compliance. The DPR

should independently carry out science-based studies that would demonstrate the impact or otherwise for the purpose of issuing policies and guidelines for use in the industry. Though current regulations bench-marks with what obtains in the industry, science-based regulations cannot be faulted. This move will also endear respect for the agency as current regulations which focus on onshore regulations are also used for offshore and deep offshore operations. The said regulations should be made with agreed format and definitions of standards to remove all ambiguity or interpretation that might arise. Regulator role is considered as a service to the public hence it must continuously engage and obtain feedback from its stakeholders. This research has articulated several challenges across the industry that can be used for policy and agency improvement.

7.3 Contribution to knowledge

A holistic overview of the regulatory framework in the Nigerian oil and gas industry has been given by this research. This is the first time a study of the oil and gas industry from the regulatory standpoint has been carried out. Research Previous studies have been done by academia, lawyers and other third-party interests. This is the first time in the history of the Nigerian regulatory agency that a research on the workings of the regulatory agency has been done. No doubt papers have been presented over the years at conferences and seminars and they have been valuable for policy making. However, feedback from industry experts with over 100 years cumulative expertise has been compiled for the benefit of the industry, the country and other developing nations engaged in extractive activities. Challenges faced by oil industry stakeholders have been outlined and explained in this research and several lessons can be learnt from the highlighted gaps presented. This research thus concludes that there must be a systematic approach to environmental compliance bearing in mind the need to be free from government and political influence. Regulators are currently doing so much with so little however; much more can be achieved for the continuous sustainability of operations and revenue gains for government. The passage of the governance part of the PIB is a step in the right direction and demonstrates government commitment to ensuring Nigeria has world class regulatory agencies in the country.

7.4 Areas for further research

The main areas of further research could be in carrying out a comparative analysis of compliance methodologies of companies in developing world and in developed nations. This will help evaluate the compliance methodologies used by global companies and thereby set standards for use in Nigeria. Further research on compliance through risk-based environmental regulations is proposed as this presents flexibility in regulation role and compliance as asserted by Ayres and Braitwaite (1992), Gunningham and Parker (1999). This will help provide the basis upon which standards are set in the guidelines. Having established the link between community partnership and compliance, further study aimed at articulating modalities of community inclusion in regulatory policy formulation and functions could be explored and examined. This would be of interest given the human resource gap highlighted by this research and the challenges of fair compensation rates currently not incorporated in the laws in Nigeria When there is a win-win in regulatory compliance and business, compliance tends to increase as regulators are highly perceived to be doing their job effectively thus they are recognized as experts (Parker 1999).

Further research on compliance through risk-based environmental regulations is proposed as this presents flexibility in regulatory role and compliance as asserted by Ayres and Braitwaite (1992), Gunningham and Parker (1999). This will help provide the basis upon which standards are set in the guidelines. Companies by their size and financial position, have the resources to comply with regulations but they are not often given a free hand to choose how they meet set targets. Use of performance-based standards is the current trend in regulation globally but only a committed and experienced and trained regulator would know where to draw the line as stated by Guningham and Sinclair (1999) in his study of regulatory mix as a means of increasing compliance. As Parker (1999) put it, some element of flexibility can endear the regulated to the regulators as they would be better relationship and trust between the stakeholders in the sector.

7.5 Final Considerations

This research started with the intention of addressing the overlapping functions of regulatory agencies in the Nigerian oil and gas industry. Deeper reflection however changed this mind-set to the present study of strengthening the regulatory framework for the enhancement of compliance with environmental regulations in the Nigerian oil and gas sector. The researcher recalls caution to operators in Nigeria made while still in the agency "though the oil must flow, when it stops flowing, the environment is all we shall have left to fall back on." Given that all regulatory agencies in Nigeria are set up by the Federal government, it was assumed that compliance with regulations cut across all the departments. From the pilot study conducted early in the research, it became obvious that things had to change and move from workshops and more seminars and conferences to actual results.

The impact of oil exploitation is not lost on the people from where oil is derived thus this research recognizes the untold hardship occasioned by environmental impacts in these areas. Some may say that oil came at a cost too high for so little benefits for the people of the Niger Delta areas. At a recent law conference in the UK, on the 30th April 2018, organized by the Law School, RGU, on the 30th April 2018, the UK regulators were indicted for not sanctioning some oil companies for violations recorded. This came as a big surprise to the researcher who believed that this could only happen in a Third World country. Besides, the country does not solely depend on oil as its main source of revenue therefore further highlighting the complexities of regulatory compliance in the real sense of the word.

An enhanced regulatory framework would be one that considers amongst all other things, community partnership across all levels of government, properly defined responsibilities, adequate funding and capacity building for the regulatory personnel. Regulatory agencies must be independent of government and politics to drive compliance in an enhanced framework.

The new framework is useful in new and emerging economies and in restructuring existing framework for competitiveness and enhanced compliance to existing regulations. Situations and environments differ; however, the goals and objectives of environmental sustainability remains global in intent in view of climate change challenges and opportunities. This research therefore concludes that continuous

engagements and dialogue continue for the benefit and enhancement of the environment and the people living in extractive regions. The effects of climate change no longer need scientific evidence as current weather patterns are visible for all to see and experience. This research believes that the recommendations presented can be applied to other sectors of the economy to enhance regulatory role.

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APPENDIX

Appendix A Key oil and gas legislation in Nigeria **Appendix B** Extract from EGASPIN **Appendix C** DPR organogram **Appendix D** Key regulations in the Nigerian Oil and Gas sector **Appendix E** International conventions ratified by Nigeria **Appendix F** SPE paper on drilling fluids discharge (2012) **Appendix G** Sample of consent form used by respondents **Appendix H** List of audio files of interviews

Appendix A

Key oil and gas legislation in Nigeria

1. The Nigerian Constitution 1999

2. Oil Pipeline Act (1996) –Regulates granting of licenses for the establishment and maintenance of oil pipelines.

3. Oil in Navigable Waters (1968) – Act seeks to prevent pollution of the sea and navigable waters.

4. The Petroleum Act (1969)- This law provides gives mandate to the Minister to make regulations for the award of licenses and leases. From this act 'The Petroleum (Drilling & Production) Regulation' and 'The Petroleum Refining Regulation (1974)' came to be.

5. Associated Gas Injection Act (1979)- This act sought to regulate gas flaring in the country which was first set to end in 1st January 1984.

6. The Criminal Code Act (1958)- This code pertains to the control of air pollution.

7. The Oil Terminal Dues Act (1996)- This act serves to prohibit the discharge of oil in any part of the sea from a pipeline.

8. The Harmful Waste (Special Criminal Provisions Act) 1988- This act followed from the dumping of toxic wastes in Koko town in Nigeria.

9. The Environmental Impact Assessment Act (1992)-This act makes it mandatary for all new projects with potential to impact the environment to carry out a preliminary assessment of the identified impacts.

10. The Mineral Oil Safety Regulation (1963, amended and updated in 1997). This regulation focuses on the safety of persons, assets, integrity and maintenance in oil and gas operations in Nigeria.

11. Oil Pipeline Ordinance (1965) 12. Environmental Guidelines and Standards for the Petroleum Industry in Nigeria (1991, 1999, 2018).- This is a compendium of health safety

and environmental regulations for the petroleum industry. 13. Land use Act (1978)-
This act aims for adequate compensation for loss of surface rights to land owners.

14. The Nuclear Safety and Radiation Protection Act (1995) NNRA- This Act regulates
the use of radio-active substances and equipment emitting ionizing radiation.

15.The National Oil Spill Detection and Response Agency (Establishment) Act (1992)
NOSDRA- This act establishes the agency 16.The NESREA (Establishment) Act 1999 –
This act repealed the FEPA Act charged with the environment but its mandate does not
extend to the Oil and Gas sector.

Appendix B Extract from EGASPIN for environmental protection *See attached PDF*

Appendix C Organogram: Department of Petroleum Resources (DPR)
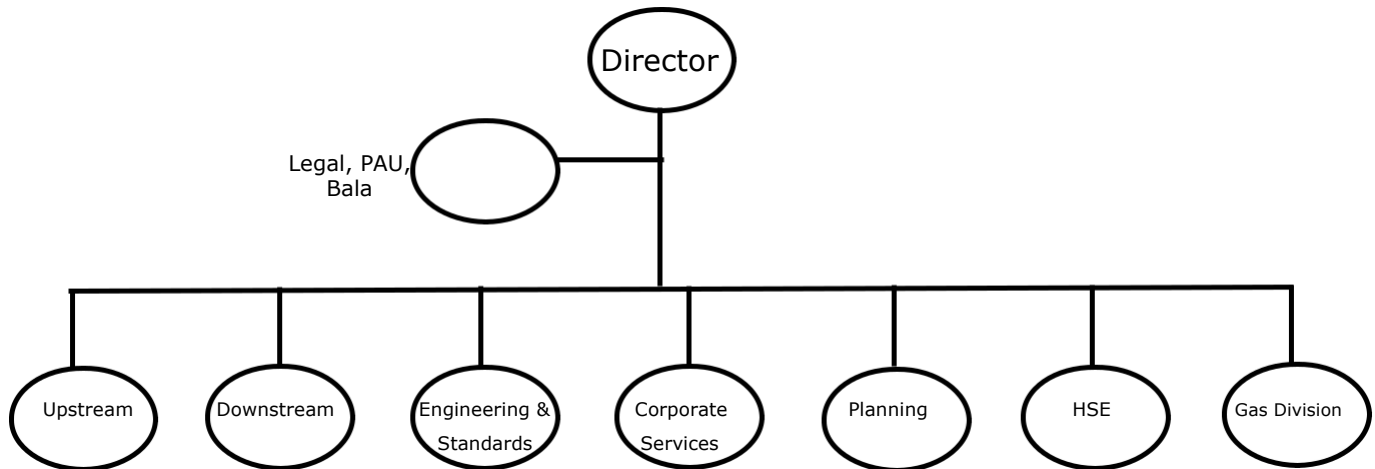
Appendix D International conventions ratified by Nigeria

1. International Convention for the Prevention of Pollution of the Sea by Oil.

2. The Geneva Convention on the High Seas.

3. International Convention on Civil Liability for Oil Pollution damage. 4. International Convention on the Establishment of an International Fund for Oil Pollution Damage. 5. The United Nations Conventions on the Law of the Sea. 6. The World Charter for Nature.

7. The Vienna Convention on the Protection of the Ozone layer. 8. The Basel Convention on the Control of Trans-Boundary Movement of Hazardous Wastes and their Disposal.

9. The African Charter on Human and Peoples Rights. 10.The International Convention on Oil Pollution Preparedness, Response and Co- operation (OPRC).

11.The United Nations Framework Conventions on Climate Change.

Appendix E SPE paper on drilling fluids discharge (2012) which the researcher co-authored.

See attached PDF

Appendix F Sample of consent form used by respondents

Consent Form for Participants

(insert title of project)

Consent Form for Participants

I have read the **Participant Information Sheet** for this study and have had the details of the study explained to me. My questions about the study have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I also understand that I am free to withdraw from the study at any time, or to decline to answer any particular questions in the study. I understand I can withdraw any information I have provided up until the researcher has commenced analysis on my data. I agree to provide information to the researchers under the conditions of confidentiality set out on the **Participant Information Sheet**.

I agree to participate in this study under the conditions set out in the **Participant Information Sheet**.

Signed: _____

Name: _____

Date: _____

Additional Consent as Required – delete if not appropriate to your research

Examples:

I agree / do not agree to my responses to be recorded.

I agree / do not agree to my images being used

Signed: _____

Name: _____
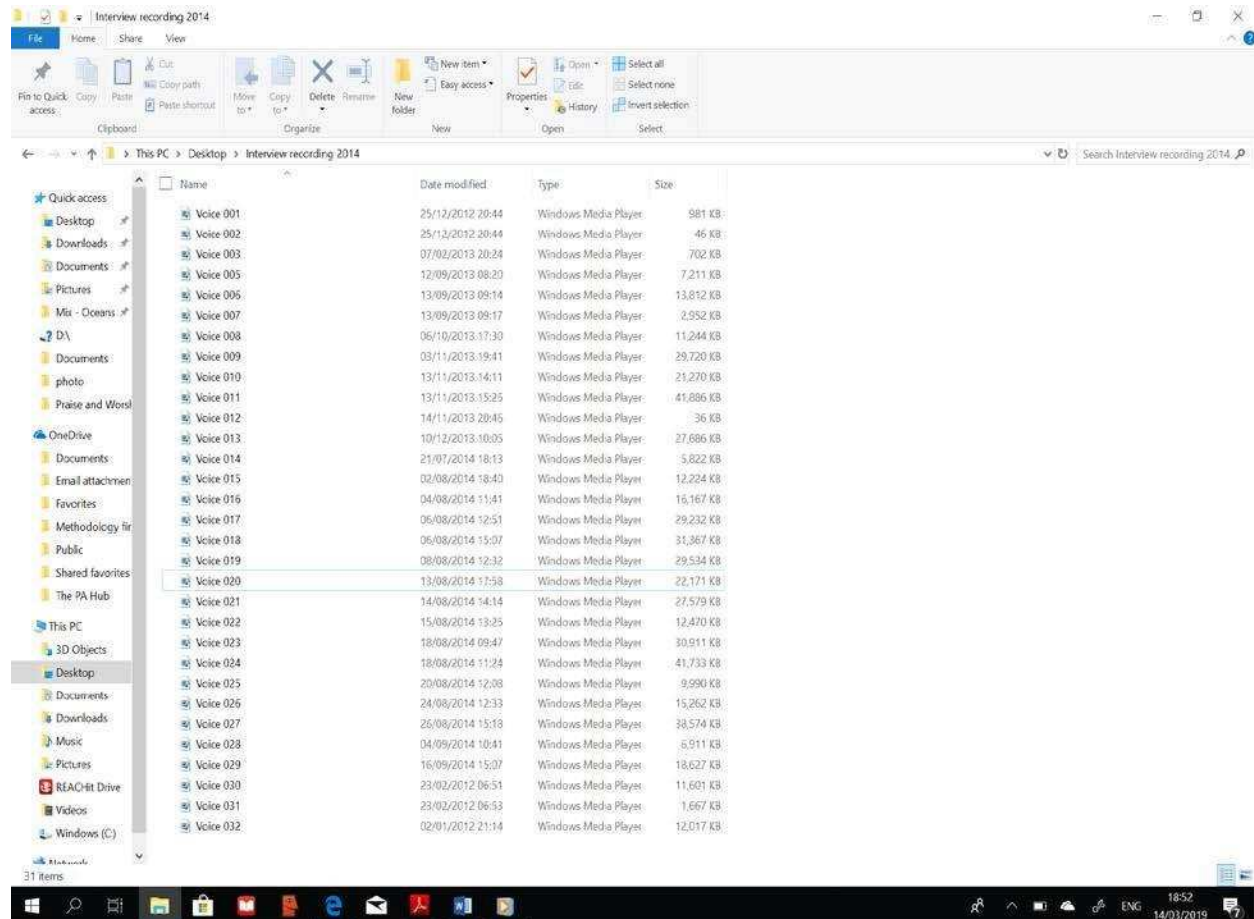
Date: _____

Researcher's Name and RGU contact information.

Supervisor's Name and RGU contact Information: (if applicable)

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Appendix G

List of audio files of interviews

Audio recordings in possession of the researcher.

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