



UNIVERSITY OF
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Environmental Impact Assessment Follow-up: Oil projects in Nigeria

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By

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***I dedicate this thesis to that shy,
Introvert kid with bad grades, being told he will not amount to much in life.
You can dream big and with hard work nothing is impossible.***

ABSTRACT

Environmental Impact Assessment (EIA) was formally introduced in Nigeria through the promulgation of EIA Decree No. 86 of 1992. Since its inception, major emphasis has been on studying its pre-decision stage similar to most jurisdictions globally. This work focuses on the post-decision stage of EIA (EIA follow-up) and in doing so especially looks into the Nigerian oil sector.

The research starts by developing a good practice criterion based on reviewing theory and practice of EIA follow-up, with a focus on oil producing countries. This is followed by a review of the current practice of EIA in Nigeria. The research adopts a mixed methodological approach. First the research employs a survey within the Nigerian oil sector. This helps in identifying challenges from the perspective of stakeholders. The findings identified diverse views among stakeholders with respect to project ownership.

Secondly, inspired by the findings of the survey, semi-structured interviews were conducted involving 64 stakeholders. This is further complemented by case studies, which were conducted on EIA follow-up programs implemented by an indigenous oil company (PRIOC) and a multinational oil company (PRMOC). Based on the survey, semi-structured interviews and case study findings, EIA follow-up practice has been reviewed within the oil producing sector in Nigeria and accordingly recommendations have been provided to improve practice.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACRONYMS & ABBREVIATION	FULL TERM
BBL	Barrel
BPD	Barrels Per Day
CEA	Canadian Environmental Agency
CEXP	Community Expert
COM	Community Member
CON	Consultant
DFID	Department for International Development
DPR	Department of Petroleum Resources
EA	Environmental Assessment
EAD	Environmental Assessment Department
EER	Environmental Evaluation (Post-impact) Report
EGASPIN	Environmental Guidelines and Standards for the Petroleum Industry in Nigeria
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EMS	Environmental Management System
EPD	Environmental Protection Department
ESR	Environmental Screening Report
EU	European Union
FEPA	Federal Environmental Protection Agency
FME	Federal Ministry of Environment
FGN	Federal Government of Nigeria
GDP	Gross Domestic Product
IAIA	International Association for Impact Assessment
IEA	International Energy Agency
IEE	Initial Environmental Evaluation
IMM	Impact Mitigation Monitoring
IOC	Indigenous Oil Company
JICA	Japan International Corporation Agency
MDA	Ministries Department and Agencies
LGA	Local Government Authority
MMR	Mixed Method Research
MDA	Ministries, Departments and Agencies
MOC	Multinational Oil Company
MOEF	Ministry of Environment and Forestry
MPR	Ministry of Petroleum Resources
NAOC	Nigerian Agip Oil Company
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NNOC	Nigerian National Oil Corporation
NNPC	Nigerian National Petroleum Corporation
NPDC	Nigeria Petroleum Development Company
OML	Oil Mining License
PD	Protection Department
PEIAR	Preliminary Environmental Impact Assessment Report
PRIOC	Proponent Indigenous Oil Company
PRMOC	Proponent Multinational Oil Company

REGD	Regulator DPR
REGF	Regulator FME
SEA	Strategic Environmental Assessment
SEIA	State Environmental Impact Assessment Authority
SEPA	States Environmental Protection Agencies
SG	Sahara Group
SMENR	State Ministry of Energy and Natural Resources
SPDC	Shell Petroleum Development Corporation
TOR	Terms of Reference
UNCED	United Nations Conference on Environment and Development
USA	United States of America
WB	World Bank
WHO	World Health Organization

PHASE ONE

[Theoretical Phase]

CHAPTER ONE: SETTING THE RESEARCH AGENDA

This chapter sets the research agenda for this thesis and is divided into five sections. In the first section, the context of the research is set, followed by the rationale of the research. The third section presents the scope of the work and its design. Finally, the thesis structure is presented.

1.1 Setting the context for research

The exploitation of petroleum (oil) has not always been without environmental side effects (UNEP 1997). Many studies have shown that petroleum hydrocarbon contain substances that cause risks to human health, the natural environment and ecological systems where a pollutant linkage is established (Farrel-Jones et al. 2003; Ferguson and Kasamas 1999). Thus, efforts are taken to reduce the danger of oil projects to human health and the ecological systems (Ite et al. 2013). The Environmental Impact Assessment (EIA) process, provides a mechanism that aims at preventing or reducing the impacts from developmental projects (in this research, projects associated with oil) on the wider environment (Naser 2015).

EIA was first introduced as a tool to aid decision-makers in project development by the National Environmental Policy Act (NEPA) in the USA in 1969. The Act established an environmental policy for activities of federal agencies whose actions had the potential to affect people, the community and the natural environment (Morgan 2012). European Union (EU) member states incorporated EIA in their planning processes in 1985 (85/337/EEC) through the European Economic Community (EEC) council directive 85/337/EEC. Since its inception in the United States of America (USA) and the EU, provisions for EIA have been implemented in nearly all countries globally (Badr et al. 2011; Fischer 2016).

The value of an EIA process does not end with decision-making, but also lies in the effective implementation of recommendations in the post-decision phase (EIA follow-up) (IAIA 2009; Ingelson and Nwapi 2014). According to Gallardo et al. (2016) since 2000, more EIA studies have focused on the importance of EIA follow-up procedures. Despite this attention, EIA follow-up is perceived to be the weakest stage of the EIA process (Jones and Fischer 2016; Wessels 2013). This may be owing to different reasons including: lack of appropriate legislation, cost, shortage of competent personnel and weak regulatory enforcement (Gallardo et al. 2016; Jha-Thakur et al. 2009; Jones and Fischer 2016). In the context of Nigeria, Nwoko (2013) identified limited workforce, logistics and regulatory enforcement as fundamental challenges to the implementation of EIA follow-up. This has led to EIA follow-up reportedly not taking place 75% of the time in Nigeria (Nwoko 2013).

1.2 Rationale for research

The current EIA follow-up practice in Nigeria is perceived to have major challenges affecting its effective implementation (Nwoko 2013; Yusuf 2008). The failure to conduct EIA follow-up can turn the EIA process into a linear exercise aimed at making a onetime project decision rather than an interactive exercise (Jalava et al. 2015). Nigeria can to a large extent benefit from international practices used in different jurisdictions, for its EIA to become an interactive exercise, this can be done by ensuring the implementation of the EIA follow-up program. While several research studies have critically examined EIA in Nigeria (Abah 2012; Ite et al. 2013; Nwafor 2006; Ogunba 2004; Olokesusi 1998), few studies have focused on the EIA follow-up component (Ingelson and Nwapi 2014; Nwoko 2013; Yusuf et al. 2007) and there is currently no published evidence on how EIA follow-up has been effective in the Nigerian context. This research aims to fill that gap, by evaluating EIA follow-up in the Nigerian oil sector and making recommendations to improve practice.

1.2.1 EIA follow-up

The need for more to be done to safeguard the environment from project activities, increased the advocacy to focus on the post-decision phase activities within the EIA process in the 1980's (Bashour 2016). EIA follow-up is usually required by regulators to control compliance, reduce uncertainty, verify impact and mitigate predictions and improve the EIA process (Wessels 2013). The importance attached to the role of EIA follow-up, to the success of an EIA: is highlighted strongly in works by (Arts et al. 2001; Jha-Thakur 2011; Marshall et al. 2005; Morrison-Saunders and Arts 2004) so much that 'applying EIA follow-up within EIA is' considered 'no longer an option but a sound precaution and a proactive measure' (Marshall 2003: 1). It has the power to determine the success of the EIA itself, as 'the ultimate success of an EIA is determined by the outcome of the proposals' (Morrison-Saunders and Arts 2004: 2) and EIA follow-up helps to understand and improve these outcomes. Learning from an EIA can occur through conducting EIA follow-up, by monitoring sites to aide in predicting future effects elsewhere (Jones and Fischer 2016). It considers any adjustments that might be needed to accommodate any unforeseen uncertainties.

1.2.2 The Nigerian context

Located in West Africa, Nigeria has a population of 186 million people (WB 2017). With an area covering 923,773km² (Nwilo and Badejo 2005), it shares borders with the Gulf of Guinea, the Benin Republic, the Republic of Chad, the Republic of Cameroon and the Niger Republic. Ecologically, the landscape varies from tropical rainforests in the south to flat sparsely vegetated dry savannah in the North, and hilly and mountainous terrain to the southeast and northeast, along the Cameroun border (Nwoko 2013). Recent reports estimate its petroleum export value at \$47, 680 million per year (OPEC 2017), indicating the vast reserves of natural gas it possesses.

Oil-related activities are currently based in the Niger-delta, which has a land area of approximately 112,000 km² (12% of Nigeria's total land area), with a population of over 30 million people spread across 3,000 communities (NDDC 2014). It represents one of the most densely populated regions of Africa (Owolabi and Okwechime 2010). The coastal region is covered in mangrove swamps making it rich in fishery resources, timber, wildlife, medicinal plants and food crops. Over 75% of the population relies on the natural resource industry for their livelihood (Akpabio and Akpan 2010).

1.2.3 Crude oil projects in Nigeria

Natural resources in Nigeria play an important role in the economy of the country. Resources it possesses include: oil, gypsum, talc, iron ore, lead/zinc, gold, bitumen, and coal to name a few (OPEC 2015). The country possesses the world's ninth largest reserve of oil and has a proven reserve of nearly 5000 billion cubic meters of natural gas (OPEC 2016). Coal and lignite reserves are estimated to be 2.7 billion tons while tar sand reserves represent 31 billion barrels of oil equivalent (Akpabio and Akpan 2010).

Discovered in Nigeria in 1956 (Ogri 2001; Watts 2004) with a production capacity of 5,100 bpd (barrels per day) (NNPC 2015), oil represents over 90% of the country's foreign exchange wealth (Akpabio and Akpan 2010; OPEC 2015). Nigerian National Petroleum Corporation (NNPC) coordinates oil production in Africa's largest oil producing nation with a daily production of 2.5 million bpd (NNPC 2015). There are about 606 oil fields in the Niger Delta, of which 360 are on-shore while 246 offshore and 275 of them are flow stations (Nwilo and Badejo 2005; O'Neil 2007) with over 7,000 kilometres of pipelines (Anyanwu 2012).

1.2.4 Problems with EIA in Nigeria

The oil sector was a major reason for the enactment of environmental legislation in Nigeria (Isichei 2000; Ogunba 2004; Okorodudu-Fabura 1988). The Federal Government of Nigeria (FGN) promulgated the Petroleum Act, 1969 to 'regulate the exploration of petroleum in Nigeria and control pollution' (DPR 2002: 1). Following the 1987 Koko incident in which toxic waste was dumped by foreign parties in Bendel state (now Delta state) within the Nigerian territory, the Federal Environmental Protection Agency (FEPA) was promulgated in 1988 (Echefu and Akpofure 1999).

The requirement mandating EIA during project planning was enacted in 1992. Weak EIA follow-up has been highlighted as the main issue among other issues with the EIA process in place (Ingelsson and Nwapi 2014; Nwoko 2013). EIA plays a key role in the decision-making process of project approval. However, views are divergent on its level of effectiveness, accuracy and influence in reality (Echefu and Akpofure 1999; Nwoko 2013; Ogunba 2004). Anayo (2002: 3) argues that EIA is hardly undertaken prior to the approval of any project and 'the key defaulters are the various levels of government who routinely approve projects within the mandatory study list without an EIA'.

One hundred and eighty projects submitted EIA reports to the FME in 2009, out of these; sixty were approved and one hundred and twenty were rejected (Lawal 2012). A study by Yusuf et al. (2007) found that EIA had not been done in some completed projects such as: road construction, mining, water wells and communication mast erections. While 60% of submitted EIAs were approved, only 31 % of the projects were being monitored (Yusuf et al. 2007). The results of a survey conducted in 2013 found 75% of proponents agreed there is inadequate implementation of mitigation measures and monitoring (Nwoko 2013). The

perceived poor implementation of EIA follow-up was acknowledged as the weakest facet of Nigeria's EIA system.

1.3 Scope for research

This research focuses on EIA follow-up practice within the oil sector of Nigeria. Previous studies have focused on the EIA of oil projects e.g. Anyanwu (2012); Ingelson and Nwapi (2014); Ite et al. (2013). However, little attention has been given to the EIA follow-up phase specifically. The research intends to contribute to this context, by identifying opportunities and making recommendations to improve current practice.

Aim and objectives

The aim of this research is to evaluate EIA follow-up in the Nigerian oil sector and to make recommendations for its improvement. To achieve this, the following objectives are outlined below:

1. To develop good practice criteria for EIA follow-up based on literature and a critical review of eight countries with an extractive industry.
2. To examine the EIA system in the Nigerian oil sector and identify its challenges.
3. To analyze EIA follow-up through two case studies with a special focus on ownership differentials in the Nigerian oil sector.
4. To make recommendations to improve EIA follow-up in Nigeria.

With the research objectives outlined, Table 1.1 presents the sub-research questions and assumptions that have been adopted to narrow the focus.

Table 1.1: Research objectives and sub-research questions

Research Objectives	Sub-research questions
1. Develop good practice criteria for EIA follow-up based on literature and a critical review of eight countries with an extractive industry.	A. What is EIA follow-up? B. What are the good practices of doing EIA follow-up worldwide and in countries with an extractive industry?
2. Examine the EIA system in the Nigerian oil sector and identify its challenges.	C. What is the status of the EIA system in the Nigerian oil sector? D. What are the challenges of the EIA system practiced in the Nigerian oil sector?
3. Analyze EIA follow-up through two case studies with a special focus on ownership differentials in the Nigerian oil sector.	E. What are the issues that affect EIA follow-up practice in the Nigerian oil sector? F. Does ownership differential influence EIA follow-up outcome in the Nigerian oil sector?
4. Make recommendations to improve EIA follow-up in Nigeria.	G. What recommendations can improve EIA follow-up practice in Nigeria?

1.4 Research design

To achieve the aim and objectives, this research was designed along three phases (see Figure 1.1); first during the theoretical phase it establishes a premise through the review of scholarly literature to construct a good practice criterion. Using the constructed good practice criteria, it links literature to practice through interactions with EIA follow-up stakeholders via interviews and case studies in the empirical phase and finally, it makes recommendations to improve EIA follow-up in Nigeria during the synthesis phase.

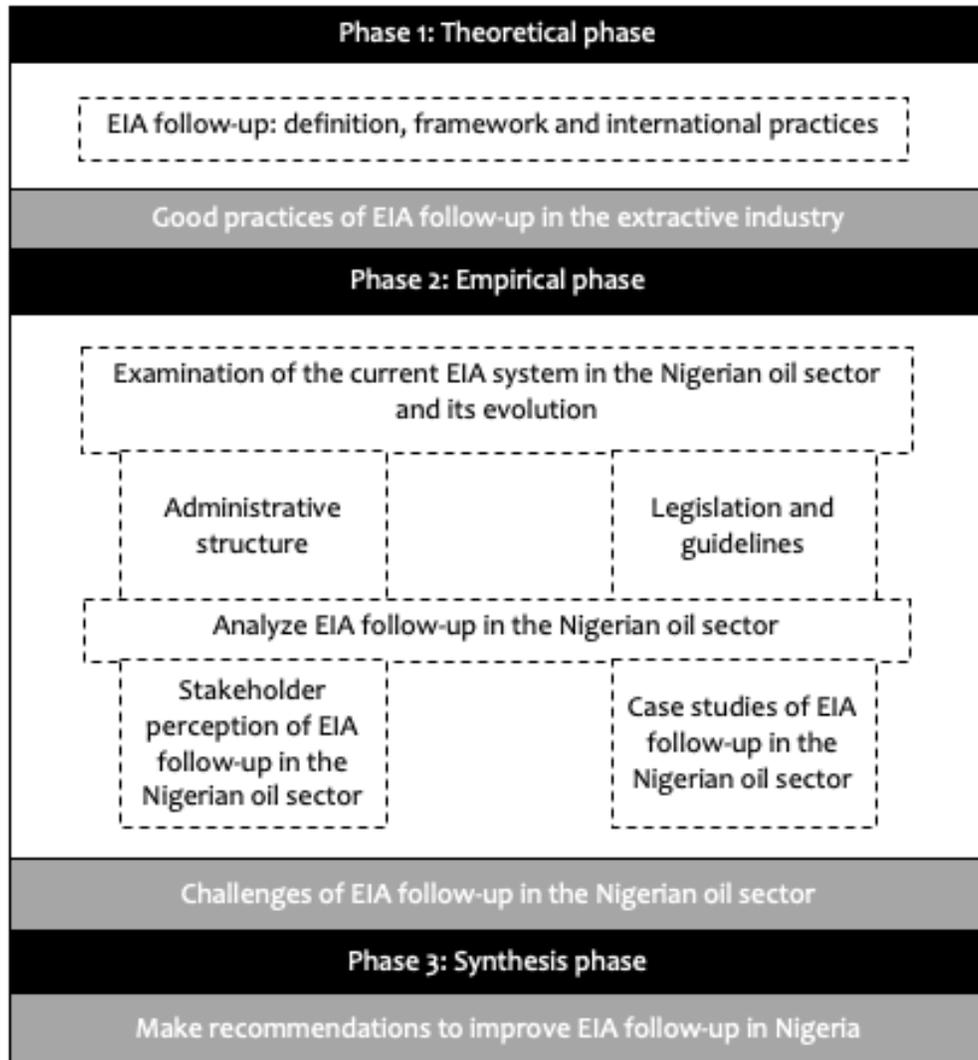


Figure 1.1: Research design

In the first phase, a theoretical premise for EIA follow-up is constructed. This is carried out through literature review, which allows the researcher to become well acquainted with the studies that have already been carried out on the subject area. Webster and Watson (2002) believe apart from the fact that reviewing relevant literature provides a firm foundation for theory development, it advances knowledge by revealing information derived in previous studies and uncovering the gaps that may exist in the subject matter. The use of theory provides a clearer understanding of the world in a way that it makes sense to construct a framework to systematically organise the information, facts and experience gathered. However, there is need to link the designed theoretical framework to practice, which not only provides explanations to the structure, but also clarifies the actions carried out by various actors.

The second phase, which is *the empirical phase* starts by providing contextual background into the EIA system of the Nigerian context (see Chapter 6). In providing the contextual background, it looks at the evolution of environmental management in the Nigerian oil sector. This was done through a literature review to provide a historical record of environmental management in the Nigerian oil sector. Using this as a basis, the administrative structure, legislations and guidelines guiding the EIA system in Nigeria is discussed.

The other half of this phase was divided into two parts, in which fieldwork was conducted. Firstly, using a mixed methods approach, a paper questionnaire and semi-structured interviews were carried out with stakeholders (proponents, regulators, community and consultants) participating within the EIA system in Nigeria to elicit information about EIA follow-up and its perceived implementation in the oil sector. Results of the quantitative and qualitative methods adopted were presented (see Chapter 7). Secondly, two case studies were conducted to further interrogate findings from the first part of the empirical phase. The case study was carried out using documentary analysis, semi-structured interviews and observation. Results of the second part of the empirical phase were then presented (see Chapter 8). Results presented in Chapter 7 and 8 culminates in the achievement of the third research objective.

The final phase, which is *the synthesis phase*, synthesises the findings from the research. The phase identified the challenges inhibiting EIA follow-up in the Nigerian oil sector based on the categories of the good practice criteria. Based on the challenges identified, recommendations were made to improve EIA follow-up in the Nigerian oil sector.

1.5 Thesis structure

Based on the research design, this thesis has three main phases that have been designed in line with the four research objectives as illustrated in Figure 1.2. The chapter introduces the

context of the research, the aim and objectives. It also provides the rationale for the research, the significance and presents the overall structure of the thesis.

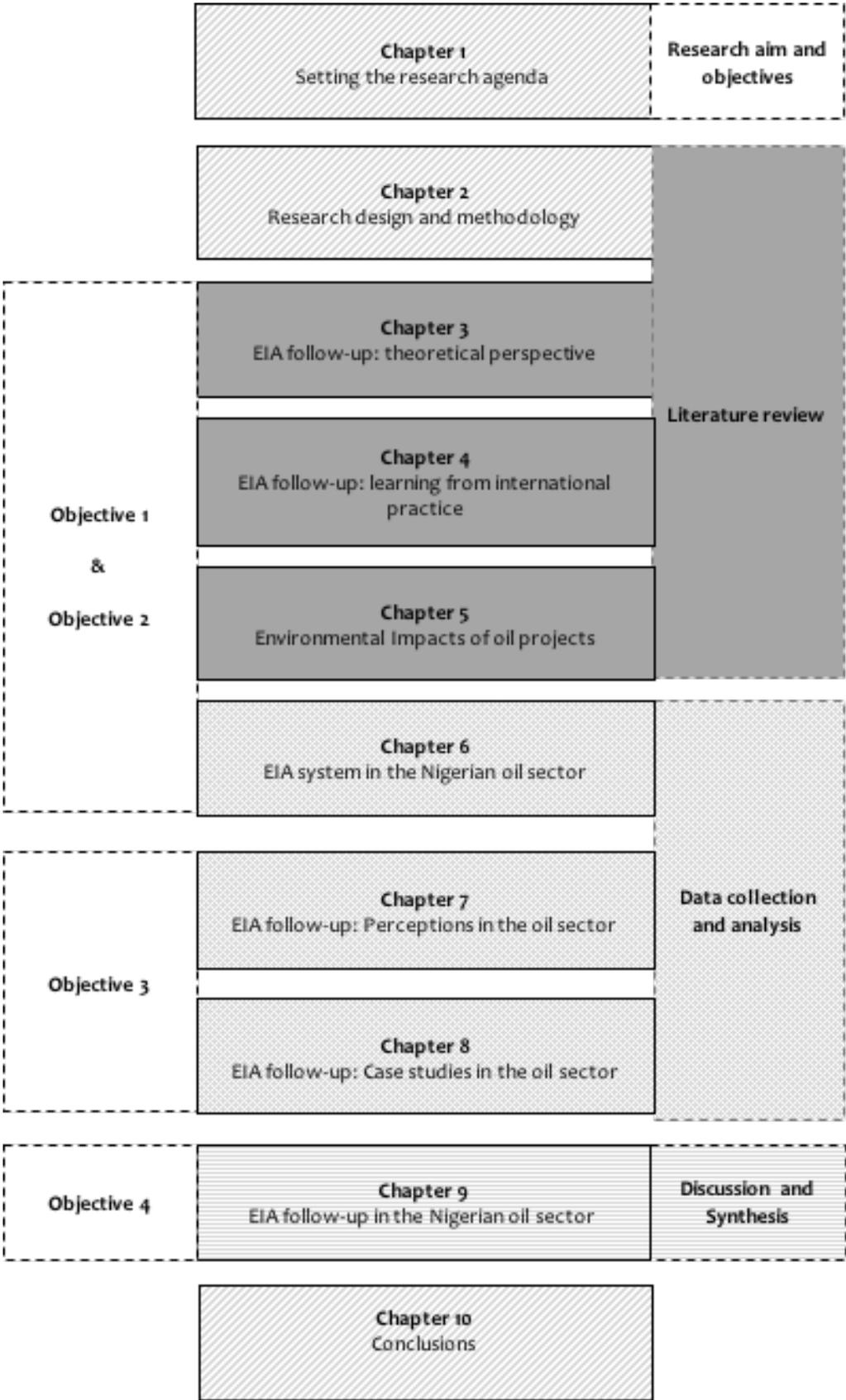


Figure 1.2: Thesis structure

Chapter 1: Setting the research agenda: The first chapter of this thesis sets the research agenda. It sets the aim, objectives and research questions. The topic of the research is also introduced in this chapter and it sets the context and rationale of the thesis.

Chapter 2: Research design and methodology: The chapter examines the selected approach for the research and justifies the methodology and methods adopted in its execution. The researcher adopts a pragmatic view and used a sequential mixed method approach to collect and analyse data. Finally, this chapter discusses the ethical considerations used in this study.

Chapter 3: EIA follow-up: theoretical perspective: The literature review goes deeper by looking at Environmental Assessment (EA) in detail. In doing so, it discussed Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA). The chapter then proceeded into EIA follow-up and established its fundamentals, challenges and prospects. These backgrounds contributed to the good practice criteria (see Chapter 2) used in exploring the practice of EIA follow-up in the Nigerian oil context.

Chapter 4: Learning from international practice of EIA follow-up: Practices from eight international contexts (United Kingdom, Netherlands, Australia, Canada, Hong Kong, India, Ghana and South Africa) were reviewed in this chapter. The specific countries were selected based on the presence of an extractive sector. This chapter contributed to the construction of the good practice criteria (see Chapter 2) and in the recommendations to improve EIA follow-up in Nigeria.

Chapter 5: Environmental impacts of oil projects: This chapter begins with a look at the international oil context, proceeding to oil production in African countries. Oil projects in Nigeria are then discussed, within this context; the actors in the oil sector (regulators, proponents; indigenous and multinational companies and the community). The final section identifies environmental impacts of oil projects and discusses it based on: the physical environment, social and environmental context and health of host communities.

Chapter 6: EIA system in the Nigerian oil sector: This chapter starts the data collection phase of the thesis, documents collated are critically analysed to understand the current EIA system in the Nigerian practice. The evolution of environmental policies in Nigeria is also studied, focusing on pre-independence era environmental regulations (environmental regulations in place prior to Nigeria gaining independence) to current regulation.

Chapter 7: EIA follow-up: perceptions in the oil sector: This chapter presents the results gathered from the questionnaires and semi-structured interviews. SPSS was used for quantitative analysis and NVivo software was used for the qualitative analysis. The results of the questionnaire reveal the areas of divergence among the different EIA follow-up stakeholders in Nigeria. The results of the semi-structured interviews revealed differentials in the current EIA follow-up practice in the oil sector based on the perception of project ownership (PRMOC and PRIOC).

Chapter 8: EIA follow-up: case studies in the oil sector: The two case studies that are undertaken for this study are introduced in this chapter. Case study A represents a project owned by the proponent indigenous oil company (PRIOC) and case study B represents a project owned by a proponent multinational oil company (PRMOC) operating in Nigeria. A general introduction of the respective cases is given, followed by a brief background of the project. EIA follow-up in practice were interrogated through these case studies using the good practice criteria (see Chapter 2). Issues that influence EIA follow-up in practice will be identified.

Chapter 9: EIA follow-up in the Nigerian oil sector: This chapter synthesises the overall findings based on the implementation of EIA follow-up by the PRMOC and PRIOC. The similarities and differences between both set of results are discussed and a conclusion is reached on challenges of EIA follow-up in Nigeria's oil sector. Recommendations are made to improve the Nigerian EIA follow-up practice.

Chapter 10: Conclusions: This chapter takes a retrospective look at the study by taking another look at the aim, objectives and research questions and how they have been achieved or answered. It also presents the conclusions drawn from accomplishing the objectives and discusses how this research has contributed to knowledge. It also identifies the limitations of this research.

1.6 Chapter summary

This chapter sets the agenda of the research. It started by setting the context of the research. Risk of oil exploitation to human health was introduced along with EIA and its process; culminating in discussing EIA follow-up in Nigeria. The chapter progressed to the rationale of the research, within this; it discusses how publications on EIA follow-up in Nigeria are rather limited. The scope of the research is on 'EIA follow-up practice within the crude oil sector of Nigeria' and the aim and objectives of the research are set. To achieve the aim and objectives of the study, the research was designed along three phases (theoretical phase, empirical phase and synthesis phase). Based on the research design, the thesis structure is categorised into three main parts (literature review, data collection and analysis and discussion and synthesis) that have been designed in line with the four research objectives.

CHAPTER TWO: RESEARCH DESIGN AND METHODOLOGY

This chapter provides a detailed description of the research design and methodology adopted for this research. In doing so, the chapter is divided into eight sections. It starts by introducing the research and discussing the research philosophy, this is followed by discussions on theory development and the methodological choice selected. The strategy of inquiry is then discussed along with the methods of data collection and analysis. Challenges faced during the research and the ethical issues considered are then highlighted.

2.1 Introduction to research

As a process, research is described as a systematic approach to investigate a subject matter for the purpose of increasing knowledge or making a new discovery (Saunders et al. 2016). Making recommendations to improve the EIA follow-up practice in the Nigerian oil sector is the expected outcome of this thesis. Saunders et al. (2016) argue, the tag attached to a research strategy is not as important as its appropriateness for the research to be carried out. Methodology reflects the overall research strategy which has taken the theoretical, philosophical and ethical dimensions into consideration (Henn et al. 2006). However, methods are the precise research techniques that have been selected as the best fit for solving the research problems (Silverman 2000). In explaining the logical sequence employed in accomplishing the objectives of this research, the *research onion* diagram developed by Saunders et al. (2016) would be used in describing the position and assumptions that have guided the choice of research design (see Figure 2.1).

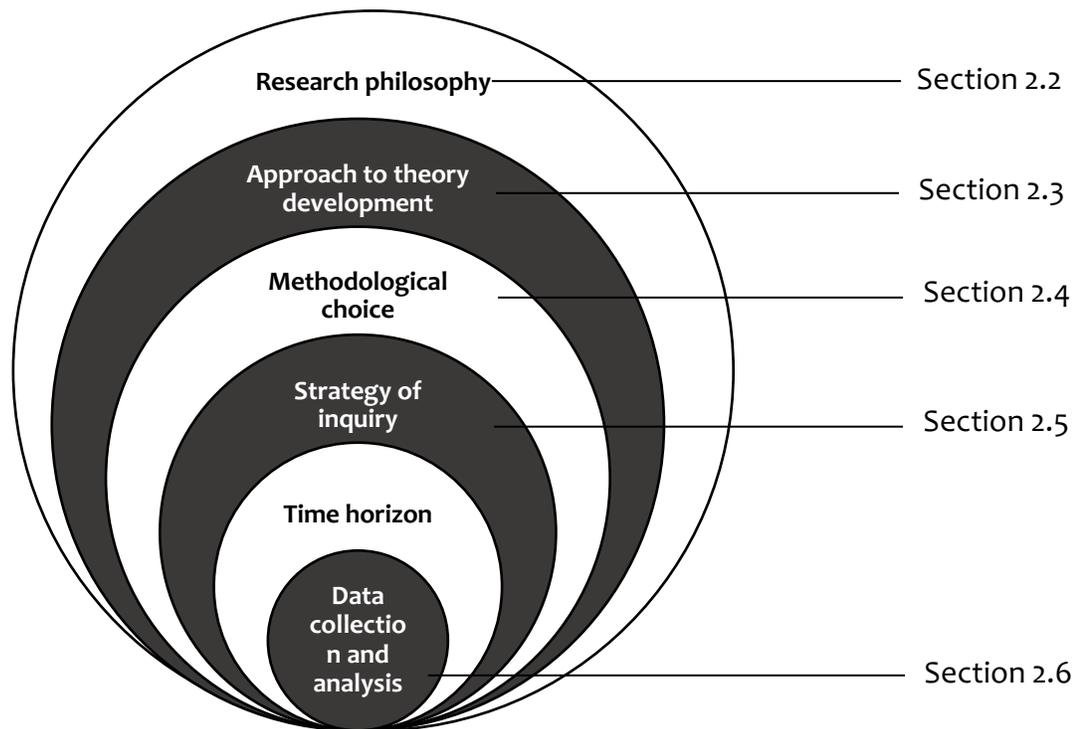


Figure 2.1: The research onion adapted from (Saunders et al 2016)

Based on the layers of the research onion, the discussion starts with the research philosophy; which provides the assumptions underpinning the nature of reality and the construction of knowledge and truth. This is the background for understanding the approach to the development of theory and the methodological choice employed for the inquiry, which are discussed subsequently. The time horizon layer was not be discussed as it is not a crucial component, integral to the research objectives. The overarching aim of this research is to evaluate EIA follow-up in the Nigerian oil sector and make recommendations for its improvement, which leans more to being a cross-sectional study rather than a longitudinal study which considers change and development over a period of time (Saunders et al. 2016).

2.2 Research philosophy

Among the assumptions made by the researcher include: the stance taken about the nature of reality, how knowledge is discovered and the extent of influence the researcher may have over the research process. The methodological choice selected, the research strategy

designed, and the mode of data collection and process of analysis are all underlined by the philosophical perspective (Creswell 2009; Saunders et al. 2016). Table 2.1 has highlighted the philosophical assumptions and how they relate to this research.

Table 2.1: Philosophical assumptions and relevance to study (Creswell 2009; Denzin and Lincoln 2011)

Assumption	Descriptive questions	Characteristics	Relevance to this PhD research
Ontology	What is the nature of reality? What is the world like?	There can be a range of reality in existence; which may be external or socially constructed; universal reality experienced by all social actors or different social realities of different social actors.	The research admits that the practice of EIA follow-up is in a constant state of change and this may either lead to a universal reality or multiple reality as socially constructed by the participants. Therefore, the research will present the different perspectives experienced by the participants as themes developed in findings.
Epistemology	How can the researcher know? What is considered acceptable and legitimate knowledge?	Discovering knowledge may be through a medium of observable and measurable facts or as a narrative of opinions, attributed meanings in individual and specific contexts.	Research question can be answered by describing and explaining events and gathering of participants' understanding, beliefs and experiences.
Axiology	What role do values, and opinions play in the research?	Acknowledging the relationship that may or may not exist amongst the social entities, social actors and the researchers as a social being.	The researcher acknowledges that the study is value-bound and reflexive in nature. The values that shape the critical interpretation would be presented along with the attributed meanings and narratives obtained from the participants.

2.2.1 Philosophical stance

The philosophical assumptions of a research do not essentially translate directly into the methods and tools used in acquiring data. They are rather routed through interpretive paradigms (Denzin and Lincoln 2011) or theoretical perspectives (Creswell 2009) in designing the strategies of inquiry that inform the procedures. The catalogue of philosophical worldviews is continually expanding as researchers find new approaches in carrying out their research. For instance, literature seems to revolve around some

philosophies; positivism, critical realism, constructivism and pragmatism. However, others such as feminist, ethnic, Marxist, cultural studies, queer theory (Denzin and Lincoln 2011), advocacy/participatory and disability theory (Creswell 2007) have emerged from their interpretive communities which; has also given rise to multiple versions of those variants. This research also assumed that the inquirer will proceed collaboratively to not further marginalize the participants because of the inquiry. In this sense, the participants may help design questions, collect data, analyse information or reap the rewards of the research. Advocacy research provides a voice for these participants, raising their consciousness or advancing an agenda for change to improve their lives. It becomes a united voice for reform and change. This philosophical paradigm focuses on the needs of groups and individuals in our society that may be marginalized or disenfranchised (Creswell 2003).

For this research, a pragmatic paradigm will be adopted for its varied approach in achieving research objectives. Pragmatism is not restricted to a philosophical system (Creswell 2009), as researchers have the liberty to work from either a post-positivist paradigm or constructionist principle, in the first stage of their study and switch to the other philosophical position in the next phase of the study (Creswell et al. 2007). In other words, researchers have the discretion to select the best methods, techniques and strategies that are well suited to the purpose and intent of their study.

2.3 Approach to theory development

Approach to theory development occupies the second layer of the *research onion*. In this case, theory itself is described as a set of premise that can be used to explain and understand social phenomena (Matthews and Ross 2010). The notion of theory includes; related concepts regarding cause and effect relationship that may exist between two or more variables, that may have been previously tested or proposed (Saunders et al. 2016). From the above descriptions, theory is either tested in research or created as an outcome of

research. It is on this basis of ordering and relationship between theory and data collection in research; that the reasoning of deduction, induction and abduction are considered as an approach to theory development.

Based on the pragmatic paradigm adopted for this research, the abductive reasoning has been selected as a suitable approach in achieving the objectives of this research. Unlike the other two processes (deduction and induction), it offers an iterative approach (see Figure 2.2) that provides deeper levels of knowledge of a phenomenon (Tashakkori and Teddlie 2010). Originating either from a deductive reasoning (theory to data; a form of reasoning where the conclusion is logically derived from a set of premises) (Ho 1994; Ketokivi and Mantere 2010) or inductive (data to theory; where a general principle is discovered or developed from specific occurrences or observations (Plowright 2016), abduction is a process that allows the researcher to move between the two logical approaches to reasoning (Suddaby 2006). With this approach to theory development, the researcher can maximize the advantages of both reasoning without suffering their limitations.

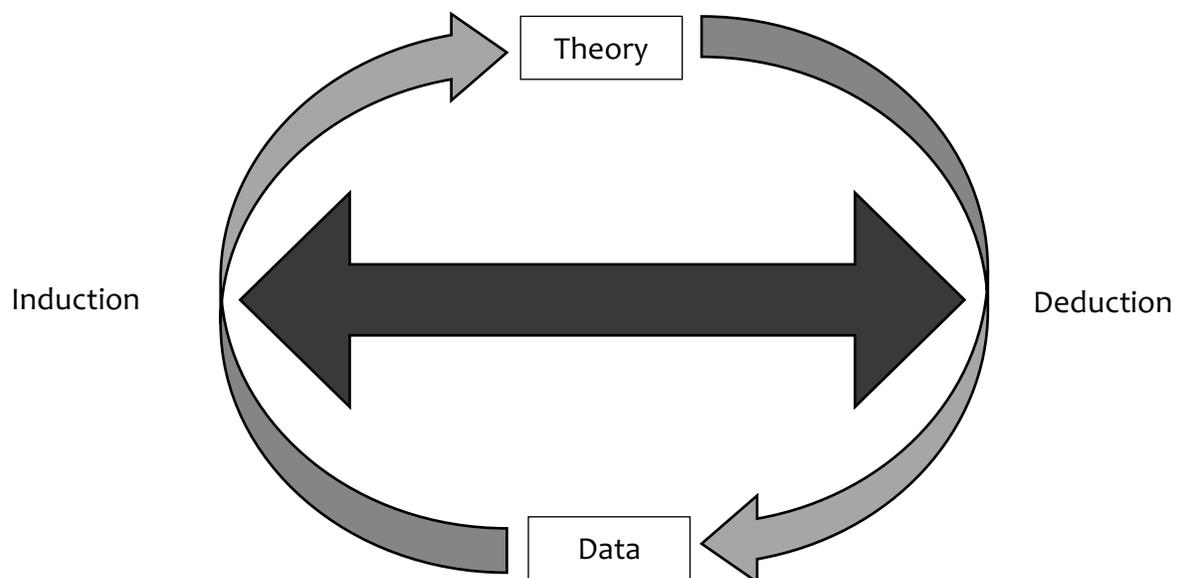


Figure 2.2: Deductive, inductive and abductive approaches (Bryman 2016; Matthews and Ross 2010)

2.4 Methodological choice

Given the philosophical stance and the abductive approach of the researcher, the Mixed Method Research (MMR) was selected as a suitable strategy for achieving the objectives of this study. The choice is further supported by the following reasons:

- Using the strength of one method to offset the weakness of the other, the MMR provides completeness to the research topic. For example, some information may be difficult to obtain using the quantitative method and the qualitative method might be hindered by physical access to willing participants;
- The opportunity to provide information using one strategy and further interrogate the study using another; and
- In reporting research findings, it is expected that the findings from the qualitative aspect would further elucidate findings obtained through quantitative method.

This combined design is a pre-determined approach taken by the researcher, in which there is a clear understanding that neither the quantitative nor the qualitative, alone will be sufficient to achieve the objectives of this study. As such, the study would be able to create a standardized means of obtaining information on EIA follow-up in the Nigerian oil sector, including confirmation of possible drivers and challenges that have been identified through the literature review. The flexibility of the qualitative aspect allows the researcher to alter the interaction to align with the interests of the participant or in response to emerging themes. This is an attribute that is needed for in depth exploration of emerging themes and issues, which may have not been previously identified in the literature review for EIA follow-up in the Nigerian oil sector. This aligns with the pragmatic foundations that *what works best* should be selected in answering the research problems (Creswell et al. 2007).

2.5 Strategy of inquiry

The MMR strategy allows the researcher to choose the combination of quantitative and qualitative elements in relation to their study. Elements in this case, refers to the stages involved in the quantitative or qualitative approach that includes the research question, data collection, data analysis and interpretation (Tashakkori and Teddlie 2010). Owing to the different ways the attributes within the MMR can be combined, there are numerous designs that can be employed in carrying out a research using the strategy. It is essential, that the researcher selects a design that best answers the research questions and is simple to implement and manage within the resources available. This ensures the choice of inquiry is not just controlled by the intent of the research but also depends on practicality.

The researcher adopted a *sequential mixed model design* as the strategy for achieving the aim and research objectives. Within this design, the first stage generates questions that will be inputted into the good practice criteria (see below) and answered during the second phase. The final interpretation is as a result of contributions by both phases of the study. The second phase of the study is conducted to provide further explanation for unexpected findings of the first phase. The first phase (quantitative phase) is exploratory and sets an overview of EIA follow-up in the Nigerian oil sector. It consists of data collection and analysis within one phase, to generate understanding of the topic area. The second phase (qualitative phase) is confirmatory and is split into two stages (perception and practice), in the perception phase, semi-structured interviews are conducted and analysed while in the practice phase, case studies are conducted. The resulting final meta-interpretation is made as either confirmation or dis confirmation of the interpretation made at the end of the two phases (Tashakkori and Teddlie 2010). The strategy has been modelled in Figure 2.3 below. The first phase involves the operationalization of the research question and subsequent quantitative data collection.

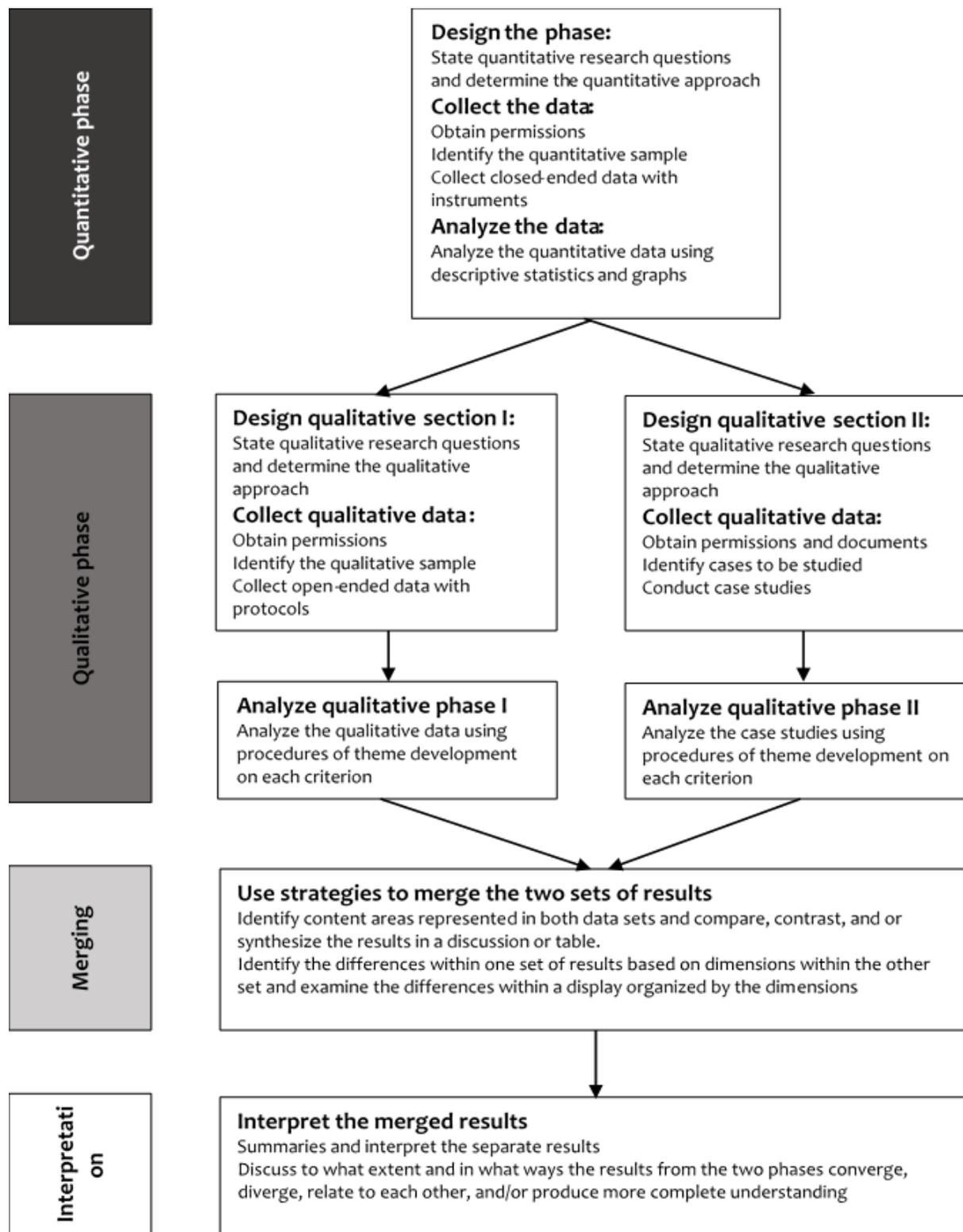


Figure 2.3: Flowchart of process in a convergent design. Adapted from (Creswell et al. 2007)

The next phase involves the qualitative phase of the study and it is divided into two parallel sections (see Figure 2.3). Section one seeks to understand the perceptions of stakeholders and section two uses case studies to understand reality in practice. Both sections are

analysed in this phase based on theory development with respect to the good practice criteria. The third phase is the point of mixing, which involves the merging of results obtained from both phases by comparing and contrasting the results. The final phase is the overall interpretation where the researcher determines the extent to which the result from the two sections agree, diverge, relate or combine to create a better understanding of the topic.

2.6 Methods of data collection and analysis

This is the final layer and inner core of the *research onion* that answers the question, *what tools can the researcher use to find out knowledge*. Crotty (1998) describes methods as the techniques or procedures used to collect and analyse data required for answering research questions or achieving research objectives.

For this study, the questionnaire was considered a suitable technique for the collection of quantitative data that would be used to lay a foundation of EIA follow-up and its stakeholders in the Nigerian oil sector. While a semi-structured interview is selected as a feasible means that would allow research participants express their views, opinions and experiences with regards to the study.

Gathering data is considered a physical activity that is bound within spatial, time, security and resource restraints (Matthews and Ross 2010). Therefore, the choice of method may be influenced by suitability rather than appropriateness. This research was able to engage with stakeholders at the national level of EIA follow-up in the Nigerian oil sector. The research also engaged participants from Bodo community in the Niger delta area. This particular community was chosen based on its strategic importance of being an oil producing area; in Ogoni land which is considered among the most polluted areas in the world (UNEP 2012). Figure 2.4 shows the activities that took place during the process of data collection.



Figure 2.4: Data collection circle. Adapted from (Creswell 2009)

The overarching aim of this research is to improve EIA follow-up in Nigeria. As such, the geographical location for collecting primary data for the study is defined, as the researcher will engage participants with hands on experience of EIA follow-up in the Nigerian oil sector. This is the beginning of the constraint described by Matthews and Ross (2010), as there is a limit to how long the researcher can stay out in the field.

The planning strategy employed prior to field work, included; contacting stakeholders implementing EIA follow-up programs within the Nigerian oil sector. Early preparation was done in 2016, this included sending introductory letters to prospective stakeholder organizations. In the case of regulatory bodies, rapport needed to be built by attending conferences and meeting face to face with regulators. To gain access to the proponents, the researcher needed an introductory letter from the regulator permitting the proponent to provide information to the researcher. Although this was done, the researcher needed to build rapport with staff of the companies, to ensure data could be collected within the timeframe available. In the case of the community, a visit was made to the leader of the community. Information on the research was provided to the community to encourage

transparency and build trust. This proved key to the successes of the researcher in collecting data from the community. The researcher engaged as many individuals as possible within the community. The remaining steps of the data collection circle (See Figure 2.4) are discussed in subsequent sections.

2.6.1 *Collecting primary data using a survey*

Surveys are designed to collect large volume of primary data from population samples which might be spread out over extensive geographical locations, usually in numerical format (Hair et al. 2007). This form of data collection is relatively cheaper to administer, when the need to travel for an interview is considered (Bryman 2016). For this reason, the researcher can reach a larger number of respondents simultaneously using surveys than in any of the other data collection methods. An identified limitation of the questionnaire is the likelihood of a low response, when potential respondents do not attempt or complete them (Bryman 2016). Walonick (2004) also laments that poor response is the bane of statistical analysis and this has a great potential to lower the confidence in the results derived. The researcher mitigated this limitation by sensitizing the participants, prior to the administration of the survey. The use of peer delivery, in disseminating the survey encouraged higher response rate.

Although this process limits the amount of questions and additional data that can be collected, the use of a questionnaire, minimizes researcher influence that might have otherwise shape the answers given by respondents (Bryman 2016). Walonick (2004) believes that surveys dispel the middleman bias by enabling a standard presentation of the questions to all the respondents. In the process of eliminating the influence of the researcher's own reasoning in the answers collected, respondents are denied the opportunity to clarify any challenge encountered with the researcher. As such, the survey was pre-tested and based on that; community stakeholders were divided into two

(community members and community experts). Community members will only be asked questions concerning their level of knowledge of EIA follow-up, while community experts will be asked same questions as the regulators and proponents. Before it was administered to the respondents, contact details of the researcher provided on the survey forms with an encouragement for the respondent to get in touch/engage in case of ambiguity.

Designing the questionnaire

Being a self-completing activity, it is essential that the structure of the questions should be as clear and concise as possible for the respondents to read, interpret and select an answer. Being that the questionnaire is exploratory, it was pertinent to make the questions easy to understand and connote meaning to the respondents. Kumar (2005) suggests a four-step process in the development of the research instrument, the researcher has adopted a five-step approach, linking the research objectives all the way to questions administered in the questionnaire as seen in the model depicted in Figure 2.5.

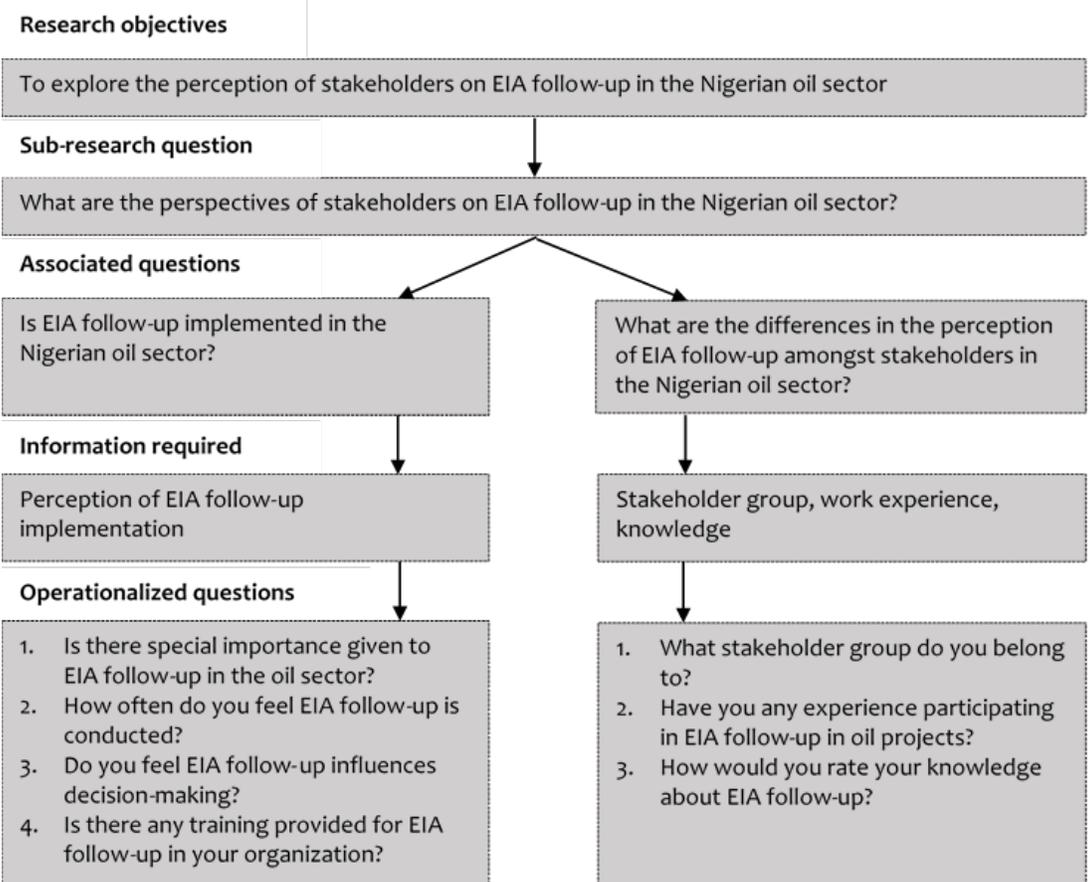


Figure 2.5: Questionnaire design process. Adapted from (Kumar 2005)

To create an easy layout and a sequencing of questions for the respondents, the questionnaire was divided into two broad categories; in an interactive style as depicted in Table 2.2 below.

Table 2.2: Categories in the questionnaire

Categories
A. Stakeholder information
B. Implementation of EIA follow-up in the Nigerian oil sector

Category A contains stakeholder information such as; their gender, age, stakeholder group, experience and knowledge which would be collected as demographic data. This was used as independent variables to decipher the differences that occur in the responses collected through the questionnaire. The next section focused on obtaining information on the implementation of EIA follow-up in the Nigerian oil sector; as this area is under explored in literature. The questionnaire provided background information into the subject area for further probe. Table 2.3 below, highlights the questions asked and the rationale for asking them. A full copy of the administered questionnaire is provided subsequently (see Appendix A).

Table 2.3: Questions asked in category B and their rationale

	Question	Assessment scale	Rationale
1	Is special importance given to EIA follow-up in the oil sector?	1=don't know; 6=high	To determine whether stakeholders consider EIA follow-up in the oil sector to be given high importance.
2	How often do you feel EIA follow-up is conducted?	1=don't know; 6=high	To determine stakeholders' view on how often EIA follow-up is implemented.
3	Do you feel EIA follow-up influences decision making?	1=don't know; 6=high	To measure stakeholder's satisfaction with the outcome of EIA follow-up.
4	Which of these resources do you feel are sufficiently allocated?	Forced ranking system	To assess stakeholder's views on which resources are sufficiently available to implement EIA follow-up.
5	Is there any training provided for EIA follow-up?	1=don't know; 6=high	To assess stakeholders' view on the amount of training provided for EIA follow-up.

Administering the questionnaire

Snowball sampling was the strategy adopted in the administration of the questionnaire. The choice of this non-probability sampling technique is based on its merits, where strategically identified respondents from each stakeholder group refer the researcher to other respondents within the stakeholder group; that are willing to participate in the study (Bryman 2016). This strategy was viable for soliciting participants to complete the survey, as it allowed the researcher to capture audiences with interest in the study area. As earlier explained, the researcher was able to build rapport and get contacts within stakeholder groups; which made the choice of sampling feasible. The questionnaires were administered at the national level to relevant regulators, proponents, community experts and at the local level to community members. This approach produced a sample based on perception of respondents with knowledge on the study area.

The nature of quantitative methods is the creation of a uniform instrument for collecting data from all subjects. In this case, the paper questionnaire is the adopted instrument employed in collecting data, on which the information required is recorded. Completed questionnaires were safely secured in a protected field bag and transferred into a locked storage at night to prevent loss as approved in the ethics approval. Apart from safe keeping in the field, the biggest hurdle was in the collection of the completed surveys. As such, the researcher had to schedule multiple visits to different locations to remind respondents to finish the survey and collect them.

2.6.2 Collecting primary data using semi-structured interviews

Four types of qualitative data collection have been highlighted by Creswell (2009), and they included: observations (ranging from participatory to objective observation), interviews and focus groups (using both close-ended and open-ended approach), examination of public and private documents and discussions and audio-visual materials (including

photographs, art objects, videotapes, films etc.). For this research, the interview has been selected as one of the tools to collect the qualitative data, based on the inappropriateness and the unsuitable nature of the other techniques. For example, EIA follow-up program implementation cannot be observed within the research timeframe, it is also impractical for the researcher to arrange a focus group with intended participants owing to their different geographical locations. Documentary review was utilized in certain aspects, however was not be solely utilized; due to the paucity of necessary documents and the sensitivity attached to them. The audio-visual approach will also have no inherent value to the research objectives.

The interview is a widely used method of qualitative data collection, due to the flexibility it provides the researcher (Bryman 2016). This is strengthened by the fact that: it requires shorter involvement, when compared to observation and less planning as demanded by the focus group approach. Three forms of interviews are generally utilized; structured, semi-structured and unstructured (see Table 2.4).

Table 2.4: Features of the types of interviews. Adapted from (Bryman 2016; Gill et al. 2008)

Structured Interview	Semi-structured Interview	Unstructured Interview
The interviewer directs the interview. Pre-arranged questions are set, with no room for deviations. Participant has a limited scope of response	Pre-set topics and questions guide interactions. The interviewer is expected to strike a balance between obtaining the necessary information and collecting information deemed by the interviewee to be of importance	The opinions of the interviewees are paramount in this form of interviews. Participants are encouraged to express themselves on their values, thoughts and attributed meanings. The interviewee controls the mode of interaction
The ordering and language used in asking the question is fixed and standardized for the interviewees	Follow-up questions can be asked by the interviewer, a departure from the set questions. The wordings of questions can be adjusted as to make the interviewee understand it better	Structures, procedure or specific questions are of no importance. The interviewee and the interviewer are at liberty to adjust the situation
These are relatively quick and easy to administer	Interview guide are designed to make the process easier to manage	This could consume quite a bit of time and be difficult to manage due to its unscripted nature
Answers can be processed quickly	Data collected are rich and detailed	Data collected would be rich but will also include quite a bit of information that may not required
Not required when insight or depth is required, due to the	Allows the discovery or provides insight into issues important to	Considered useful in areas where there is little knowledge about

Structured Interview	Semi-structured Interview	Unstructured Interview
structured nature of the answers required	interviewees not previously identified by the researcher	the subject matter or in the investigation of a different perspective on a known topic
Quantitative research	Typically, qualitative research	Useful in ground theory

This research adopted the semi-structured approach. Semi-structured interviews are usually employed in collecting qualitative social data when the researcher is interested in obtaining people’s behaviour, opinion and understandings of how, why and what they have experienced and what underpins their construction of the social world (Matthews and Ross 2010). In utilizing the semi-structured approach, the researcher focused on collecting information provided by participants on the subject matter. The participants were questioned at length on the subject matter, to describe their perception and realities. The interviewees will be allowed free range, to talk on their own understandings about the subject matter and to get rich data and qualitative depth. The semi-structured nature of the interview allowed the researcher to capture the perspective of the participant, rather than restrain the interaction to the concerns of the researcher. This provided flexibility in the data collection, as the interviewer asked new questions to follow-up interviewees’ responses and clarify points raised or new insight into new lines of inquiry. An interview guide was developed before the interaction, to ensure that all the relevant issues have been addressed before the end of the interview. Even though the interviewer had prepared a list of questions and topics to be covered, the interviewee had a great deal of latitude in how to reply. Open-ended questions were utilized during the interviews, to encourage the interviewee to provide a rich depth of information.

Purposive sampling

This type of sampling allowed the researcher, to engage individuals that have the necessary skillset and experience; to provide data that is directly related to the research topic (Creswell et al. 2007). The sample sizes interviewed were not a statistical representation of

the population size but are strategically situated with the knowledge that the researcher required in achieving the research objectives.

In addition, the sampling strategy also leveraged on the criterion and opportunistic sampling approach; in recruiting participants using the selection filter (see Figure 2.6). This is a guideline for the type of participant that the researcher would like to engage. In the context of this research, there are two different stages of interviews conducted. In the first stage, proponents, regulators, community experts, consultants and community members involved in EIA follow-up were engaged. In the second stage of interviews, specific project managers on selected case studies were interviewed.



Figure 2.6: Guideline for the recruitment of participants in interviews. Adapted from (Bryman 2016)

Rather than selecting a large number of participants, this allowed recruitment of participants; that provided an in-depth understanding of EIA follow-up implementation, in the Nigerian oil sector and provided an opportunity for recommendations to improve it.

Developing interview questions

Interviews provided an opportunity to collect participant views on the implementation of EIA follow-up in the Nigerian oil sector. The questions were broad in nature, designed to allow the research participants to voice their own opinions while the researcher listened, intently to what is being said and how. The flexibility in the qualitative technique allowed the researcher to digress from the set questions and take the interview in alternate directions; that may emerge from the responses of the interviewee (Bryman 2016). However, there will be a balance; between the set questions, the experiences and narratives expatiated on by the interviewees. Specific issues identified through literature review and responses to the survey conducted, were converted into questions and asked by the researcher to the interviewees on the subject matter (see Table 2.6).

Table 2.5: Emerging issues for interview guide

Section reference	Emerging issues	Reference
3-3, 3-3.1	What do you understand by Environmental Impact Assessment?	(Duinker and Greig 2007; IAIA 2017; Munn 1979; UKDOE 1989; UNECE 1991)
3.4, 5.5.2	Is there any legal provision for conducting EIA monitoring in Nigeria?	(Arts et al. 2001; Marshall et al. 2004; Morrison-Saunders and Arts 2004)
3.4.1	What do you think are the stages of EIA monitoring?	(Arts et al. 2001; Wilson 2012), (Arts and Nooteboom 1999; Baker 2004; Culhane 1993)
1.2.4, 5.5.1, 5.5.2	What could be done to improve the importance of EIA monitoring within the oil sector?	(Ajai 2010; Ambituuni 2014; Eneh 2011; Ingelson and Nwapi 2014; Nwoko 2013)
3-3, 3-3.1, 4.4.1, 5.5.2	Once the EIS has been granted how do you ensure that monitoring is implemented on ground?	(Appiah-Opoku and Bryan 2013; Glasson et al. 2012; GoI 2006; Jones and Fischer 2016; Morrison-Saunders and Arts 2004; Tang et al. 2016)
5.3.2, 5.3.3	What is the scope of EIA monitoring? (Does it include social and health issues)	(Albert et al. 2018; Lim et al. 2014; Nriagu 2011; Pegg and Nenibarini 2013)
3.4.1, 4.4.4	How are EIA monitoring reports communicated to the community?	(Ahammed and Nixon 2006; Baker 2004; Jha-Thakur 2011; Marshall et al. 2005; Morrison-Saunders and Arts 2004; NCEA 2016; Wessels et al. 2015)
5.5.1, 5.5.2, 5.5.3	How many MDA's participate in EIA monitoring on ground?	(DPR 2002; FRN 1992)
5.5.1, 5.5.2, 5.5.3	Are the EIA monitoring reports from MDA's harmonized?	(DPR 2002; FRN 1992, 1995)

The questions administered during the interviews follow the pattern above, however in some cases; were modified to align with the interviewees' skills, experience and context to allow for a smooth interaction with the interviewee. To ensure uniformity, the researcher ensured that similar wording was employed in the engagement of all the participants.

Conducting the interview

The assurance of producing quality data is critical when selecting the best procedure to utilize in the conduction of interviews. Various procedures can be adopted that will guarantee the quality of data collected. Creswell (2007) succinctly described interviewing as a sequence of actions (see Figure 2.7 below).

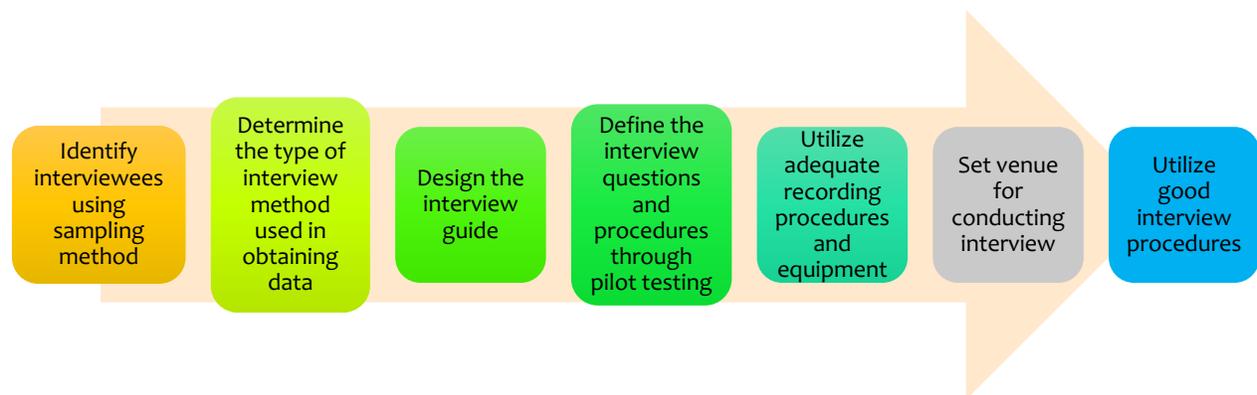


Figure 2.7: Sequence for conducting an interview. Adapted from (Creswell 2007)

The sequence highlighted above, was utilized in the preparation and conduction of the interviews. The first three stages have been covered in the preceding sections (see Purposive sampling and developing interview questions). To refine the interview questions, a pilot test was conducted with two eligible interviewees with sufficient knowledge of the subject matter who had not been selected as a research participant. This process improved the quality of questions and localized the questions to the language easily understood by the prospective interviewees.

The interview sessions were recorded, however at the preference of the interviewee, the sessions were also written. The preference for recording is borne out of the need to ensure that no part of the interaction is missing and available for referencing when carrying out data analysis. In essence, the researcher acts as the data collecting tool used to elicit

information from the interviewee. The use of recording equipment enabled the interviewer to focus on the interview, as it eliminated the pressure to transcribe the interviewees' words which might disrupt the flow of the discussion (Bryman 2016). As such, it is essential that good recorders are deployed, which would in turn influence the quality of recording obtained.

The choice of venue in the context of this research was not determined by the researcher. This is as a result of the level of seniority of prospective interviewees within their organization and their preference to participate in the interviews within a familiar environment. The researcher has no objection to this, as it ensures that the time of the interview and location are conducive for the interviewee. A consent form and a participant information sheet to elucidate the participants on the purpose of the study, what is expected of them, advise them of their rights and what the results from the interview would be used for, was presented to each prospective participant. Once this was discussed with the prospective interviewee, a completed and signed copy is returned to the researcher; whilst the interviewee keeps the participant information sheet.

The final stage of the sequence required the use of good interview procedures. This included conducting the interview within the agreed time frame, attentively listening to the interviewee, being polite and not argumentative (Bryman 2016; Creswell 2007). The researcher aimed to ensure the questions are short and not complex, to ensure the interviewee understands it and provides rich, detailed, specific, relevant and longer answers.

2.6.3 *Selecting case studies*

Yin (2014) highlighted that the specific need for the case study arises from the desire to understand complex phenomena where a holistic view of real-world events is sought, such as organizational, managerial, decision or implementation processes. Case studies were

used in this research in order to gain a practical understanding of the processes, practices and outcome of EIA follow-up in the Nigerian oil sector. According to Robson (2002) based on the nature of case study research, there are two forms in existence; (1) evaluation where greater flexibility is required to explore all possible lines of investigation and (2) confirmatory where a greater understanding exists and therefore a more fixed design can be adopted. Robson (2002) further highlighted the objectives of a study and emphasized how the strength of theoretical development in the area of interest, will inform how fixed the research design must be. The approach applied in this research was fixed, in order to achieve the aim of the research and to confirm or refute the data collected from interviews with EIA follow-up stakeholders (see Chapter 7). These case studies were used to confirm or refute the data collected earlier.

This research took a multiple case study approach; however, it is important to provide justification for employing a multiple case design and to consider the purpose of such a design. Yin (2014) described the reasoning of replication underlying the multiple case study approach: as enabling the researcher to increase the strength of findings. Replication has been highlighted to increase the external validity of findings (Levi-Faur 2006). Robson (2002) also highlighted that the design of a research taking a case study approach should include and make unambiguous the ways in which reliability and validity have been addressed and proposed within it. In this research, the case studies are used to validate data earlier collected from stakeholders during interviews.

Crucial to the success and failure of a multiple case study research design, is the need to develop a robust approach to case study selection. Cases should be selected either to provide literal replication (predicting a similar outcome due to identified similarities) or theoretical replication (predicting a different outcome due to anticipated differences) (Yin 2014). Therefore, when considering the selection of multiple cases the development of a theoretical framework from which to make the necessary propositions is vital (Yin 2014).

The overall research methodology (see Chapter 2), the good practice criteria (see 2.6.4), and the research aim and objectives (see Chapter 1) were used to inform case selection. Based on this, three steps were taken in the selection of the cases adopted:

1. **Identification of oil projects:** Nigeria started oil exploration and exploitation (oil projects) in 1956. Since 1956, 606 oil fields have been located in the Niger Delta, of which 360 are on-shore while 246 offshore and 275 of them are flow stations (Nwilo and Badejo 2005; O'Neil 2007) with over 7,000 kilometers of pipelines (Anyanwu 2012). The case studies for this research were selected from oil projects developed since the inception of EIA in Nigeria. A survey of Department of Petroleum Resources (DPR) and the Nigerian National Petroleum Corporation (NNPC) database was undertaken, as they are the bodies with the responsibility to regulate and supervise all the operations being carried out under licenses and leases in the Nigerian oil sector. The research found that 109 Oil Mining Licenses (OML)/Oil Producing License (OPL) (oil projects) currently operate in Nigeria. A majority of the oil projects were concentrated in the Niger delta and environs.
2. **Classification of oil projects:** Based on the initial review of oil projects, it was found that some oil projects were granted licenses prior to the enactment of EIA decree 86 in 1992. Continental Oil and Gas limited (CONOG) was the last to have been granted an operations license in March 2016. Projects that were granted licenses prior to the enactment of EIA decree 86 in 1992 will not be included to the list of cases considered for selection, as they are considered not to have monitoring conditions in place. In general, the documents showed there were four types of oil project contracts in Nigeria (see Chapter 5); Joint Venture (JV), Sole Risk (SR), Production Sharing Contract (PSC) and Service Contracts (SC).

A review of the document gave an opportunity to identify the proponents involved in each oil project. Two categories of proponents were identified involved in the oil

projects; Multinational Oil Companies (MOC) and Indigenous Oil Companies (IOC).

To have a balanced representation of both MOC and IOC in the research, one oil project was selected from each category.

3. **Analysis of oil projects:** The researcher analyzed the oil projects and identified projects that reflect the following factors (oil project, ownership type, age of project and project location). The projects reflecting these factors ensured four criteria in the category on project type were deemed constant (see 2.6.4).
 - a. **Ownership type:** From the pilot study and interviews conducted with stakeholders, it was perceived that there are differences in the implementation of EIA follow-up programs by MOC's and IOC's. The choice of projects was therefore done to help capture the possible distinction in the implementation of EIA programs between these proponents, with the aim of establishing possible differences that may exist between their follow-up practices.
 - b. **Oil Project:** The selected case studies should be oil projects, which are expected to implement an EIA follow-up program.
 - c. **Project Age:** Care was taken to ensure the oil projects selected were initiated within the period of 1998 to 2014; this is because EIA legislation was enacted in 1992 in Nigeria; and its application guidelines were designed in 1994. The age bracket selected provides an opportunity for the project selected to have been in operation for several years and the implementation of the EIA follow-up program should have started.
 - d. **Project Location:** Oil projects are distributed across the deep sea and the Niger delta area of Nigeria. Consequently, the projects chosen for this research must be situated onshore in the Niger delta area. Because a majority of offshore oil projects do not require community participation.

The projects selected for easier identification have been addressed as Case Study A and Case Study B respectively.

Table 2.6: Selected case studies

Case Study	Name of operator	Name of project	Project type	Project Location	Expiry Date	Category
A (OPL 135)	Nigerian Agip Oil Company (NAOC)	OPL 135	Oil drilling	Niger Delta	Not Available	MOC (Multi-national Oil Company)
B (OML 148)	Enageed Resources Ltd (ERL)	OML 148	Oil drilling	Niger Delta	September 2035	IOC (Indigenous Oil Company)

OPL 135: Located in the Niger Delta, it is called OPL 135, and it’s under a joint venture concession agreement between Nigeria National Petroleum Corporation, Philips Oil Company (Nigeria) Limited and Nigeria Agip Oil Company (NAOC).

OML 148: Called OML 148 and based in the Niger Delta, it’s under a production sharing contract between Nigeria National Petroleum Corporation and Enageed Resources Ltd (ERL). The license expires in September 2035.

2.6.4 Framework of analysis

The following methods were selected in analysing the data collected during this research. A mixed method approach was selected for this research; as such the data collated requiring analysis included data from surveys, interviews and case studies.

Survey data analysis

Surveys are considered easy to analyse when compared to other data collection techniques; this is as a result of several computer software packages that can handle data entry, tabulate results and store all data effectively (Walonick 2004). The survey was prepared to analyse gathered data using the Statistical Package for Social Scientist (SPSS). The SPSS software is considered the most used quantitative data analysis software (Bryman 2016). The responses will be coded in numerical format so that it can be inputted into the SPSS database. The

analysed data was of a descriptive nature including graphs, cross-tabulations and frequencies that present the variability of opinions and perspective across all the respondents. The analysis conducted on the data collected are provided (see Chapter 7).

Interview and case study data analysis

To analyse the data collected from the semi-structured interviews and the case studies against the good practice criteria, a scoring system was adopted. In analysing the data collected via the semi-structured interviews, the NVIVO software (NVIVO) was utilised. The forty-eight criteria of the good practice criteria (see Table 2.8), were inputted into NVIVO. Similarly, the sixty-four semi-structured interviews conducted were transcribed and uploaded. Using word search tools available in NVIVO and by reading through the collated data, interviewee experiences were matched to the appropriate good practice criteria it relates to. The information collated regarding each criterion is scored, using the scoring system adopted. This scoring system has been adapted from the review procedure developed by Fischer (2005) for reviewing quality of SA report. The scoring systems ranged from A (well performed) to G (task not attempted). The good practice criteria have five broad categories, sub-divided into questions. Each question is graded individually based on the data available via the semi-structured interviews for the Proponent Indigenous Oil Company (PRIOC) and the Proponent Multinational Oil Company (PRMOC), similarly in analysing case studies; each criterion is scored using the information available from both case studies.

Table 2.7: Scoring System (Fischer, 2005)

Scoring System	
Grade A	Generally, well performed with no important omissions
Grade B	Is performed satisfactorily and complete with only minor omissions/inadequacies
Grade C	Just satisfactory despite some omissions or inadequacies
Grade D	Indication of parts being well attempted but, on the whole, performance is unsatisfactory because of omissions or inadequacies
Grade E	Not satisfactory. Revealing significant omissions or inadequacies
Grade F	Is very unsatisfactory with important tasks poorly attempted
Grade G	Task not completed at all
N/a	Not applicable
?	Unclear

Finally, each category is scored based on the observation of the researcher on the overall view on the categories and the responses of the stakeholders. Other sources of information (e.g. documents) were also utilised to reduce the tendency of the researcher being biased.

Good practice criteria

Based on the existing foundational literature on EIA follow-up (see Chapter 3), evidence of practice in eight countries around the world (see Chapter 4) and past benchmarks constructed (Jha-Thakur 2011; Morrison-Saunders and Arts 2004: 287-98) a set of criterions are set. This set of criterions are termed ‘good practice criteria’ within this research and will be utilized as a benchmark in the later chapters against which the Nigerian EIA follow-up practice will be compared and contrasted with. Chapter 5 and 6 further help to integrate environmental practices of the Nigerian oil sector in the list. Apart from these chapters, findings from the survey results (see Chapter 7) were also incorporated into the good practice criteria. This was achieved by constructing questions based on the differences identified in the responses of the stakeholders during the survey. The questions added included under the following categories:

- Approaches and techniques:
 - Are the efforts of the regulators harmonized towards implementing the EIA follow-up program?
- Resources and capacity available:
 - Is responsibility clearly allocated for someone to communicate the EIA follow-up report to the community?

- Are resources made available to build capacity of community stakeholders to participate in the EIA follow-up program?
- Is finance made available to aide participation of community in EIA follow-up program?
- Project type:
 - During the implementation of an EIA follow-up program, is the ownership (PRMOC or PRIOC) of the project considered?
- Stakeholder involvement:
 - How are community members notified to attend a community participation exercise?
 - How are community members selected for a community participation exercise?

This research has elaborated on the ‘project type’ in selecting case studies with different type of ownership. The good practice criteria have been presented in the table below (see Table 2.8).

Table 2.8: Good practice criteria

Categories	Criteria
Regulation and Institutional arrangement	<ol style="list-style-type: none"> 1. Is the EIA follow-up process based on clear and specific formal requirements? 2. Are there any stages specified in the formal requirements? 3. Are there any time limits for the various steps in the EIA follow-up process? 4. Is there a strong commitment to conduct EIA follow-up by the regulators? 5. Is there a role for independent verifiers within the EIA follow-up process? 6. Are proponent self-regulation tools (ISO 14001, ISO 14040) permitted within the EIA follow-up process? 7. Are there incentives to encourage good practice (proponent voluntarism)?
Approaches and Techniques	<ol style="list-style-type: none"> 1. Does EIA follow-up start at the pre-decision stage of the EIA process? 2. Is EIA follow-up designed according to stages of the project (construction, operation, decommissioning)? 3. Is screening conducted during EIA follow-up? 4. Is there any scoping done during EIA follow-up? If yes, is it objective-led and continuous throughout the project cycle? 5. Is the EIA follow-up program documented in the EIA report? 6. Is existing data used in the EIA follow-up program? 7. What type of monitoring (compliance, command and control) is adopted in the EIA follow-up program? 8. What monitoring technique (rigorous, simple) is adopted during EIA follow-up? 9. Is there any provision of rigorous monitoring data? In case rigorous methods are not possible, is there any provision for simple techniques for conducting follow-up? 10. Does the proponent have any formal EMS in place? If yes, is it well integrated with EIA follow-up? 11. Does EIA follow-up meet its objectives (conformance, performance, dissemination, tackling uncertainty)? 12. Are all the components of EIA follow-up complied with? 13. What approach is adopted for EIA follow-up in the Nigerian oil context? 14. What is the scope adopted for EIA follow-up (environmental, social and health issues)? 15. Are there indirect impacts due to projects taking into account during EIA follow-up? 16. Are the approaches adopted in accordance with the local ‘EIA culture’? 17. Are the efforts of the regulators harmonized towards implementing the EIA follow-up program?

Categories	Criteria
Resources and Capacity	<ol style="list-style-type: none"> 1. Is responsibility clearly allocated to finance EIA follow-up? 2. Is responsibility clearly allocated to stakeholders to conduct EIA follow-up? 3. Is responsibility clearly allocated to evaluate/audit EIA follow-up? 4. Is responsibility clearly allocated to manage the changes if required? 5. Is responsibility clearly allocated for someone to prepare the report? 6. Is responsibility clearly allocated for someone to whom the results are reported to, or, who checks compliance? 7. Is responsibility clearly allocated for someone to communicate the EIA follow-up report to the community? 8. Is local knowledge taken into account for designing EIA follow-up? 9. Is there any provision of 'institutional memory' and knowledge brokering (contract with universities or research institutes for knowledge sharing)? 10. Is there any kind of training or education and capacity building imparted for EIA follow-up? 11. What is the strength of EIA follow-up teams? 12. Is there any independent monitoring agency involved in the EIA follow-up program? 13. Are resources made available to build capacity of community stakeholders to participate in the EIA follow-up program? 14. Is finance made available to aid participation of community in EIA follow-up program?
Project Type	<ol style="list-style-type: none"> 1. During the implementation of an EIA follow-up program, is the ownership (PRMOC or PRIOC) of the project considered?
Stakeholder Involvement	<ol style="list-style-type: none"> 1. Does community participation take place at the pre-decision stage? 2. How are community members notified to attend a community participation exercise? 3. How are community members selected for a community participation exercise? 4. Are the EMP available to communities at project locations? 5. Are the results of EIA follow-up reports available online? 6. Are public concerns represented in EIA follow-up? 7. Do regulators ensure that EIA follow-up is carried out in accordance with the regulations? 8. Is EIA follow-up viewed as a useful exercise? 9. Is EIA follow-up regulator, proponent or community driven?

2.7 Challenges faced during the research

This section highlights challenges encountered during the research, particularly during interviews and observatory visits and how they were dealt with. These challenges will be divided into three main types: difficulties in scheduling, difficulties in conducting interviews and difficulties in conducting observatory visits.

2.7.1 Difficulties in scheduling the interviews

The first challenge faced was finding material on EIA follow-up in Nigeria, as not much research has been conducted on EIA follow-up in Nigeria. Substantive primary data was collected to mitigate this issue and provide a background. The second challenge

encountered was determining the different stakeholder groups participating in EIA follow-up. Conducting a literature review on EIA follow-up internationally and identifying stakeholders with similar roles in the Nigerian context overcame this challenge. The third challenge was gaining access to the different stakeholder groups identified. Calls and emails were made to set up appointments for interviews, particularly when the participant was a senior member of staff. Personal contacts and a linear snowball method to set up key contact persons for each stakeholder group was also utilized. The interview list (see Appendix B) was then designed by the introduction of the researcher to key experts operating within the industry by the key contact persons.

2.7.2 *Difficulties in conducting the interviews*

The terminology used for EIA follow-up was often Monitoring or Mitigation as such it was important for the researcher to informally discuss and explain EIA follow-up before interviews were conducted. From the informal interviews conducted to understand the problem, it was clear the cultural context of the research area did not find the formal wording of conducting ‘semi-structured interviews’ appropriate. To mitigate this, they were tagged ‘discussions on monitoring’. The sensitivity of the research area and the political setting of the study area meant most interviewees wanted to stay anonymous. For this reason, plans to record all interviews were relegated as when required and the interviews were transcribed. Last minute cancellations and changes to agreed time of interviews were also a major challenge. In some cases, the participants did not attend the interview, and plans had to be made to rebook such appointments. Most interviews were conducted at work places of interviewees and during working hours, which affected the flow of discussion. This led to discussions being stopped and started a number of times. To counter this, the researcher had to politely refocus the respondent to what the question was and where he stopped. The accuracy of information provided was also an issue due to the

possibility of bias towards respondent's place of occupation, for this reason the reporter spoke to as many respondents as possible on the same topic to get an overarching opinion within the context.

2.7.3 *Difficulties in conducting observatory visits*

Accessing data on oil projects to be used as case studies proved more difficult than first envisaged. This was a major challenge to the research, maximum effort had to be directed towards reaching out to as many practitioners as possible before data was collated for suitable cases. Observatory visits to the oil sites were also not possible, this is a result of sites being difficult to access by land; requiring a helicopter for such visit. The cost of such was beyond the reach of the researcher. To mitigate this, the site project managers were interviewed, and visits were also made to the zonal offices of the oil projects to get as accurate an account of the information required from staff working on the projects as possible.

2.8 Ethical issues considered in research

Ethical best practices were applied during data collection of this research. The researcher ensured all respondents in this research were fully informed about the purpose of the research and its significance. Confidentiality and anonymity of respondents were strictly enforced, guaranteeing participants could talk freely with no fear of reprimand. The researcher ensured information collected from the respondents were anonymized during the write up. Coding was adopted to protect the identities of respondents, this was done to ensure the safety of respondents before, during and after the research. The University of Liverpool's ethics committee reviewed all interview guidelines and structures, to ensure they met the highest ethical standard available. Finally, informed consent was sought from respondents to acknowledge that their rights will be protected during data collection (See

Appendix C) (Creswell 2009). Concerted effort was made to get signed, written or emailed consent from all respondents as much as possible.

2.9 Chapter summary

This research has one aim and four objectives and has adopted a mixed method approach which involved:

- Survey
- Semi structured interviews
- Case studies
- Document analysis
- Observation

A good practice criterion was constructed against which the Nigerian EIA follow-up practice in the oil sector is evaluated. The good practice criteria were constructed using the best practices of EIA follow-up and other factors, which includes:

- EIA follow-up: Theoretical practice
- EIA follow-up: International practice
- Environmental impacts of oil projects
- EIA systems in the Nigerian oil sector
- Survey results on EIA follow-up in the Nigerian oil sector

Three field trips have been conducted to collect data for this research. Pilot interviews were conducted during the first field trip to understand terminologies and also persons involved in EIA follow-up in the oil sector. Documentary analysis, surveys and semi-structured interviews were conducted in the second field trip to understand perceptions of the implementation of EIA follow-up in the Nigerian oil sector. The case studies were undertaken in the final field trip. During the second field trip, data upon which the case studies were conducted were collated.

The case studies were chosen against a set of criteria, they were as follows:

- Ownership type
- Type of project
- Project age
- Project location

Some of the challenges faced during this research included:

- Finding material on EIA follow-up in Nigeria, as not much research has been conducted on EIA follow-up in Nigeria
- Determining the different stakeholder groups participating in EIA follow-up within the context
- Gaining access to the different stakeholder groups identified
- Understanding the terminology used for EIA follow-up

CHAPTER THREE: EIA FOLLOW-UP: THEORETICAL PERSPECTIVE

This chapter provides a detailed theoretical background for the research and was divided into four sections. Firstly, it focussed on introducing Environmental Assessment (EA), followed by sections focussed on Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA). The chapter then discusses EIA follow-up and the links between Environmental Management System (EMS), Environmental Management Plan (EMP) and EIA follow-up. The final section focussed on challenges of EIA follow-up.

3.1 Environmental Assessment (EA)

An EA comprises of several processes that aim at incorporating the environment into the planning of the operations and development of projects, programs, plans or policies. Pierre et al. (2004) defined EA as a ‘systematic process that consists of evaluating and documenting the possibilities, capacities and functions of resources and of natural and human systems to facilitate the planning of sustainable development and the decision-making process in general, as well as forecasting and managing negative impacts and the consequences of development proposals’. Glasson et al. (2012) also defined EA as ‘a systematic process that examines the environmental consequences of development actions in advance’. EA as a tool is used to prevent negative effects of human activities on the environment and improve decision-making on proposed actions and their potential to cause negative environmental consequences (Noble 2006). It has been further described as ‘a vehicle for incorporating environmental concerns along with conventional technical, financial, and political considerations in decision-making’ (Appiah-Opoku and Bryan 2013: 38). It involves a systematic analysis of the potential impacts of major policies, programs and projects, and the ways in which adverse impacts can be minimized (Gibson 1993). Consequently, EA is fundamentally an all-inclusive approach to decision-making in which; analysis, synthesis and management of prior predicted impacts of project proposals play a

major role. Overall, the purpose of EA is to enhance socioeconomic and biophysical impacts of projects and programs; while mitigating their potential negative impacts through thought provoked decision-making.

Among the various forms of EA include: Environmental Studies and Strategies, Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) (Pierre et al. 2004). EIA and SEA will be introduced in this chapter.

3.2 Strategic Environmental Assessment (SEA)

In recent decades, Strategic Environmental Assessment (SEA) has been applied throughout the world in a variety of sectors and various ways to predict and evaluate the potential environmental impact of policies, plans or programs, as well as to identify and evaluate alternatives to avoid, mitigate or compensate for these impacts (Chaker et al. 2006; Fischer 2007; Lemos et al. 2012; Sadler and Verheem 1996; Therivel 2004; Zhu and Ru 2008). SEA is gaining extensive recognition as a tool for promoting environmental sustainability through policy, plan and program (PPP) processes, assisting decision-making by supporting the development of more sustainable policies and strategies (Fischer 2003). SEA process requires the identification of alternatives for the proposed PPP and the preparation of a written report on the findings of the evaluation and an incorporation of the findings in a publicly accountable decision-making process (Therivel et al. 1992; Therivel and Partidario 1996). SEA is believed to have emerged as a means of responding to the numerous criticisms related to the EIA of projects, in terms of identifying the synergic and cumulative effects of such projects when they are part of a plan or program. This problem has provided sufficient motive for environmental authorities to delay issuing a project license or in certain cases not issuing a license at all (Furtado 2015).

Throughout the 1990's, various authors including (Sadler and Verheem 1996; Therivel et al. 1992; Thriewel and Partidario 1996) have focused on defining what SEA means. In this context, Therivel et al. (1992) focused on SEA being used for determining environmental impacts of a policy, plan or program and its alternatives. As for Sadler and Verheem (1996), they emphasized the importance of carrying out a SEA at the earliest possible stage; prior to decision-making and the need to consider environmental, social and economic aspects equitably.

Some definitions see SEA as a tool derived from EIA, extending its process and procedure upstream from the project to the strategic level, and focusing on the environmental impacts of policies, plans, and programs that are being proposed. However, other definitions take a broader, more complex and varied perspective. They promote SEA not just as a participatory means of 'upstreaming' impact assessment, but also as an integrated development planning tool, to help integrate environmental, social and economic considerations during the formulation of policies, development plans and programs at the strategic level. Sadler (2001: 4) comprehensively defined SEA as a 'process to systematically analyse and address the environmental effects and consequences of proposed strategic actions, which should include considerations of major alternatives and specific measures to mitigate significant adverse environmental effects and enhance positive benefits, explicit reference to the objectives, principles and policies for environmental protection and sustainable development that apply within the jurisdiction concerned, and an obligation to take account of the relevant findings prior to and as an integral part of decision-making, consistent with a duty of care for the environment'. This definition encompasses all aspects of SEA discussed above, which covers EA at policy, project, plan and program level. EIA on the other hand is specifically focused on project level EA.

3.3 Environmental Impact Assessment (EIA)

In 2019, it will be fifty years since EIA legislation (US National Environmental Policy Act (NEPA) 1969) was first introduced. Within this period, EIA has been implemented in almost all the countries of the world (Fischer 2016). The Act established an environmental policy for activities of federal agencies whose actions had the potential to affect people, community and the natural environment (Morgan 2012). EU member states incorporated EIA in their planning processes in 1985 (85/337/EEC) through European Economic Community (EEC) Council Directive 85/337/EEC. EIA is the oldest, and most established form of EA globally (IAIA 2017).

EIA has been defined by numerous authors from varying perspectives, however, the often quoted and broadly accepted definition is by Munn (1979), which refers to the need ‘to identify and predict the impact on the environment and on man’s health and well-being of legislative proposals, policies, programs, projects and operational procedures, and to interpret and communicate information about the impacts’. The UKDOE (1989: 1) concisely defined EIA, ‘as a technique and process by which information about the environmental effects of a project is collected, both by the developer and from other sources, and taken into account by the planning authority in forming their judgements on whether the development should go ahead’. A more succinct definition of EIA was provided by UNECE (1991) ‘as an assessment of the effects of certain public and private projects, which are likely to have significant effects on the environment, before development consent is granted’. The International Association for Impact Assessment (IAIA) defined EIA ‘as the process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of proposed development proposals prior to major decisions being taken and commitments made’ (IAIA 2017: 1). Apart from the definitions above, Duinker and Greig (2007) defined EIA as ‘an exercise in futuring’. This is because most of the steps in an EIA consists of exploring alternative futures. Based on the definitions above, EIA can be

described as an important tool used for decision making on the environmental suitability of projects.

3.3.1 The EIA process

EIA can be displayed as a series of iterative steps (Glasson et al. 2005). While it's presented in a linear manner (see Figure 2.1), an EIA should be a cyclical process with interactions between the various steps (Glasson et al. 2012). As a cyclical process, it systematically examines the potential environmental implications of development actions (Noble 2006). The EIA process can be divided into two stages (the pre-decision stage and post decision stage). The pre-decision stage involves the early components of EIA prior to proposal authorization and implementation (Morrison-Saunders and Arts 2004). While the post-decision stage of the proposal is the actual follow-up process of EIA (EIA follow-up), and it includes monitoring and auditing; it's mainly concerned with the various steps of the plan or project after the decision has been made (Morrison-Saunders and Arts 2004).

The practice of EIA varies considerably from the process displayed in Figure 2.1 (Glasson et al. 2012). This is perhaps due to varying institutional arrangement for EIAs based on different forms of government and socio economical values (Ogola 2007). For example, the Nigerian EIA practice in the oil sector requires parallel approval by the regulator of the environment and of the oil sector (see Chapter 5). Figure 2.1 below highlights important steps in the EIA process (Glasson et al. 2012).

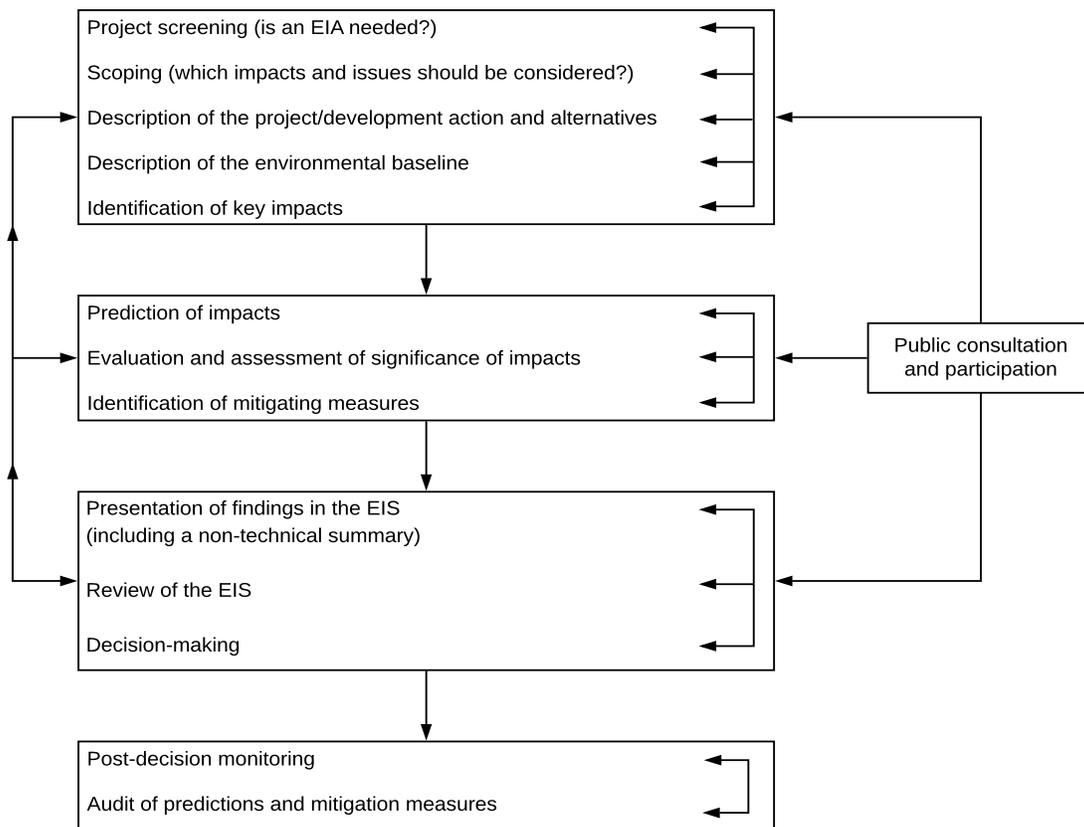


Figure 3.1: Important steps in the EIA process (Glasson et al. 2012)

Based on a review of (Glasson et al. 2005, 2012; Wood 2002), the steps above (see Figure 3.1) has been described in table 3.1 below.

Table 3.1: Description of Pre-decision stage and post decision stage of the EIA process (Glasson et al. 2005, 2012; Wood 2002).

Pre-decision stage
<p>Project screening: the EIA process starts with screening. It focuses the application of EIA to those projects that may have significant environmental impacts (Pinho et al. 2010). It is partly determined by the EIA regulations operating in a country at the time of assessment. Three approaches to screening have been identified; case-by case screening, list-based screening and threshold-based screening (Noble 2006). The project progresses to the scoping stage if screening identifies possible impacts of the project on the environment.</p>
<p>Scoping: aims to determine impacts that are significant in nature, insignificant and those that are unclear (WorldBank 2012). This stage occurs during the pre-decision phase of the EIA process. At the conclusion of scoping, mitigation measures and alternatives are provided to significant impacts.</p>

The consideration of alternatives: seeks to ensure that project developers (proponents) have considered other feasible approaches, including 'alternative project locations, scales, processes, layouts, operating conditions, and no action option'.

Description of the project/development action: it highlights the purpose and justification of the project, and the understanding of its various characteristics – including stages of development, location and processes.

Description of the environmental baseline: this stage of the EIA process, seeks to establish both the current and the prospective state of the environment, in the absence of the development, considering modifications resulting from natural events and from other human activities.

Identification of key impacts: collective analysis of previous results of the earlier stages with the aim of ensuring all potential significant adverse and beneficial impacts are identified and considered in the process.

The prediction of impacts: seeks to identify the scale and other dimensions of identified possible changes in the environment as a result of the project as compared to the baseline data (if no project or plan is done).

Evaluation and assessment of significance: assesses the relative significance of the predicted impacts to permit a focus on key adverse impacts.

Mitigation: encompasses the introduction of measures to avoid, reduce, remedy or compensate for any significant adverse impacts.

Public consultation and participation: ensure the opinions of the public (host community and all other interested parties) are adequately taken into consideration in the decision-making process. It also aims to guarantee the quality, comprehensiveness and effectiveness of the EIA process.

Environmental Impact Statement (EIS): is presented at the end of the pre-decision stage of the EIA process. If implemented incorrectly, much good work in the EIA may be negated.

Review of EIS: a systematic evaluation of the quality of the EIS is done, to determine its contribution to the decision-making process.

Decision-making: this is the culmination of the pre-decision process, where relevant authorities (the regulator) considers the EIS along with the public participation responses to make a decision on the EIA of the project.

Post decision-stage

Post-decision monitoring: involves the recording of outcomes associated with development impacts, after a decision to proceed has been made. It is believed to have the ability to contribute to effective project management.

Auditing: this is conducted post monitoring, it may involve comparing reality to perception (actual outcomes with predicted outcomes), and this step helps in assessing the quality of predictions made at the beginning. It can improve the effectiveness of mitigation and provide an important medium for learning.

Over the last two decades, the increasing concern on environmental issues has caused certain modifications in the role, structure and configuration of EIA. Gachechiladze-Bozhesku (2012: 13) believes ‘initially EIA mostly put emphasis on the evolution of the pre-decision phase’ and had two principal functions: as a decision-making instrument to decide on the acceptability of a project based on its environmental cost, and as a planning tool to minimize adverse impacts caused by a project (if approved). However, EIA is more than a decision-making instrument and a planning tool to minimize adverse effects. For Dipper et al. (1998) EIA is also used ‘as a tool to help achieve Sustainable Environmental Management (SEM)’. This led to the integration of EIA into the planning process and widened the number of stages, adding screening, scoping, public hearing and consultations (Glasson et al. 2005), although this evolution occurred, it was still perceived as a linear process ‘used simply as a means of obtaining development approval rather than to ensure SEM’ (Wood 2002). For this reason, there was more agitation to further safeguard the environment from development activities. This advocacy led to more focus on post decision phase activities (Bashour 2016).

3.4 Environmental Impact Assessment Follow-up (EIA follow-up)

The post decision phase of the EIA process has been called by numerous terminologies, which include: post decision analysis, EIA follow-up program, environmental management and audit, ex-post evaluation. However, it is most widely referred to as EIA follow-up (Arts et al. 2001). The term ‘EIA follow-up’ is a universally accepted reference point for sharing, enriching knowledge and discussing this area.

EIA follow-up is defined as ‘the monitoring and evaluation of the impacts of a project or plan (that has been subject to EIA) for management of, and communication about, the environmental performance of that project or plan’ (Arts et al. 2001; Morrison-Saunders and Arts 2004: 4). In the case of Marshall et al. (2005), they defined EIA follow-up as the ‘monitoring and evaluation of the impact of a project or plan for the management of, and the communication about, the environmental performance of that project or plan’. Similarly, Berkes (1988) likened it to an activity ‘equivalent to impact prediction; prediction of changes from baseline conditions as demonstrated by the results of monitoring’. It was also defined by Hunsberger et al. (2005) as ‘the monitoring of actual effects (in comparison with predicted ones) as well as monitoring and enforcement of compliance with commitments and approval conditions’.

In summary, EIA follow-up is a post decision activity used to check the predictions and the mitigation plan of an EIA process; providing an opportunity for iterative learning and improvement of efficiency. EIA follow-up ensures that the outcomes of the project have a substantive goal as the pre-decision stage of the EIA which is to prevent and reduce adverse consequences of development while securing the protection of the environment (Pölonen et al. 2011). Arts et al. (2001) highlighted four components that should make up any EIA follow-up program for a project or development.

3.4.1 Components of EIA follow-up

The four components identified by Arts et al. (2001) include: monitoring, auditing or evaluating, management and communication.

Monitoring

Monitoring is a fundamental component of EIA follow-up. It involves the collection of data with the aim of providing information on the characteristics or functioning of environmental variables. For this purpose, 'monitoring usually consists of a program of repetitive observation, measurement and recording of environmental variables and operational parameters over a period of time defined' (Arts et al. 2001: 176). Monitoring can be categorized based on the specific activity it is to be used for. Among the different types of monitoring identified include: baseline monitoring, compliance monitoring, impact monitoring, scientific monitoring, management monitoring, effectiveness monitoring, enforcement monitoring and state of the environment monitoring (Morrison-Saunders and Arts 2004).

Baseline monitoring: This involves the measurement of environmental parameters during pre-project stage for the purpose of determining the characteristics and ranges of natural deviation and to determine where appropriate the nature of change. Challenges with baseline monitoring are that most of the times they are 'undertaken without clearly defined objectives' (Beansland 1988).

Compliance monitoring: Compliance monitoring consists of; the periodic sampling and or continuous measurement of environmental parameters, levels of waste discharge or process emissions to preserve and ensure regulatory requirements are met (Au and Sanvicens 1995). This activity could also involve surveillance and inspection, however need not necessarily involve measurement of a repetitive activity.

Impact monitoring: In the case of impact monitoring, environmental parameters are measured during the construction or operation phase of a project; to detect variations from the baseline parameters, to verify the accuracy of predictions and effectiveness of measures (Au and Sanvicens 1995). These help in understanding the cause-effect relationship.

Scientific monitoring: Similar to impact monitoring, scientific monitoring also deals with understanding cause-effect relationship. It 'audits EIA accuracy and explains errors' (Sadler 1998).

Management monitoring: This involves the determination of the effectiveness of recommended mitigation measures (Sadler 1998).

Effectiveness monitoring: Effectiveness monitoring 'is scientific and quantitative in nature', it investigates the success of mitigation measures. Qualitative measures are not utilized in this method (Sadler 1998).

Enforcement monitoring: Enforcement monitoring as a mechanism, 'ensures that mitigation is being performed as described in the EIA document' (Sadler 1998).

State of the environment monitoring: This is also known as area-wide monitoring, where the general state of the environment of the area is reviewed (Arts and Nooteboom 1999). Chapter four helps to understand the kind of monitoring which is practiced within the Nigerian context. This further helps to understand the orientation of follow-up in the country.

Auditing

Originates from the field of economics and accountancy, it compares observations with a predefined framework. It can be defined as 'a periodic activity that involves comparing monitoring observations with a set of criteria (such as standards, predictions or expectations), and reporting the results' (Arts et al. 2001). Auditing also brings forward data, both raw and comparative, however, differs from evaluation as evaluation has an added ingredient of value, which makes sense of the data collected and thus adds on to the first two components of EIA follow-up. Auditing is the intermediate stage between monitoring and evaluation. It is the linkage between the two components of follow-up and thus is highlighted. 'An environmental impact assessment audit evaluates the performance of an

EIA by comparing actual impacts to what was predicted' (Wilson 2012). Auditing has two fundamental objectives, scientific and management.

Scientific auditing: Scientific auditing checks the accuracy of predictions and explains errors, which in turn help to improve methods for future EIA projects (Wilson 2012).

Management auditing: This type of auditing focusses on the 'assessment of the success of mitigation in reducing impacts' making future actions more effective (Wilson 2012).

Evaluation

The term evaluation is used in planning and policy for the generic process of gathering, structuring, analysing and appraising information (Arts and Nooteboom 1999). Evaluation deals with subjective policy-based judgments rather than purely scientific and technical analysis. It relates to the appraisal of conformance with standards, predictions or expectations as well as the environmental performance of the activity (Arts et al. 2001). Evaluation is an integral part of the follow-up process as its outcome provides information on the accuracy of predicted impacts.

Management

Involves making decisions and implementing appropriate project and environmental management actions in response to the data collected by monitoring and the evaluated findings (Morrison-Saunders and Arts 2004: 154-75). In the case of EIA, Environmental Management Systems (EMS) can play a key role in the management of environmental outcomes and in 'taking appropriate action in response to issues arising from monitoring and evaluation activities' (Arts et al. 2001: 177). The managerial role of EIA follow-up was further explored by e.g. Culhane (1993), who states that 'EIA follow-up may be a useful tool for project managers to assess the achievement of management objectives, and to ensure that the project outcomes correspond to the predictions underlying the pre-project decision

analyses. Management is a fundamental part of follow-up as it ensures challenges raised during evaluation are mitigated and if the case arises, mitigation measures are improved.

Communication

The term communication in EIA follow-up involves 'informing stakeholders on the results of the EIA follow-up program being implemented' (Morrison-Saunders et al. 2001: 2). It is an important post-project implementation activity, as it encourages community participation in the EIA follow-up process. This is also a trust building tool, as it leads to transparency, openness and more trust from the public. Communication provides a mechanism of passing on the lessons learned to others (Baker 2004). Public participation enables cumulative local community needs, both social and cultural to be addressed during follow-up.

3.4.2 Types of EIA follow-up

EIA follow-up has been classified based on three criteria. On its scale and the functions, it performs. Also, based on the roles played by the stakeholders in the process. This section focusses on the three classifications of EIA follow-up highlighted above and the different types of activities undertaken.

According to scale

EIA follow-up can be classified based on the level at which it is conducted i.e. project, program, plan and policy. There are currently two main types of follow-up; the first analysis the overall performance of the EIA systems and the quality of the EIS's (evaluation of EIA systems) and the second focuses on the systematic, structural, ex-post evaluation of projects and their environmental consequences (evaluation of EIA activities) (Arts 1998). Sadler (1998) further categorized evaluation of EIA systems into six types of effectiveness review. These were termed 'ex-post evaluation' and it refers to a 'generic process of review,

analysis and policy-institutional interpretation of all aspects of EA effectiveness, encompassing the process as a whole and its components, methods, procedures, activities, products and results'. These categories consist of: auditing and reporting for EA systems, implementation review and follow-up studies, effects monitoring and impact auditing, review of EIS quality, decision-centred analysis and post-project analysis. These provide a 'basis for a broad, comprehensive approach to EA effectiveness' and aim at 'problem solving, not finding fault' (Sadler 1998). Follow-up has been classified at three abstract levels (see Figure 3.2). The micro scale, the macro scale and the meta-scale (Morrison-Saunders and Arts 2004).

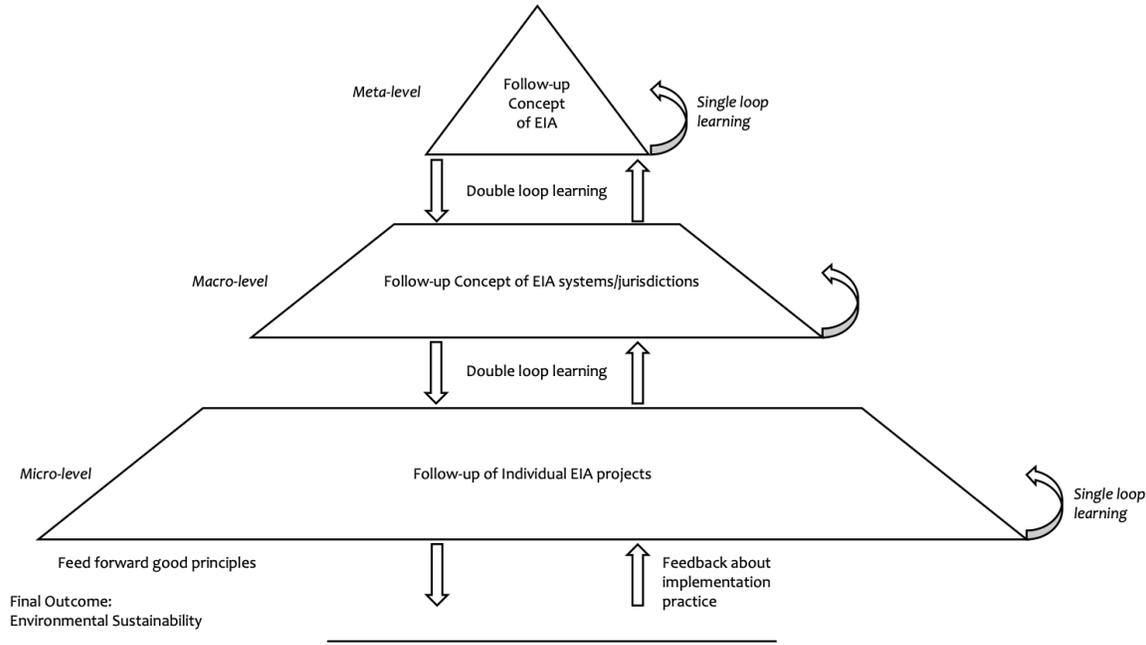


Figure 3.2: different levels of EIA follow-up and their relationships (Morrison-Saunders and Arts 2004)

The micro and macro scale focusses on individual projects and EIA jurisdiction/system level respectively, while the meta-scale focusses on multi-jurisdictional level 'examining the utility of the EIA (or SEA) concept overall' (Morrison-Saunders and Arts 2004). SEA follow-up is carried out at a strategic level, Fischer (2003) emphasizes the importance of carrying out EIA follow-up. Although this is the case, factors have also been identified that 'seriously

hamper post-evaluation at strategic levels' (Partidario and Fischer 2004). These factors include:

- a. 'high level of abstraction at the strategic level;
- b. importance of after-linked decision-making and party's other than the leading authority;
- c. uncertainty;
- d. ambiguity in the relationship between the contents of strategic plan with that of the environmental impacts;
- e. limited value of conformance as an evaluation criterion and finally the dynamic contextual influences like political administrative on strategic planning' (Partidario and Fischer 2004).

According to Functions

Partidario and Fischer (2004: 235) have categorized EIA follow-up into four types, based on key tasks which follow-up performs. This categorization was based on SEA follow-up, however 'there are currently no indications that SEA follow-up fundamentals are different from elements of EIA follow-up'. The four types of follow-up include: conformance follow-up, performance follow-up, uncertainty follow-up and dissemination follow-up.

Conformance follow-up: Conformance follow-up, verifies the compliance with objectives of regulatory requirements and applicable standards of set criteria. Monitoring (especially compliance monitoring) is the component of follow-up, that helps achieve this task. This method is usually reactive in nature and has long feedback cycles. It records and maintains periodic samples of monitored data that can be compared with permissible thresholds.

Performance follow-up: Regular observation and measurement of environmental and sustainability parameters are used in monitoring effects of a project. It is pro-active in nature

when compared to conformance monitoring. Performance monitoring has a short feedback cycle and is more suitable to adaptive management.

Uncertainty follow-up: Uncertainty follow-up focusses on understanding uncertainty and is especially important in risk assessment and management. It proves particularly effective in policy matters. Dealing with special and unpredicted circumstances, it paves the way for adaptive management.

Dissemination follow-up: Dissemination follow-up deals with the dispersal of feedback received during the follow-up process. The feedback helps in improving impacts prediction and mitigation practices thus increasing efficiency in future projects (Partidario and Fischer 2004: 235). The research will help in identifying the type of follow-up practices within the Nigerian context.

According to role played by stakeholders

Discussing the main groups of stakeholders involved in the process is a necessity to understanding the wider context within which it is conducted. According to CEAA (2011), 'Lessons learned from environmental follow-up studies represent a gain for all stakeholders as well as the society and the environment'. Various authors (Arts 1998; Baker 2004; Morrison-Saunders and Arts 2004) have identified three principle parties involved in EIA follow-up. Stakeholders play an important role in answering the question of who is involved in the EIA follow-up process. Figure 3.3 below presents the three stakeholders that should be involved in any EIA follow-up process and their areas of competing interest.

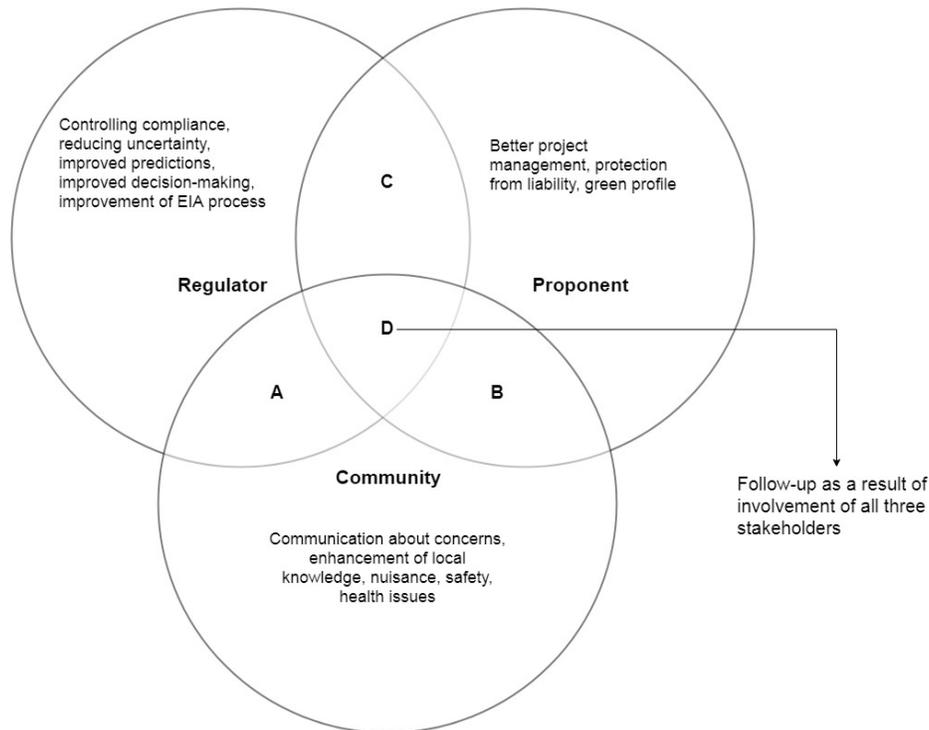


Figure 3.3: Competing interests of key stakeholders in EIA follow-up adapted from (Morrison-Saunders and Arts 2004)

Proponents: They are the initiators of the development project; they could be private companies or government organizations. In most systems, they are expected to perform the first layer of follow-up activities considered as ‘first party follow-up’ just as in project management (Morrison-Saunders et al. 2003).

Regulators: The regulators are the competent authorities such as governmental ministries, department’s agencies or funding agencies such as; the African Development Bank (AfDB) and the World Bank with the responsibility to administer, implement and enforce EIA regulations. The term ‘Second party follow-up’ has been coined to describe follow-up conducted by regulators (Morrison-Saunders et al. 2003). They play a key role in ensuring the EIA follow-up conducted by the proponent is in accordance to the EMP criteria agreed during project approval. They also gain by learning from experience to improve the overall EIA process.

Community: The community encompasses academics, non-governmental organizations (NGOs), and members of the public that can be directly or indirectly affected by the

proposed development. Follow-up activities carried out or initiated by the community can be considered as ‘third party follow-up’ (Morrison-Saunders et al. 2003). The knowledge of local context available in the community is very useful to the EIA learning process; this makes the community a good independent evaluator to the proponent and regulator. In most situations, direct action from the community on approved project development leads to EIA follow-up being conducted by the proponent and the regulator. Involvement at this level ranges from direct participation to indirect participation (communicated to on follow-up activities and outcomes).

Although EIA follow-up according to the role played by stakeholders has been compartmentalized into three, projects usually have an overlapping influence on all three types of stakeholders mentioned above. The degree of influence on outcome of a project is dependent on the contextual influences impacting the project. As earlier illustrated in figure 3.3 some EIA follow-up activities are as a result of regulator and community initiatives (A), while some are as a result of regulator and proponent initiatives (C). The area represented as (D) results in EIA follow-up involving all three parties of stakeholders. It will be interesting to evaluate EIA follow-up in Nigeria and determine who drives the process amongst regulators, proponents and the community. Each party will attempt to maximize their own interest from the EIA follow-up program and thus in turn will influence the outcomes of EIA follow-up.

3.4.3 Objectives of EIA follow-up

The main objectives of EIA follow-up include; ‘to control projects and their environmental impacts, maintain decision-making flexibility and promote an adaptive management approach, improve scientific and technical knowledge, improve public awareness and acceptance and integration with other information’ (Arts and Nooteboom 1999; Arts et al.

2001; IAIA 2009; Jha-Thakur 2011; Morrison-Saunders and Arts 2004) Figure 3.4 illustrates the objectives of follow-up.

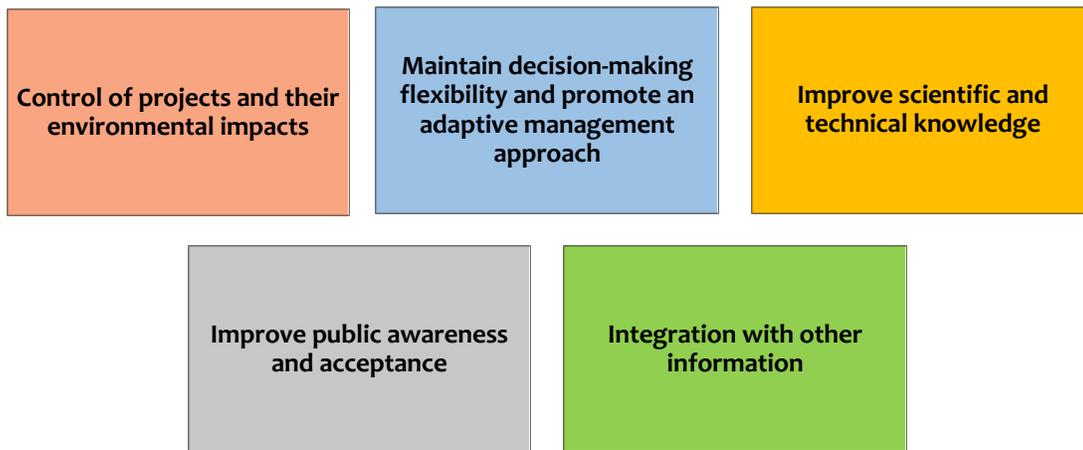


Figure 3.4: Objectives of EIA follow-up adapted from (Morrison-Saunders and Arts 2004)

Control of projects and their environmental impacts: EIA follow-up provides both verifying and controlling functions for implemented projects (Morrison-Saunders and Arts 2004). For example, compliance audit can verify the correctness of project implementation and the level of meeting approval conditions and relevant environmental standards. Follow-up programs can provide feedback on the actual impacts that arise from a development, thereby facilitating these to be understood and managed.

Maintain decision-making flexibility and promote an adaptive management approach: EIA follow-up encourages adaptive environmental management (AEM), which deals with uncertainties by continuously modifying management practices. Adaptation of current practices is a very important element to the environment or in the socio-political context in achieving its aim.

Improve scientific and technical knowledge: Improving EIA predictions for future projects is vital to the overall EIA project. The feedback mechanism provided ensures better understanding of the opportunities and challenges of the EIA process to aid improvement in subsequent programs; it helps in making the whole process dynamic and not linear or rigid.

Improve public awareness and acceptance: Public opinion is an integral part of follow-up. It allows the public to be engaged on the project and raises awareness to improve their know-how about the actual effects of the development. This in turn enhances public support acceptance. Communicating environmental performance or the management of environmental impacts aid the transparency and accountability of planning decision-making. This is particularly important in a developing country context where projects are politically and socially sensitive.

Integration with other information: The objective of integration is related to the legislative and administrative context of a project. Follow-up may serve as an ‘umbrella under which various monitoring and evaluation activities can be integrated and managed’ (Arts 1998). This includes all monitoring and evaluation related activities, for example compliance monitoring of environmental permits by the competent authority or monitoring and auditing under the developer's environmental management systems. This promotes understanding of area-wide effects and proves beneficial for resource managers, environmental regulatory agencies and proponents alike.

3.4.4 Different approaches to EIA follow-up

Approaches adopted to conduct follow-up activities varies. There is no one exact way of conducting EIA follow-up, as such approaches utilized differs based on jurisdiction and political and or cultural context (Morrison-Saunders and Arts 2004). Based on research, several ways of conducting EIA follow-up have emerged. Four models of EIA follow-up are proposed and include: legal-based approach, partnership approach, self-regulatory approach and incentive or disincentive approach (Hullet and Diab 2002).

Legal based approach: Legal based approach utilizes the establishment of legal requirements for EIA follow-up to be successful. Countries who have successfully implemented EIA follow-up generally have a political system in place (Wood 1994; Wood and

Coppell 1999). India has perhaps adopted this approach as its various regulations, are designed for EIA follow-up (Jha-Thakur 2011). Legal based model employs a command and control approach to EIA follow-up, the laws set are the 'commands' to control the situation. Legal based approach divides tasks among stakeholders but may be rigid.

Partnership Approach: In this approach, agreements can emerge both as formal statutory requirements by legal authority or as voluntary agreements among parties. In case of the latter, it is usually the pressure of public concern and sensitive issues, which initiate such partnerships to take place. The United Kingdom (UK) conducts EIA follow-up using this approach.

Self-regulatory Approach: Certain proponents in their quest to have a 'green profile' adopt adaptive environmental management systems and/or internal auditing systems. Certain international organizations specify standards they expect proponents to comply with. In such cases, a proponent adopts a green profile, to qualify to transact with such international organizations. Although ISO 14001 does not make explicit reference to EIA or EIA follow-up measures, if an organization is certified with it, it implies effective facilitation of EIA follow-up activities. This is a result of an overarching framework within which EIA follow-up can be placed (Hullet and Diab 2002).

Incentive and disincentive Approach: This approach focuses on the construction phase and thus does not run throughout the life cycle of the project. A bonus-penalty system or contractual agreement is the best way to describe this approach. A 'bonus-penalty system' consists of different bonuses and penalties awarded to a proponent to encourage environmental compliance and 'contractual agreement' establishes binding responsibilities for follow-up (Hullet and Diab 2002).

3.5 Link between EMS, EMP and EIA follow-up

The terms Environmental Management Plan ‘EMP’, Environmental Management Systems ‘EMS’ and ‘EIA follow-up’ tend to be a cause for misunderstanding and thus it is important to understand and distinguish between these terms, before evaluating EIA follow-up within the Nigerian context. Both EMP and EMS are environmental management tools, although many view an EMP as a formal document and an EMS as a set of both documents and processes for implementing and (re)formulating EMPs (Cherp 2008). The relationship between an EIA, an EMP and an EMS is illustrated in figure 3.5 below (see similar diagram in (Marshall 2001)). The figure illustrates findings and recommendations from an EIA are reflected in an EMP, which feeds it to the planning component of an EMS.

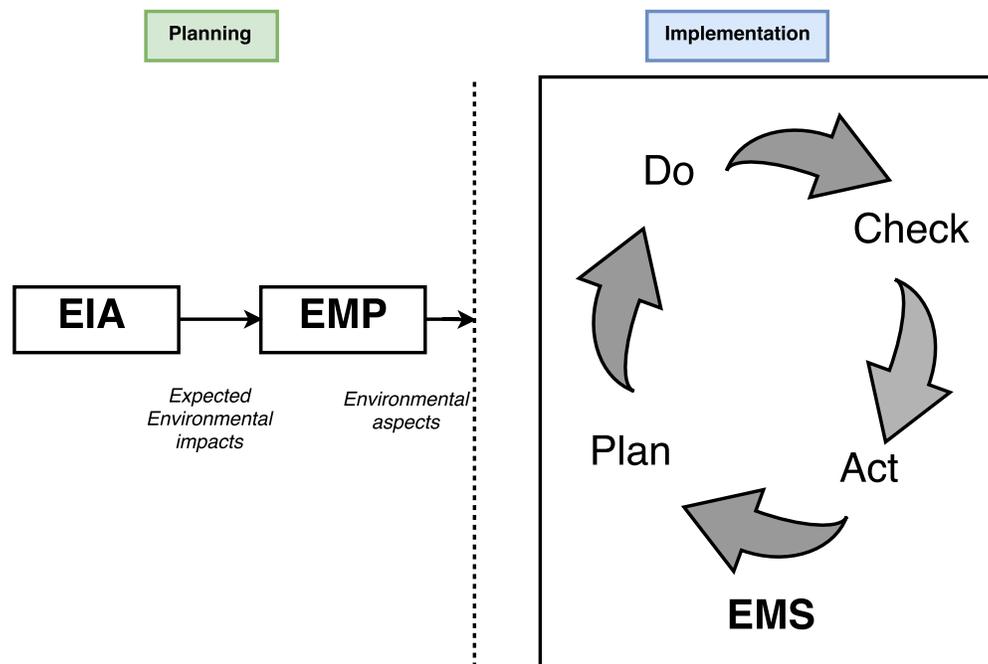


Figure 3.5: The relationship between EIA, EMP and EMS. Adapted from (Cherp 2008)

EIA: An EIA is a process conducted prior to the commencement of a project to detect the perceived impacts of the project to the environment (see Figure 3.3).

EMP: An EMP is prepared at the pre-decision stage of an EIA, in parallel with preparation of EIS (see 3.3.1). An EMP may either be incorporated in the EIS as set conditions for the proponent or as a separate document or as in the Nigerian context included as a chapter in

the EIA report (see Chapter 6) (Cherp 2008). An EMP encompasses the proposed management systems and the monitoring and auditing arrangements required to ensure both the proper implementation of agreed mitigation measures and the verification of predicted environmental impacts (Cherp 2008). An EMP is used by the regulator to specify conditions to be met by the proponent when implementing the project. In the Nigerian context, the EMP is used as the document to conduct Follow-up (see Chapter 5). To ensure its implementation, (Goodland et al. 1995) recommends ‘incorporating its budget in the total project cost’ before loan signing.

EMS: An EMS is an effective means of internalizing commitments made in the EIA and the EMP. Cherp (2008) defines it as ‘a management approach which enables an organization to identify, monitor and control its environmental aspects. EMS is a part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy’. EMS ensures all ‘*environmental aspects*’ of an organization (including EIA, Follow-up and EMP) are linked towards achieving the organization’s environmental goals. EMS constitutes part of the overall management system, thereby aligning the environmental goals into all organizational activities (Cherp 2008; Marshall 2001). In practice, it is difficult to establish such a relationship between EIA, EMP and EMS. Over the last two decades, EMS has been increasingly standardized and formalized ensuring a ‘functional EMS should follow certain universal principles’ (Cherp 2008). This has ensured the universal acceptability of international EMS standard ISO 14001.

The challenge when integrating an EIA process into an existing EMS is to provide ‘adequate control’, which an EMP provides (Marshall et al. 2001). An EMP contains project specific conditions that controls environmental impacts and acts as an interface between the EIA and the EMS.

3.6 Current challenges of EIA follow-up

The majority of the challenges in implementing follow-up are similar to problems encountered in implementing EIA (Morrison-Saunders and Arts 2004). Some of the factors hindering the implementation of follow-up have been discussed below.

Uncertainty and limited information: EIA as a planning tool faces challenges with respect to uncertainty, EIA follow-up aims to ‘get a grip on uncertainty’. However, EIA follow-up itself encounters this challenge. Uncertainty re-emerges during the process of data collection as well as appraisal (Arts and Nootboom 1999: 245; Morrison-Saunders and Arts 2004: 17).

Deficiencies in EISs: EIS is the most direct source of information to conduct EIA follow-up in most jurisdictions and yet in most cases ‘they are descriptive’ and the predictions are ‘vague and qualitative’ (Arts and Nootboom 1999: 246). However, ‘ideally if more thought and effort is put into the design phase, then it is expected that fewer problems should arise in the latter part of the EIA follow-up program’ (Baker 2002). However, a weak design phase i.e. deficiencies in the EIS itself inhibits effective EIA follow-up implementation.

Lack of guidance: ‘EIA has traditionally been focused on the pre-decision stages leading up to project authorization’ (Glasson 1994; Sadler 1996). Numerous guidance documents are available on conducting EIA whereas in most jurisdictions there is insufficient guidance on conducting EIA follow-up especially in countries with little experience, training and capacity building (Morrison-Saunders and Arts 2004: 16).

Legislative deficiencies: In most jurisdictions, legislative requirements for EIA follow-up is lacking and this ensures guidance is also lacking (Morrison-Saunders and Arts 2004: 16). Numerous environmental laws usually hold monitoring requirements in same context, which leads to monitoring activities being ‘duplicated, uncoordinated, or not conducted’ (Shepherd 1998).

Demands on financial and staff resources: EIA follow-up is an activity, which demands time, money and staffing both for proponent as well as for regulatory authorities (Morrison-

Saunders and Arts 2004: 16). The cost could discourage EIA follow-up activity in developing countries where in most cases there is a scarcity of resources.

Lack of stringent penalty: This is one of the factors identified in the US practices where little pressure is legally exerted to conduct monitoring and 'the courts have not traditionally held for the plaintiff seeking to ensure mitigation monitoring (Shepherd 1998).

3.7 Chapter Summary

This chapter started by understanding EA and its types (EIA and SEA). It defined SEA based on various definitions set out by key authors and proceeded to discuss EIA. Within the context of EIA, it started by defining EIA and proceeded to describe the generic steps in the EIA process. Emphasis shifted to the post decision phase of the EIA process (EIA follow-up), the four components of EIA follow-up were discussed:

- Monitoring
- Auditing
- Evaluating
- Communicating

Types of EIA follow-up was also discussed (according to scale, function and stakeholder involvement), the scales available were identified as: meta-level, micro level and macro level. Conformance follow-up, performance follow-up, tackling uncertainty follow-up and dissemination were identified as functions. While the stakeholders involved were identified as follows: Proponent, regulators and the community.

The chapter proceeded to establish the objectives of EIA follow-up to include:

- Control of projects and their environmental impacts
- Maintain decision-making flexibility and promote an adaptive management approach
- Improve scientific and technical knowledge
- Improve public awareness and acceptance
- Integration with other information

The different approaches identified as being adopted to towards implementing EIA follow-up included: Legal based approach, partnership approach, self-regulatory approach and incentive and disincentive approach. The current challenges faced in the implementation of EIA follow-up were also discussed.

CHAPTER FOUR: EIA FOLLOW-UP: INTERNATIONAL PRACTICE

This chapter focuses on the characteristics of EIA follow-up in selected international contexts and has been sub divided into four sections. It starts by laying the EIA follow-up framework, followed by the principles of EIA follow-up and the contextual factors for EIA follow-up. The final section focuses on EIA follow-up in different jurisdictions with an extractive industry.

4.1 EIA follow-up framework

The EIA process involves a few steps (see Figure 3.1). It starts with determining if EIA is required (project screening), and which impacts should be considered as significant or not significant (scoping). The next steps; involve predicting and evaluating potential impacts and identifying necessary mitigation measures. The results of the EIA are presented in a report, commonly referred to as Environmental Impact Statement (EIS), which is subject to review and public consultation. Finally, the effects of the development are monitored and the EIA is subjected to audit and evaluation (Glasson et al. 2005; Wathern 1988). Therefore, EIA follow-up is a stage within EIA. 'Like EIA itself, EIA follow-up will always have to be tailored to specific project circumstances and has 'distinct stages like screening and scoping are essential' (Morrison-Saunders and Arts 2004: 287). These stages constitute the framework for conducting EIA follow-up and are still evolving. The framework below, is based primarily on the works of (Arts et al. 2001; Baker and Dobos 2001; Baker 2004).

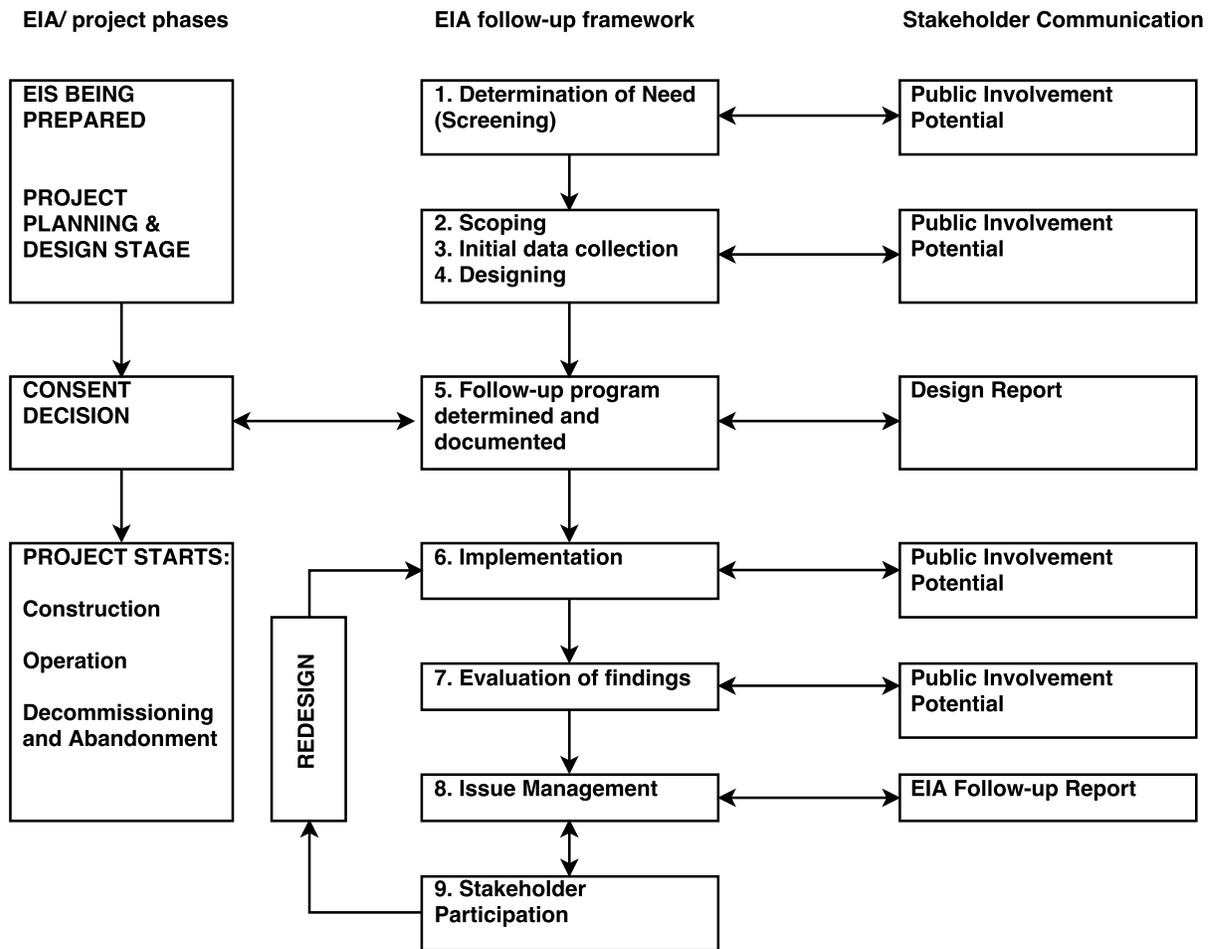


Figure 4.1: EIA follow-up framework adapted from (Baker 2004: 46)

The figure above (see Figure 4.1) illustrates the start of an EIA follow-up program, during the initial phases of an EIA. EIA follow-up considerations should be taken into account from the pre-decision stage (Baker 2004; Jha-Thakur et al. 2009). The steps below are expected during the implementation of an EIA follow-up program.

4.1.1 Screening

Screening determines if a project requires an EIA. For EIA follow-up, it helps in answering the question ‘Why should EIA follow-up be done?’ (Arts and Meijer 2004: 68). Screening helps practitioners in determining the need for EIA follow-up on a project specific basis. Arts (2001) identified ‘two extreme situations’ in the screening stage of EIA follow-up. These include:

- Projects which never require EIA follow-up; and

- Projects which always require EIA follow-up.

Apart from these situations, Arts and Meijer (2004: 70) based on the practice in the Netherlands, identified a situation ‘where the projects always require screening for the need of EIA follow-up’, this is achieved using different criteria for deciding its need.



Figure 4.2: Extremes of screening process (Arts 2001)

Baker and Dobos (2001: 2) listed twelve criteria in their EIA follow-up framework proposal for screening projects to determine if EIA follow-up is required. While in the case of Arts and Meijer (2004), they believe screening is achieved by determining if ‘EIA follow-up may generally be appropriate in achieving one or more of several objectives’ (Arts and Meijer 2004: 68). There are two types of needs; essential needs and complimentary needs (Arts and Meijer 2004; Baker and Dobos 2001). Essential needs are critical in determining EIA follow-up requirements. These can be discussed under four headings, which are:

- Existing requirements
- Uncertainty
- Sensitivity and
- Risk

Existing requirements: Existing requirements are the legal requirements for any specific type of project that determine if an EIA follow-up program is required on the specific project or not. Screening requirements can take different forms (Arts and Meijer 2004: 68). In the case of EIA’s where adaptive management is required, an EIA follow-up program will play a crucial role.

Uncertainty: Uncertainty is present in cases where new or unproven technology is used and makes EIA follow-up crucial during project implementation (Baker 2004: 47).

Sensitivity: Sensitivity could be political, environmental or social. Politically sensitive projects will require justification and impact of project and thus EIA follow-up will be indispensable for its success. In the case of socially sensitive projects, there will be high public concern and thus, the latest developments and exact impacts of the project will need to be documented and reported. In environmentally sensitive areas, careful monitoring should be conducted to ensure that the environment is protected.

Risk: Risks associated with projects require systematic monitoring to avoid or manage factors associated with it. Risks associated with failure of proposed mitigation measures in case of sensitive projects or big scale project will initiate the need for EIA follow-up study (Baker 2004: 47). As emphasized earlier, complimentary needs add value to a project EIA follow-up. These needs are closely associated with the objectives of EIA follow-up. Improving scientific or technical knowledge, improving public awareness or acceptance and integration of EIA follow-up with other existing mechanisms all add value to the EIA follow-up process (Arts and Meijer 2004: 69).

Complimentary needs may not be a reason to initiate an EIA follow-up program but may add value to an EIA follow-up program by enhancing; knowledge, improving public awareness and providing the means to integrate EIA follow-up with existing EMS.

4.1.2 Scoping

Scoping (see Chapter 3) determines ‘what needs to be followed up’, it helps in determining the relevant issues of EIA follow-up. There are two methods of scoping, ‘comprehensive or issues oriented’ (Arts 2001: 177).

Comprehensive scoping: Comprehensive scoping, focuses on the overall impacts of the project monitored and analysed.

Issues oriented scoping: Issues oriented scoping, is more objective in approach and takes in to account only selective issues determined based on importance to the project. Thus, ensuring focus is maintained on crucial issues and not necessarily all issues. Ultimately, the scope of an EIA follow-up program might depend on the potential significance of the impacts and the uncertainties about predictions and outcomes (Sadler 1996).

Determining issues leading to selecting a project for EIA follow-up is guided by certain factors. Arts and Meijer (2004: 76) highlighted some of these factors, which include:

Relevance to decision-making: Issues important to decision-makers, the public or other stakeholders; that may warrant an EIA follow-up program (Arts and Meijer 2004: 76).

Relationship of the issue with the environment: EIA follow-up should concern significant environmental issues and impacts (Arts and Meijer 2004: 76). This varies from context to context but could include: protection of humans, flora and fauna, goods, water, soil and air to name a few.

Phase of project development: Numerous projects proceed in phases, 'each of which may be associated with specific issues which change over time' (Arts and Meijer 2004: 76). This could result in the focus of follow-up to change from one phase to another.

Relevance to future issues: The results of the EIA follow-up program of a project can be used for future activities, decision making or EIAs, and if considered important (by competent authority); it could be selected for EIA follow-up (Arts and Meijer 2004: 76).

The factors above comprehensively cover the crucial issues that can lead to the selection of a project for EIA follow-up. Arts and Meijer (2004: 76) have also identified sources where issues could be generated to determine the need for EIA follow-up. The most important source is the EIS, as it has the predicted impacts based on which, consent decision is given. Gaps in the existing knowledge are also identified in the EIA, which needs to be followed up. Mitigation and compensation measures indicated in the EIS are relevant issues as well,

especially if the methods are complicated and there is uncertainty. Environmental Management Plan (EMP) is yet another source of EIA follow-up issues, in which the proponent itself undertakes to elaborate on mitigation measures. Changes in pre-decision conditions like expansion of projects or modification of the original plan may also generate additional EIA follow-up issues. Change may also be initiated externally by new events near the project. Auditing may give rise to new issues as well, that may require attention.

The possibility of considering all arising issues during EIA follow-up is low. Varying stakeholders have different interests and concerns (see Chapter 2). The smooth functioning of a project requires a balance between priority and urgency. Having selected the issues to address during EIA follow-up, the next stage is to design the EIA follow-up program. However, prior to this; the initial data collection or baseline monitoring is required to be done. This is discussed here as the third stage of EIA follow-up.

4.1.3 Initial data collection

Baseline conditions prior to the commencement of a project are required to provide a benchmark for comparing post project data collected. This is identified as baseline monitoring. Anomalies identified during baseline monitoring could be addressed by the proponent to avoid an impact on the project, improve the existing operating environment and exhibit leadership in managing issues. This showcases the proponent positively and increases the likelihood of a favourable decision to their project application.

4.1.4 Designing

The foundation of EIA follow-up is laid at the pre-decision stage of the EIA process, although it is a post-decision stage activity (Jha-Thakur et al. 2009). Baker (2002: 5) highlights 'if more thought and effort is put into the design phase, then fewer problems should arise in the latter part of the follow-up programme'. This largely feeds to the narrative that EIA follow-

up starts at the pre-decision stage. The design phase is the last stage of EIA follow-up to take place before the conclusion of the pre-decision stage. The design stage 'determines roles and responsibilities, the scope of follow-up issues, and the tools and methodologies to be used in the follow-up program' (Jha-Thakur et al. 2009; Morrison-Saunders and Arts 2004: 48). Numerous tools and methodologies exist to determine 'how EIA follow-up should be carried out?' the tool and method selected is determined on a project by project basis, 'as there is no evidence to suggest that one is superior to other and may result in better EIA follow-up' (Baker 2004: 51-52).

Resource allocation is a fundamental element in the design phase of a project. Specifying stakeholder responsibilities also constitutes an important aspect of the design phase and answers the question of 'who is responsible for what?' The regulatory set-up often influences this decision (Morrison-Saunders and Arts 2004). Although there are responsibilities that are legally mandated, other roles might evolve with the project. For example, 'if EIA follow-up is a requirement of a project approval, then the regulator plays a significant role in all aspects of the EIA follow-up program' (Baker 2004: 48) which, in such a case is more of a legal requirement. However, in cases of projects of a sensitive nature, the proponents may wish to include local public or NGOs (non-governmental organisations) to win public confidence. In such cases 'self-regulatory initiatives of proponents may fill the gap in EIA regulations' (Morrison-Saunders et al. 2003: 46).

Roles and responsibilities may be given specific attention in the EMP. Organisations may maintain their own environmental department and thus may have internally specified responsibilities with respect to environmental impacts of the projects undertaken. Although it may not be possible to include complete determination of roles and responsibilities, planning needs to be undertaken to ensure proper implementation and compliance of EIA follow-up measures.

The other dominant resource in need of allocation is cost of EIA follow-up program. How much finance is required for specific activities during the EIA follow-up program should be highlighted in the design phase. This question has been incorporated within the good practice criteria (see Chapter 2). Allocation of separate funds is also required for the machines to carry out monitoring. Collection of data, maintaining databases requires funds, as such funds need to be allocated. In some projects as in oil projects, large costs may be incurred if communities are to be restored. Compensation might need to be paid in such sensitive cases. The design stage should incorporate as many of these activities as possible. Apart from resource allocation, responsibilities and roles specification, time needed to be allocated on activities during the design phase. EIA follow-up should not be set-up as an indefinite continuous activity (Arts et al. 2001: 181). As such, a time line with limits should be incorporated in the design phase and this has been included in the good practice criteria (see Chapter 2). In case of projects, which are conducted in phases, the time factor in EIA follow-up may be quite prominent. However, in other cases as well, this feature should be encouraged. Issues may become less or more dominant, in respect to the phase of the life cycle of the project. According to Arts and Meijer (2004: 84) there can be 'several phases and related evaluative moments' in the life cycle of an EIA project. These are:

- Pre-construction phase
- Construction phase
- Operational phase
- Decommissioning phase

As oil projects have specific stages in their life cycle, such an approach may be useful (see Chapter 5). The importance of phase by phase EIA follow-up has been incorporated in the good practice criteria (see Chapter 2). The design for EIA follow-up in the pre-decision stage needs to be documented, which will later help to ensure accountability and as such has been included in the good practice criteria (see Chapter 2). It is pertinent documentation is

completed before a decision is taken to give consent or not on the project. The design can be included along with EIS submitted or as a separate document. However, the EIA follow-up programme is finalised only after the consent decision is given. Recommendations given by the responsible authority can be incorporated into the document. As mentioned earlier, the scoping in follow-up is a continuous activity and thus this document may be amended as and when the need arises with prior consent to stakeholders.

4.1.5 Implementation

This phase of an EIA follow-up, starts the post-decision stage of the EIA process and usually ‘this is the phase that most practitioners identify as EIA follow-up’ (Baker 2004: 52; Morrison-Saunders and Arts 2004: 52). This is the stage where ‘mitigation measures are put into place and impact monitoring and/or audit program begin’ (Baker 2004: 52). This phase usually corresponds with the implementation phase of the project development (e.g. project construction or operation). However, each EIA follow-up mechanism is project specific and can be unique.

4.1.6 Evaluation

Evaluation is the first phase post submitting the EIA follow-up report. Unfortunately, this phase is often neglected during implementation of EIA follow-up (Baker 2004: 53). Data collected on its own makes little or no sense unless evaluated. Evaluation can be used to achieve several objectives, among which including: understanding changes as a result of the development activity by comparing collected data to the prior collected baseline data. It can also provide proof on the accuracy of the predictions contained in the EIA report. Evaluation enhances and enriches the EIA follow-up program by highlighting lessons to be learned that can be applied during the design of future programs (Baker 2004: 53). Four generic steps

have been identified by (Baker 2004: 54) to determine if evaluation is conducted in any jurisdiction. They include:

- 'The responsible authority should ensure that all requested information has been submitted by the proponent in a timely manner, according to agreed schedule;
- The responsible authority should ensure that all materials submitted are expertly reviewed;
- Once the materials have been reviewed, it should be determined if further measures are required. This should be done in consultation with other stakeholders; and
- Outcome of this evaluation should be documented and discussion should be carried out with proponent and other stakeholders regarding any further mitigation requirement' (Baker 2004: 54).

4.1.7 Issue management

Issues that might be discovered during the evaluation phase, need to be addressed during this stage. Certain evaluated EIA follow-up reports of projects might not require issue management, as no issues are identified during evaluation. For issues that do arise, adaptive management can act as an important tool in mitigating or rectifying them. A flexible approach is encouraged in introducing modifications to combat any negative impacts or to accommodate any new method.

4.1.8 Stakeholder communication

Communicating with stakeholders is a key component of an EIA follow-up program (Baker 2004: 55). Variations to the original EIA follow-up program need to be communicated to all stakeholders. This can be done verbally. However, reporting in a written document can be advantageous in keeping a record of these variations.

4.2 Principles of EIA follow-up

The need for EIA follow-up principles ‘arose at the IAIA’ 03 conference in Marrakech’ to act as a guide and benefit overall practitioners to improve EIA outcomes and protect the environment in the process (Marshall et al. 2005; Morrison-Saunders et al. 2007). However, EIA follow-up is evolving and adapts itself according to practitioner’s need and this has been reflected in several works (Marshall et al. 2005; Morrison-Saunders and Arts 2004). The principles for EIA follow-up are closely related to EIAs. Certain principles of EIA follow-up are similar to the basic principles of EIA (Baker 2002). The categorising of EIA follow-up principles has been subjective, however they share similar philosophy. Marshall et al. (2004) have categorised EIA follow-up principles under four headings, representing the four fundamental contexts of EIA follow-up.

- Practitioners and Stakeholders
- The Content of EIA Follow-up
- The Process of EIA Follow-up
- Procedural Implementation of EIA Follow-up

But Morrison-Saunders and Arts (2004) categorised it into three.

- Content of EIA follow-up
- Process of EIA follow-up
- Procedural steps for EIA follow-up

In the case of Marshall et al. (2005) the principles are categorised based on four questions ‘Why?’, ‘Who’, ‘What’ and ‘How’. ‘Where’ was added to these based on studies of the Indian context by (Jha-Thakur 2011) which will be discussed in the next section (see 4.3). The four principles by Marshall et al. (2005) of EIA follow-up are discussed below:

Why? – highlights the core values of EIA follow-up

Who? – focuses on the roles and responsibilities of stakeholders involved in EIA follow-up

What? – presents the nature of EIA follow-up

How? – relates to the techniques used in carrying out EIA follow-up

The four categories of principles of EIA follow-up above are important to the construction of the good practice criteria (see Chapter Two). The ‘why principles’ which as stated above are the core values of EIA follow-up are explained below (see Table 4.1).

Table 4.1: Core values of EIA follow-up (The Why Principles) adapted from (Marshall et al. 2005)

1.	<i>EIA follow-up is key to determine EIA outcomes:</i> The goal of the EIA follow-up is to reduce the negative impacts of development on the environment. It should be carried out to ensure that the consequences of EIA planning and decision making are known which will, safeguard and protect the environment.
2.	<i>Transparency and openness:</i> Participation of stakeholders in the EIA process should be encouraged by providing feedback. Decisions from the implementation of EIA follow-up should be transparent, fair and communicated to stakeholders.
3.	<i>Commitment to conduct EIA follow-up during EIA:</i> Parties responsible should be committed and accountable. The commitment should include during preparation and implementation of monitoring, evaluation, management and communication.

The next set of principles constitutes the ‘what principles’ (see Table 4.2), these principles relate to the nature of EIA follow-up.

Table 4.2: The nature of EIA follow-up (The What Principles) adapted from (Marshall et al. 2005)

4.	<i>EIA follow-up should fit the EIA culture and societal context:</i> It should be designed to suit the administrative, legislative, socio-economic and cultural context it is to be applied and merged with existing planning decision making and project management activities.
5.	<i>EIA follow-up should consider cumulative effects and sustainability:</i> Individual level EIA follow-up is limited by its scope in terms of dealing with cumulative effects of multiple developments and sustainability issues. Thus, EIA follow-up should be carried out at a strategic level or an area-oriented approach should be adopted.

6.	<i>EIA follow-up should be timely, adaptive and implementable:</i> Adaptability and pro activity are essential in solving environmental issues. EIA follow-up programs must be effective in meeting defined objectives.
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The ‘who principles’ guides the roles and responsibilities of stakeholders during EIA follow-up (see Table 4.3).

Table 4.3: Roles and responsibilities of participants (The Who Principles) adapted from (Marshall et al. 2005)

7.	<i>The proponent must be accountable for implementing EIA follow-up:</i> During the design phase the proponent needs to give careful consideration of their actions and the likely impacts, which they may cause on the environment. The EIA follow-up should be seen by the proponent as a project management tool and as a measure to reduce potential costs. They should communicate the follow-up results to the stakeholders.
8.	<i>Regulators should ensure that that EIA is followed up:</i> The necessity for EIA follow-up should be identified by the regulators and enforced through regulatory requirements, ensuring a balance between the interest of the proponent and the community. The regulator needs to ensure compliance by the proponent and facilitate learning from experience.
9.	<i>Community involvement:</i> The community should be informed of the outcomes from the EIA follow-up process. Community direct participation in the EIA follow-up process is encouraged. This will provide a platform to build trust, partnership and share knowledge with the community.
10.	<i>All stakeholders should participate without prejudice in EIA follow-up:</i> Proponents, regulators and the community often share interlinked interests, which should initiate a practicable and reasonable EIA follow-up program.
11.	<i>Continuous learning should be promoted to improve future practice:</i> EIA follow-up should ensure dynamism, by learning from active feedback to avoid the process being static.

The final set of principles according to Marshall et al. (2005) are the ‘how principles’, they provide guidance on conducting an EIA follow-up program within contexts (see Table 4.4).

Table 4.4: Conducting EIA follow-up (The How Principles) adapted from (Marshall et al. 2005)

12.	<i>Division of roles, tasks and responsibilities:</i> Clear and distinct roles, tasks and responsibilities should be set in the pre-decision EIA report. The EIA report should outline tasks and responsibility among and within the different parties.
13.	<i>EIA follow-up should be objective-led and goal oriented:</i> For EIA follow-up to be effective, the set goals and objectives must be achieved. This is an important task of scoping within the EIA process.
14.	<i>The program designed must equate the predicted environmental impacts:</i> Each project is unique in terms of its aim and environmental concerns, therefore an EIA follow-up program must be tailored to suit the proposed activity, its stages and dynamic context. In addition, the process should be as practical and feasible as possible.
15.	<i>EIA follow-up should have an evaluation criterion:</i> well-defined methodology and approach is required for enactment of a rigorous evaluation criteria. This will help in measuring impact without ambiguity.
16.	<i>EIA follow-up should be sustained over the entire life of the project:</i> EIA follow-up should not be restricted to one specific stage of the project but should be conducted throughout its different stages. EIA follow-up should be responsive to long-term and short-term environmental changes.
17.	<i>Adequate resources should be provided for EIA follow-up:</i> EIA follow-up must be cost-effective, efficient and pragmatic. Resources such as time, staff and capacity need to be provided for in advance.

The seventeen principles (see Table 4.1, 4.2, 4.3, and 4.4) promote and provide guidelines for the design and implementation of EIA follow-up. As highlighted earlier, there is ‘no particular’ way of conducting EIA follow-up. However, these principles can act as a guide to improve the effectiveness of EIA follow-up in any context (Morrison-Saunders et al. 2007). Based on these principles, Morrison-Saunders and Arts (2004) recommended contextual factors that interact for EIA follow-up to take place in any context.

4.3 Contextual factors for EIA follow-up

Understanding the theory and practicalities of EIA follow-up, supports the listing of criteria

that may signify good practice. However, there is no single best way of conducting EIA follow-up. It adapts itself to the jurisdiction within which it is being implemented. As noted by Morrison-Saunders and Arts (2004: 4) ‘no two EIA follow-up programs will be identical, even if undertaken in the same jurisdiction; owing to variation in contextual factors’. As such, the contextual factors driving EIA follow-up in any jurisdiction will be different from that of another context. Four factors have been identified by Morrison-Saunders and Arts (2004: 10) to ensure a successful EIA follow-up outcome in any jurisdiction (see Chapter 3). They include: a) regulation and institutional arrangement; b) approaches and techniques adopted; c) resources and capacity available and d) type of project (see Figure 4.3).

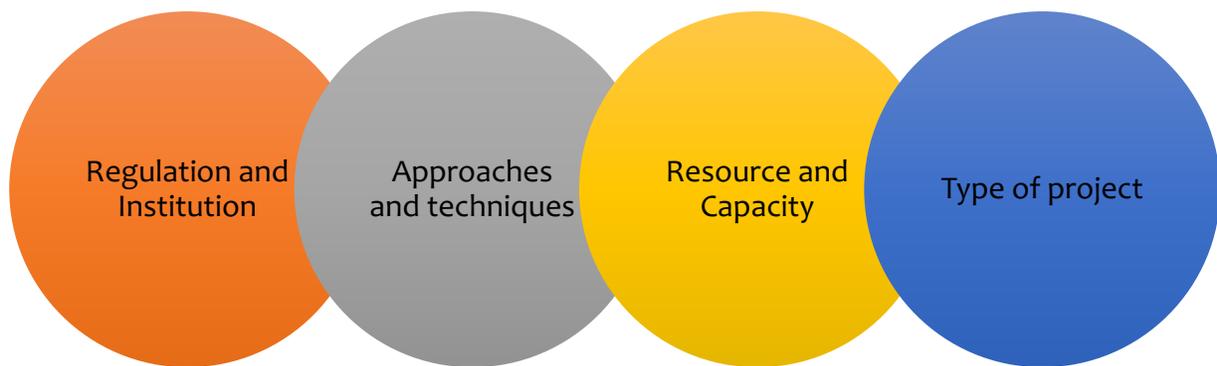


Figure 4.3: Contextual factors governing EIA follow-up (Morrison-Saunders and Arts 2004: 11)

4.3.1 Regulation and institutional arrangement

Regulatory and institutional arrangements include: legal requirements and administrative structure for the implementation of EIA follow-up within a particular jurisdiction. The arrangement available for this, is determined by wider societal factors (e.g. political setting, availability of resources, cultural values) (Morrison-Saunders and Arts 2004: 11). Some of the arrangements that could be adopted include: self-regulation by proponent (e.g. EMS); command and control by government regulators (e.g. permits, standards, surveillance, enforcement and prosecution of offences for non-compliance); public pressure by community stakeholders (e.g. public concern, media attention and lobbying by interest

groups); partnership approach and incentive and disincentive approach (Hullet and Diab 2002; Morrison-Saunders and Arts 2004: 11). The successes of these arrangements are dependent on wider societal factors discussed above. The arrangement guaranteeing success in a jurisdiction adopting a democratic style of government might not suit a country practicing a socialist form of government. Jurisdictions with a high degree of citizen participation and awareness in environmental causes might be best suited to a community-driven follow-up.

4.3.2 Approach and techniques adopted

The methodology and methods adopted in collecting data for EIA follow-up varies, from simple and pragmatic not so expensive techniques to rigorous and scientific studies costing considerably more (Morrison-Saunders and Arts 2004: 11). The approach and techniques utilized are determined by the objectives the EIA follow-up program aims to achieve. For example, measuring oil content in water at a project will require a more rigorous and scientific method than measuring wind direction at a project site. The stakeholder collecting the data also impacts on the methodology and method used (e.g. a proponent with adequate resources as compared to a community pressure group with limited resources) in such a case, the availability or non-availability of resources impacts on the options available to the stakeholders.

4.3.3 Resources and capacity available

The availability of resources and possessing capacity are key to the outcome of an EIA follow-up program. This is due to the time frame in some cases required to fully implement a program (Morrison-Saunders and Arts 2004: 10). Examples of the resources and capacity required include: finance, time and staff resources. It is pertinent to understand the resources and capacity required to efficiently achieve a successful outcome (e.g. with better

techniques, and more know-how it might be possible to reduce cost and yet achieve desired results). However, the choice for resources may not always exist, as due to lack of finance the number of staffs hired may have to be reduced.

4.3.4 Project type

The type of project requiring an EIA follow-up program influences the program designed. The type usually depends upon the size of the project (big or small) and the project initiator (private or government) (Morrison-Saunders and Arts 2004: 11). It might also be influenced by external funding bodies (e.g. the proponent may be the initiator, but the EIA follow-up program might be dictated by funding agencies). The level of planning (see Chapter 3) within which a project occurs, could also have an impact upon the EIA follow-up program designed.

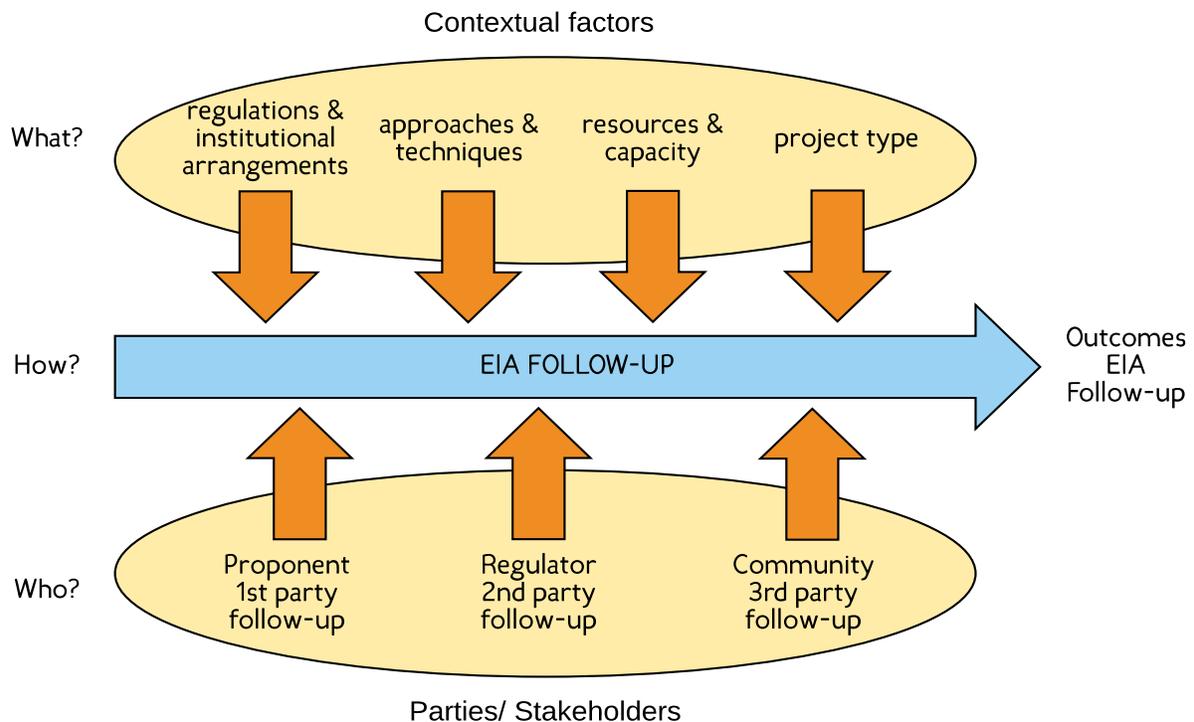


Figure 4.4: contextual factors and stakeholders for successful EIA follow-up (Morrison-Saunders and Arts 2004: 11)

Since the establishment of these contextual factors and the important stakeholders required for a successful EIA follow-up outcome by Morrison-Saunders and Arts (2004), it

has been applied in varying jurisdictions; expanding the discourse. Although most jurisdictions do not require modification to the established contextual factors and stakeholders required (Appiah-Opoku and Bryan 2013; Gachechiladze-Bozhesku 2012; Nadeem and Hameed 2010), some do require modification of the existing contextual factors and stakeholders to enhance the possibility of a successful outcome. For example, Jha-Thakur (2011) within the Indian context ‘explored the factors that cause regional variation in the implementation of EIA follow-up’ and identified it as having an impact on the outcome of an EIA follow-up program. In relation to ‘where’ environmental, social, political and economic contextual factors were established (see Figure 4.5), this should have an impact on the EIA follow-up program within the context (Jha-Thakur 2011).

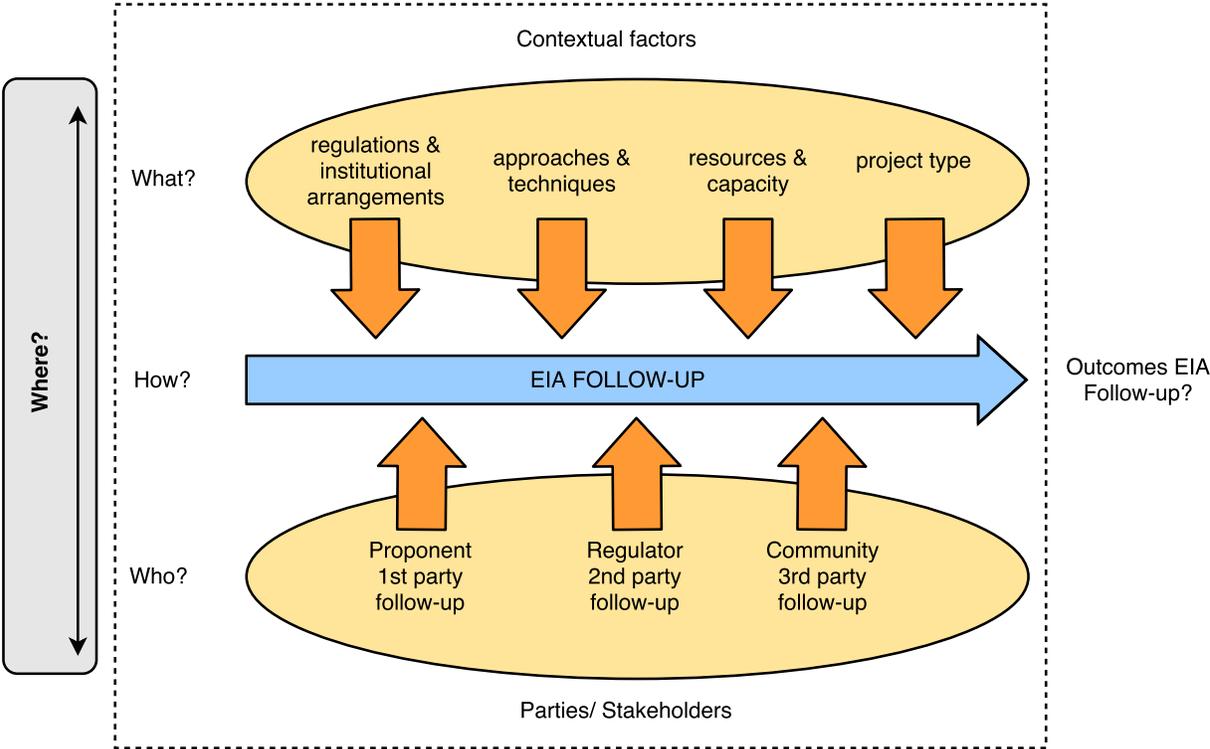


Figure 4.5: Contextual factors for developing best practice for EIA follow-up (Jha-Thakur 2011: 436) adapted from (Morrison-Saunders and Arts 2004: 11)

In the case of Wessels (2013) factors that might ‘influence the independence of verifiers to better anticipate and avoid conflict of interest was embedded into the framework’ in South Africa (see Figure 4.6). Within this context, it is believed ‘independent parties with no vested

interest in the outcome of a particular activity the best way of implementing an effective compliance and enforcement regime’ (Wessels and Morrison-Saunders 2011: 30). This necessitated the introduction of a role for independent verifiers within the earlier framework of (Morrison-Saunders and Arts 2004).

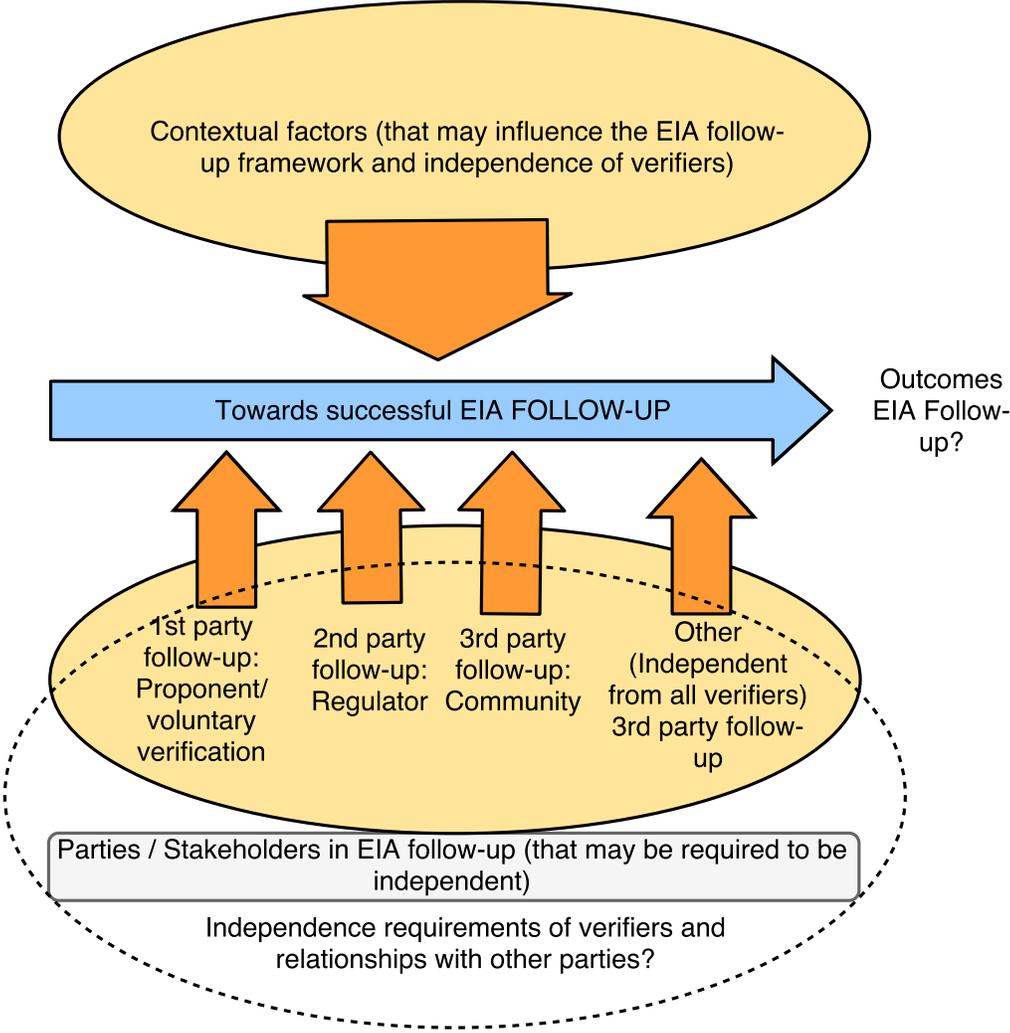


Figure 4.6: Contextual factors, parties involved and independence required for successful EIA follow-up and verification (Wessels 2013) adapted from (Morrison-Saunders and Arts 2004: 11)

These adaptations have enhanced the practice of EIA follow-up and enriched the possibility of successful outcomes in the various jurisdictions. It is important to study the implementation of EIA follow-up in other jurisdictions to enrich the good practice criteria being developed for the oil sector of the Nigerian practice (see Chapter 2).

4.4 EIA follow-up experience in different jurisdictions

Eight systems from different jurisdictions were reviewed (United Kingdom, Netherlands, Australia, Canada, Hong Kong, India, South Africa and Ghana). The specific countries were selected based on the following conditions:

- a) The presence of an extractive industry, especially oil and gas (including refining)
- b) The years of involvement in the extractive business for middle income, lower middle income and low-income countries (WB 2017)
- c) Availability of published work on EIA follow-up

The review has been categorized based on the contextual factors and stakeholders required for a successful EIA follow-up discussed above:

4.4.1 Regulation and institutional arrangement

The importance of regulation and institutional arrangements, as a foundation to implementing EIA follow-up in any jurisdiction cannot be overemphasized. For the purpose of this review, it has been divided into two parts; legal requirements and administrative framework.

Legal requirement for EIA follow-up

In the United Kingdom (UK), it is not mandatory to conduct EIA follow-up for every project. Although it is not mandatory, it has increasingly been made a condition of development through section 106 (a mechanism which make a development proposal acceptable in planning terms, that would not otherwise be acceptable. They are focused on site specific mitigation of the impact of development) agreements on a case-by-case basis (Jones and Fischer 2016). In Netherlands, regulation makes EIA follow-up mandatory. The law states ‘The competent authority that has taken a decision, in the preparation of which an EIS was drawn up, shall investigate the effects of the activity concerned on the environment, either during or after completion’ (Morrison-Saunders and Arts 2004: 66). Australia’s EIA follow-

up system is like the UK's system; it is not mandatory however and can be conducted depending on the state under which a project is proposed. The Australian law states 'The EIA process will provide a basis for setting environmental conditions, and establishing environmental monitoring and management programmes (including arrangement for review) and developing industry guidelines for application in specific cases' (IGAE 1992: 22). Similar to the Dutch regulation, the Canadian law makes EIA follow-up mandatory for projects initiated in the country. The law defines an EIA follow-up program as 'a program for verifying the accuracy of the EA of a project; and determining the effectiveness of any measures taken to mitigate the adverse environmental effect of a project' (Canada 2003). Just as the case of Canada, EIA follow-up is mandatory in Hong Kong. Section 16(1)(j) of EIA ordinance 'imposes Environmental Monitoring and Audit (EM&A) requirements as conditions in Environmental Permit (EP)' (Tang et al. 2016: 4).

The subsequent amendment of EIA notification of 1994 in 2006 has made EIA follow-up mandatory for all projects in India. The project proponents are now bound to submit the half yearly compliance reports, both, as a soft copy and hard copy to the concerned regulatory authority twice in a calendar year (Gol 2006). The environmental protection Act 490 makes EIA follow-up mandatory in Ghana. It 'mandates a proponent to submit annual reports detailing environmental policy objectives of the project; environmental problems encountered during the year and how they were managed; and monitoring results against national or international standards' (Appiah-Opoku and Bryan 2013: 40). In South Africa, Act 107 (Section 24(7)(f)) of NEMA 'requires the investigation and formulation of arrangements for the monitoring and management of environmental impacts' (DEAT 1998: 19). Making EIA follow-up mandatory.

Administrative framework for EIA follow-up

EIA follow-up in the UK, is conducted at the local level. The local council decides on if projects require follow-up, in the situation they do; it sets the conditions and regulates it

(Jones and Fischer 2016: 2). In Australia, power has been decentralized to the provinces (state) to decide if EIA follow-up is required or not. As such, states like New South Wales (NSW) and South Australia (SA) have enshrined EIA follow-up while in Tasmania there are no legislative requirements for EIA follow-up.

In the Canadian context, the Canadian Environmental Agency (CEA) conducts the EIA follow-up practice, this is done at the federal level (CEAA 2011). The same applies to Hong Kong, the Environmental Protection Department (EPD) is the body mandated at the federal level to issue permit conditions and conduct EIA follow-up (Tang et al. 2016). This also applies in Ghana (Appiah-Opoku and Bryan 2013) and South Africa (DEAT 1998), the Environmental Protection Agency (EPA) and the Department of Environmental Affairs (DEA) respectively regulate EIA follow-up practice at the federal level. Since the amendment of EIA Notification (2006) in India, power has been delegated from the federal level (Ministry of Environment and Forests) to the State level (State Environmental Impact Assessment Authority) (Jha-Thakur 2011; Paliwal and Srivastava 2012).

4.4.2 Approaches and techniques

From the theoretical review (see Chapter 3), various approaches and techniques have been highlighted as being used during EIA follow-up in different contexts in the aim of achieving successful outcomes. The three approaches and techniques are: command and control, self-regulation and public pressure.

In the UK for example, Hollands and Palframan (2014: 44) identified command and control in use by regulators making 'environmental permit required (to ensure compliance to UK and EU Legislation) and may well impose upper limits or thresholds'. EIA follow-up being applied through self-regulation by using EMS has also been identified by Marshall et al. (2005). Active public and media raising project concerns is also common in the UK, making public pressure another technique in use. In the case of the Netherlands, lack of external

pressure has been identified as one of the issues affecting EIA follow-up (Morrison-Saunders and Arts 2004). Although public pressure is highlighted as a challenge, self-regulation is in place. As the proponent is expected to submit monitoring data to the competent authority (NCEA 2016). Screening and scoping are also utilized to decide which projects require EIA follow-up with the competent authority setting the conditions.

Command and control is employed in Australia, permit conditions are set by the EPA (Morrison-Saunders et al. 2003). In the Australian Capital Territory (ACT) there is informal mechanism in place, where anybody can apply for an order requiring monitoring (Ahammed and Nixon 2006). This is a form of public pressure. In the context of Canada, environmental agreement conditions are set by the Canadian Environmental Agency (CEA) and they oversee implementation (Noble and Storey 2005). Examples of public pressure from the Canadian context include: Waskaganish voluntary anadromous cisco catch registry a community led program during EIA follow-up, providing a forum for collaboration with proponent (Strangway et al. 2016). The Canadian Community Monitoring Network (CCMN) is an initiative developed by environment Canada and the Canadian nature federation partnered towards developing national standards for community based monitoring (Lawe et al. 2005).

Command and control are also utilized in Hong Kong, permit conditions are set by the regulator and enforced. Continuous public involvement is completed at all stages allowing the public to raise concerns (Morrison-Saunders and Arts 2004). Command and control is also utilized in India; clearance conditions are set by the State Environmental Impact Assessment Authority (SEIA) and regional officers verify compliance during site visits (Jha-Thakur 2011). Self-regulation has also been identified in the Indian context, as proponents are expected to submit a compliance status report on the conditions given to them while granting clearance every six months to the regional offices (Paliwal and Srivastava 2012). Public interest litigation also takes place in the Indian context when public concern is raised

on any project on which EIA follow-up has been carried out (Paliwal and Srivastava 2012). Proponents are responsible for the design and implementation of EIA follow-up in Ghana. Failure to self-regulate has been perceived to lead to public pressure by the community (Appiah-Opoku and Bryan 2013). For example, in the case of Wassa Association of Communities Affected by Mining (WACAM). Conditions of approval are set by the competent authority in the Record of Decision (ROD) and the same body enforces in a command and control manner (Hullet and Diab 2002). Public pressure is considered low in the EIA follow-up practice of South Africa. A study conducted by Hullet and Diab (2002), found only 17% of respondents identified following through with interested and affected parties (I & AP's) as a part of the EIA follow-up process.

4.4.3 Resources and capacity

Availability of resources and capacity are key to the success of the EIA follow-up outcome. Although this is the case, it has been highlighted that no context currently has all resources and capacity required to conduct EIA follow-up within its jurisdiction. Four components have been identified as important to the success of EIA follow-up outcome. Staff strength, cost, time and know how. Some lessons of resource and capacity from the countries reviewed are identified below.

In the UK, Marshall (2005) identified positive adjustment in the attitude to the controlled management of EIA as a benefit of using self-regulation on staff strength when conducting EIA follow-up. The cost of self-regulation was also found to be effective. A review of the opinion of practitioners, found an overwhelming majority indicating; EIA follow-up took up very little time and there was sufficient training and expertise to conduct it (Jones and Fischer 2016). The availability of reserved budget to conduct EIA follow-up, proved to be a major stimulus in the Netherlands as to why it is being conducted (Morrison-Saunders and Arts 2004). In Southern Australia, insufficient staff strength and lack of adequate time frame

to conduct EIA follow-up were two major obstacles highlighted (Ahammed and Nixon 2006). Noble and Storey (2005) found EIA follow-up to be cost effective in Canada, 'due to its emphasis on legislative requirements'. Long standing challenges of finding adequate resources and barriers were highlighted by Hunsberger et al. (2005) as a barrier to EIA follow-up in Canada. The EIA follow-up practice in Hong Kong was found cost effective due to the use of web technology, allowing members of the public to report perceived offences to the regulator (Tang et al. 2016). Training for EIA follow-up monitoring and management was also found to be in place (Tang et al. 2016).

4.4.4 Role of stakeholders

From the theoretical review conducted in chapter two, the importance of stakeholders to the success or failure of an EIA follow-up process cannot be overemphasized. The four major stakeholders highlighted from the various contexts reviewed are: the proponent, the regulator, the community and independent verifier.

In the UK context, Marshall (2005) identified direct improvement to corporate EMS and reputation as a result of proponents conducting EIA follow-up. The regulators in this context enforce and prosecute offences for non-compliance. Marshall (2005) also highlighted early engagement initiative and program of monitoring being set up for community to be involved in the EIA follow-up process. Provision for independent verifiers in post construction impacts has also been identified in some projects, EIA follow-up is being conducted on.

The proponent in the Netherlands submits monitoring data to the regulator (competent authority), this has been noted to improve EMS and company reputation. The competent authority in the Netherlands investigates the actual environmental consequences resulting from the performance of the activity (NCEA 2017). In the Netherlands, a notice of the report is published in one or more daily papers, newspapers or free local papers; or in another

suitable manner (notification of the public) to involve the community in the EIA follow-up process. The competent authority and the environmental inspectorate as an independent verifier are responsible for monitoring projects and plans and their impact on the environment (NCEA 2017).

The proponent in Western Australia (WA) 'provides monitoring and mitigation commitments in EIS' (Morrison-Saunders et al. 2003). In NSW and SA, proponents are required to carry out impact monitoring under planning consent conditions (Ahammed and Nixon 2006). The role of the regulator is to set legally binding approval conditions for the proponents (Morrison-Saunders et al. 2003). In the Australian Capital Territory (ACT) the community is involved by putting a mechanism in place where anybody can apply for an order requiring monitoring (Ahammed and Nixon 2006). Monitoring conditions are published in government gazette in SA. In the command and control set up of the Canadian context, the proponent ensures that environmental agreement conditions are met. Within the framework, CEA as the regulator sets the environmental conditions and ensures it is applied. The community are involved by the proponent publishing results of EIA follow-up to meet EA regulator set conditions. The communities also set community led monitoring programs. Conditions set by CEA in the Ekati mine environmental agreement, establishes 'an independent watchdog (Independent Environmental Monitoring Agency)' (Noble and Storey 2005: 175). Public pressure has also given rise to similar independent bodies.

The Hong Kong context requires proponents to submit a draft Environmental Monitoring and Audit (EM&A) manual to the regulator if EIA follow-up is needed. The proponent also complies with any conditions specified on the Environmental Protection Department (EPD) permit by the regulator (Morrison-Saunders and Arts 2004). Stricter penalties are enforced by the regulator on defaulters. Stiff penalties of up to HK \$2Million and six months' imprisonment for first time offenders (EPD 2012: 8). The community is involved by a dedicated Environmental Impact Assessment Ordinance (EIAO) website, enabling the public

to compare EIA predictions with results (Tang et al. 2016) and make comments and ask questions. Independent environmental reviewers are normally engaged by the proponent to encourage transparency and fairness (Tang et al. 2016). In the Indian EIA follow-up experience, the proponent submits a compliance status report on the conditions given to them while granting clearance every six months to the regional offices. The proponent also submits an EMP to the committee. The regulator at the federal level Ministry of Environment and Forestry (MOEF) sets clearance conditions after review of EMP and regional officers verify compliance during site visits. To enhance transparency and community participation, EIA follow-up reports are made available on the internet; advancing transparency (Jha-Thakur 2011). Communities have also been perceived to act based on observed concerns during project implementation. In the context of Ghana, the proponent submits an EMP report every three years after the first year of operation. Also the proponent submits an annual environmental status report, based on objectives (Appiah-Opoku and Bryan 2013). The regulator in this context issues Provisional Environmental Permit (PEP) to the proponent. Community involvement in EIA follow-up has been perceived as poor (Appiah-Opoku and Bryan 2013).

In South Africa, the proponent also submits an EMP as part of the study report. The regulator sets compliance conditions in ROD to be implemented by the proponent. The community has also been identified to be involved during EIA follow-up, an example of this is the Permit Advisory Panel (PAP) established for the Sappi-Saiccor mill; situated at Umkomaas on the KwaZulu-Natal south coast (Hullet and Diab 2002). Independent verifiers ECO's are involved in the construction phase of projects (Wessels et al. 2015).

From the review above, it can be construed that implementation of EIA follow-up differs from one jurisdiction to another; but the guiding principles across all jurisdictions remain the same (see 4.2). Based on these principles, contextual factors have been designed that should exist in any jurisdiction for EIA follow-up to occur. Since the advent of these

contextual factors, authors from varying international contexts (Appiah-Opoku and Bryan 2013; Gachechiladze-Bozhesku 2012; Hullet and Diab 2002; Jha-Thakur 2011; Nadeem and Hameed 2010; Tang et al. 2016) among others have studied EIA follow-up within their jurisdictions (see 4.4) and provided lessons from practice. These lessons have enhanced the knowledge of EIA follow-up and were considered when developing the good practice criteria (see Chapter 2).

4.5 Chapter Summary

This chapter started by discussing the various steps involved in EIA follow-up framework. They included: Screening, scoping, initial data collection, design, implementation, evaluation, issue management and stakeholder communication.

The chapter proceeded to discuss the contextual factors and stakeholders involved in the EIA follow-up process of any particular jurisdiction. This included: regulatory and Institutional arrangement, approaches and techniques, resources and capacity and stakeholder involvement. The chapter further discussed modifications done to this framework by (Jha-Thakur 2011; Wessels 2013) which emphasises EIA follow-up is evolving and differs from one jurisdiction to the other. Eight countries (United Kingdom, Netherlands, Australia, Canada, Hong Kong, India, South Africa and Ghana) were further reviewed to understand the systems of EIA follow-up in the varying jurisdictions.

CHAPTER FIVE: ENVIRONMENTAL IMPACTS OF OIL PROJECTS

This chapter focusses on environmental impacts of oil projects and is divided into four sections. Firstly, it provides a broad overview of global oil production, followed by perspectives on oil production in Africa. The third section focused on oil projects in Nigeria and the final section looked at environmental impacts of oil projects.

5.1 Global oil production

The oil industry has overall had a positive impact on the world in numerous ways (Okotie et al. 2018). The international energy agency (IEA) in 2012, estimated that oil contributed 40.7% of the global energy demand (IEA 2014). It provides fuel for our airplanes, ships, cars for mobility and industrial engines. The by-products from oil, also serves as raw materials for many industries such as; petrochemical, solvents, pesticides, fertilizers, plastics, pharmaceuticals, among others (EIA 2018). Oil is discovered in the subsurface formations (reservoir) on planet Earth. Li (2011), estimated there are more than 65,000 oil and gas fields currently in the World. Oil reserves are spread across the various continents, Ivanhoe and Leckie (1993) highlights that about 94% of global oil reserves are located in Near (Western Asia) and Middle East, Commonwealth of Independent states and Venezuela. Among the countries with the largest reserves include: Venezuela (300,878bbl¹), Saudi Arabia (266,455bbl), Canada (169,709bbl), Iraq (142, 503bbl) and Kuwait (101, 500bbl). Within the continent of Africa, Libya has the largest oil reserve (48,368bbl) followed by Nigeria (37,062bbl).

¹ Bbl: Barrel

5.2 Oil production in Africa

The African continent is well endowed with energy resources (fossil fuels; oil, gas and coal, and renewable resources; hydro, geothermal, solar and wind potential) (Othieno and Awange 2016). Among these energy resources, the most economically valuable fossil-based fuel (oil) is found in more than twenty African countries (Othieno and Awange 2016). Countries with oil reserves spread across all regions (west, north, south, east and central) of the continent. Table 5.1 below highlights some of the oil reserves discovered within African countries.

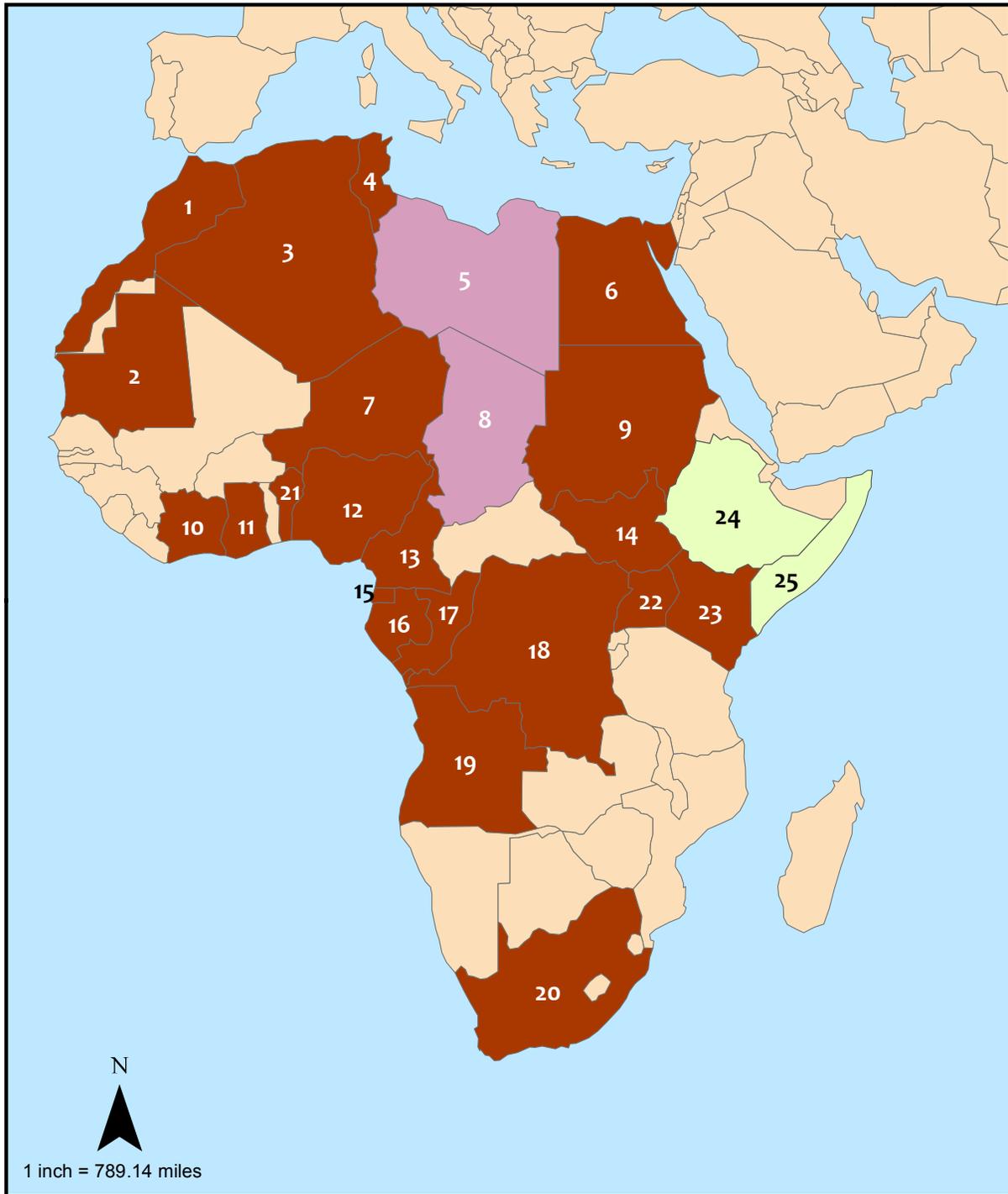
Table 5.1: Oil reserves in some African countries (CIA 2013; EIA 2012, 2014a; UNDP 2002)

Country	Oil reserve (Billion bbl)	Year
Egypt	4400	2013
Algeria	13400	2010
Libya	48000	2011
Angola	13500	2012
Tunisia	430	2012
Ghana	660	2013
Cameroon	200	2010
Benin	44	2002
Nigeria	37200	2013
DRC	3180	2014
Sudan	6000	2010
Uganda	6000	2014

The countries represented above have a combined reserve of about 129,034 million barrels of oil (about 129 billion barrels). Other countries on the continent with oil reserves include: Kenya, Equatorial Guinea, Gabon, and Ivory Coast (EIA 2014b). Africa as a continent has a total oil reserve of more than 150 billion barrels, while the world had about 1646 billion barrels (Africa included) (EIA 2014b). Equating to 12% of total world reserve, this is significant

as a large share of oil reserves are based in the Middle East and Russia (EIA 2014b). Within its regions, new reserves are being discovered on a yearly basis. In East Africa, oil exploration in the last decade has yielded results; with discoveries in Kenya and Uganda (Bategeka et al. 2015; CNN 2012). Similar findings have been completed in Ghana and Niger (West Africa). Apart from new discoveries, countries such as Ethiopia and Somalia are currently exploring for oil reserves (Othieno and Awange 2016). Figure 5.1 highlights oil producing and exploring countries in Africa.

In Southern Africa, Angola alone accounts for 99.8% of oil within the region while South Africa accounts for 0.2% (EIA 2014b). North Africa has dominated oil production in Africa for a decade (Othieno and Awange 2016), the region has a total oil reserve of roughly 70.5 billion barrels and contributes 56% of the oil in Africa's reserves (EIA 2014b). Libya accounts for about 48.47 billion barrels of the oil reserves and Algeria also has a considerable quantity of oil within their reserves (EIA 2014b). The increment in oil discovery across the continent, enhances the need to consider environmental liabilities within the oil exploration process.



Key

Map of Africa

□ Countries

Oil producing and exploring countries

□ All countries

■ Oil producing countries with EIA

■ Oil producing countries without EIA

■ Oil exploring countries

1	Morocco	8	Chad	15	Equatorial Guinea	22	Uganda
2	Mauritania	9	Sudan	16	Gabon	23	Kenya
3	Algeria	10	Ivory Coast	17	Rep of Congo	24	Ethiopia
4	Tunisia	11	Ghana	18	Dem Rep Congo	25	Somalia
5	Libya	12	Nigeria	19	Angola		
6	Egypt	13	Cameroun	20	South Africa		
7	Niger	14	South Sudan	21	Benin		

Figure 5.1: Oil producing and exploring countries in Africa (source: author)

5.3 Oil projects in Nigeria

Within the African continent, Nigeria is the second largest producer of oil (see Table 5.1) and twelfth in the world (OPEC 2016). In terms of oil exports, Nigeria ranks first in Africa with an output and exports range between 2m to 2.5m barrels daily over the last few years (KPMG 2013). Apart from being a major oil state in Africa; it is also one of the first to discover and produce oil in commercial quantities (Panford 2017). Oil was first discovered in commercial quantity in 1956 at Oloibiri, Niger Delta by Shell British Petroleum (Shell-BP) with a production capacity of 5,100 barrels per day by 1958 (Anejionu et al. 2015; NNPC 2015; Ogru 2001). Currently, about 606 oil fields (355 situated onshore and 251 offshore) exists in the Niger delta region (Kadafa 2012; Nwilo and Badejo 2005). The region prides itself as the hub of oil exploration and production infrastructure in Nigeria (Eke 2016).

The oil sector has become vital to the Nigerian economy, with an estimated export value of \$89 billion per annum (OPEC 2017) and total estimated collected revenue of \$600 billion since 1960 (Ite et al. 2013). These figures translate into contribution of up to 35% of Nigeria's gross domestic product (GDP) and over 90% of its foreign reserve (Akpabio and Akpan 2010; OPEC 2017). Despite the country's oil wealth, the majority of the population remain relatively poor (Eke 2016). Since oil was first discovered in Nigeria, numerous companies both indigenous and multinational have been issued concessionary licenses by the department of petroleum resources (DPR) to participate in the exploring, drilling, transporting and refining of oil in Nigeria.

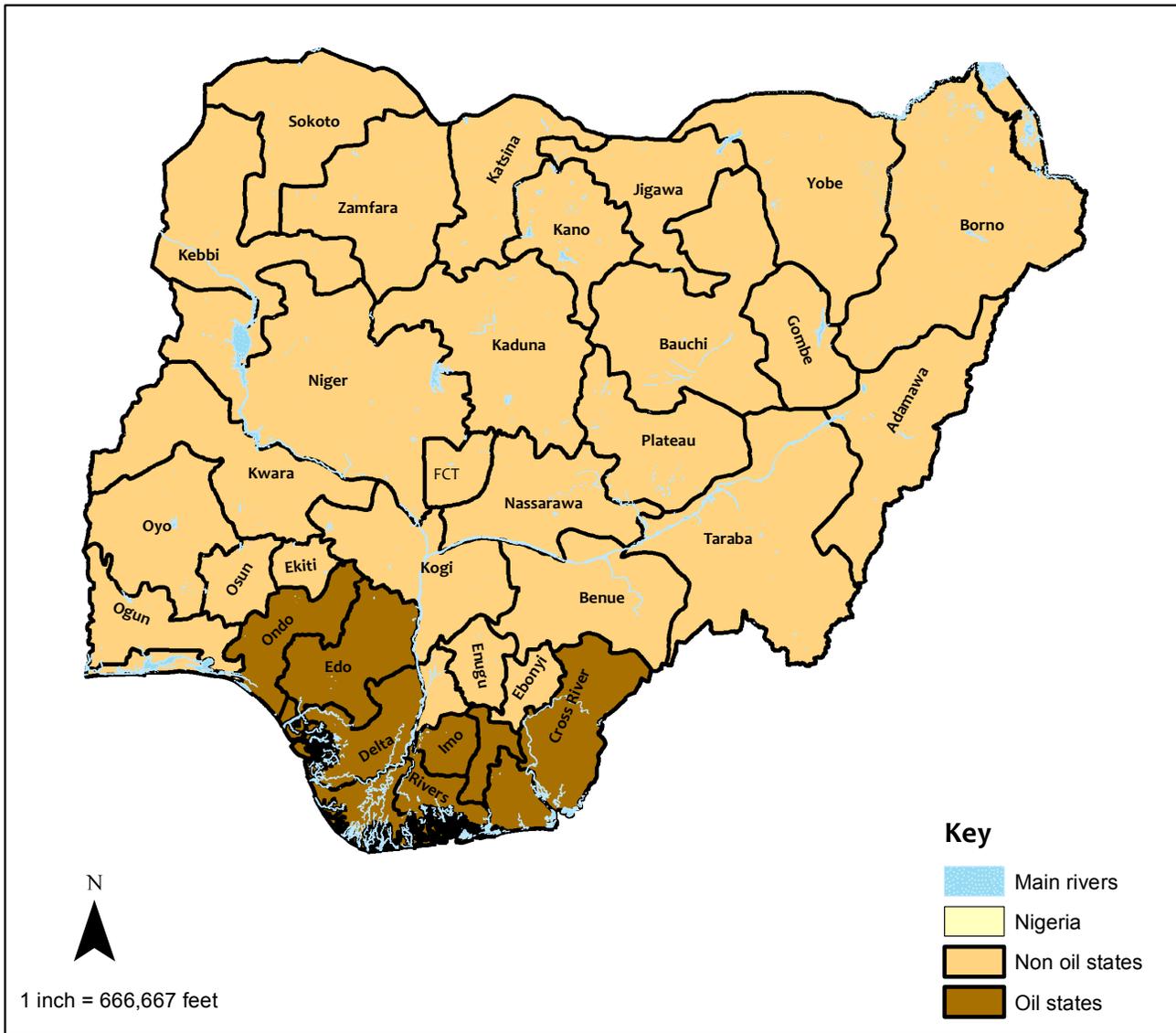


Figure 5.2: Map of Nigeria and the Niger delta oil producing states (source: author)

5.3.1 Oil project regulators

Section 1(1) of the Nigerian Mineral and Mining Act 2007 states:

'The entire property in and control of all Mineral Resources in, under or upon any land in Nigeria, its contiguous continental shelf and all rivers, streams and water courses throughout Nigeria, any area covered by its territorial waters or constituency and the Exclusive Economic Zone is and shall be vested in the Government of the Federation for and on behalf of the people of Nigeria' (FRN 2007: A485).

Section 1(2) further states:

'All lands in which minerals have been found in commercial quantities shall, from the commencement of this Act be acquired by the government of the federation in accordance with the provisions of the Land Use Act' (FRN 2007: A485).

Although Section 1(1) and (2) grants the Federal Government of Nigeria (FGN) full control over its mineral resources, section 1(3) states:

'The property in mineral resources shall pass from the Government to the person by whom the mineral resources are lawfully won, upon their recovery in accordance with this Act' (FRN 2007: A485).

Section 1(3) allows the FGN to pass the mineral resources to a third party that 'lawfully' wins it, who could be in the private sector or third sector.

During the early days of the oil administration in Nigeria, the hydrocarbon section of the Ministry of Lagos Affairs (MLA) kept records and enforced safety and other regulations on matters related to exploration and importation of oil products (DPR 2018b). With the expansion of the oil sector and the increase in production, the section was upgraded to a petroleum division and in 1970 changed to the Department of Petroleum Resources (DPR) (DPR 2018b). Figure 5.1 shows the timeline and evolution of oil sector administration in Nigeria.

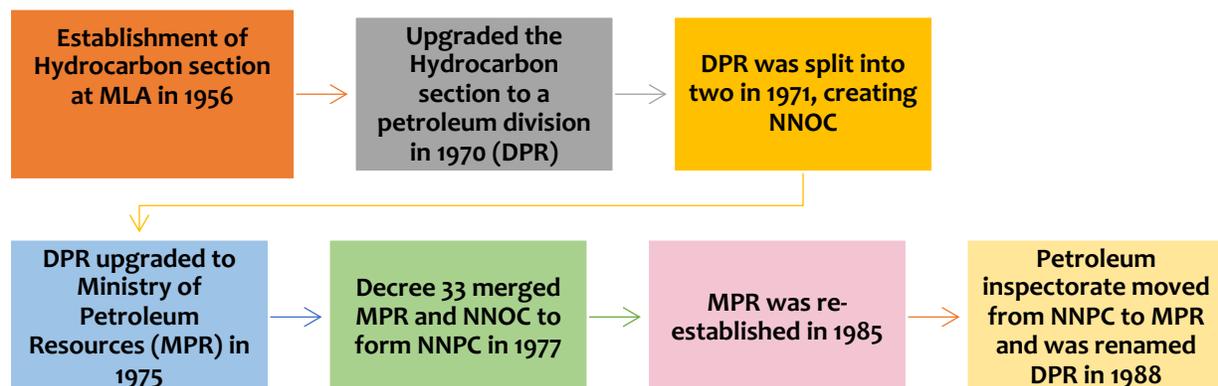


Figure 5.3: Timeline and evolution of oil sector administration in Nigeria (DPR 2018b)

The operations of the DPR were split into two in 1971, to mitigate the perceived burden of managing all aspects of the oil sector. As a result, the Nigerian National Oil Corporation (NNOC) was created to handle direct commercial operational activities in the oil sector and the DPR continued to exercise statutory supervision and control of the industry (DPR 2018b). This ensured a clear separation of duties, one entity handling policy formulation and commercial aspects and the other statutory regulatory control. In 1975, the DPR was upgraded (Ministry of Petroleum and Energy) and later renamed as Ministry of Petroleum Resources (MPR) (DPR 2018b). However in 1977, decree 33 merged MPR and NNOC to form the Nigerian National Petroleum Corporation (NNPC) thereby creating a singular body to manage oil sector governance in Nigeria (DPR 2018b). The decree also created the petroleum inspectorate as an integral part of the NNPC and entrusted it with regulation of the oil sector. MPR was re-established in 1985, but the Petroleum Inspectorate remained within the NNPC until 1988 when the NNPC was reorganised. The reorganisation moved the petroleum inspectorate from the NNPC to the MPR as the technical arm and renamed it as DPR. As a result of this, three entities were established (MPR, DPR, NNPC) to govern different aspects of the oil sector.

Currently, the MPR, DPR and NNPC are the three organisations regulating the oil sector space in Nigeria. Figure 5.2 shows the three organisations governing Nigeria's oil sector and how they interact with one another.

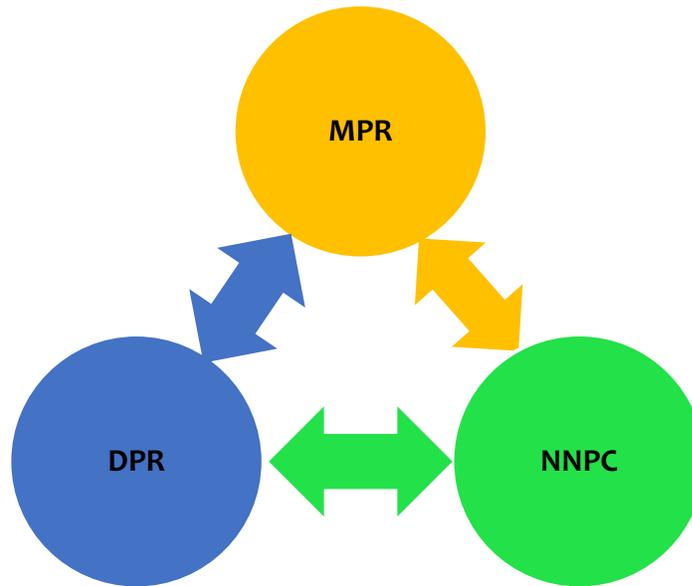


Figure 5.4: Relationship between the MPR, DPR and NNPC (source: author)

Ministry of Petroleum Resources (MPR): Within the oil sector, MPR has the mandate of ‘transforming the oil and gas industry for the increased benefit of Nigeria and its people through effective implementation of policies on hydrocarbon exploration, exploitation, production, distribution and utilization in accordance with international standards’ (MPR 2018: 1). In essence, MPR oversees all other sectors including downstream, midstream and oil services (KPMG 2014). It lays the foundation for the oil sector and it has oversight functions over the DPR and the NNPC.

Department of Petroleum Resources (DPR): The DPR has a responsibility to ‘ensure compliance to petroleum laws, regulations and guidelines in the Oil and Gas Industry’ (DPR 2018a: 1). To achieve this task, the DPR ensures monitoring of operations at drilling sites, producing wells, production platforms, flow stations and other oil activities. Apart from monitoring oil activities, the DPR is also expected to carry out functions such as: supervising oil activities under license and leases, ensure HSE regulations conform with national and international best practice, maintain records on petroleum industry operations, advise government on public policies that may impact on the administration and oil activities and processing industry applications for leases, licenses and permits among others (DPR 2018a;

KPMG 2014). These roles have ensured the DPR plays an integral role in the issuance of leases/licenses and overall regulation and enforcement of the oil sector. The DPR is overseen by the MPR and the organisation liaises with the NNPC to coordinate the marketing perspective of the license.

Nigerian National Petroleum Corporation (NNPC): The NNPC is considered the state oil corporation (KPMG 2014). The NNPC is responsible for exploring, refining, transporting and marketing oil resources (NNPC 2018a). The NNPC is the commercial arm of the FGN's interest in the oil sector. The NNPC engages in joint ventures with lease holders to protect Nigeria's interest within such ventures. Apart from participating in joint ventures (see 5.2.2), the NNPC also markets crude oil produced in Nigeria and engages in the importation of refined products. The NNPC is oversighted by a board which is headed by the MPR. It also liaises with the DPR to manage the marketing of licenses issued by the DPR.

5.3.2 Oil project proponents

As mentioned earlier (see Chapter 2), the case studies drawn for this research have been selected to represent the two types of proponents in the oil sector (indigenous oil companies and multinational oil companies). Among the types of leases/licenses issued to the proponents include: service contract (SC), joint venture contract (JVC), product sharing contracts (PSC) and marginal field concession (MFC) (DPR 2016; KPMG 2014). Although there are four types of oil contract in place, they can be divided into two.

- Based on the participation of NNPC with the licensee in the production and liability of the project
- The production and liability of the project is solely taken on board by the licensee without the participation of the NNPC

Such licenses where the NNPC participates are called JVC, while projects where the NNPC do not participate could be a SR, PSC or MFC. A JVC is the standard agreement between the NNPC and a multinational oil company (MOC) (KPMG 2014). Under such an agreement, both NNPC and the MOC contribute to funding oil operations in the proportion of their JV equity holdings, and generally receive oil produced in the same ratio. In the case of Nigeria most projects are shared as 60% to NNPC and 40% to the MOC.

In the case of PSC contracts, concessions are held by the NNPC; who then engages with the MOC or an indigenous company (IOC) as a contractor to conduct oil operations on behalf of itself and the NNPC (KPMG 2014). The contractor takes on the immediate financial risk, with an understanding to recover all cost; at the commencement of commercial production (KPMG 2014). In this model, the contractor undertakes exploration, development and production activities for and on behalf of NNPC or the concession holder, at its own risk (KPMG 2014). The concession ownership remains entirely with the NNPC and the contractor has no right to the oil produced. The contractor is reimbursed for the cost incurred from the proceeds of oil sold and is paid periodically their share of the profit in accordance with the formulae stipulated in the contract agreed upon.

In furtherance to Nigeria's local content agenda, MOC's are encouraged to surrender their marginal fields for assignment to IOC. Marginal fields are oil fields that have not produced oil and have remained dormant for a period of over 10 years (KPMG 2014). The DPR liaising with the NNPC, determines the type of contract to be entered into with the proponent, prior to the start of the bidding process.

Proponents Indigenous Oil Companies (PRIOC): The need for Nigeria to assume control of her oil resources informed the enactment of the Nigeria Oil and Gas Development Law (NOGDL) in 2010 (Balouga 2012). The NOGDL 2010 defines Nigerian content as 'the quantum of composite value added to or created in the Nigerian economy by a systematic development of capacity and capabilities through the deliberate utilization of Nigerian

human, material resources and services in the Nigerian oil and gas industry' (FRN 2010: 22). The establishment of the NOC in 1971 (see 5.2 above) was a vehicle for the promotion of Nigeria's indigenization policy in the oil sector. The setting up of the NNPC in 1977, established a local content initiative through acquisition of interests in the operations of MOC (Balouga 2012). Among some of the indigenous oil companies operating in the Nigerian oil sector include: OANDO, CONOIL, CAMAC Holding Limited, Enageed Resources Limited, Emerald Energy Resource Limited etc. (DPR 2016). Among the types of contract leases/licenses issued to indigenous companies include: SR, PSC and MFC (DPR 2016).

Proponents Multinational Oil Companies (PRMOC): As highlighted earlier (see 5.2 above), Shell-BP was the first company to discover oil in Nigeria (NNPC 2018a). Although Shell-BP discovered oil in Nigeria, they were not the first to explore for oil in Nigeria. A German entity, the Nigerian Bitumen Corporation (NBC) commenced exploration activities in 1908 at the Araromi area, west of Nigeria (NNPC 2018b). These activities ended abruptly with the outbreak of the First World War in 1914. With the discovery of oil in 1956, the oil industry was opened to MOCs in 1961 (NNPC 2018b). Some of the MOC's granted concessionary licenses to join the initial exploration efforts, which included: Mobil, Agip, Safrap (now Elf), Tenneco and Amoseas (Texaco and Chevron respectively). Since the opening of the oil sector to MOC's, oil production has risen subsequently from 5100 barrels per day (bpd) to 2.0 million bpd in 1974; peaking at 2.4 million in 1979 (NNPC 2018b). The MOC's have had a difficult relationship with oil communities in the Niger Delta, due to environmental impacts of oil projects.

5.4 Environmental impacts of oil projects

The stages involved in the extraction of oil (from seismic survey to oil production) have considerable impact on the environment (Anejionu et al. 2015). The Niger Delta region is essentially covered by Oil Mining and Oil Prospecting Licenses (OML/OPL), which grants oil

exploration firms unrestricted access to operate on land and sea within the region in search of oil (Aghalino 2004). As a consequence, the environment (terrestrial, atmospheric and the marine) has had its own share of pollution through oil related activities. Among the effects of oil projects include: flooding and coastal erosion, agricultural land and mangrove degradation, deforestation, water and air quality degradation, and loss of aesthetic values of natural beaches due to oil slicks (Chukwuezi 2006; Ugochukwu 2008). There have also been reports of depletion of wildlife and aquatic species, as well as extinction threats to a large number of important plant species in the region (IUCN 2009; Ugochukwu 2008). These environmental impacts raise serious concern on long-term health impact on oil communities (Albert et al. 2018; Elum et al. 2016; Pegg and Nenibarini 2013; Sam et al. 2017).

5.4.1 Impacts of oil projects on the Physical environment

Oil projects have numerous impacts on the physical environment where they are situated (see Table 5.2 below). Amongst its major impacts on the environment include: oil spillage, pipeline explosion and gas flaring and venting. Table 5.2 highlights the different activities of an oil project and its potential impacts on the physical environment.

Table 5.2: oil projects and potential impacts on a physical environment (UNEP 2011)

Oil project activity	Physical activity	Environmental Impacts
Seismic activity		
	Setting up base camps	Land clearance Access creation Abstraction of groundwater Hydrological changes Sewage and solid wastes Light and noise pollution Introduction of alien and invasive species
	Cutting lines	Removal of vegetation access creation
	Seismic operation	Vibration Noise
Drilling activity		
	Setting up base camps	Land clearance Access creation Abstraction of water Hydrological changes sewage Solid wastes Light and noise pollution Introduction of alien and invasive species
	Setting up drilling pads	Land clearance

Oil project activity	Physical activity	Environmental Impacts
		Access creation Hydrological changes
	Drilling operations	Noise Drill cuttings and drilling wastes spills and leaks Light and noise pollution Nuisance odours
Production activity		
	Facility Installation	Land clearance Access creation Abstraction of water Hydrological changes Introduction of alien and invasive species
	Pipeline Installation	Land clearance Access creation Hydrological changes Spillages and leaks fires Nuisance odours Pigging wastes
	Facility Operation	Noise Discharge of water Waste e.g. from tank bottoms spillages and leaks Fires Nuisance odours Gas flaring

Oil Spillage: Oil spillage accounts for major terrestrial and marine ecosystem degradation in the Niger delta (Chima and Vure 2014; Nwilo and Badejo 2005; UNEP 2011). Predominant occupations in the region such as; farming and fishing, have been extremely impacted by spills (UNEP 2011). Remains of birds and burnt habitats have been found close to spill sites (Anejionu et al. 2015). Spill impacted areas have included freshwater sites which have been polluted with noticeable damage to flora and fauna (Idris 2007). Between 1976 to 1996, it is estimated that a total of 4647 spill incidents occurred in Nigeria and since the start of oil production; it is estimated over 10,000 spills have occurred (Egberongbe et al. 2006). On average, it is believed 600 oil spill incidents occur per annum in the Niger delta (Egwu 2012). As a result, millions of barrels of oil have been discharged into the Niger delta environment (DPR 2016), causing widespread destruction to the ecosystem. Oil spillage in the Niger delta

has been associated to degradation and poor maintenance of oil facilities such as; pipelines and storage tanks, and to a lesser extent sabotage² (Anejionu et al. 2015).

Pipeline Explosion: the explosion of oil pipelines also has a major impact on the environment (Anejionu et al. 2015). Explosion of a pipeline differs significantly due to its more direct impact on life and property when compared to oil spill (Oteh and Eze 2012; Phil-Eze 2004). Amongst the impacts of pipeline explosion include: loss of human and animal lives, properties, vegetation and important habitats and atmospheric pollution (Anifowose et al. 2012; Omodanisi et al. 2014). Accidental bursting of old and poorly maintained pipelines is the major cause of pipeline explosion. Also, deliberate sabotage of oil facilities during bunkering (illegal siphoning of oil products) by oil communities is also considered a cause of pipeline explosion (Albert et al. 2018; Egwu 2012; Nwilo and Badejo 2005). The Niger delta region has experienced several cases of pipeline explosions. Within a ten-year period of 2003 to 2013, it is estimated that over 16,000 pipeline breaks occurred with 2.4% due to natural causes and about 97.5% as a result of sabotage (Ogbeni 2012).

The most devastating pipeline explosion in Nigeria occurred at Jesse (Delta state), resulting in the deaths of more than 1000 people and severe destruction of the physical environment (Ogbeni 2012; Tuschl and Ejibunu 2007). In 2016, numerous pipeline explosions by militants, ensured oil production was brought down from between 2m to 2.5mbpd to 800,000 bpd (DT 2016).

Gas flaring and venting: This is the major contributor to environmental pollution in the Niger delta. The term **gas flaring** 'indicates the combustion of gas (without energy recovery) in an open flame that burns unceasingly at the top of flare stacks in oil production sites' (Eni 2018: 1). This practice resulted in the burning of large quantities of gas with the consequent

² The deliberate attempt to damage, destroy, or hinder an oil pipeline.

production of huge amounts of carbon dioxide and nitrous oxide, which have contributed substantially to atmospheric pollution (Anejionu et al. 2015). Gas flaring and venting have been used by all oil exploration companies, to dispose of associated gas extracted during drilling. Gas flaring and to a lesser extent venting in the last six decades, have been used by all the exploration companies to dispose of associated gas extracted with oil. A large proportion of Nigeria's oil facilities, were built in the early 1960s when gas was not a popular energy source and environmental standards were not high, this provided an environment for gas flaring to be adopted (Abdulkareem 2005). The poor awareness on the impacts of gas flaring to the environment allowed the practice of gas flaring to thrive and available technology at the time was inefficient when compared to technology presently available to tackle gas flaring (Leahey et al. 2001; OGP 2000).

The natural gas present in Nigeria comprises mainly of methane (90%) and ethane, propane, n-butane, I-butane, n-pentane, I-pentane, hexane, nitrogen and hydrogen sulphide (Abdulkareem 2005; Arowolo and Adaja 2012). Gas flaring systems do not attain complete combustion, due to air entrapped into the combustion region (Leahey et al. 2001). As such, gas flaring in the region releases a large proportion of harmful gasses to the environment including: carbon dioxide (CO₂), carbon monoxide (CO), nitrogen oxide (NO), nitrogen dioxide (NO₂), volatile organic compounds (VOC), particulate matter, sulphur dioxide (SO₂), hydrogen sulphide (H₂S) and carcinogenic substances such as; benz(a)pyrene, dioxin, benzene and toluene (Abdulkareem 2005; Anejionu et al. 2015; Ezeigbo et al. 2013; Ovri and Iroh 2013; Ovuakporaye et al. 2012).

5.4.2 Impacts of oil projects on the Social and Economic environment

Social impacts are considered 'changes made by an organisation or company through their activities which affects the economic and wellbeing of the populace' (Albert et al. 2018: 1056). Impacts of oil projects do not only affect the environment but also: traditions, the

local economy, culture and way of life among communities (Celestine 2003; Pegg and Nenibarini 2013). Oil projects in the Niger delta are considered partially liable for the extensive social underdevelopment which 'engrosses lack of societal amenities, physical infrastructure, piped water, schools, hospitals, and employment opportunities' despite the huge benefit of oil to the economy (Ebegbulem et al. 2013). The argument highlights the correlation between decrease in social and economic conditions with an increase in oil production. The increase in oil projects, results in the loss of sources of livelihood (farming and fishing) creating unemployment (Albert et al. 2018). The loss of employment, provides a breeding ground for the cultivation of violence, militancy, frustrations, reduction in tourism and hospitality (Okonkwo 2014). Two key impacts of oil projects within this context are on community livelihood and culture and tradition.

Community Livelihood: As highlighted earlier (see Chapter 1), the Niger delta region possesses huge natural resources, this has enabled its human inhabitants to adopt farming and fishing as a major source of livelihood (Ejiba et al. 2016; Elum et al. 2016). The Niger delta is one of the most heavily impacted oil spill sites in the world, impacting on the livelihood choices of the community. This has resulted in destruction of soil microorganisms, decreasing soil fertility and diminishing agricultural productivity (Chindah and Braide 2000). Oil spill in all its forms have a negative impact on livelihood. As highlighted by Human Rights Watch (HRW) 'a small leak can wipe out a year's food supply for a family, with it wiping out income from products sold for cash' (HRW 1999: 1). Ecosystems in the Niger delta have been wiped out by large oil spills, poisoning drinking water, sea food, fishes, water birds and animals; negatively affecting fishermen (Mendie 2014). This ensured farmers and fishermen were faced with poor harvest, resulting in increased vulnerability of their communities (Ejiba et al. 2016).

Culture and Tradition: Oil projects have had an adverse impact on cultural values and spirituality in Niger delta communities (Modibbo et al. 2014). Which has resulted in the

regression of social harmony in the communities. The oil communities have a tradition deeply rooted in nature and this has ensured the protection and preservation of the environment for generations (HRW 1999). The land and rivers surrounding these communities are not only viewed as natural resources for exploitation, but also viewed as ‘the abode of their ancestors from where they oversee their lives, it is also considered a god and revered as such’ (Feyide 1986: 3). This belief ensures the protection of the forest is ‘beyond merely the protection of a collection of trees and abode for animals’, it is a sacred possession (Pyagbara 2007: 4). These beliefs make the cutting down of trees indiscriminately without regard to their sacrosanctity and influence on the wellbeing of the community a major offence. Certain animals are considered totems³ and should not be killed, as they could be the animation of spirits (Pyagbara 2007); which if killed could bring disaster on the land. Similarly, rivers and streams apart from to be used as a source of water, are to be protected and not desecrated upon (HRW 1999). Extinction of medicinal plants and herbs that are rooted in their traditional medicine and spirituality have had significant impacts on the communities (Modibbo et al. 2014). The Niger delta inhabitants believe there is a dynamic interaction existing between humans and nature, that is sacred and should be protected (Pyagbara 2007).

5.4.3 Impacts of oil projects on Health

The direct impact of oil projects on the health of oil communities in the Niger delta have not been extensively investigated (Nriagu 2011). Oil contains many harmful compounds such as toxic metals (including vanadium, nickel, iron, aluminium, copper, lead, and cadmium), VOC’s (including benzene, toluene, ethylbenzene, and xylenes (BTEX)), polycyclic aromatic compounds (benzo[a]pyrene), and noxious gases (carbon monoxide and nitrogen oxide)

³A natural object serving among certain tribal or traditional peoples as the emblem of a clan or family and sometimes revered as its founder, ancestor or guardian

(Lim et al. 2014; Nriagu 2011). These compounds have numerous impacts on human health (see Table 5.3).

Table 5.3: Potential impacts of oil projects on communities in the Niger delta (Nriagu 2011)

Contaminants	Sources	Potential health effects
Polycyclic aromatic hydrocarbons (PAHs)	Diesel exhaust Gas flaring and venting Storage pits and ponds Conflagration of oil spills and wastes	Probable or possible carcinogens. Animal studies show reproductive effects
Metals (including arsenic, barium, cadmium, chromium, lead, mercury, selenium, zinc, and others)	Drilling muds Stimulation fluids Storage pits and ponds Produced water Gas flaring and venting Diesel exhaust	There are different potential health effects associated with each metal. Possible toxin effects include skin problems, hair loss, kidney damage, high blood pressure, increased cancer, neurological damage risk, and others
VOC's (including BTEX (benzene, toluene, ethylbenzene, and xylenes) formaldehyde, and others)	Gas flaring of natural gas Storage pits and ponds Oily wastes Diesel and natural gas Engine exhaust compressors Conflagration of oil spills and wastes	React with NO _x to form ground-level ozone and smog, which can trigger respiratory problems. Can cause health problems such as cancer
BTEX	Venting of natural gas Storage pits and ponds Produced water Dehydration	Benzene is a known carcinogen. Toluene may affect the reproductive and central nervous systems, whereas ethylbenzene and xylenes may have respiratory and neurological effects
Diesel fuel	Stimulation fluids Oil-based drilling muds Engines/heavy equipment	Both fuel and exhaust contain carcinogenic substances like benzene and PAHs
Particulate aerosols	Diesel exhaust Pits (dust from) Gas flaring and venting Conflagration of oil spills and wastes	Can be inhaled and cause health effects like respiratory ailments, aggravation of asthma and allergies, painful breathing, shortness of breath, chronic bronchitis, and premature death. May combine with other air pollutants to aggravate health problems. Some particulates, such as diesel exhaust, are carcinogenic
Sulphur oxides	Diesel and natural gas Engine exhaust	React with other chemicals to form particulate pollution, which can damage lungs and cause respiratory illness, heart conditions, and premature death
Nitrogen oxides	Compressor engines Gas flaring and venting Diesel and natural gas engine Exhaust conflagration of oil spills and wastes	React with VOCs to form ground-level ozone and smog, which can trigger respiratory problems. React with other chemicals to form particulate pollution, which can damage lungs and cause respiratory illness, heart conditions, and premature death. React with common organic chemicals to form toxins that may cause biological mutations
Carbon dioxide	Gas flaring and venting Engine exhausts Power generating plants	Greenhouse gas

Carbon monoxide	Gas flaring and venting	Can cause brain damage
Methane	Stimulation fluids Oil-based drilling muds Engines/heavy equipment's Anaerobic pits and ponds	Main concern is the explosive nature of this gas

The table above highlights some of the most dangerous effects of oil projects on human health. Some of the impacts highlighted include skin problems, hair loss, kidney damage, high blood pressure, increased cancer, neurological damage risk, respiratory ailments, aggravation of asthma and allergies, painful breathing, shortness of breath, chronic bronchitis, damage lungs and cause respiratory illness, heart conditions. These negative impacts that are usually associated with oil projects have been studied further during the case study analysis. Appropriate measures adopted by formal and informal requirements have been investigated as well (see Chapter 7).

The discussions in section (5.3.1, 5.3.2 and 5.3.3) have raised numerous negative impacts of oil projects on the physical, social and economic environment and health of oil-bearing communities. Oil projects also have a positive impact on the social and economic environment. As highlighted by communities (see Chapter 6) oil projects generate income for the proponents and the government, this has enabled the proponents to invest in welfare programs to improve the livelihood (drinking water, education, medicinal facilities and roads) of oil communities. Apart from these welfare benefits, numerous jobs are also created in communities which have oil projects.

5.5 Chapter Summary

This chapter started by discussing oil within the global context, it established that oil is spread across the major continents in the world and currently; there are more than 65,000 oil fields in existence. The chapter also highlighted the five countries with the largest oil reserves as: Venezuela (300,878bbl), Saudi Arabia (266,455bbl), Canada (169,709bbl), Iraq (142, 503bbl) and Kuwait (101, 500bbl). The chapter proceeded to oil production in Africa, within this context; it highlighted the abundance of natural resources in the continent and also highlighted some oil reserves within countries in the continent. The chapter proceeded to discuss in detail the different countries in Africa with oil reserves or currently exploring

for oil. Within the Nigerian context, the Niger delta region was highlighted as the oil hub in the country and the significance of oil to the Nigerian economy was discussed. The regulatory bodies in charge of regulating the oil sector were then established as:

- Ministry of Petroleum Resources (MPR)
- Department of Petroleum Resources (DPR)
- Nigerian National Petroleum Corporation (NNPC)

Similarly, the oil projects proponents were established as:

- Indigenous oil companies;
- Multinational oil companies.

Finally, the environmental impacts of oil projects on the physical environment, social and economic environment and health were discussed. Among their possible impacts on the physical environment included: gas flaring, vibration noise and solid waste. In the case of social and economic environment, it could impact: community livelihood and culture and tradition. While in the context of health, it could impact humans and animals.

PHASE TWO

[Empirical Phase]

CHAPTER SIX: EIA SYSTEM IN THE NIGERIAN OIL SECTOR

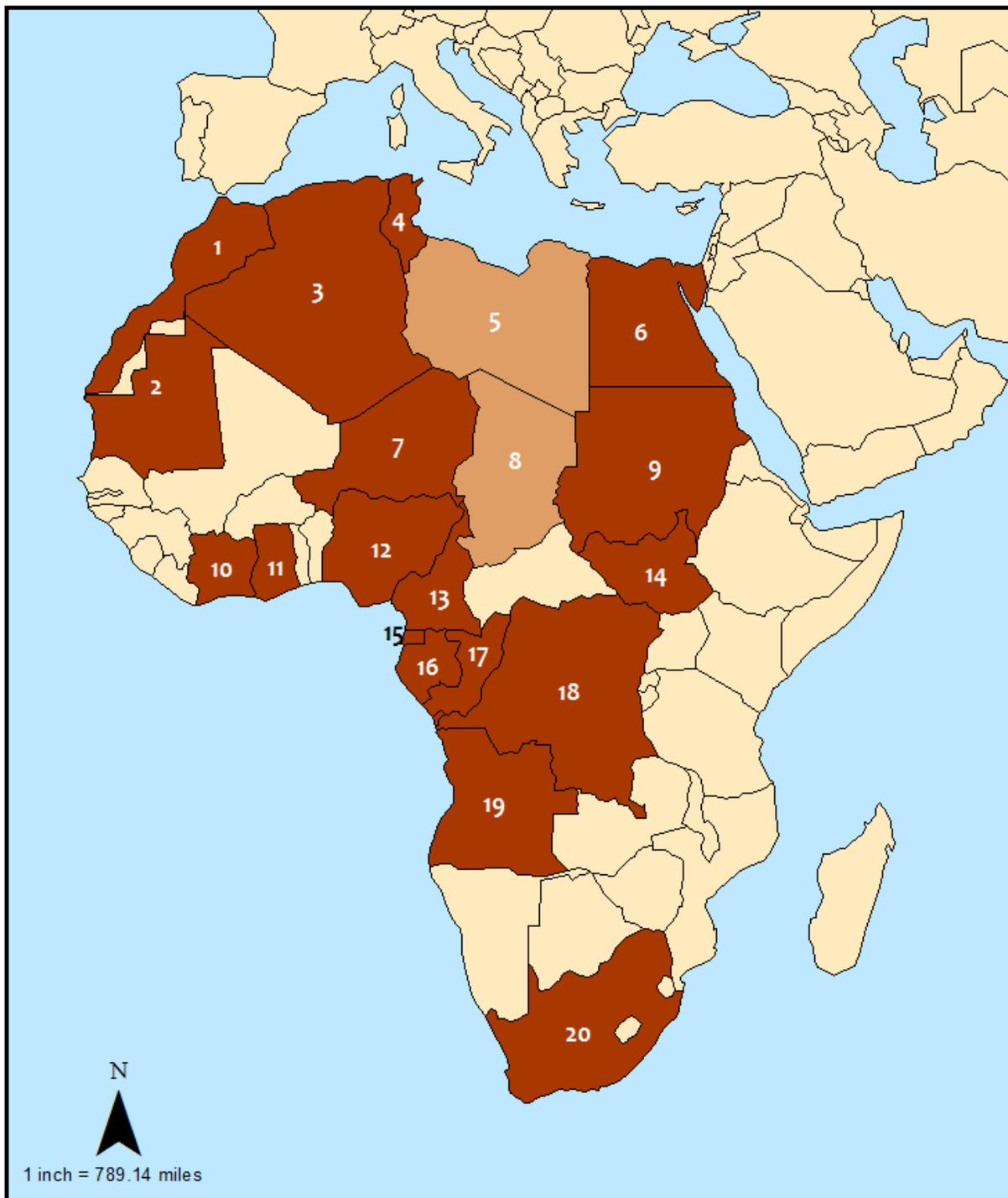
This chapter focuses on the EIA system in the Nigerian oil sector. First, it provides a broad overview of EIA systems in African oil producing countries and analyses their legislation, administration and process. The chapter proceeds to the Nigerian oil context, beginning with a focus on the evolution of environmental protection laws, then tapers into the current regulatory framework, legislation and guidelines of the EIA system in place. The chapter ends by comparing the two EIA systems in place (for the DPR and FME).

6.1 EIA systems in African oil producing countries

The increase in countries within Africa with oil reserves (see Chapter 5), has further enhanced the importance of having effective EIA systems in place. EIA in most countries was introduced in the early nineties, due to pressure from international donors and environmental disasters (Kakonge 2006). Since its introduction, EIA has spread to most countries on the continent (Campion and Essel 2013). The African Ministerial Meeting on Environment (AMME) in 1995, identified the adoption of EIA for priority attention (Kakonge 2006). This was in furtherance of Principle 17 of the United Nations Conference on Environment and Development (UNCED) (UNCED 1992). The conference recognised EIA as a key tool for environmental protection and sustainable development (Campion and Essel 2013). Subsequent to the early efforts to raise awareness in the nineties, adoption levels and evolution of EIA among countries has been divergent. A systematic review has been conducted on twenty oil producing countries in Africa (see below), which highlights the level of divergence in the adoption and evolution of EIA systems in countries on the continent.

Twenty countries (Algeria, Angola, Cameroon, Chad, Congo (Brazzaville), Congo (Kinshasa), Cote d'Ivoire (Ivory Coast), Egypt, Equatorial Guinea, Gabon, Ghana, Libya, Mauritania, Morocco, Niger, Nigeria, South Africa, Sudan, South Sudan and Tunisia) were selected based

on two criteria. First they need to be within the African continent and secondly, they need to be producing a minimum of 1000 bpd of oil per year (EIA 2014b). The aim of the review is to lay a background upon which the Nigerian EIA system will be reviewed. The review does not compare EIA systems but tries to identify common trends in the systems implemented by countries. As Hantrais (1999) has suggested, there are challenges and dangers in cross-national comparative studies because indigenous planning context in each country (e.g. political, historic, cultural and administrative structures) so different. This makes comparisons difficult because of the vast variety of approaches. Ahmad and Woods (2002) systematic evaluation criteria for EIA systems were adapted to conduct this review. The three main categories within these criteria are: EIA legislation (provisions for EIA, year of enactment, status of EIA regulation, legal provision for appeal, time limit, SEA provision), EIA administration (regulatory bodies, review committee, sectoral authority role) and EIA process (screening, scoping, alternatives, specified report content, public participation, EMP requirement, requirement for impact mitigation, experience in SEA and EIA implementation monitoring). The review highlights the prominent EIA systems within the oil producing countries in Africa.



Key

Map of Africa

Oil Country

- All countries
- Countries with an EIA
- Countries without an EIA

1 Morocco	9 Sudan	17 Rep of Congo
2 Mauritania	10 Ivory Coast	18 Dem Rep of Congo
3 Algeria	11 Ghana	19 Angola
4 Tunisia	12 Nigeria	20 South Africa
5 Libya	13 Cameroon	
6 Egypt	14 South Sudan	
7 Niger	15 Equatorial Guinea	
8 Chad	16 Gabon	

Figure 6.1: Oil producing countries in Africa with and without an EIA (source: author)

6.1.1 EIA legislation in African oil producing countries

In reviewing EIA legislations across the oil producing countries (see Table 6.1), it was noticed that most countries have a legislation in place. However, the legislation varies based on year of enactment, status, legal provision for appeal, time limit for each stage and provision for SEA.

Year of enactment and status: The first African oil producing country to enact an enabling EIA legislation is Algeria (1983), followed by Congo Brazzaville in 1986 and Tunisia in 1988 (see Table 6.1). Most countries in the region introduced EIA in the 1990s with fifteen countries enacting legislations and formal procedures. The remaining countries have either drafted legislation or lack them completely.

Provision for appeal: In the case of legal provision for appeal, these were specified in the legislation of six countries: Angola, Cameroon, Egypt, Gabon, Ghana and South Africa. Provision for appeal increases the acceptance and execution of EIA studies, it is important for appeal to be available in any context to portray that the process is not a barrier against development.

Time limit: Specification of time limits for the submission of each stage of the EIA process by the proponent and for the decision on the EIA final document by the decision maker is highly important. In this context, seven countries have specified time limits regarding issuing a decision with respect to final EIA document submitted by the proponent. While, six countries specified time limits for each stage of the EIA process.

Provision for SEA: Coverage of SEA provisions across the countries reviewed was low. Only three countries: Congo Brazzaville, Ghana and Sudan have provisions for SEA.

6.1.2 EIA administrations in African oil producing countries

In the case of EIA administration in African oil producing countries, the reviewed criteria included; presence of regulatory bodies, review committees and sectoral authority (see Table 6.2).

Regulatory body: All African oil producing countries with enacted or draft legislation have a body or bodies in place to regulate the EIA process (see Table 6.2). Independent bodies with adequate power to enforce EIA legislation and procedures were identified in eleven countries. Multiple bodies with EIA responsibilities were also found in seven countries (Algeria, Angola, Ivory Coast, Niger, Nigeria, South Africa and Sudan). These could either be based on a tiered level system or at the same level. The form of governance structure has an influence on if a single tiered or multiple tiered structure is adopted. For example, Nigeria has a three-tiered structure of governance (federal, state and local government). As such roles exist within the EIA system for all three tiers.

Review committee: Committees for reviewing EIA reports were found in fifteen countries, with the exception of Angola. While no information was available on four countries (Chad, Equatorial Guinea, Gabon and Libya).

Sectoral authority role: Eleven countries, along with Nigeria, are unique in specifying responsibilities of sectoral authorities. Coordination between competent authorities (e.g. FME) and other regulatory bodies (e.g. DPR) are generally weak. This may be accredited to lack of clarity on their roles or weak coordination between bodies during the EIA process. Defining roles and duties of competent authority and the sectoral authorities, may enhance collaboration between the parties involved.

6.1.3 EIA process in African oil producing countries

The criteria reviewed for the EIA process in African oil producing countries included; provision for screening, scoping, alternatives, implementation monitoring, and specified report content, public participation, EMP, impact mitigation and experience of SEA (see Table 5).

Screening: Most countries reviewed have a screening provision in place, with only Sudan not having one within its process. No information was available on Chad, Equatorial Guinea and Libya (see Table 5.6). In most screening stages reviewed, the use of lists and thresholds remains the most popular approach adopted.

Scoping: The large majority of the countries reviewed have a scoping component available, ten countries require the proponent to submit a scoping report which is assessed, and feedback provided. In five countries (Egypt, Morocco, Niger, South Sudan and Tunisia) legislation requires the regulator to specify the scope of the EIA either through guidelines, or in collaboration with the proponent. The screening and scoping methods identified were similar to generic screening and scoping methods adopted in most jurisdictions.

Alternatives: Nine countries do not have any legal obligation, within law, for the consideration of alternative designs, layout or project site. Seven countries were found to have provision for alternative considerations. Alternative considerations increase the possibility of a positive EIA application approval.

Specified report content: Fifteen countries were found to have requirement in their regulation or guidelines. Equatorial Guinea and Gabon were found to have no specific requirement, and no information was available on Chad, Libya and South Sudan.

Public participation: Public participation exists in thirteen countries; five countries lacked this provision. Public participation process is important to encourage transparency and acquire legitimacy from host communities on the project being proposed.

Requirements for Environmental Management Plan: Requirements for EMP are stated in eleven countries as part of the requirements of their EIA reports. However, nine countries were found to either not to have an EMP requirement or no information was available.

Impact mitigation: Impact mitigation exists in seventeen countries, with no information available on three. Impact mitigation addresses possible effects of a project on the environment. El-Fadl and El-Fadel (2004: 565) highlighted four approaches adopted in mitigating effects: '(1) direct prevention by avoiding sensitive areas, (2) reduction by adjusting work schedules, pollution control devices, changes in design, etc., (3) restoration and remediation measures for example by regarding, replanting and site clean-ups, and (4) compensation in the form financial or in-kind payments to affected people'.

Experience of Strategic Environmental Assessment: A majority of the countries reviewed do not have provisions for SEA within their legislations, and the ones that do; SEA is still relatively new within their systems. As such, only two countries (Ghana and South Africa) were found to have existing content on SEA.

Implementation monitoring: Thirteen countries have mandatory implementation monitoring within their regulation, monitoring validates the process of an EIA and ensures the positives of conducting an EIA are sustained. Seven countries either do not have an implementation monitoring requirement or no information was available.

6.1.4 Weaknesses of African oil producing countries

The review highlighted general weaknesses of EIA systems of African oil producing countries and they include:

- A lack of legal requirement for appeal in most jurisdictions

- A general deficiency in allocating specific time limits to stages of the EIA process, in most cases; time limits exist only with respect to determining a final decision
- Absence of formal provisions for SEA in the majority of the countries reviewed
- Lack of specification of sectoral responsibilities and weak coordination where roles have been defined between bodies
- In most jurisdictions, legislation on provision for alternatives is non-existent
- Provision for public participation is still lacking in legislations of certain contexts
- Absence of requirements for EMPs is a major weakness within legislations
- SEA experience is lacking in most jurisdictions; however, this is understandable; considering most contexts lack a SEA requirement within their legislations
- Impact monitoring is still lacking in some countries reviewed

The review identified Egypt, Ghana and South Africa, as jurisdictions with comprehensive and robust EIA systems in place. The major differences between these systems compared to those of the other 17 countries are: the presence of provision for appeals and time limits at every stage of the EIA process.

Understanding the overall context of EIA systems in the African oil producing countries, provides a solid foundation for the evaluation of the Nigerian EIA system. The challenges identified inhibiting their EIA systems in general, help in exploring the characteristics of the Nigerian system in detail.

6.2 EIA system in Nigeria

The evolution of environmental protection laws in Nigeria will be divided into five periods, these periods are based on timelines within the political history of the country: 1900-1959 (British colonial period), 1960-1979 (first republic), 1979-1983 (second republic), 1984-1998 (third republic) and 1999-to date (fourth republic). Nigeria's drive to protect the

environment can be traced to the second half of the 1900's pre-independence. Figure 6.2 shows the evolution of environmental protection in Nigeria.

Years 1900-1959: The first environmental related law were; section 246 of the criminal code of 1958, established to control household burial and the public health act of 1958 established to control the spread of diseases, slaughtering of animals and disposal of night soil and refuse.

1960-1979: A committee consisting of several Ministries was set up in 1964 to scrutinize the issues of water pollution and formulate water Pollution Act for the federation. Simultaneously the Department of Petroleum Resources (DPR) based in the Ministry of Petroleum Resources (MPR) with the mandate to supervise, explore, exploit and all activities regarding oil production and transportation enacted a Petroleum Act in 1969 (Anayo 2002; Ogbodo 2009). The petroleum act included prevention of environmental pollution in air, water and soil. In 1970 the National council of Health's expert committee on Environmental Health attempted to establish a sanitary inspectorate in the Ministry of Health by reviewing proposals and recommendations on the subject matter. Scientific criteria and standards on toxic wastes and pollution levels were absent in the early years since independence. In the 1970's, agitations for better environmental living conditions and the neglect of government action within the Oil producing Niger delta region of Nigeria heightened (Chokor 1993).

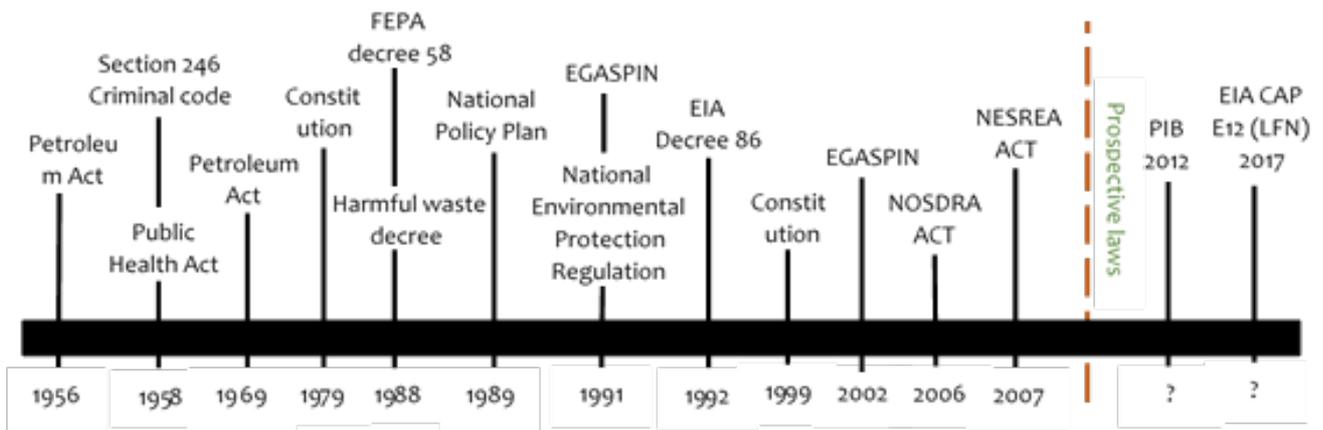


Figure 6.2: Environmental regulation history in Nigeria 1956 to date (source: author)

1979-1983: A Federal Constitution was enacted in 1979, it gave powers to the local councils to enforce environmental hygiene emphasizing on refuse clearance, and the management of liquid and solid wastes in abattoirs, residential homes and streets (Ola 1984).

1984-1998: In 1987, an illegal vessel containing toxic waste was dumped in Koko, Bendel state (Edo state). In reaction, the federal government promulgated the Harmful Waste decree 1988 and initiated the application of EIA in all major developmental projects. The FEPA Decree 58, which was later converted to the Federal Ministry of Environment (FME) in 1999; was established in 1988. With the establishment of FEPA, it became the key regulator of environmental issues in Nigeria. Provision was also made for the set-up of States Environmental Protection Agencies (SEPA) and the Local Government Authority (LGA) environmental departments. Power to monitor and enforce to a certain level were also delegated to States and LGA environmental departments. FEPA developed the National Policy Plan (NPP) in 1989 with the aim of achieving sustainable development. Sectorial guidelines were then developed by FEPA including the National Environmental Protection Regulation (NEPR) in 1991 to decrease pollution in waste generating industries. This regulation gave FEPA the right to demand an EIA report from a proponent if the need arises. The policy also enshrined environmental auditing in Nigerian industries. The DPR in 1991 issued an Environmental Guidelines and Standards for the Petroleum Industry in Nigeria

(EGASPIN) to focus on environmental protection of the oil industry, this became the procedural document implemented by DPR in the oil sector. EIA Decree 86 (1992) was promulgated, making the submission of EIA to FEPA mandatory before any development or activity under the mandatory list can take place.

1999- To date: a new constitution was enacted in 1999, section 20, 33 and 34 referred to citizen's right to environmental protection and human wellbeing. In 2002, DPR published an updated guideline to govern the environment within which oil production occurs (EGASPIN 2002). The guidelines provided rules to reduce environmental pollution and enforce environmental monitoring. Thus, the DPR was tasked with conducting health and safety checks and environmental audit of oil company activities. The National Oil Spill Detection and Response Agency (NOSDRA) was set up in 2006 and the National Environmental Standards and Regulation Enforcement Agency (NESREA) was formed in 2007 as an agency under FME. Section 7 of its Act:

'Provides authority to ensure compliance with environmental laws, local and international, on environmental sanitation and pollution prevention and control through monitor and regulatory measures' (NESREA 2007: 1).

The Petroleum Industry Bill (PIB) 2012 and EIA CAP E12 (LFN) 2017 has been in the works for several years, however not yet passed due to rancour in agreeing to the terms of the Act's between the legislature and the executive arm of government. The EIA CAP E12 (LFN) 2018 is expected to have a new guideline on Strategic Environmental Assessment (SEA).

6.2.1 Administrative structure

Numerous Ministries Departments and Agencies (MDA) at the federal, state and local government level have the constitutional authority to manage the environment in Nigeria (Eneh 2011). At the federal level, the FME and the DPR are the ministries with environmental responsibilities within their roles (see Figure 5.4). The FME has four agencies, while the MPR

has one department with varying environmental roles. At the state level, the State Ministry of Environment (SME) and the State Ministry of Energy and Natural Resources (SMENR) have the mandate regarding environmental responsibilities (see Figure 5.4). Similar to the federal level, agencies under these ministries (Environmental Protection Agency (EPA) and Protection Department (PD)) are utilised in effecting these responsibilities. The environmental department and the energy department at the LGA level, also play a participatory role in the protection of the environment. As a result of these multiple bodies and their overlapping functions, Figure 6.2 clearly shows a regulatory framework ripe for confusion and rivalry at all levels of governance, causing inefficiencies rather than a harmonious and complementary environment (Ajai 2010; Ambituuni 2014; Eneh 2011). Within the confines of this thesis, it is pertinent to discuss the laws and guidelines utilised by the two bodies at the federal level (FME and DPR), with responsibilities of receiving, approving and regulating the EIA process of oil projects in Nigeria.

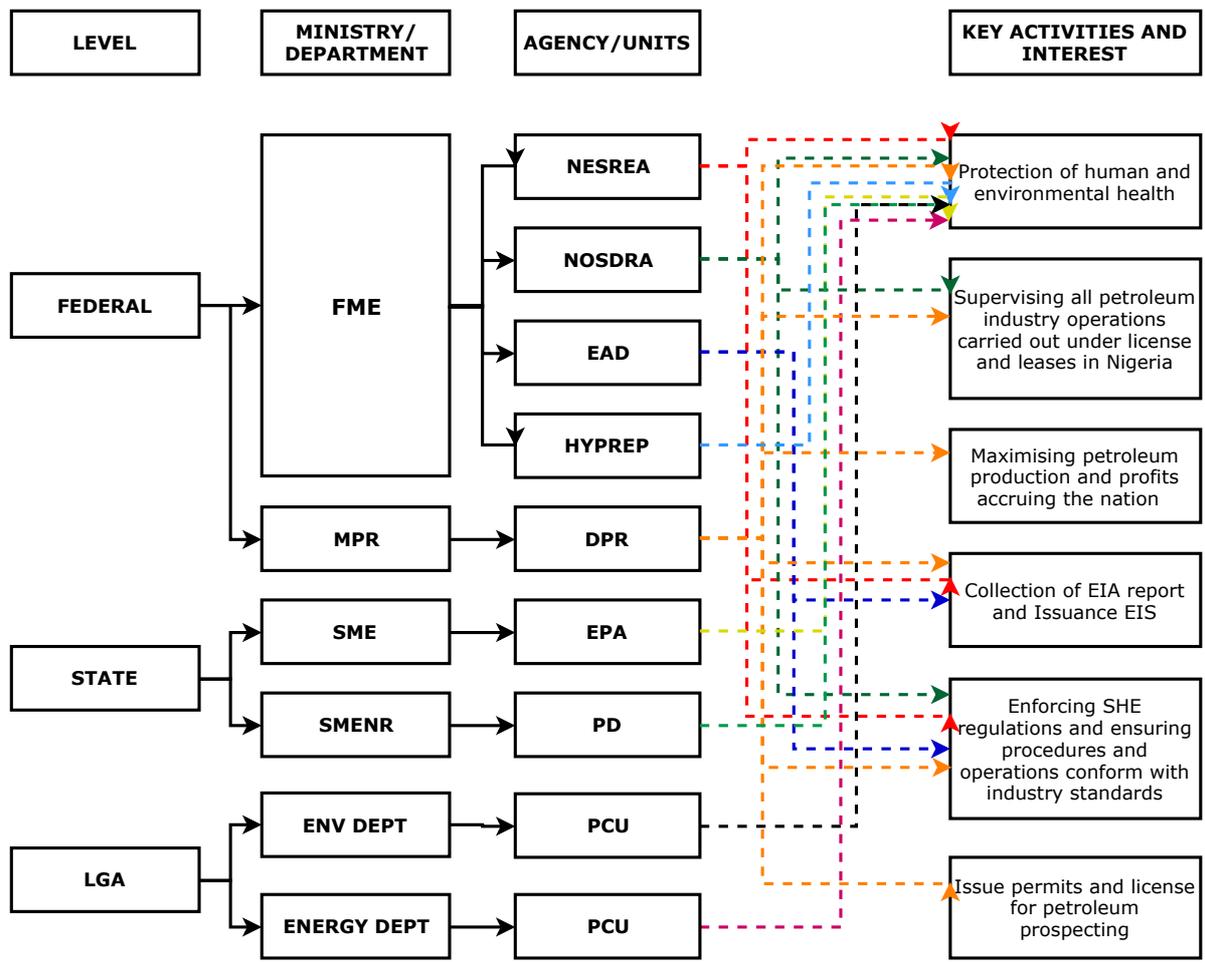


Figure 6.3: Interactions between the MDA's and the different stratus of governance in the oil sector of Nigeria (source: author)

6.2.2 EIA legislation and guidelines

The legislations and guidelines for EIA in Nigeria, enshrines the FME and the DPR are the two bodies governing the EIA processes within the oil sector. The legislation implemented is EIA Decree No. 86 of 1992 and the Petroleum Act of 1969, the guidelines are EIA procedural guidelines 1995 and the EGASPIN in 2002 respectively.

Environmental Impact Assessment Decree No. 86 of 1992

Environmental Impact Assessment Decree No. 86 of 1992, is the principal legislation in Nigeria governing all development projects within all sectors (FRN 1992). It mandates the FGN to set rules, guidelines and standards to protect the environment from likely or significant effects of a prospective project. The Decree does not require an EIA for all prospective projects, rather projects requiring an EIA are determined based on assessment

by the FGN. The assessment places projects into three categories, based on six criteria (project magnitude, extent or scope, duration and frequency, associated risks, significance of impacts, and availability of mitigation measures for associated and potential impacts identified) (FRN 1992). The three categories of projects (see Figure 6.3) are:

Category 1: Consists of projects where an EIA is mandatory;

Category 2: The decree states that projects listed in category 2, but located in environmentally sensitive areas (ESAs), will be assigned to category 1 and therefore subject to full-scale EIA;

Category 3: These projects are essentially programs. These programs shall be subject to full EIA process if they involve physical outputs such as buildings and ancillary facilities.

Under the 1992 regulations, the FME through the Environmental Assessment Department (EAD) (see Figure 6.2), acts as the point of call for the project proponent, the final EIA report is also submitted to the EAD for regulatory approval. The EAD is involved at every stage of the EIA report preparation, liaising with the project proponents.

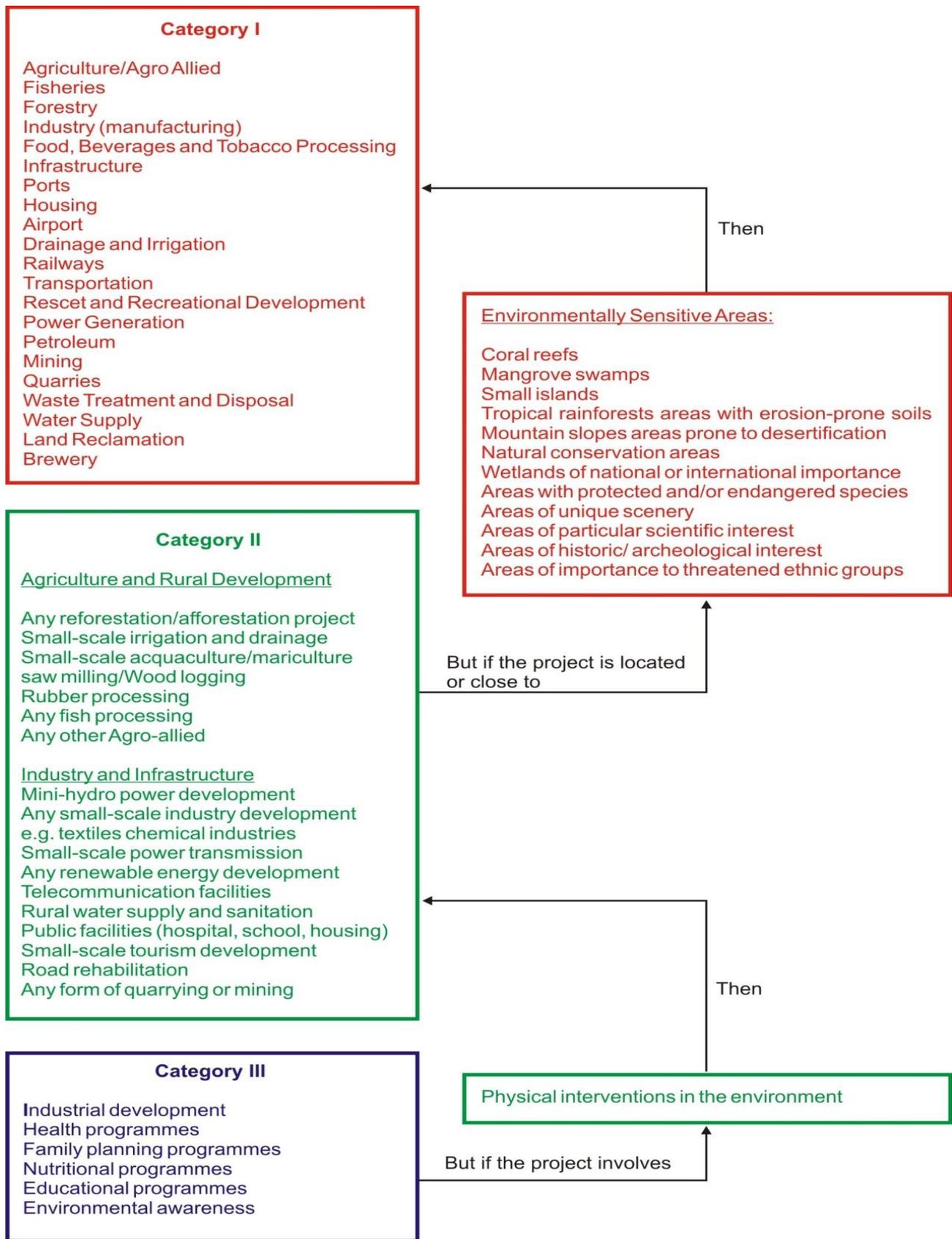


Figure 6.4: Three categories of projects determining need for an EIA (FEPA 1994)

This process is same for government and private sector led development projects, as long as the intended project falls under a mandatory category (see Figure 6.3). The EAD has also been empowered to exempt projects from the EIA process, based on the following

criteria's:

- a. 'In the opinion of EAD, the projects are in the list of projects where the president or the council is of the opinion that the environmental effects of the project are likely to be minimal;
- b. The project is to be carried out during a national emergency for which temporary measures have been taken by the government;
- c. The project is to be carried out in response to circumstances that in the opinion of the agency, the project is in the interest of public health or safety' (FRN 1992: 5).

This provides a loophole for certain projects requiring an EIA, to be exempted from going through the EIA project. This especially happens in projects initiated by the FGN or where it has strong interests.

Procedure for implementation of EIA Decree No. 86 of 1992

In order to obtain an EIS, the project proponent is expected to take the following steps:

Report preparation: The first requirement for a proponent is to prepare an EIA report. In the course of preparing an EIA report of a proposed project, both the primary and secondary stakeholders should be consulted. Among the objectives of such consultation is to identify the concerns of stakeholders regarding the impacts of the proposed project in order to address such issues during the actual study and to reflect such comments in the projects. The consultation also provides an opportunity identify other guidelines that need to be consulted. Other guidelines which may need to be consulted for an oil project could include: National Guidelines for spilled oil fingerprinting (Act 14 of 1999), National Guidelines on Waste Disposal through underground injection (1999), World Health Organization (WHO) Health and Safety Components of EIA (1987) and other National Laws and Regulations (National Inland Waterways Authority Act No. 13 of 1997). Once this is completed, the project is expected to take the following steps (see Figure 6.4).

Initial Environmental Evaluation (IEE): A draft EIA report is to be submitted to the EAD under the FME in line with EIA guidelines by a proponent which is evaluated to ascertain the type of review required (see Figure 5.6). The review adopted by the regulator will be dependent on the nature, scope, anticipated impact, risks that might arise during project planning and implementation (FEPA 1995). Based on this review, the project could be classified as a mandatory project, other project, classified project or excluded project (see Figure 6.4). This review is conducted using the categories above (see Figure 6.3). Mandatory projects are either directed for a preliminary assessment (where physical inspection is conducted) or directed to the scoping stage (see Figure 6.4). Projects in categories II and III (see Figure 6.3) are directed to screening, where it is determined if an EIA is required or not.

Draft EIA Report: This is subjected to an in-house review, to determine to what extent issues raised in the Terms of Reference (TOR), have been addressed and if the draft EIA reports are to go for a public hearing, review panel or mediation (see Figure 6.4). A draft EIA report, is expected to include: 'a description of the proposed activities, potential affected environment, including specific information necessary to identify and assess the environmental effect of the proposed activities, a description of the practical activities, as appropriate, an assessment of the likely or potential environmental impacts of the proposed activity and the alternatives, including the direct or indirect cumulative, short-term and long-term effects, an identification and description of measures available to mitigate adverse environmental impacts of proposed activity and assessment of those measures, an indication of gaps in knowledge and uncertainty which may be encountered in computing the required information, an indication of whether the environment of any other State or local government area or areas outside Nigeria is likely to be affected by the proposed activity or its alternatives, a brief and non-technical summary of the information provided under paragraphs (a) to (g) of this section' (FRN 1992: 4).

Public Hearing (public display): Section 25 of the EIA Act (FRN 1992) provides members of the public an avenue to participate in the EIA process, by submitting comments. EIA reports are to be placed in strategic locations for 21 working day, such places could include: LGA headquarters, where a project is located, SME or EPA's, the FMEs zonal offices and liaison offices. The locations of EIA report display, and public hearings are usually published in national and relevant state daily newspapers. Comments received from the display venues are forwarded to the FME headquarters for collation and evaluation preparatory to the review panel meeting for the project, as shown by the dashed line (see Figure 6.4).

Mediation: Certain projects are likely to have a significant adverse effect that are immitigable or raise high level of public concern, such a project can be referred to FME for subsequent referral to mediation (FRN 1992). To set up mediation, a ministerial council set up by FME would have been convinced that the parties involved are willing to participate in the mediation and abide by its decisions (FRN 1992). The result of the mediation is submitted to the review panel, to be deliberated on as shown by the dashed lines (see Figure 6.5).

Review Panel: Once either mediation or hearing is concluded, FME may set up a review panel to review the draft EIA report depending on the sensitivity or significance of the comments received (FRN 1992). The guidelines for setting up this review panel are based on the type of project, scope and ecosystem to be affected (FRN 1995). This is vague, as the guidelines leave a lot of space for personal opinions during their interpretation. The chairman of the LGA the project is located in and state commissioner of environment must be included in the panel (FRN 1995). In most states in Nigeria, LGA elections are not conducted; as such no LGA chairman exists. Such review panel meetings are to be held in public, to encourage stakeholders to utilize this opportunity to put forward their views and concerns for consideration (FRN 1995). This tends not to be the case, as the review panels are not held at the locations of the projects. The review panel produces a review report (see Figure 6.4), which is presented to the proponent recommending changes to the draft EIA report.

EIA approval: The proponent submits a final EIA report with the changes highlighted in the review report (see Figure 6.4) to the FME. The FME may decide to set a number of conditions for the approval of the implementation of the project. This approval is accompanied with an Environmental Impact Statement (EIS); it usually includes an order that mitigation measures highlighted in the project's EIA report shall be complied with.

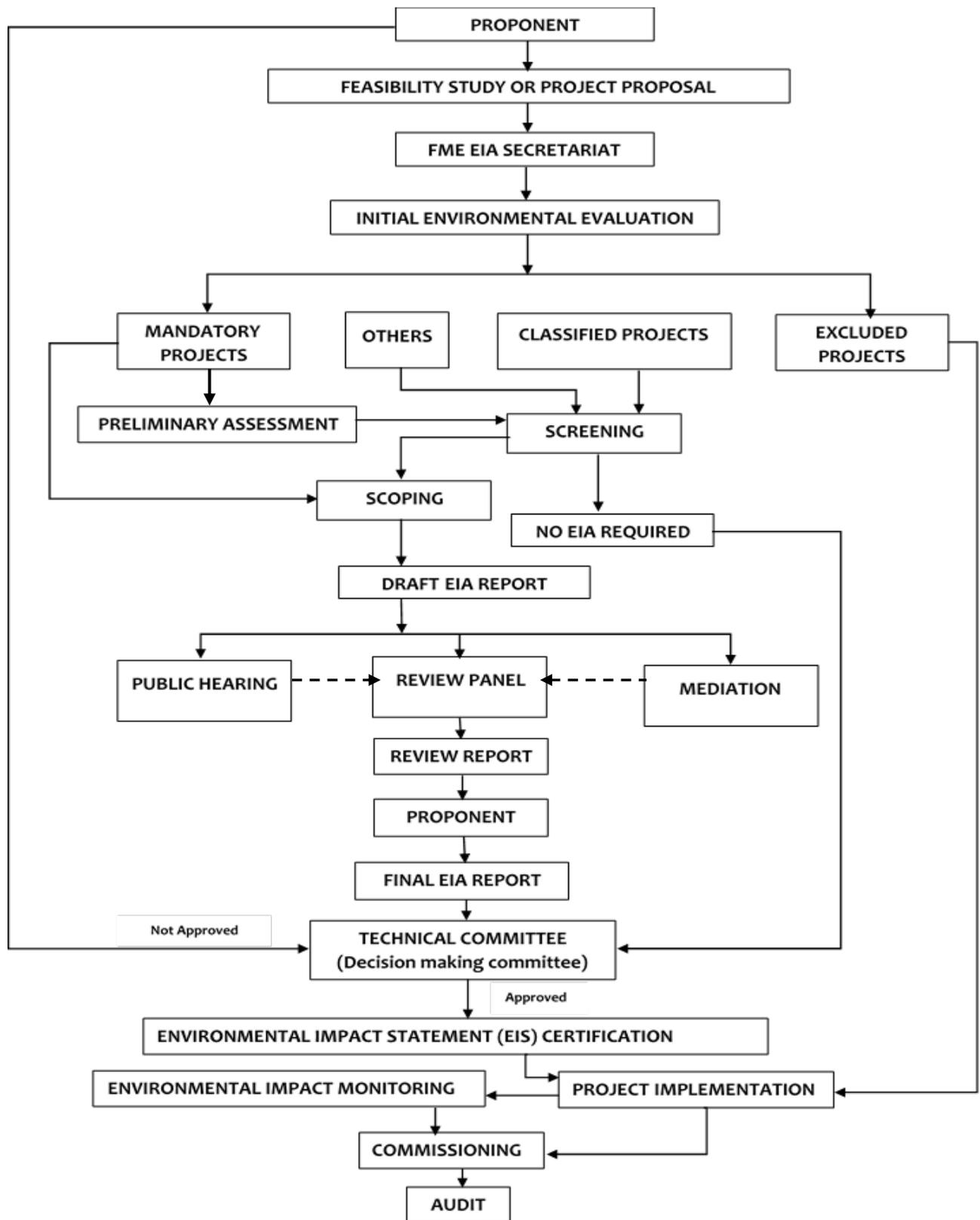


Figure 6.5: Adapted flowchart showing EIA procedures in Nigeria (FRN 1995)

Impact Mitigation Monitoring (IMM): The legal requirement for IMM in the EIA process are stipulated in section 16 (c), 17 (2) (c), 37 (c), (1), 40 (1) (a) (2), 41(1) and 41(2) of the EIA Act as well as Section 11 of the EIA procedural guideline (FRN 1992, 1995). The Environmental

Impact Monitoring (EIM) is designed to monitor the EMP and concerns during project operations. It is also designed to assess the extent to which conditions contained in an EIA report are paralleled during the various phases of project development and operations. The degree of effectiveness of mitigation measures recommended in an EIA report are assessed by conducting IMM. Relevant documents, in house monitoring records, project implementation schedules, as well as other documents are reviewed and verified to conduct IMM.

Petroleum Act of 1969

In the case of the DPR, the Petroleum Act 1969 is the major legislation governing the EIA process in place. The Petroleum Act was passed in 1969 to provide for the exploration of petroleum from the continental shelf and territorial waters of Nigeria (FRN 1969). Similar to the Nigerian Mineral and Mining Act 2007, The Act vests the ownership of all offshore and onshore revenue generated from petroleum resources to FGN. The Act also empowers the Minister of MPR to grant oil exploration, prospecting, mining and refining licenses. As the principal legislation which governs crude oil exploration and exploitation in Nigeria, the Act makes minimal provision for possible environmental consequences of these economic activities. The Act does not consider prevention of atmospheric and water pollution crucial, rather it leaves it at the discretion of the Minister. Noticeably missing among the Act, provisions is a provision addressing land pollution and contamination as a possible impact of OML. Although this is the case, the petroleum (drilling and production) regulations of 1969 were enacted by the minister of MPR. Section 25 and 43 (subsection 4) of the regulation stipulates:

‘where any pollution occurs or has occurred, the licensee of the facility must take immediate steps to control and, if possible, end it’ (FRN 1969: 34).

This provision mandates the proponent to take action on any pollution that occurs within the domain of their projects. But does not require the polluter to clean up the pollution and restore the environment to the state before the pollution.

Nigeria relies heavily on petroleum resources, being a mono economy. This has made the petroleum sector a sacred territory, with its own regulations that are only subject to the DPR. The need for environmental provisions was not recognized in the petroleum Act 1969 judging from the absence of a clear provisions aimed at the environmental management, conservation and sustainable use of natural resources. The dearth of such deliberate instruments naturally signifies the absence of an institution or agency charged with the task of protecting and developing the environment.

EGASPIN procedural guideline 2002

The EGASPIN describes environmental quality control guidelines that cover oil exploration, production operations, hydrocarbon processing, transportation, permits, sanctions, and pollution abatement technologies (DPR 2002: 11). Specific to environmental management, the EGASPIN requires the proponent to ‘institute planned and integrated environmental management practices, aimed at ensuring that unforeseen, identified and unidentified environmental issues are contained and brought to an acceptable minimum’ (DPR 2002: 11). The environmental abatement procedure of EGASPIN provides two approaches depending on the situation to be examined; an Environmental Evaluation (Post-impact) Report (EER) which appraises the extent of damage already caused by oil exploration and exploitation to the environment, and the EIA report to evaluate the potential impact of proposed projects or facilities. This guideline requires EIA reports to be presented when seeking for a petroleum exploration license. The law also gives DPR the authority to monitor oil sites to ensure environmental issues are contained and brought to a minimum. The law goes further to mention ‘an EIA report shall accompany the application for environmental permit for

seismic activities' (DPR 2002: 11). The guideline requires the following projects to go through an EIA process:

- 'Seismic operations
- Oil and gas field developments for onshore, near-shore, offshore and deep offshore development (well drilling, construction of crude oil production, tank farms and terminal facilities including floating production, storage and offloading vessels
- Laying of crude oil and gas delivery lines, flow lines, and pipelines in cumulative excess of 20 km in length and/or as determined by the Director of DPR
- Hydrocarbon processing facilities such as oil refineries and petrochemicals, liquefied natural gas, blending plants, and product filling stations (combined capacity above 20,000 liters)
- Construction of product depots with combined capacity
- Construction of waste treatment and/or disposal facilities (waste water treatment plant, incineration process above 300 kg per hour and engineered sanitary land filling);
- And dredging activities greater than 500 m³' (DPR 2002: 133).

The guideline also requires the proponent to provide access for 'the director of petroleum resources or his accredited representative, at all reasonable times, to enter, inspect, take samples and/or analyse such samples using the operator's equipment to ascertain whether these conditions have been complied with' (DPR 2002: 17). This represents second party follow-up conducted by the regulator. The steps involved in the EIA procedure under EGASPIN have been highlighted below (see Figure 6.5):

Project Conceptualization: The proponent is expected to conceptualize the project and submit a proposal to the DPR.

Environmental Screening Report (ESR): An initial assessment /environmental screening and scoping of significant issues. Carried out during concept selection studies by the initiator and DPR. Screening outcome influences choice of concept.

Preliminary Environmental Impact Assessment Report (PEIAR): Preliminary assessment of impacts including detailed screening by the project initiator, DPR and other stakeholders for potential significant and adverse environmental effects.

Draft EIA Report: This shall be prepared by the initiator and submitted to DPR for review at the end of project conceptual design and shall form the basis for approval of the detailed engineering design by DPR. Including mitigation measures.

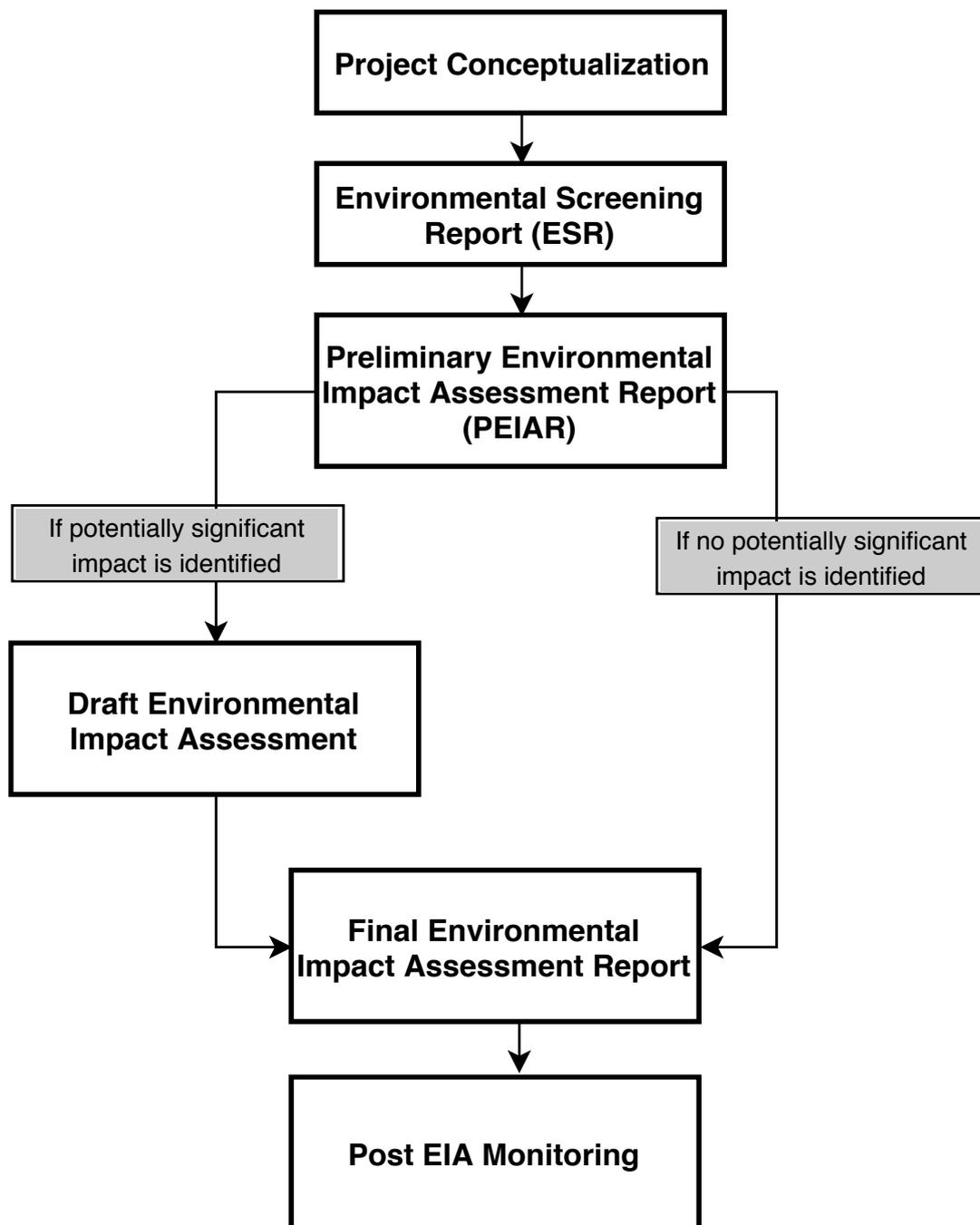


Figure 6.6: Flowchart showing EIA procedure in Nigeria under EGASPIN (DPR 2002)

Final EIA Report: Prepared by the initiator and submitted to the director of DPR prior to the commencement of any construction activities. Includes implementation of mitigation measures, Post EIA monitoring and post-auditing program.

Post EIA Monitoring: Quarterly reports are to be submitted to the DPR, with yearly annual visits to the project site. The EIA approval might state extra conditions required.

6.2.3 FME vs DPR's EIA procedure

The EIA system in the Nigerian oil sector is similar to that of some of the other African oil producing countries, it is one of the twelve countries with sectoral authority (DPR) involvement in the EIA procedure (see 6.1.2). Similarities and differences exist between the two systems within the oil sector. Table 6.4 below highlights similarities and differences between the two EIA systems in place.

Table 6.4: Similarities and differences between DPR and FME's EIA system

Procedural guideline for EIA Decree No. 86 of 1992 (FME)	EGASPIN procedural guideline 2002 (DPR)
Report preparation	Project Conceptualization
Initial Environmental Evaluation (IEE)	Environmental Screening Report (ESR)
Draft EIA Report	Preliminary EIA Report
Public Hearing (public display), Mediation, Review Panel	Draft EIA Report
EIA approval	Final EIA Report
Impact Mitigation Monitoring (IMM)	Post EIA Monitoring

As highlighted in Table 6.4, the proponent initiates the process in both instances; in the case of FME, it starts with a feasibility study or project proposal, while for the DPR; a proposal on project execution is to be submitted. In both processes, screening is required; For the FME, it is used to determine if the project belongs to the EIA mandatory category, while for the DPR; it is used to determine choice of concept for the project. A draft EIA report and a preliminary EIA report are required to be submitted to the FME and DPR respectively. In the case of the DPR, if no potential significant impact is identified; the project becomes the final EIA report and is approved. While if potential impacts are identified, it is considered a draft and consultation is conducted between the regulator and the proponent prior to submission of a final EIA report and approval or rejection. In the case of FME, the draft EIA report is subjected to either a direct panel review, mediation or public hearing prior to a panel review. Oil projects being on the mandatory list are majorly subjected to public hearing prior to a

panel review. This is a major point of deviation for the procedure adopted by the DPR, where there is no provision for either public hearing, mediation or a panel review. The EIA final report is approved or rejected by a technical committee in the case of the FME, there is no evidence a technical committee is set in the case of the DPR. Requirements for EIA monitoring exists in both the DPR and the FME procedure, in the case of the FME; it is called compliance monitoring and impact mitigation monitoring. While in the case of DPR, it is called post EIA monitoring.

From the FME and the DPR's EIA procedures, it is evident that the EIA procedures were designed for different purposes. The procedure adopted by the DPR is strictly for oil projects, while the FME EIA procedure covers all sectors of the country including oil. Importantly, it is compulsory for proponents to comply with the two EIA procedures. This raises questions with respect to the impact of having two divergent EIA procedures. This question was included in the 'good practice criteria' (see Chapter 2).

6.3 Chapter Summary

This chapter started by focusing on EIA systems in African oil producing countries. It utilised the geographical location of the country (must be in the African continent) and barrels of oil exported daily (minimum of 1000 bpd), in selecting countries to include in the review. Twenty countries were identified as suitable to participate in this review: Morocco, Mauritania, Algeria, Tunisia, Egypt, Libya, Niger, Chad, Sudan, Ivory Coast, Ghana, Nigeria, Cameroon, South Sudan, Equatorial Guinea, Gabon, Republic of Congo, Democratic republic of Congo, Angola and South Africa.

The criteria developed by Ahmad and Wood (2002) in reviewing EIA systems in Egypt, Turkey and Tunisia were adapted and utilised for this review. The criteria had three categories:

- EIA legislation;
- EIA administration;
- EIA process.

Based on these categories above, the EIA systems of the countries were reviewed and weaknesses of the EIA systems in African oil producing countries where identified to include:

- A lack of legal requirement for appeal in most jurisdictions;
- A general deficiency in allocating specific time limits to stages of the EIA process, in

- most cases; time limits exist only with respect to determining a final decision;
- Absence of formal provisions for SEA in majority of the countries reviewed;
- Lack of specification of sectoral responsibilities and weak coordination where roles have been defined between bodies;
- In most jurisdictions, legislation on provision for alternatives are non-existent;
- Provision for public participation is still lacking in legislations of certain contexts;
- Absence of requirements for EMP's is a major weakness within legislations;
- SEA experience is lacking in most jurisdictions, but this is understandable; considering more contexts lack a SEA requirement within their legislations;
- Impact monitoring is still lacking in some countries reviewed.

The chapter proceeded to delve into the Nigerian oil context. Within the Nigerian context, the evolution of environmental protection laws were discussed along five periods in the country's political history; 1900-1959 (British period), 1960-1979 (first republic), 1979-1983 (second republic), 1984-1998 (third republic) and 1999-to date (fourth republic).

The current day regulatory framework was then discussed along the federal, state and local government levels. The two major bodies in charge of regulating EIA within the Nigerian oil sector (Department of Petroleum Resources and Federal Ministry of Environment) were identified. In each case, the legislation and guidelines were highlighted and discussed. For the DPR (Petroleum Act of 1969 and EGASPIN 2002) and the FME (Decree No. 86 of 1992 and EIA procedural guidelines 1995). The chapter ends by comparing the EIA system of the DPR against that of the FME.

CHAPTER SEVEN: EIA FOLLOW-UP: PERCEPTIONS IN THE OIL SECTOR

This chapter focusses on the analysis of the survey and semi-structured interviews conducted during this thesis and is divided into four sections. The first section identifies participating stakeholders. The second section is an overview of EIA follow-up in the Nigerian oil sector; based on the results of the survey. Emerging issues from the overview are presented in the next section. The fourth section presents the results of the analysed interviews, based on the categories of the good practice criteria.

7.1 Participatory stakeholders

Sixty-four stakeholders answered the questionnaires and were interviewed as part of the research, with a breakdown as follows: survey (n=64) (see Chapter 2), semi-structured interviews (n=64) (see Chapter 2), with a further breakdown of stakeholder groups: regulators (REGF and REGD) (n=6), proponents (PRMOC and PRIOC) (n=17), community members (COM) (n=30), community experts (CEXP) (n=2) and consultants (CON) (n=9). These interviewees represented organizations and stakeholders with interests in EIA follow-up of the Nigerian oil sector. Participating organizations included: The Department of Petroleum Resources (DPR), the Federal Ministry of Environment (FME), Sahara Group (SG), CAMAC Holding Ltd, Nigerian Petroleum Development Company (NPDC), Shell Petroleum Development Corporation (SPDC), Nigerian Agip Oil Company (NAOC), Centre for Health Environment and Rural Development (CHERD), Cares Group, Dave and Rose Ltd and Bodo community. The participants were drawn from government agencies at national level, indigenous and multinational oil companies (IOC and MOC), oil host community, NGO's and consultancies. The issues discussed were to determine their perception of the current practice of EIA follow-up in the Nigerian oil sector.

7.2 Overview of EIA follow-up in the Nigerian oil context

To establish an overview of EIA follow-up in the Nigerian oil sector, data related to specific variables (gender, age, stakeholder group, experience, knowledge) of stakeholders were collected; along with importance, level of implementation, impact on future decision of EIA follow-up and training provided for EIA follow-up. These variables built demographic profiles of stakeholders and provided an overview of EIA follow-up in the Nigerian oil sector.

7.2.1 Gender and age of stakeholders

As shown in Table 7.1, 70.3% (n= 64) of the survey respondents were male while 29.7% female. This was consistent with the national Labour Force Participation Rate (LFPR) for men which is 71.4% but not for women which stands at 65.1% (NBS 2016). The huge variation in the rate of women employed in the oil sector could perhaps not be limited to the Nigerian oil sector. According to McKee (2014: 167) ‘jobs in the energy industry have not been considered women’s work, as few women have been involved in the planning, building or operation of energy systems such as coal or uranium mines, refineries, oil and gas drilling sites or transmission lines’. This narrative is changing as more organisations encourage women to apply for jobs in the oil sector.

Table 7.1: Gender of stakeholders

			Female	Male
Stakeholder Group	COM		53.3%	46.7%
	CON		0.0%	100.0%
	PRMOC		18.2%	81.8%
	PRIOC		0.0%	100.0%
	REGD		33.3%	66.7%
	REGF		0.0%	100.0%
	CEXP		0.0%	100.0%
Total			29.7%	70.3%

The age group of the stakeholders are displayed in Table 7.2. The average age group of stakeholders were within the 40 to 59 years group. Only one stakeholder was within the 60

years and above group, this could be linked to the mandatory retirement age in the Nigerian Civil Service, which is either 35 years of pensionable service or at 60 years of age (FRN 1972). Within the 18 to 25 years group, there were 13 stakeholders. This contradicts a recent assessment conducted on awareness of environmental matters by the Nigerian young people (Abiolu 2018). Perhaps the fact that the Niger delta region has had longstanding environmental problems meant the youths have a higher level of awareness when compared to the national average. Figure 7.1 shows the age group distribution of stakeholders.

Table 7.2: Age groups frequency of stakeholders

	Frequency	Percent	Cumulative Percent
18-25 years	13	20.3	20.3
26-39 years	19	29.7	50.0
40-59 years	31	48.4	98.4
60 years and above	1	1.6	100.0
Total	64	100.0	

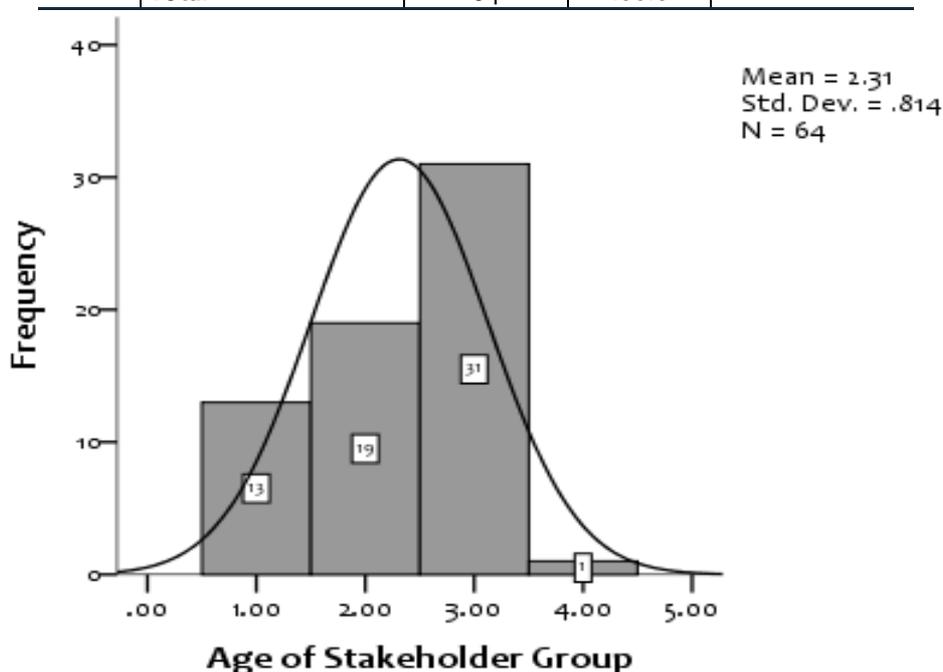


Figure 7.1: Age group distribution of stakeholders

7.2.2 Experience of stakeholders

As shown in Table 7.3 and Figure 7.2, 73.4% (n=64) of the stakeholders had experience participating in EIA follow-up, while 26.6% had no participatory experience. Stakeholders

with a 'High' level of experience were the largest group of participants 35.9%, this was closely followed by stakeholders with no experience at all (20.3%), with a little experience (18.8%), considerable experience (17.2%) and stakeholders who do not know if their experience is related to EIA follow-up (6.3%).

Table 7.3: Experience frequency of stakeholders

	Frequency	Percent	Cumulative Percent
Don't Know	4	6.3	6.3
Not at All	13	20.3	26.6
A little	12	18.8	45.3
Moderate	1	1.6	46.9
Considerable	11	17.2	64.1
High	23	35.9	100.0
Total	64	100.0	

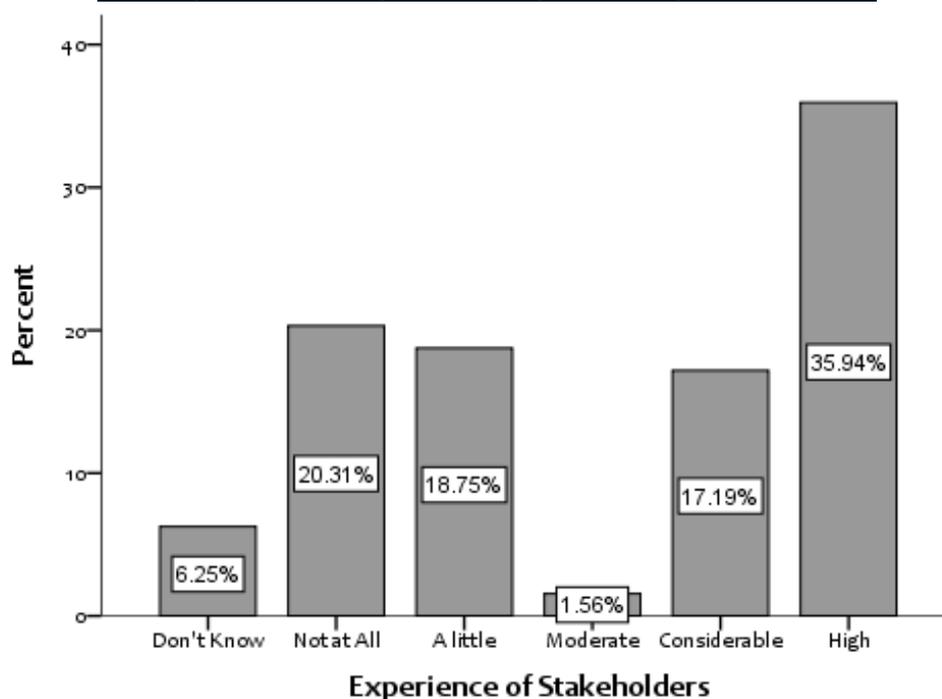


Figure 7.2: Experience level of respondents

Apart from the overall levels of experience of respondents, it was deemed important to further assess the levels of experience of individual stakeholder groups. Table 7.4 below shows participating stakeholder groups and their level of experience.

Table 7.4: Stakeholder groups and experience levels

		Don't Know	Not at All	A little	Moderate	Considerable	High	Total
	COM	3	13	11	0	3	0	30
	CON	1	0	1	1	2	4	9
	PRMOC	0	0	0	0	0	11	11
	PRIOC	0	0	0	0	2	4	6
	REGD	0	0	0	0	2	1	3
	REGF	0	0	0	0	0	3	3
	CEXP	0	0	0	0	2	0	2
	Total	4	13	12	1	11	23	64

From the table above, the stakeholders with the least level of experience participating in EIA follow-up are the Community members (COM) with 27 of them having ‘a little’, ‘no knowledge’ or ‘not being sure’ of their level of experience. This may raise questions with respect to levels of community participation in EIA follow-up. All Proponents of Multinational Oil Companies (PRMOC) had a ‘High’ level of experience participating in EIA follow-up, in the case of Proponents of Indigenous Oil Companies (PRIOC) two stakeholders had a considerable level of experience while four had a high level of experience. This raised the question, why do PRMOC have more experience than PRIOC. In the case of FME Regulators (REGF), all participating stakeholders had a ‘high’ level of experience participating in EIA follow-up. This was not the case with DPR Regulators (REGD), where two participating stakeholders had ‘considerable’ experience and one had a high level of experience. This raises the question, why do REGF have more experience participating in EIA follow-up than REGD. In the case of Community Experts (CEXP), all participating stakeholders had experience with EIA follow-up.

7.2.3 Knowledge of stakeholders

The respondents indicated their level of knowledge on EIA follow-up (see Chapter 2) and 43.75% of stakeholders had ‘considerable’ knowledge. Table 7.5 and Figure 7.3 shows the knowledge of stakeholders on EIA follow-up.

Table 7.5: Knowledge frequency of stakeholders

		Frequency	Percent	Cumulative Percent
	Don't Know	4	6.3	6.3
	Not at All	15	23.4	29.7
	A little	7	10.9	40.6
	Moderate	9	14.1	54.7
	Considerable	28	43.8	98.4
	High	1	1.6	100.0
	Total	64	100.0	

Apart from respondents with considerable knowledge, 23.44% had ‘no knowledge at all’, 14.06% had a ‘moderate’ level, 10.94% ‘a little’ knowledge, ‘6.25% ‘didn’t know’ their level of knowledge and 1.56% had a ‘high’ level of knowledge on EIA follow-up.

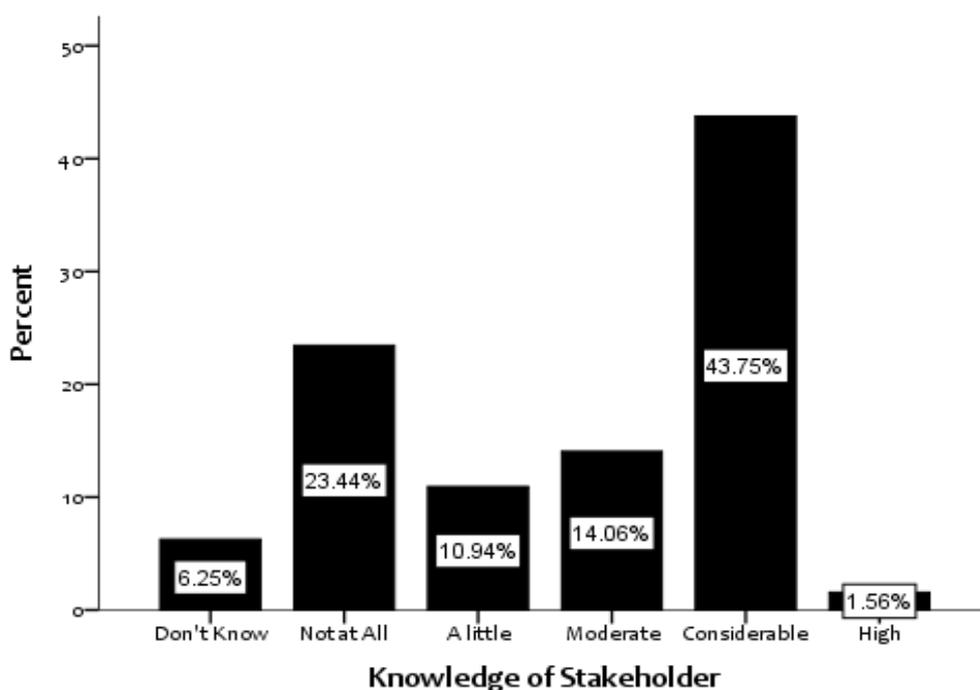


Figure 7.3: Knowledge of Stakeholders on EIA follow-up

In further exploring the level of knowledge of respondents, it was important to understand the level of knowledge of individual stakeholder groups. Table 7.6 below shows stakeholder groups and their levels of knowledge.

Based on Table 7.6, 24 COM ‘don’t know’, had ‘no knowledge’ or only ‘a little knowledge’. This highlights issues regarding the level of involvement of COM in EIA follow-up. Six had a

‘moderate’ or ‘considerable’ level of knowledge. In the case of PRMOC, seven had ‘considerable’ knowledge, three had ‘moderate’ knowledge and one ‘did not know’ what category of knowledge they belong to. The results reflect varying age groups and academic qualifications of respondents in the group. The result could also perhaps be due to the division of EIA and EIA follow-up roles within MOC (see below and Chapter 8).

Table 7.6: Stakeholder groups and knowledge

		Don't Know	Not at All	A little	Moderate	Considerable	High	Total
	COM	3	15	6	3	3	0	30
	CON	0	0	1	1	7	0	9
	PRMOC	1	0	0	3	7	0	11
	PRIOC	0	0	0	0	6	0	6
	REGD	0	0	0	2	1	0	3
	REGF	0	0	0	0	2	1	3
	CEXP	0	0	0	0	2	0	2
	Total	4	15	7	9	28	1	64

The PRIOC all had a ‘considerable’ level of knowledge on EIA follow-up. This could be because of all participatory respondents handling both EIA and EIA follow-up within their organizations (see below and Chapter 8). As with stakeholder experience above, this raises questions regarding the impact of the difference in knowledge between PRMOC’s and PRIOC’s. Interestingly, one REGF had ‘High’ and two had ‘considerable’ knowledge of EIA follow-up. REGD’s had ‘considerable’ and moderate’ levels of knowledge, one and two respectively. This also raises questions, regarding the impact of the difference in knowledge between the two regulators. All CEXP had considerable knowledge (two) and seven consultants also had ‘considerable’ knowledge.

7.2.4 Importance of EIA follow-up

As shown in Table 7.7 and Figure 7.4, 56.3% (n=64) of the respondents perceived EIA follow-up is of ‘High’ importance to the oil sector, this constituted the largest response. Respondents who believe it is of ‘considerable’ importance 18.8% closely followed this. Surprisingly, 12.5% of respondents perceived it is of ‘little’ importance compared to 10.9%

that perceived it is of ‘moderate’ importance. Only 1.6% of the respondents ‘didn’t know’ the level of importance of EIA follow-up in the oil sector.

Table 7.7: Frequency of importance of EIA follow-up in the oil sector

		Frequency	Percent	Cumulative Percent
	Don't Know	1	1.6	1.6
	A little	8	12.5	14.1
	Moderate	7	10.9	25.0
	Considerable	12	18.8	43.8
	High	36	56.3	100.0
	Total	64	100.0	

The graph below shows a relatively steady rise in the importance of EIA follow-up to the oil sector, based on the responses of respondents. As the level of importance rises, the frequency of respondents also rises.

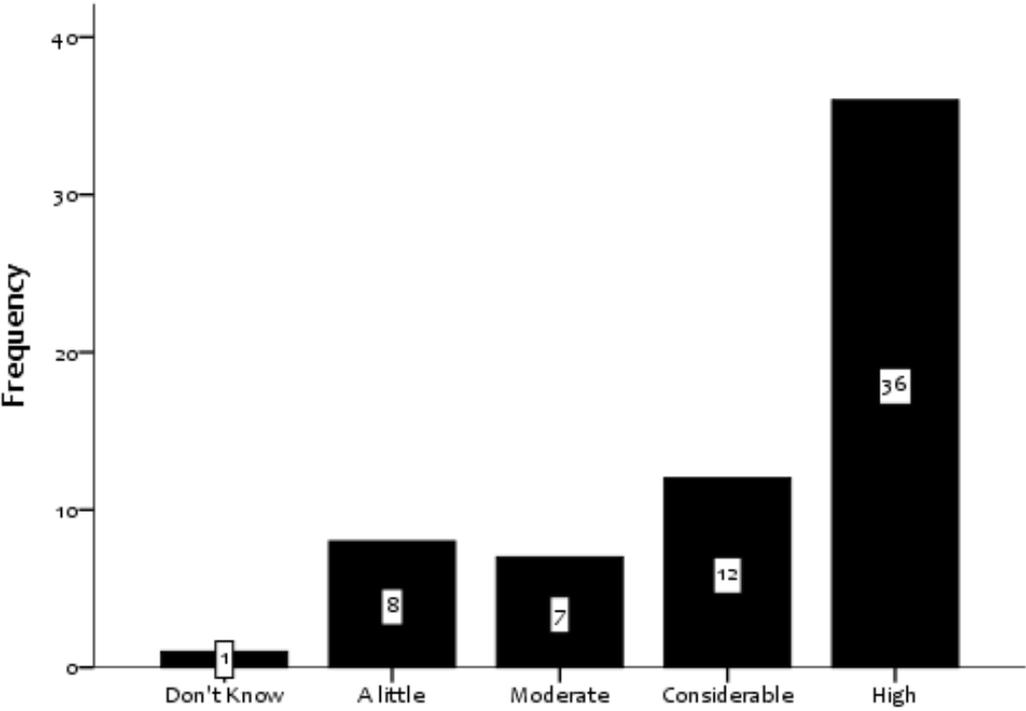


Figure 7.4: Importance of EIA follow-up in the oil sector

Apart from the overall perceived importance of EIA follow-up to the oil sector, it was necessary to further interrogate the results and determine the perception of each

respondent group with respect to how important EIA follow-up is in the oil sector. Table 7.8 displays the results.

From the table below, nine PRMOC’s believe EIA follow-up is ‘Highly’ important in the oil sector and two believe it has ‘Little’ importance. This was in contrast to three of the PRIOC believing it is of ‘considerable’ importance and three believing it to be of ‘moderate’ importance. This again raises huge questions, with respect to the difference in perception between the PRIOC and PRMOC. A wider margin of the PRMOC believe EIA follow-up is very important in the oil sector compared to the PRIOC.

Table 7.8: Importance of EIA follow-up to stakeholder groups

		Don't Know	Not at All	A little	Moderate	Considerable	High	Total
	COM	0	0	6	3	6	15	30
	CON	1	0	0	0	1	7	9
	PRMOC	0	0	2	0	0	9	11
	PRIOC	0	0	0	3	3	0	6
	REGD	0	0	0	0	0	3	3
	REGF	0	0	0	1	2	0	3
	CEXP	0	0	0	0	0	2	2
	Total	1	0	8	7	12	36	64

In the case of REGD, all stakeholders considered EIA follow-up to be of ‘High’ importance. This differed to responses by REGF where two considered it to be of ‘considerable’ importance and one considered it ‘moderately’ important. The difference in perception between the two regulatory bodies raises the question; why is EIA follow-up perceived more importantly by respondents in one regulator body than the other? In the case of COM, 15 stakeholders perceived it of ‘High’ importance, six perceived it to be ‘considerable’, three perceived it to be ‘moderate’ and six perceived it to be of ‘Little’ importance. This raises questions as to why perceptions of COM vary with respect to the importance of EIA follow-up in the oil sector. Considering its’ purpose is to aid protect their environment.

7.2.5 Level of EIA follow-up implementation

As shown in Table 7.9, 47.1% (n=34) of the stakeholders perceived the level of implementing EIA follow-up in the oil sector as ‘High’. While 26.5% of the stakeholders perceived it ‘moderate’, 8.8% perceived it as ‘considerable’, same percent perceived it as ‘little’, 5.9% ‘don’t know’ if EIA follow-up was frequently conducted and only 2.9% perceived it ‘not’ to happen at all.

Table 7.9: Level of implementing EIA follow-up in the oil sector

		Frequency	Percent	Cumulative Percent
	Don't Know	2	5.9	5.9
	Not at All	1	2.9	8.8
	A little	3	8.8	17.6
	Moderate	9	26.5	44.1
	Considerable	3	8.8	52.9
	High	16	47.1	100.0
	Total	34	100.0	

Apart from the overall perceived level of implementing EIA follow-up in the oil sector, it was necessary to further interrogate the results and determine the perspective of each respondent group with respect to how often EIA follow-up is conducted on projects in the oil sector. Table 7.10 displays the result.

Table 7.10: Frequency of conducting EIA follow-up based on stakeholder group

		Don't Know	Not at All	A little	Moderate	Considerable	High	Total
	CON	0	0	1	5	3	0	9
	PRMOC	0	0	0	1	0	10	11
	PRIOC	2	1	0	3	0	0	6
	REGD	0	0	0	0	0	3	3
	REGF	0	0	0	0	0	3	3
	CEXP	0	0	2	0	0	0	2
	Total	2	1	3	9	3	16	34

With respect to PRMOC respondents, 10 stakeholders perceived the rate of conducting EIA follow-up ‘High’ while one perceived it ‘Moderate’. The responses differed significantly with the views of the PRIOC, where three believe it is conducted to a ‘moderate’ degree, two ‘didn’t know’ how often it is conducted, and one believed it is ‘not’ conducted at all. The

results show a major diversion in the opinion of PRMOC and PRIOC. Both REGD and REGF respondents concurrently agree that EIA follow-up is implemented to a ‘High’ degree in the Nigerian oil sector. CEXP believe conducting EIA follow-up is ‘Low’ in the oil sector.

7.2.6 EIA follow-up on future decision-making

As shown in Figure 7.5 and Table 7.11, 70.6% (n=34) of the respondents perceived the impact of EIA follow-up on decision making as ‘High’. While 8.8% of the respondents perceived it ‘moderate’, 5.9% perceived it as ‘considerable’, similarly 5.9% perceived the impact as ‘Little’ and another 5.9% perceived it as ‘not at all’ important. Apart from these, 2.9% ‘didn’t know’ if EIA follow-up had any impact on future decision-making.

Table 7.11: Frequency of Impact of EIA follow-up on decision-making in the oil sector

		Frequency	Percent	Cumulative Percent
	Don't Know	1	2.9	2.9
	Not at All	2	5.9	8.8
	A little	2	5.9	14.7
	Moderate	3	8.8	23.5
	Considerable	2	5.9	29.4
	High	24	70.6	100.0
	Total	34	100.0	

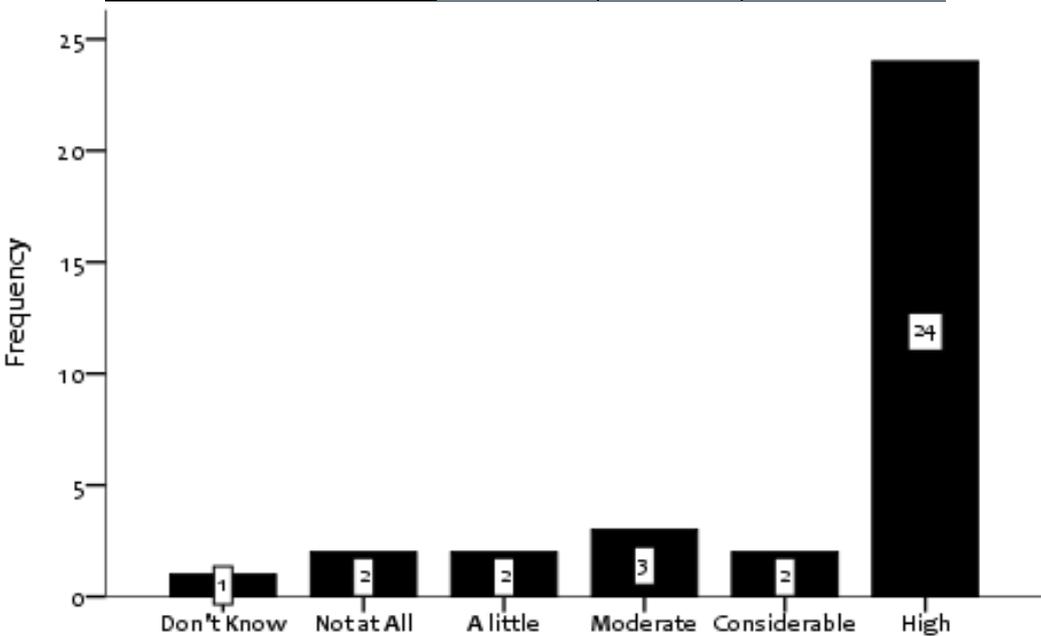


Figure 7.5: Impact of EIA follow-up on future decision-making in the oil sector

From the graph in Table 7.12, all PRIOC perceive EIA follow-up to have a ‘High’ impact on future decisions made by regulators in the oil sector. The perception of the PRIOC differed significantly with the perception of PRMOC where only 8.6% of respondents believe EIA follow-up has a ‘High’ impact on future decision-making. 22.9% perceived it as ‘moderate’, 17.1% perceived it as of ‘Little’ importance, similarly 17.1% perceived it as of ‘No’ importance to future decision making and 34.3% ‘didn’t know’ if it had an impact or not. Based on the results, there is a clear divergence in perspectives between PRMOC and PRIOC.

Table 7.12: Impact of EIA follow-up on decision-making in the oil sector based on stakeholder groups

		Don't Know	Not at All	A little	Moderate	Considerable	High	Total
	CON	0	1	1	1	2	4	9
	PRMOC	1	1	1	2	0	6	11
	PRIOC	0	0	0	0	0	6	6
	REGD	0	0	0	0	0	3	3
	REGF	0	0	0	0	0	3	3
	CEXP	0	0	0	0	0	2	2
	Total	1	2	2	3	2	24	34

With respect to REGD and REGF, both respondents believe EIA follow-up has a ‘High’ impact on future decision-making. For CEXP, all respondents also believe EIA follow-up has a ‘High’ impact on future decision-making.

7.2.7 Training provided for EIA follow-up

As shown in Table 7.13 and Figure 7.6, 29.4% (n=34) of respondents perceived ‘no’ training provided at all for EIA follow-up. The same percentage of stakeholders (29.4%) ‘Did not know’ if any training is provided. While 8.8% perceive the level of training provided ‘Low’ and 5.9% perceive it ‘Moderate’. However, 26.5% of the stakeholders perceived training provided ‘Considerable’, it was necessary to further scrutinize the results and understand the perspective of each respondent group. The results are presented in Table 7.14.

Table 7.13: Frequency of training provided for EIA follow-up

		Frequency	Percent	Cumulative Percent
	Don't Know	10	29.4	29.4
	Not at All	10	29.4	58.8
	A little	3	8.8	67.6
	Moderate	2	5.9	73.5
	Considerable	9	26.5	100.0
	Total	34	100.0	

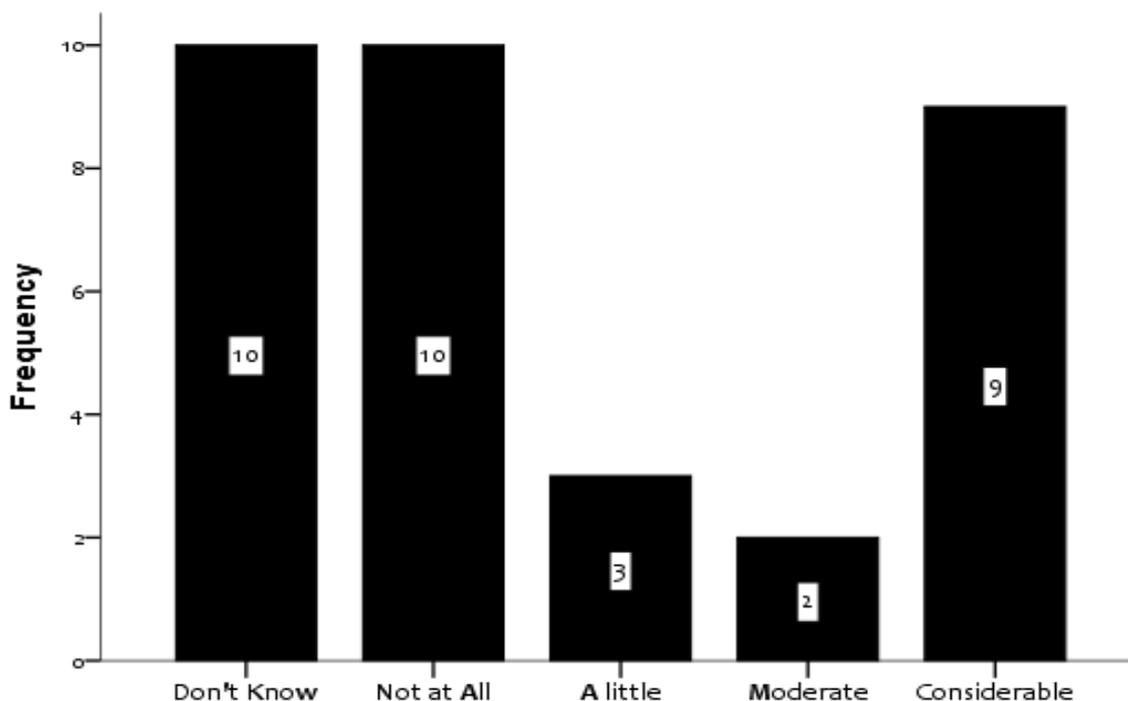


Figure 7.6: Perspectives on training provided for EIA follow-up in the oil sector

From the figures in Table 7.14, 3 PRIOC stakeholders perceived ‘No’ training at all is provided for EIA follow-up. Similarly, three ‘didn’t know’ if training is provided. This is of significant divergence to the perspectives of PRMOC where five stakeholders perceived ‘considerable’ training is provided, two perceived ‘moderate’ level of training is provided, and only two perceived ‘No’ training at all is provided. With another two ‘not knowing’ the level of training provided. In the case of REGDs, two stakeholders perceived ‘No’ training at all is provided while one ‘didn’t know’ the level of training provided. This differed to the results from REGFs where all stakeholders believed ‘No’ training at all is provided. CEXP believe only a ‘Little’ training is provided.

Table 7.14: Training provided for EIA follow-up based on stakeholder groups

		Don't Know	Not at All	A little	Moderate	Considerable	High	Total
	CON	4	0	1	0	4	0	9
	PRMOC	2	2	0	2	5	0	11
	PRIOC	3	3	0	0	0	0	6
	REGD	1	2	0	0	0	0	3
	REGF	0	3	0	0	0	0	3
	CEXP	0	0	2	0	0	0	2
	Total	10	10	3	2	9	0	34

7.3 Emerging issues from overview of EIA follow-up

Based on the results of the survey, divergence existed amongst respondents on the practice of EIA follow-up in the oil sector. A major source of divergence seemed to be based on which proponent initiates the project (PRIOC or PRMOC). Some of the areas of divergence between respondents include:

- Level of participation of COM in EIA follow-up
- Level of experience in EIA follow-up of PRMOC compared to PRIOC
- Level of experience of REGF compared to REGD
- Level of knowledge of COM on EIA follow-up
- Level of knowledge of PRMOC compared to PRIOC
- Perception of importance of EIA follow-up in the oil sector by PRMOC compared to PRIOC
- Perception of importance of EIA follow-up in the oil sector by REGD compared to REGF
- Perception of COM on the importance of EIA follow-up in the oil sector
- Perception of PRMOC compared to PRIOC with respect to level of implementing EIA follow-up
- Perception of PRMOC compared to PRIOC with respect to Impact of EIA follow-up on future decision making

- Perceptions of respondents with respect to level of ‘training provided by their organizations for EIA follow-up

Inspired by these findings, questions were integrated into the good practice criteria (see Chapter 2), interviews were conducted with the stakeholders (see below) and two case studies of PRIOC and PRMOC led projects were conducted (see Chapter 8); to further understand the divergence between PRIOC and PRMOC led implementation of EIA follow-up in oil projects.

7.4 Perception of stakeholders on EIA follow-up practice

The interviews conducted on all stakeholders (n=64) and documentary analysis were utilized in laying the context upon which the perception of the PRMOC and the PRIOC stakeholders (n= 17) were graded under the five categories of the good practice criteria (see Chapter 2): regulatory and institutional arrangement, approaches and techniques, resources and capacity, project type and stakeholder involvement.

7.4.1 Regulation and institutional arrangement

There are seven criterions in this category, Table 7.15 summarises the grades awarded based on PRIOC and PRMOC responses on each criterion. A detailed analysis of responses by all respondents with regards to regulation and institutional arrangements are discussed below:

Table 7.15: Grades awarded based on responses to criteria on regulation and institutional arrangement by PRMOC and PRIOC

Criteria	PRMOC	PRIOC
1. Is the EIA follow-up process based on clear and specific formal requirements?	B	D
2. Are there any stages specified in the formal requirements?	F	F
3. Are there any time limits for the various steps in the EIA follow-up process?	D	E
4. Is there a strong commitment to conduct EIA follow-up by the regulators?	G	F
5. Is there a role for independent verifiers within the EIA follow-up process?	G	G

Criteria	PRMOC	PRIOC
6. Are proponent self-regulation tools (ISO 14001, ISO 14040) permitted within the EIA follow-up process?	C	G
7. Are there incentives to encourage good practice (proponent voluntarism)?	G	G
Overall grade of Regulation and Institutional arrangement	E	F

Clear and specific formal requirements: All regulators, proponents and community experts identified the presence of some form of legal provision for EIA follow-up in the Nigerian oil sector. A majority of respondents highlighted the presence of EIA Act 1992 and Petroleum Act 1969 as the two legislations in place for conducting EIA follow-up. In the case of PRMOC respondents, statements made were generally:

‘Yes, there is... EGASPIN and FEPA Act 1992 which institutes the need to do monitoring of environment’ some respondents also mentioned the presence of ‘an in-house regulation called the control framework’

For the PRIOC, three stakeholders mentioned only the EIA Act 1992 as the legislation in place. While the other three stakeholders mentioned only the Petroleum Act 1969. Generally, statements made were either:

‘Yes, the EIA Act which was in 1992... Ensures that all projects before any major project is embarked on’ or ‘yes... there is... it is part of the EGASPIN’.

Thus, on this criterion; PRMOC are graded a **B** for generally acknowledging both legislations in place, while PRIOC are graded a **D** for acknowledging one of the legislations but the overall unsatisfactory performance is as a result of inadequacies of not acknowledging both (see Chapter 2 for grade interpretation).

Stages specified in EIA follow-up: Most respondents did not have a response to the stages of EIA follow-up. One of the community experts interviewed reverted back to highlighting the steps of the EIA process. However, a REGF did discuss the specified stages as follows:

'At the start of the project, Impact Mitigation Monitoring (IMM) starts... you pass the construction phase of the project... the operational phase that is monitored, once you are found in compliance, compliance monitoring starts until decommissioning. Once decommissioned, audit comes after three years.'

The PRMOC and PRIOC respondents did not acknowledge any of these as stages within their EIA follow-up. Thus, on this criterion; PRMOC and PRIOC are both awarded a **F**.

Time limits for EIA follow-up activities: The regulators, proponents and community experts, all emphasized diverse opinions on the time limit specified for EIA follow-up activities. In the case of community experts, most respondents digressed to discussing data collection and monitoring. The main perceptions expressed are:

'If a project... has to do with biodiversity, the period is a bit longer between monitoring. But if it has to do with emissions, such as air pollution, then monitoring is frequent as these are things that can occur on daily basis, but things that have to do with biodiversity and recovery of the ecosystem takes a bit longer. So, the frequency of monitoring of things that have to do with biodiversity or the biota or the ecosystem, the frequency of those take a bit longer...'

The responses by the PRIOC's included:

'I think it should be continuous... no particular after one year or after two years', 'one will not say there is. It is supposed to be done at least one year of commencement of operations. I say it should be continuous... this is where compliance comes in. I mean there is also a place for compliance monitoring so compliance will take care of your continuous monitoring activities' and 'you comply with the regulators... you should have a schedule either weekly, monthly... this should be followed'.

Based on the varied responses, it is clear there is a partial time limit for monitoring the operation phase of oil projects; based on recommendations in the EMP. But this is not clear amongst the respondents and have been awarded an **E**. In the case of PRMOC's, a majority

of the respondents-based timeline on what is contained in the EMP. This is ably captured by this quote:

‘This is dependent on the sampling matrix (EMP). We have some parameters monitored weekly, we have some monitored monthly. We even have some monitored yearly’. A minority of the respondents mentioned ‘There is no specific timeframe...’ while others also mentioned submission of monitoring reports ‘the maximum time that is allowable for you to submit your report is two to three months. This is to ensure that the report you are giving is a correct report and it is not altered, as the longer it stays with you; the more likelihood that you have jumbled the figures.

Similar to the PRIOC, there is partial timelines for EIA follow-up activities; they have been awarded a **D** for highlighting a timeline for the submission of monitoring reports. Both the responses of the PRIOC and PRMOC are mainly related to operation stage of projects. Neither of the groups have discussed the construction stage or decommissioning stage. Submissions of monitoring reports were also mentioned by the PRMOC. Similar to the responses by the proponents, the REGD also did discuss timeline specific to monitor conducted during operation. For the REGF’s:

‘There is no time frame... You conduct until you close out all the issues... You start when the project start’, to further expatiate, ‘you monitor the project and you pass the construction phase... you pass the operational phase... monitoring still continues on the project until it is decommissioned. Audit comes at 3 years inter lapse. To confirm what the monitors are doing.’

This response comprehensively covered all stages of the project development.

Commitment by regulators to conduct EIA follow-up: Varying levels of responses were gathered from all respondents with respect to level of commitment by regulators to conduct EIA follow-up. While the community respondents would like to see:

'... environmental protection given more of a priority by government', this position is backed by 60% of the PRIOC. The other 40% believe 'regulators do penalize stakeholders for errors made during operation'.

No response was obtained from the PRMOC. For the REGD's, two stakeholders acknowledged:

'More enforcement should be expected on the part of the regulator', while 1 believed the commitment as it is currently, 'is making a difference on ground'. In the case of REGF's, all respondents acknowledged 'the EIA law does not discriminate... oil is of high importance because of the impact on the environmental terrain' one of the respondent's further highlights 'we inform the proponent when monitoring is due, if they are not compliant enough to tell us monitoring is due'.

As a result of this, the commitment by regulators to conduct EIA follow-up has been awarded an **F** based on the perception of PRIOC; while it is 'not completed' and has been awarded a **G** based on PRMOC's position.

Role of independent verifiers: All 64 respondents acknowledged there are no independent bodies involved in the EIA follow-up process. The REGF and the REGD are the only verifiers with a mandate involved in the EIA follow-up process. Although this is as a result of legislations not accommodating independent verifiers, both the PRMOC and PRIOC have been awarded a **G**.

Integration of self-regulation tools within EIA follow-up: apart from the EIA Act of 1992 and Petroleum Act of 1969, some PRMOC respondents did mention:

'... An in-house regulation called the control framework' integrated into their EIA follow-up procedure. Within the context of the framework, 'once the EIA is... approved, the EMP is extracted... that means commitment has been made. The parameter for monitoring is then integrated into the project scope and then monitoring commences'.

None of the PRIOC respondents highlighted any form of self-regulation tool in being incorporated into their procedure. Thus, it can be said that self-regulatory tool is present in practices of some PRMOCs as such awarded a **C**, due to the fact; it is not present in all PRMOCs. While in the case of PRIOC's; self-regulation is not present in their practice and has been awarded a **G**.

Incentives for proponent voluntarism: none of the respondents acknowledged the presence of incentives for proponent voluntarism within their practice. As a result of this, both PRMOC and PRIOC have been awarded a **G**.

7.4.2 Approaches and techniques adopted

Based on the good practice criteria, the category of approaches and techniques has seventeen questions. Table 7.16 summarises the grades awarded based on PRIOC and PRMOC responses (n= 17) on each criterion. A detailed analysis of responses by all respondents with regards to approaches and techniques adopted is discussed below:

Table 7.16: Grades awarded based on responses to criteria on approaches and techniques by PRMOC and PRIOC

Criteria	PRMOC	PRIOC
1. Does EIA follow-up start at the pre-decision stage of the EIA process?	E	G
2. Is EIA follow-up designed according to stages of the project (construction, operation, decommissioning)?	B	D
3. Is screening conducted during EIA follow-up?	G	G
4. Is there any scoping done during EIA follow-up? If yes, is it objective-led and continuous throughout the project cycle?	E	G
5. Is the EIA follow-up program documented in the EIA report?	C	G
6. Is existing data used in the EIA follow-up program?	C	G
7. What type of monitoring (compliance, command and control) is adopted in the EIA follow-up program?	G	G
8. Is there any provision of rigorous monitoring data? In case rigorous methods are not possible, is there any provision for simple techniques for conducting follow-up?	G	G
9. Does the proponent have any formal EMS in place? If yes, is it well integrated with EIA follow-up?	D	G
10. Does EIA follow-up meet its objectives (conformance, performance, dissemination, tackling uncertainty)?	G	G
11. Are all the components of EIA follow-up complied with?	G	G

Criteria	PRMOC	PRIOC
12. What approach is adopted for EIA follow-up in the Nigerian oil context?	G	D
13. What is the scope adopted for EIA follow-up (environmental, social and health issues)?	C	C
14. Are there indirect impacts due to projects taking into account during EIA follow-up?	G	D
15. Are the approaches adopted in accordance with the local 'EIA culture'?	G	G
16. Are the efforts of the regulators harmonized towards implementing the EIA follow-up program?	D	E
Overall grade of Approaches and Techniques adopted	F	F

Early start of EIA follow-up: No response was given by any of the regulators, community experts or the PRIOC with respect to 'if EIA follow-up starts at the pre-decision stage'. In the case of PRMOC's, all respondents highlighted the implementation of the EMP as the start of the EIA follow-up process. For this reason, PRMOC have been awarded an **E** as although the implementation of EMP can perhaps be called the start of implementing EIA follow-up, it cannot be called its start. The PRIOC have been awarded a **G** as it has not been completed. Based on document analysis, baseline study is mentioned in the EIA sectoral guidelines for oil and gas industry projects (FRN 2013). Considering this, EIA follow-up should start during baseline studies at the pre-decision stage; monitoring the environment and collecting data.

EIA follow-up based on project evolution: In the case of PRIOC's, most respondents identified 'documentation review, physical site inspection and receiving feedback from regulators' as the stages involved in the conduction of EIA follow-up. This was apart from one respondent, whom identified 'pre-construction, construction and post construction' as the stages of a project EIA follow-up is designed. Based on their responses, PRIOC's were graded a **D**. As for PRMOC's, most of the respondents highlighted the 'construction phase, operational phase and decommissioning phase' as the stages of an oil project upon which EIA is designed. For this fact, the responses of the PRMOC's have been graded a **B**.

Screening for EIA follow-up: None of the proponents, highlighted screening within the process of EIA follow-up. Rather, responses with respect to screening came from both regulators, and deviated to the EIA process; rather than the EIA follow-up process. As discussed earlier (see Chapter 6), screening takes place within oil projects to determine the category a project should be placed. Based on the fact no responses were provided for screening, accordingly both PRIOC and PRMOC have been awarded a **G**.

Scoping for EIA follow-up: Based on the EIA sectoral guidelines, scoping is conducted during the EIA process (FRN 2013). None of the PRIOC respondents highlighted scoping within their EIA follow-up practice. For the PRMOC, one of the respondents highlighted:

‘A Terms of Reference is sent to both DPR and FME... Most times the agencies send it back amended either with an expansion most times, maybe we said we want to take 10 samples, DPR or FME will look at it and say no, based on the area you described, you must take a minimum of so and so sample’.

Although scoping does exist, there is no evidence to suggest scoping is continuous for the project-life cycle. This category has been awarded an **E** for PRMOC and a **G** for PRIOC.

Documentation of EIA follow-up program: The final EIA report to be prepared by the proponent should have a separate chapter called Environmental Management Plan (EMP) (FRN 2013). The PRMOC respondents concurred with this statement, among the comments made include:

‘For any EIA report that you see; there is chapter 7, which is the EMP’. The EMP was described by one of the respondents as a document, ‘containing mitigating measures to address those identified potential hazards from the project’

The EMP contains the design of EIA follow-up. None of the PRIOC respondents discussed documentation of EIA follow-up program. REGD respondents highlighted the conversion of the EMP into an Environmental Action Plan (EAP), which should be two pages long and makes the implementation of the EMP less complicated. This category has been awarded a

C for the PRMOC for their clear understanding of the need to document the EIA follow-up program and a G for the PRIOC for not completing this task.

Use of Existing data in EIA follow-up: The responses from the PRMOC, highlighted situations were due to the volatility of the Niger delta region, existing data was used as sampling; rather than going to collect primary data. One of the respondents highlighted:

‘due to constant inaccessibility of location and of course you know how volatile the Niger delta is, so in terms of reducing manpower exposure... we engaged the regulators and told them instead of doing two season sampling, we have enough collected data... due to secondary data we had over the years due to compliance monitoring... we were asked to conduct 1 season sampling rather than two’.

None of the PRIOC or other respondents discussed using existing data within EIA follow-up programs. Based on this, the PRMOC has been awarded a C while PRIOC has been awarded a G.

Type of Monitoring: None of the respondents discussed the type of monitoring implemented within the Nigerian oil sector. Based on FRN (2013) compliance monitoring is implemented within the Nigerian oil sector. As the EIA Act 1992 and Petroleum Act 1969 are enacted and the regulators are expected to ensure their compliance by the proponent on behalf of the community. Based on perception of the type of monitoring implemented, the PRMOC and PRIOC have been graded a G.

Type of Technique adopted: None of the respondents discussed the type of technique implemented within the Nigerian oil sector. Based on FRN (2013) there is no particular technique recommended for EIA follow-up within oil projects. However, considering most oil projects are under the highest categories of both the EGASPIN and the EIA Act 1992 (see Chapter 6); technical and rigorous types of techniques are adopted for monitoring. There is provision for simple techniques to be employed, especially in projects that are considered

small oil projects. Type of technique adopted for monitoring based on perception of PRMOC and PRIOC have been awarded a **G**.

Integration of EMS within EIA follow-up: None of the PRIOC respondents highlighted the implementation of any EMS within their projects and in general, there has been no mention of any of the EMS tools. In the case of PRMOC's, respondents highlighted the presence of 'in house regulations...' that encompasses all other regulations they must comply to, apart from the need to comply with the EMP. One of the respondents mentioned their commitment to international biodiversity conservation and non-exploration of oil and gas in world heritage sites. Hence, PRIOC have been graded a **G**, while PRMOC a **D** for having an example of an EMS integrated into its EIA follow-up program.

EIA follow-up meeting its objectives: None of the PRMOC or PRIOC provided a response to this question. The REGD's believe it is meeting its' objectives

'It is making a difference on ground, yes of course. Because, that is the only way we can know whether the project is actually impacting on the environment'

However, their responses where not categorical on which of the objectives of EIA follow-up are being met and to what degree. More clarity is provided to this criterion based on review of case studies (see Chapter 8). The PRMOC and the PRIOC have both been graded a **G**.

Components of EIA follow-up: Monitoring is the main component of EIA follow-up in the Nigerian oil sector. The regulator carries out auditing and evaluation of data and management of issues is mainly within the purview of the proponents. The regulators also conduct evaluation as reports are sent to them every quarter. There is a perception that dissemination is the weakest part of EIA follow-up in the Nigerian oil sector. This would be established or extricated based on the findings in the case study (see Chapter 8). Both PRMOC and PRIOC are graded a **G**.

Approach adopted for EIA follow-up: The approach adopted in the Nigerian oil context is dominantly a legal-based approach (FRN 2013). One of the PRIOC respondents highlighted

‘Nobody wants to be sanctioned. It can get up to more than \$500000 or more depending on the level of abuse’, this emphasises the fact a legal based approach is employed. None of the PRMOC has highlighted the approach adopted within the oil sector. Based on this, the PRMOC have been graded a **G** while the PRIOC have been graded a **D**.

Scope of EIA follow-up: CEXP’s, PRIOC’s, PRMOC’s, REGD’s and REGF’s all expressed opinions on the scope of what an EIA follow-up program within the Nigerian oil sector should cover. The scope of an EIA follow-up program in this context differs to scoping exercise during EIA follow-up. In the case of CEXP’s, they overwhelmingly believe; apart from environmental parameters, EIA follow-up also covers social and health impacts of the oil project:

‘... The social and the health impacts of the proposed project on the local communities on the biota and every other aspect of the environment’. This PRIOC are in concurrence with this line of thought, they majorly highlighted ‘... when you speak on environment, you are talking about both people, you are talking about social, talking about their health and components of the environment generally.’ Some PRIOC respondents, while agreeing with the perception, did highlight that this is the case ‘for onshore but most offshore projects do not consider that’.

All PRMOC respondents apart from one, were in accord with the position of CEXP; mainly highlighting:

‘Social and health issues along with the environment are aspects of the monitoring plan, all integrated in the EMP. In terms of both the biophysical, the social and health aspect...’

The one PRMOC who disagreed, believes; EIA follow-up only entails:

‘... Monitoring of our immediate environment. The land water and air.’

For the REGD, both physical environment and the socio-economic environment are included within the scope of an EIA follow-up program:

‘When you are carrying out your EIA you are looking at both the physical environment and the socio-economic environment. So, if you have to monitor any project from execution depending on the kind of project up to commissioning; we would expect the impact on the socio-economic conditions of the area should be noted. So, that is one of the things we carry out monitoring for.’

The REGF believe the scope of the REGD should not include social and health issues but in their own case, emphasis is made to include all issues:

‘...If you are talking to DPR, they do not have overarching jurisdiction on social and health issues. But this is FME...’

It will be interesting to investigate through case studies, the scope of EIA follow-up in practice (see Chapter 8). Based on their responses, both the PRMOC and the PRIOC have been graded a **C**.

Taking into account indirect impacts: All responses by the PRIOC alluded to the fact, indirect impacts are taken into account as an EIA follow-up program proceeds:

‘There are aspects that were not initially considered during the initial assessment... while activities are going on, one or two changes were made and monitoring exposes that. The person who is being monitored may not come back to the ministry and say we have changed our work scope a bit. There are now new aspects that have been introduced.’

Thus, the PRIOC’s have been graded a **D**, while the PRMOC a **G**.

Impact of local culture on approaches adopted: None of the proponents, suggested local culture played a role on the approach adopted for EIA follow-up. Neither of the other respondents discussed this either. More light will be shed on this issue during case studies (see chapter 8). Based on the fact no responses were provided on the impact of local culture on approaches adopted, both PRIOC and PRMOC have been awarded a **G**.

Harmonization of regulators: Majority of the PRIOC believe there is no synchronization

between the REGD and the REGF during EIA follow-up:

‘No, it is not harmonized. Each Agency and Department sends you their own report.’

Two PRIOC respondents highlighted the existence of synchronization amongst regulators:

‘They do it as a team. They have a checklist and it is same. We all sign the checklist...’

For the PRMOC, a majority of the respondents highlighted ‘multiple regulatory bodies’ as a fundamental challenge affecting the EIA follow-up program. They overwhelmingly highlighted a lack of synchronization within the entire EIA process:

‘In the Nigerian context, DPR will want to do its own things separately and FME will want to do its own things separately. There has not been that midway point where two of the agencies will agree and say let’s go for this ECM and facilities inspection jointly. We both observe the sampling protocol of the contractor; we witness the sampling stations we able to confirm that their geo reference is the way they should be. Even if they go together, we make sure they go together; they will still come up with their independent report. They have never come to that point of an agreement that DPR report, FME report let us come together and review together and make it one single report.’

Although overwhelmingly they highlighted a lack of synchronization, one of the respondents still believes there is synchronization amongst the REGD and REGF:

‘Once we collate the results, we send it to the regulators at the end of the month. Yes, they do harmonise their own reports’ the REGD respondents agreed there is no harmonization currently taking place with the REGF ‘at the moment, no in terms of EIA monitoring, because at the moment all the regulators are independent’ but the REGF believes within the oil context, ‘your focus being Oil which you know DPR has parallel or almost parallel monitoring mandate.’

Overall the PRMOC have been graded a **D** while the PRIOC an **E**. The grades awarded on this criterion is with regards to the perception of the proponents (PRIOC and PRMOC) on the

degree to which harmonization is done by the regulators. This was done, to determine if the practices of the regulators differ when relating with one proponent compared to the other.

7.4.3 Resources and capacity available

The PRIOC and PRMOC are to be graded based on fourteen criteria within this category.

Table 7.17 summarises the grades awarded based on PRIOC and PRMOC responses (n= 17)

on each criterion. A detailed analysis of responses by all respondents with regards to resources and capacity available are discussed below:

Table 7.17: Grades awarded based on responses to criteria’s resources and capacity available by PRMOC and PRIOC

Criteria	PRMOC	PRIOC
1. Is responsibility clearly allocated to finance EIA follow-up?	F	F
2. Is responsibility clearly allocated to stakeholders to conduct EIA follow-up?	C	D
3. Is responsibility clearly allocated to evaluate/audit EIA follow-up?	C	E
4. Is responsibility clearly allocated to manage the changes if required?	B	F
5. Is responsibility clearly allocated for someone to prepare the report?	B	E
6. Is responsibility clearly allocated for someone to whom the results are reported to, or, who checks compliance?	D	G
7. Is responsibility clearly allocated for someone to communicate the EIA follow-up report to the community?	E	E
8. Is local knowledge taken into account for designing EIA follow-up?	D	G
9. Is there any provision of ‘institutional memory’ and knowledge brokering (contract with universities or research institutes for knowledge sharing)?	E	G
10. Is there any kind of training or education and capacity building imparted for EIA follow-up?	B	F
11. What is the strength of EIA follow-up teams?	C	F
12. Is there any independent monitoring agency involved in the EIA follow-up program?	G	G
13. Are resources made available to build capacity of community stakeholders to participate in the EIA follow-up program?	D	F
14. Is finance made available to aide participation of community in EIA follow-up program?	G	G
Overall perception of Resources and Capacity available for PRMOC and PRIOC	D	F

Financing EIA follow-up: None of the PRIOC respondents highlighted who is responsible for the finance of EIA follow-up in the oil sector. Rather, they highlighted:

‘Regulators need to do more... when regulators come with their powers then people will have to sit-up and within the scarce resources do what they can’

For the PRMOC, all respondents highlighted the need for:

‘Proper federal budgetary allocations. They should allocate funds for the activities because it is very capital intensive, especially with the current economic climate, in terms of monitoring: sampling, transportation, logistics, monitoring itself and there is need for that awareness to see the need for doing it...budgetary allocation is key.’

In the case of REGF respondents:

‘... Funds for the monitoring has been kept aside before the issuance of EIS’

Thereby hinting that the proponents are responsible for financing EIA follow-up. The REGD concurred with the REGF:

‘Finance is one of those stuffs that we expect the company to commit to in the EMP. It is not just saying that I will carry out monitoring, we want to know the budget you have in place for monitoring.’

Based on the responses of PRIOC and the PRMOC on financing EIA follow-up they were graded a **F**.

Conduct EIA follow-up: Nineteen respondents out of the thirty community members interviewed highlighted various bodies with the responsibility of conducting EIA follow-up. The bodies highlighted included: Non-governmental organisations (NGO’s), REGF, community leaders, youth groups, United Nations Environmental Program (UNEP) and Shell Petroleum Development (SPDC). Participation of these bodies are investigated during case studies (see Chapter 8). In the case of PRIOC, among the bodies highlighted include REGF, SME, NOSDRA, REGD and the community. For the PRMOC, the proponent, consultants, REGD and REGF are the bodies. Based on responses, the PRIOC have been graded a **D** and

PRMOC graded a **C**. The REGD highlighted the proponents, regulators and the communities as involved in the conduction of EIA follow-up. The REGF concurred with this line of thought.

Evaluation/audit EIA follow-up: The respondent from the PRIOC believes the proponent is responsible for evaluation/auditing EIA follow-up:

'If I don't agree to what they are writing, I have a right to question them and ask them that guy what are they writing this for? I need them to provide answers, it is spelt out in regulation, and they must convince me that they are writing the right thing.'

The PRMOC concurred with the PRIOC, amongst the responses given included:

'...we check the process how it affects the environment... the results will indicate... if you have non-conformance, and if you have non-conformance you need to check what is the reason for the non-conformance and you need to correct it...'

The REGD deviated from the perspectives of the proponents, they believe they evaluate/audit monitoring reports:

'We notice gaps and of course we have a feedback process where we get back to the companies on the areas that they need to improve on.'

For the REGF, they highlighted auditing comes three years after decommissioning of any particular project:

'Audit comes at 3 years inter lapse. To confirm what the monitors are doing.'

Based on these responses, the PRIOC and PRMOC were graded an **E**.

Managing changes: None of the PRIOC interviewees highlighted who is responsible for managing changes during the EIA follow-up program. In the case of PRMOC, all respondents highlighted the proponents play a dominant role in managing changes because of EIA follow-up:

'If there is an upsurge, you will be able to call yourself to order and call the project executors to order. Okay we have seen that the level of the particulate matter has risen,

why has it risen? Then you check the type of equipment you are using; you need to check your activities along with what time of the year you are doing it.'

Apart from the role of the proponent, one of the respondents also highlighted the key role regulators play in the early stages of selecting the best method for mitigation:

'Recently we had compliance monitoring by the REGF on some of our asset location participating in the compliance monitoring. After that, our team lead was invited to Abuja to hold a meeting, to discuss the actions, and discuss how to mitigate any issues based on the findings from the field...'

Thus, the PRIOC are graded an **F** and the PRMOC are graded a **B**.

Preparing report: REGD and REGF prequalified consultants usually prepare monitoring reports on behalf of the proponents. In two instances, PRIOC respondents stressed they have never seen a monitoring report produced by a consultant:

'How do I put it, I have not even seen any data on monitoring since I got to this place. I have not seen any report. Though my previous boss says this company is doing it, that company is doing it, but I have never seen a report.'

In the case of PRMOC's, they highlighted the use of third-party consultants in the collection of data samples, which are then analysed and compared to data samples analysed in-house. Based on this, they write a report in-house and submit it to the REGD and REGF:

'The project owner does EIA monitoring reports after the MDA's have participated in environmental sampling and Lab analysis...'

The REGD expects the proponent to prepare the EIA follow-up report. Based on their responses, the PRMOC is graded a **B** while the PRIOC are graded an **E**.

Checking compliance: None of the PRIOC interviewees highlighted who is responsible for checking compliance. In the case of the PRMOC, one of the respondents highlighted although not knowing the procedure adopted by the regulators:

'They do complain where they think we erred...' another respondent highlighted it is mandatory to invite the REGD and the REGF for monitoring 'we invite them. Because as the project owners it is statutory, we invite them'. The REGF concurred with the PRMOC, acknowledging they '...inform the proponent when monitoring is due, if they are not compliant enough to tell us monitoring is due.'

The REGD respondents highlighted the difficulty in complying faced by proponents and the need for more enforcement 'some companies comply while others find it difficult to comply. Basically, you would expect that regulators will enforce the more, there should also be strict reporting to the appropriate authority' thereby reiterating the role of the regulators in checking compliance. Thus, the PRMOC have been graded a **D** and the PRIOC have been graded a **G**.

Communicating report to community: Based on the responses of the PRIOC, the REGF should be responsible for communicating the EIA follow-up report to the community:

'It lies mainly with the REGF... the EIA reports are made public by the REGF'. The PRIOC also highlighted situations, where the community contacts the REGF to raise concerns regarding not being informed on the project by the proponent 'we got a letter from one community...they complained...not being carried along on the EIA and the monitoring aspect of it...I did not read the letter, as we were cc in it. The community sent it to the REGF, from what they were saying, they had the right to know what's happening and monitoring and the entire exercise and everything they should be copied.'

The PRMOC concurred with the PRIOC in situating the responsibility of communicating the EIA follow-up report to the community to the regulators. They further emphasized the community can access these reports by applying to the regulators:

‘So, when you report weekly report that are collated to quarterly report that are sent to regulators, and if the community wish to get access to any of these reports, they can apply to the regulators whom can provide it.’

Some REGD respondents questioned the need of communicating the EIA follow-up report to the community ‘do they have a need for it?’ while another believes ‘it is in the public domain, or it should be in the public domain’ so there is no need to communicate it. Another REGD respondent did admit:

‘When you say monitoring, reports communicated that may be one of the areas we have a bit of gap. I am not too sure the communities get that type of feedback.’ For the REGF, both respondents believe the community gets sufficient feedback by ‘liaising with the Local Governments Environmental Health people...’

They further highlighted the presence of environmental committees set up by the communities who participate within the EIA follow-up program:

‘Some communities have environmental committees that are quite active. Therefore, during monitoring the committee is always there. Like Bonny NLNG project, there committee has a standing committee they monitor monthly in conjunction with the government regulators at all the levels.’

Based on the responses of the PRIOC and the PRMOC both have been graded an **E**.

Local knowledge during design: None of the PRIOC interviewees mentioned integration of local knowledge into the EIA follow-up program. In the case of PRMOC, they believe:

‘Constant engagement between the asset owners and workers on site also with the community improves EIA monitoring.’

Within the REGF’s EIA framework (see Chapter 6) the criteria for public participation if conducted, ensures local knowledge is considered. The community respondents overwhelmingly believe they deserve a prominent role within the process and can add value if engaged. The response by the PRMOC was graded a **D** and the PRIOC was graded a **G**.

Provision for knowledge brokering: Most of the interviewees did not mention there being any provision for knowledge brokering and institutional memory. One of the PRMOC did mention the need for improved information:

‘There is always room for improvement. One of the key areas that we lack is paucity of information.’

Based on this, the PRMOC have been graded an **E** while PRIOC a **G**.

Capacity building for EIA follow-up: All PRIOC respondents highlighted insufficient opportunity for EIA follow-up capacity building, attributing it to organizational size:

‘You know our organization is very small, so I don’t know what to say here (but body language showed little to no opportunity for capacity building).’

The PRMOC overwhelmingly believe adequate opportunities for capacity building exist:

‘We have a specific department section for environmental studies. Under that environmental study, things like EIA monitoring is one of the things that they do. We are well trained, as a matter of fact; we are overly trained.’

In the case of the REGD, although sufficient training is provided; training on specialist areas could be improved:

‘I will say we have capacity to a great extent, but of course the issue of...specific specialist for each environmental scope will still need to be enhanced’. Respondents from REGF, they believe they could do with ‘more training... on monitoring in general.’

As such, capacity building for EIA follow-up has been graded a **B** for the PRMOC and an **F** for the PRIOC.

Strength of EIA follow-up teams: The PRIOC mainly consisted of one office with less than five staff in charge of all environmental aspects of the oil project (from baseline studies to submitting the EIA to monitoring). In the case of the PRMOC, companies had separate environmental units to carry out environmental protection and implementation of monitoring measures. General Managers head these units and usually six to eight staff work

as case officers under them. Although PRMOC have better capacity, they also tend to have more projects. Thus, the PRIOC have been graded an **F** and the PRMOC a **C**.

Independent monitoring agencies: The PRIOC did not highlight the presence of any independent monitoring agency within the EIA follow-up program. They did highlight the use of third-party companies and experts as guides during monitoring:

'I find a consultant through vetting and hand it over to them and monitor it.'

The PRMOC concurred with the PRIOC. The REGF highlighted the presence of community led committees (see public participation above) within some projects. They also encourage the use of verified third party players for EIA monitoring. Thus, both the PRIOC and the PRMOC have been graded a **G**.

Community capacity building: Nineteen out of the thirty community respondents overwhelmingly believe they can add value to the EIA follow-up program if resources are made available to build their capacity:

'Create an education program to educate the community on the benefits of plants and animals to the community.'

CEXP also concurred with the position of the community members. In the case of PRIOC, none of the respondents allocated resources made available for community participation. The PRMOC highlighted training are available to contractors mainly employed from the community to conduct EIA follow-up:

'Contractors who go out for sampling, we do carry out a lot of training for them. That includes... how to sample, preservation, transportation and transferring to the lab.'

Thus, the PRIOC were graded a **F** and the PRMOC a **D**.

Finance to aid community participation: None of the interviewees highlighted the availability of finance to support community participation. As such, the PRIOC and the PRMOC were graded a **G**.

7.4.4 Project type

Based on the good practice criteria, project type as a category has five criterions. Four of these questions are constant (see Chapter 2). This is due to same parameters being utilised in the selection of case studies for the PRIOC and PRMOC (see Chapter 2 and 8). Table 7.18 summarises the grades awarded based on PRIOC and PRMOC responses (n= 17) on each criterion.

Table 7.18: Grades awarded based on responses to the criterion on project type by PRMOC and PRIOC

Criteria	PRMOC	PRIOC
1. During the implementation of an EIA follow-up program, is the ownership (PRMOC or PRIOC) of the project considered?	D	G

Ownership of project: Some of the community respondents highlighted SPDC, NAOC, Total and Mobil as being responsible for oil pollution in their communities. All of the companies mentioned were MOC's. None of the PRIOC interviewees highlighted possible differentials in implementing EIA follow-up due to project ownership. For the PRMOC, two respondents believe emphasis is on oil companies when compared to other companies:

'The whole effort at monitoring and all, is geared towards the oil companies. Do you understand? Other companies that are not oil related nobody is following them up.'

They further highlighted that implementation of EIA follow-up is dependent on which organization can be extorted:

'It depends on who is the organization. If it is a government agency, they may even start the work before the EIA. You can only be strict with oil Company because it is always easy to extort money from them. If it is another community-based company, who will go there and disturb them, they will slap somebody.'

Based on this, the PRMOC has been graded a **D** and the PRIOC a **G**.

7.4.5 Stakeholder Involvement

This category of the good practice criteria has nine criterions (see Chapter 2). Table 7.19 summarises the grades awarded based on PRIOC and PRMOC responses (n= 17).

Table 7.19: Grades awarded based on responses to the criterions on stakeholder involvement by PRMOC and PRIOC

Criteria	PRMOC	PRIOC
1. Does community participation take place at the pre-decision stage?	C	E
2. How are community members notified to attend a community participation exercise?	D	G
3. How are community members selected for a community participation exercise?	D	G
4. Are the EMP available to communities at project locations?	B	F
5. Are the results of EIA follow-up reports available online?	E	G
6. Are public concerns represented in EIA follow-up?	C	F
7. Do regulators ensure that EIA follow-up is carried out in accordance with the regulations?	D	F
8. Is EIA follow-up viewed as a useful exercise?	A	C
9. Is EIA follow-up regulator, proponent or community driven?	Regulator Driven	Regulator Driven
Overall perception of Stakeholder Involvement by PRMOC and PRIOC	C	F

Community Participation in EIA follow-up: Community participation is mandatory in the Nigerian oil sector, dependent on the category within the FME process it belongs (see Chapter 6). Seven community respondents highlighted; they had participated during public participation exercises within their communities in the past ‘I participated during the SPDC project presentation’; while twenty-three respondents highlighted, they have never been involved in a public participation exercise. In the case of PRIOC, respondents have highlighted situations where communities have complained about not being involved in the EIA follow-up program:

‘We got a letter from one community on an oil project NPDC was operating on our behalf. They complained they were not being carried along on the EIA and the monitoring aspect of it. However, as it is written in the EGASPIN, the person was quoting one area in EGASPIN. I didn’t read the letter as we were cc in it.’

The PRMOC respondents overwhelmingly highlighted that community participation takes place during the EIA process:

‘The communities are meant to be part of the EIA process from the start to the finish. From Scoping to Panel Review and all of that’. The REGD concurred with the PRMOC, highlighting that community participation ‘gives opportunity for especially the public participation and in Nigeria for most project developers, EIA is the only veritable tool that allows for public participation’. Same position is adopted by the REGD noting that ‘usually...the communities have a say and opportunity to also either share in the scoping workshop or program’

This coming from the REGD is interesting as public participation does not exist within the EGASPIN (see Chapter 6). Based on this, the PRMOC was graded an **E** and the PRMOC a **C**.

Notification of community members: Four community respondents highlighted the methods of notification to include engaging the youths and through the chief’s⁴ palace. The PRMOC notifies community members by publishing advertisements in the dailies and announcing it on radio. For the REGD, the local governments environmental health people and environmental committees where present are amongst the methods used. None of the PRMOC responded on the method of notification utilised. Based on this, the PRMOC were graded a **G** and the PRMOC were graded a **D**.

Selection of community members: CEXP have highlighted that ideally, traditional rulers are key in ensuring adequate representation for the community. But this is not currently the case:

‘Ordinarily the traditional leaders would have been very useful in peace keeping, in confidence building...However, what we have now in majority of the communities is the traditional rulers do not live in their communities. They stay in township; they stay in

⁴ The local leader of the people

state capitals. The reason is because they don't have peace in their communities. So, it is the little boys that have taking up arms that are ruling the communities and the traditional stool in majority of the communities; I can speak confidently for several states in the Niger Delta have lost their traditional stools. This is because majority of conflicts we have in the community are due to chieftaincy titles. 2 people or 3 sometimes fighting on 1 stool. This is because government pays them a whole lot of money, so everybody wants to be a traditional ruler. You just sit-down and earn salary at the end of the month. So, the role that should have been played by the traditional ruler is non-existent as we stand.'

The PRMOC respondents highlighted that, no particular method is used in selecting members of the public for public participation. They use the methods highlighted above to notify the members of the public and on the day, whomever appears is welcome. In the case of the REGD, they highlighted that 'during the EIA you identify the key stakeholders...' these are the people to be liaised with to represent the wider community. The REGF highlighted that participation of representatives is left to the state government and the local government. None of the PRIOC responded with respect to how community members are selected for participation. Based on this, the PRIOC are graded a **G** and the PRMOC have been graded a **D**.

Availability of EMP at project location: Conflicting responses were given by the community members, with respect to availability of EMP at project locations. While some said it was made available, others highlighted the need for such reports to be shared with the community. In the case of the PRIOC, all respondents highlighted it is the responsibility of the REGF and the REGD to ensure the EMP is available at the project location. All PRMOC respondents concurred that the EMP is available at project locations and that it is the duty of the proponent to ensure this happens:

‘REGF requires that we do a 21-day display of these documents. So, before our panel review, we display the documents for 21 days for the communities to review and get back to us with concerns. What they feel has not been considered.’

Based on these responses, the PRIOC have been graded an **F** while the PRMOC have been graded a **B**.

Availability of EIA follow-up reports online: None of the community respondents have knowledge of the availability of EIA follow-up reports online. The PRIOC respondent also highlighted that he has not seen a monitoring report while at the organization:

‘I have not seen any report till date, and I have checked all the folders he left, and I have not seen any.’

Both PRMOC respondents’ highlighted EIA follow-up reports not being available to the community:

‘...Right now, we are not carrying community along in internal monitoring activities; the direct interface we have with the community’s end with the EIA process. That is the status quo for now’

A PRMOC further highlighted the need to digitize the whole process for greater transparency:

‘We need to create a system online preferably where there are checklists that you need to tick off before you can get certain projects approved. For example, if you want to buy a phone, and you need an EIA, let it be there that you need an EIA. So, that when you want to start that process of buying a phone as you go online as a proponent, that I want to register to buy a phone, that checklist is prompt up and you will now know; I need this, I need that and so on. And these are criteria’s you must comply with... the processes become streamlined and standardized. That will get people looking at it as technocrats not as politicians.’

Based on their responses, the PRMOC have been graded an **E** and the PRIOC a **G**.

Public concerns in EIA follow-up: The CEXP believe:

‘By ensuring we are part of the monitoring process ...we ensure that the mitigation... outlined in the EIA’s are being implemented. So, we mount pressure the moment the EIA approval has been granted on the proponent, to ensure that the IMM that has been identified in the EIS is being implemented to the letter.’

They further highlighted the need to:

‘Review what is obtainable in developed countries. We are a developing country so we can aim higher. To look at what is obtainable in EIA in developed countries and find lessons we can learn to improve our own EIA system.’

The PRIOC highlighted that community concerns are not always captured during the EIA follow-up process, but the public do complain when such violation is recorded:

‘We got a letter from one community on an oil project NPDC was operating on our behalf. They complained they were not being carried along on the EIA and the monitoring aspect of it. But basically, as it is written in the EGASPIN.’

All PRMOC respondents highlighted that public concerns are taken into account during EIA follow-up, either:

‘Via consultative fora during EIA’ or while they visit the community ‘the communities are always involved in monitoring, because you cannot take people to a community without paying homage. Before you go to a community to pick samples here and there, you go to the chief and say chief we are your boys we are loyal we have come. The chief will come with his cabinet to ask what the matter is. What have we come for? You explain and having satisfied the chief, you now drop kola and wrap it with cloth. That ceremony alone could take you one day.’

Based on these responses, the PRIOC are graded an **F** while the PRMOC a **C**.

Responsibility of regulators in ensuring compliance: Eighteen out of the thirty community members interviewed believe the regulators are not doing enough to ensure the

proponents comply with the EMP and the EIS. The PRIOC concurred with this position, further highlighting that:

‘Our attitude, culture and way of life in Nigeria is what is slowing us down, it happens in other developed countries but not as pronounced as this. Even if you want to bend the rule, you do not break it. However, in Nigeria we break it as such, the regulators leave a lot is to be desired with respect to them ensuring compliance’.

The most of the PRMOC respondents, highlighted in the past the level of ensuring compliance by the regulators was low, but this is currently a changing narrative:

‘Beginning to! I would not say it is not completely, but I would say it is beginning to. I know that years, years and years ago, when I started working, the awareness of EIA monitoring was not like this. But these days we are having a lot of technocrats, people coming into the system, people trying to comply with regulation. There are a lot of sanctions on ground, if you don’t do this now; you get to pay a huge amount of dollars. Imagine an EIA that you will do all in all without spending 40 million Naira, you default and DPR will give you a fine of \$500,000 which if you convert would have covered the whole EIA process by far. So, because of such kind of issues, most of the oil companies are taking serious look into EIA. It is not where we want it to be yet, but it is much better.’

The REGD highlighted the need for ‘for improved enforcement’ to ensure better levels of compliance. Based on these responses, the PRIOC are graded an **F** while the PRMOC a **D**.

Importance of EIA follow-up: Four community members believe EIA follow-up is not a very useful exercise, due to the current state of their environments. The PRIOC respondents digressed from this position, they believe EIA follow-up is a useful exercise ‘Yeah I think so, monitoring from both perspectives is making a difference on ground’. All PRMOC respondents concurred with the PRIOC ‘of course, significantly’. Both REGD and REGF

respondents also agreed with the positive narrative. Based on their responses, the PRIOC are graded a **C** and the PRMOC an **A**.

Driver of EIA follow-up: All three stakeholders (proponent, regulator and community), play a role during EIA follow-up in the Nigerian oil sector. However, it is pre-dominantly regulator driven due to the fact the regulator is expected to ensure compliance. The PRIOC also concurs that the regulator drives the EIA follow-up process:

'I think I have always been on the receiving end in terms of monitoring, I am the one being monitored. So, it's not like maybe I go out monitoring.'

The PRMOC, also highlighted that the regulator drives compliance:

'Once the EIA is done, the fall out document which is EMP. Then the compliance monitoring can start from then.'

Based on these responses, the PRMOC and the PRIOC are both considered regulator driven.

7.5 Chapter Summary

This chapter aimed to present the perception of stakeholders on EIA follow-up in the Nigerian oil sector. To achieve this, the chapter started by identifying the stakeholder groups and organizations operating in the Nigerian oil sector (see Chapter 2, 5, 6 and 7). The identified stakeholders were engaged firstly in a survey to have an overview on EIA follow-up in the Nigerian oil sector and then via semi structured interviews to understand the perception of stakeholders. The results of the semi-structured interviews were structured according to the good practice criteria (see Chapter 2). Some of the key issues raised from the survey on the overview of EIA follow-up in Nigeria include:

- Level of participation of COM in EIA follow-up;
- Level of experience in EIA follow-up of PRMOC compared to PRIOC;
- Level of experience of REGF compared to REGD;
- Level of knowledge of COM on EIA follow-up;
- Level of knowledge of PRMOC compared to PRIOC;
- Perception of importance of EIA follow-up in the oil sector by PRMOC compared to PRIOC;
- Perception of importance of EIA follow-up in the oil sector by REGD compared to REGF;
- Perception of COM on the importance of EIA follow-up in the oil sector;
- Perception of PRMOC compared to PRIOC with respect to level of implementing EIA follow-up;

- Perception of PRMOC compared to PRIOC with respect to Impact of EIA follow-up on future decision making.

In the case of perception of proponents on EIA follow-up in the Nigerian oil sector, the following findings were identified based on the overall perception of the researcher on the responses of the proponents on each criteria:

Regulation and institutional arrangement: The perception of the PRMOC and PRIOC on regulation and institutional arrangement in the Nigerian oil sector was studied and was found to be an **E** (Not satisfactory revealing significant omissions or inadequacies) and **F** (very unsatisfactory with important tasks poorly attempted) respectively.

Approaches and techniques adopted: Grade **F** (very unsatisfactory with important tasks poorly attempted) was allocated to both the PRMOC and PRIOC for approaches and techniques based on their perception. Rigorous techniques found to be used for EIA follow-up by both PRMOC and PRIOC. EIA follow-up was also found to be predominantly compliance oriented. There was clearly poor knowledge of approaches and techniques amongst PRMOC and PRIOC stakeholders.

Resources and capacity available: The resources and capacity made available for EIA follow-up by the PRMOC and PRIOC were graded a **D** (indicates parts being well attempted but, on the whole, performance is unsatisfactory because of omissions or inadequacies) and **F** (very unsatisfactory with important tasks poorly attempted) respectively. There was a perceived insufficiency of resources and capacity for EIA follow-up in both practices. But this was more glaring in the practice of the PRIOC as compared to the PRMOC.

Project type: This category was graded a **D** (indicates parts being well attempted but, on the whole, performance is unsatisfactory because of omissions or inadequacies) and **G** (task not completed at all) for the PRMOC and PRIOC respectively. Based on perception, ownership differentials (implementation of EIA follow-up differently in the practice of one proponent compared to the other) was identified in the practice of the PRMOC, compared to that of the PRIOC.

Stakeholder involvement: The PRMOC were graded a **C** (Just satisfactory despite some omissions or inadequacies) and the PRIOC a **F** (very unsatisfactory with important tasks poorly attempted), with respect to perception of stakeholder involvement in EIA follow-up. The perception of practice in the PRMOC was found to be better than that of the PRIOC.

CHAPTER EIGHT: EIA FOLLOW-UP: CASE STUDIES FROM THE NIGERIAN

OIL SECTOR

This chapter focuses on the case studies of the thesis and is divided into three sections. The first section covers Case study A (OPL 135), followed by the second section covering Case Study B (OML 148). The third section analyzed both case studies: using the good practice criteria. Key emerging issues based on similarities and differences between the two case studies are highlighted.

8.1 Case study A: 3D seismic data acquisition & drilling of exploratory wells in OPL 135 (OPL 135)

OPL 135 is an oil producing license (see Chapter 5), awarded by the FGN to Nigeria Agip Oil Company (NAOC) (see Chapter 7); in a joint venture format (see Chapter 5). OPL 135 is situated along the coastal borders and traverses several communities in Delta state, Nigeria (see Figure 8.1). The area covers approximately 600km² of highly vegetated and flood prone terrain. The area of study, spans from Owelle Obalu in the south through Umute and Ollloh Ogwashi in the north west of Delta state (see Figure 8.1).

8.1.1 Background

The OPL was granted to NAOC in 1962, then called OPL 34; before being split into four Oil Mining Licenses (OML) in 1967, among which was OPL 135 (NAOC 2009). NAOC has remained the operator of OPL 135 since its inception and exploration had never been conducted within the block. Also, no prior EIA approval had been applied for; to the Department of Petroleum Resources (DPR) or the Federal Ministry of Environment (FME). EIA approval was sought for this project, as it falls under the mandatory categories of the procedural guideline of Act No. 86 of 1992 and the DPR's Environmental Guideline and Standards for the Petroleum Industry in Nigeria (EGASPIN) issued in 1991 (revised 2002).

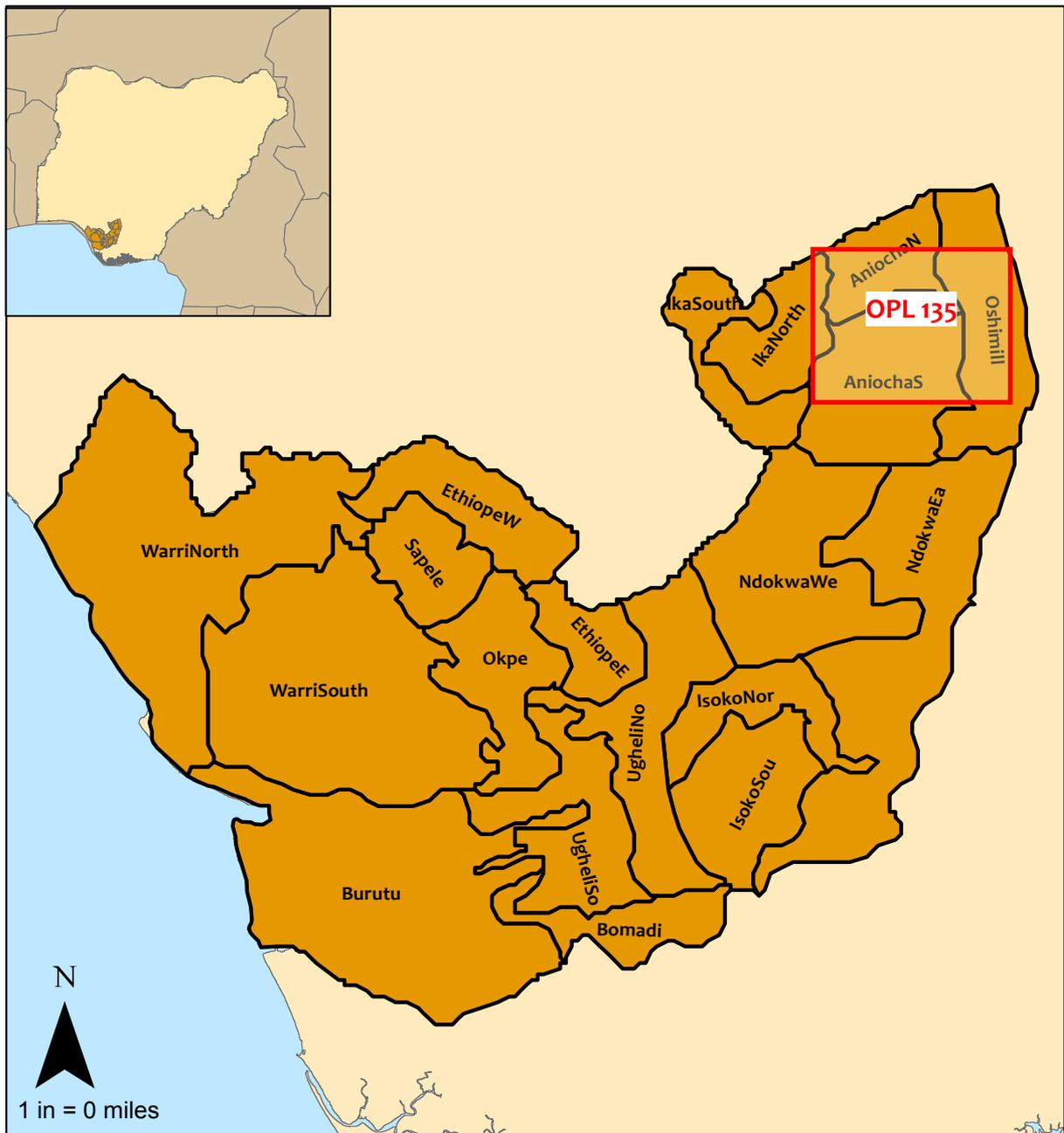


Figure 8.1: Map of Nigeria and Delta state showing study area (source: author)

8.1.2 Pre-decision stage of OPL 135

The term ‘pre-decision’ implies that a decision has not yet been taken on a projects EIA application; as such the project is yet to commence. This was the case, with respect to OPL 135 during its pre-decision stage. The EMP prepared for this project was developed based on data samples collected during the wet season (27th October to 2nd November 2007) and

dry season (8th to 14th of February 2008) assessment periods (NAOC 2009). In compliance with the EIA Act No 86 of 1992, the following steps were taken during the pre-decision stage of the EIA process (see Table 8.1).

Table 8.1: Pre-decision stage process by FME for OPL 135 (compiled by author)

FME Requirement	Findings
Initial Environmental Evaluation	The project was found to be in the mandatory category of projects requiring an EIA, based on it is falling under category 1 of Decree No 86 of 1992 EIA regulation (FRN 1995). The project is also located in an environmentally sensitive area which mandates compulsory EIA for all projects irrespective of the category it originally falls into (Decree 86, 1992) (FRN 1995).
Scoping	Based on the project being in category 1, scoping to establish terms of reference (TOR) was conducted by the proponent and submitted to the regulator for site verification, to ensure only significant impacts are considered (there is no evidence this was done in this order).
Draft EIA prepared	The draft EIA report on this project was submitted to FME on the 31/05/2007.
Public Hearing	There is no chapter particularly assigned to public hearing, it is situated as a section within chapter 4 (NAOC 2009). Interactions with the public were held at four consultative forums, these took place at royal palaces with representatives of community leaders (NAOC 2009). The dates of: the meetings and procedures used to recruit participants are not provided.
Final Report (including EMP)	The final EIA report and EMP was submitted to the FME between the 14/02/2008 and 03/07/2009. No specific date has been provided for its submission date although wet and dry season data collection were conducted on the 27/10/2007 to 02/11/2007 and 08/02/2008 to 14/02/2008 respectively.

FME Requirement	Findings
Technical committee decision	The technical committee wrote a correspondence to NAOC on the 03/07/2009, giving final approval to NAOC to proceed with the project based on 8 conditions.
EIS certificate issued	The EIS certificate was issued on the 24/06/2013 and was backdated to the 03/07/2009.

Based on the analysis of the pre-decision stage of OPL 135's FME's process, the EIA process started with the IEE in 2007 and ended with the issuance of the EIS certificate 2013. Prior to the issuance of an EIS, a provisional approval was issued in 2009. Specific timelines for stages of the EIA process does not exist within the FME process (see Chapter 6). As such, the EIA processes tend to take an unspecified period of time (Ogunba 2004). In the case of the DPR, timelines for compliance do exist on some stages of the EGASPIN (see Chapter 6). The following steps were taken to comply with the petroleum Act 1969 (see Table 8.2).

Table 8.2: Pre-decision stage process by DPR for OPL 135 (compiled by author)

DPR Requirement	Findings
Initial Environmental Evaluation	IEE was prepared by NAOC and submitted to DPR.
Screening (to determine impact significance?)	EIA was mandatory for the project based on the activities to take place being seismic in nature (DPR 2002). Based on the EGASPIN regulations, it should be done 30 days after the IEE by NAOC. There is no evidence with respect to date of screening.
Scoping panel constituted by regulator	Scoping was conducted prior to the collection of wet season and dry season samples on the 27/10/2007 to 02/11/2007 and 08/02/2008 to 14/02/2008 respectively (NAOC 2009). But there is no evidence to suggest a panel for scoping was constituted by the DPR; neither is there any indication for a date of sitting of such a panel.
Submission of draft EIA	The draft of the EIA report was submitted on the 14/12/2008 to DPR (NAOC 2009). A response was issued by DPR on the 27/05/2009,

DPR Requirement	Findings
	detailing concerns within the EIA draft report that needs to be addressed. Based on the EGASPIN regulation, a response is expected within 21 days. In this case, a response was received after 163 days.
Submission of final EIA (including EMP)	The final EIA report was submitted by NAOC to DPR on the 30/03/2011.
Approval letter issued by DPR	On the 10/06/2011, a final approval letter was issued by the DPR; highlighting all concerns raised on the communication dated 27/05/2009 had been satisfied. Based on the EGASPIN regulations, a response is expected seven days after the submission of the final draft. In this case, a final response was received after 72 days.

Based on the analysis of the pre-decision stage of OPL 135's DPR process, the IEE was submitted by NAOC to kick start the EIA process. The screening is to be conducted by NAOC and the DPR, but there is no evidence that both parties were involved in the screening process. The next step is the scoping phase (see Chapter 6), based on the EGASPIN; a scoping panel was to be constituted. There is no evidence within the EIA to conclude that such a panel was constituted. The draft EIA was submitted on the 14/12/2008, with a response containing areas of concern expected within 21 days. Based on evidence, a response was received by NAOC on the 27/05/2009, i.e. after 163 days. The final draft of the EIA was submitted by the proponent on the 30/03/2011. A response was expected in seven days, but DPR approved the EIA on the 10/06/2011, i.e. After 72 days.

8.1.3 EIA follow-up stage for OPL 135

The FME and DPR on the basis of the EIA report and correspondence with NAOC, granted the EIS and approved commencement of operation. In both cases, emphasis was placed on the importance of complying with the Environmental Management Plan (EMP). As such, within the Nigerian context; the EMP lays down the foundation for EIA follow-up in the pre-

decision stage. In the case of OPL 135, the EMP was contained as chapter 7 of the EIA report. This was submitted to DPR and FME in March 2011, implying that during the time of this study; the implementation of the EIA follow-up conditions specified by the EMP should have begun. The EMP consisted of four sections and included environmental protection and monitoring measures to be adopted by the proponent. These are shown in Table 8.3.

Table 8.3: EMP sections and project activities to be monitored for OPL 135 (NAOC 2009)

Sections of EMP for OPL 135	Project activities to be monitored according to EMP of OPL 135
<ol style="list-style-type: none"> 1. Introduction 2. Environmental Monitoring 3. Audit Program 4. Resourcing and Responsibility 	<ol style="list-style-type: none"> 1. Land Acquisition 2. Vegetation Clearing 3. Dredging 4. Movement and Transportation of Material and Personnel 5. Drilling 6. Waste Generation 7. Production Testing 8. Movement of Personnel and Materials 9. Site Clean-up 10. Waste Removal 11. Rehabilitation of Site

Apart from the project activities contained in the EMP to be monitored, the FME granted final approval subject to certain conditions. For OPL 135, eight conditions were set by the FME. The EIS given by the FME further provides conditions to be complied with. The EIS is issued for a period of five years in 2013, backdated to 2009 when the final approval was granted (see Table 8.1). In the case of the DPR, final approval was granted for OPL 135 with a commitment from NAOC ‘to ensure the full implementation of the mitigation measures proffered for all the identified significant impacts in the EMP and approval report, with the involvement of the DPR’. This took place in 2011 (see Table 8.2).

8.1.4 Implementation of EIA follow-up program in OPL 135

The stakeholders for OPL 135 included the regulatory bodies DPR and FME, the proponent NAOC and the local communities of Owelle Obalu in the south through Umute and Oloho Ogwashi in the north west of Delta state. The proponent is required to submit compliance

reports to the head offices of the FME, located in FCT Abuja and the DPR located in Lagos state.

Since the issuance of the EIS, the FME have visited OPL 135 in 2013 and 2014 to check compliance to the conditions set in the EMP, the final approval issued and the EIS. These visits based on documents obtained, took place on the 11/03/2013 with feedback being received on the 28/03/2013 and the 24/10/2014 with the feedback received on the 12/12/2014. This implies that EIA follow-up for OPL 135 by the FME commenced in March 2013, almost 4 years after the issuance of the final approval for OPL 135 by the FME. The proponent could not provide records of compliance checks conducted on OPL 135 by the DPR.

8.2 Case study B: 3D seismic data acquisition, drilling of exploratory wells in OPL 278 (OML 148)

OML 148 is an oil mining license (see Chapter 5) awarded by FGN to Enageed Resource Limited (ERL) (PRIOC) (see Chapter 5). OML 148 is located in the swamp forest belt of the Niger Delta. The concession boundaries fall into Delta, Edo and Ondo states (see Figure 8.2). The area covers approximately 871km² of predominantly swampy terrain. The area of study shares a boundary with the following oil blocks/concessions OPL 204 to the north, OML 40 to the south, OML 103, OML 111 and OML 96 to the east (see Figure 8.2).

8.2.1 Background

The license was granted to ERL in 2007, then called OPL 274 before being converted into an Oil Mining Licenses (OML) and assigned number 148 (ERL 2016). ERL has remained the sole operator of OML 148 since its inception in a production service contract (PSC) with the FGN (see Chapter 5). An EIA approval was applied for on the 09/12/2011 from the DPR to explore over 500 km² of land and this was granted along with its EMP. EIA was required before commencement of exploration on OML 148, because as with OPL 135, it falls under the

8.2.2 Pre-decision stage of OML 148

The proponent applied for an approval for the 3D seismic data acquisition and drilling of exploratory wells to the DPR on the 23/11/2011, this was granted on the 09/12/2011. The EMP was prepared using data samples collected during the wet season (September 2010 and November 2010) and the dry season (January 2011) (ERL 2016). Based on the EIA Act No 86 of 1992, steps are to be taken during the pre-decision stage of the EIA process. This was also acknowledged by ERL (2016: 6):

‘The proposed project shall be executed within the limits of National and International institutional/legal framework... Federal Environmental Protection Agency (FEPA) Act No. 58, 1988 and Environmental Impact Assessment Act No. 86, 1992.’

But in the case of this project, there is no evidence that approval was sought nor granted by the FME. In the case of the approval sought from the DPR, Table 8.4 presents the steps which were taken.

Table 8.4: Pre-decision stage process by DPR for OML 148 (compiled by author)

DPR Requirement	Findings
Initial Environmental Evaluation	IEE was prepared by ERL and submitted to DPR.
Screening (to determine impact significance?)	Similar to OPL 135, there is no evidence screening was done within the 30 days’ timeline after the submission of the IEE by ERL.
Scoping panel constituted by regulator	Scoping was conducted prior to the collection of the first, wet or dry season sample in the September 2010 (ERL 2016). But like OPL 135, there is no evidence to suggest a panel for scoping was constituted by the FME or indication of a date of sitting of such a panel.
Submission of draft EIA	No information is available with respect to whether a draft submission was made prior to the submission of the final EIA report.
Submission of final EIA (including EMP)	The final EIA report was submitted to DPR on the 23/11/2011.
Approval letter issued by DPR	An approval letter was issued to ERL on the 09/12/2011.

Based on the analysis of the pre-decision stage of OML 148, there was no information provided by the proponent to show an EIA has been approved by the FME on this field. While in the records of the FME, this field is shown as currently not being developed. An analysis of the DPR's process of the pre-decision stage of OML 148 shows; the IEE was submitted by ERL to kick start the EIA process. Screening was conducted on the project, although similar to OPL 135 there is no evidence if it was conducted within the 30 days' timeframe as stipulated. A similar situation was observed during scoping, no evidence was identified to determine if a panel was constituted to scope the project. There was no mention of a first draft being submitted in any of the correspondence between DPR and ERL. The final draft of the EIA was submitted on the 23/11/2011 with a response expected within 7 days, but the same was approved on the 09/12/2011, i.e. after 12 working days.

8.2.3 EIA follow-up stage for OML 148

Based on the EIA report and consultation with ERL, the DPR granted an approval for the project. As with OPL 135, emphasis was placed by the DPR on the importance of complying with the EMP. The EMP was contained as chapter 6 of the EIA report and consists of three parts. This was submitted to the DPR along with the EIA report on the 23/11/2011. During the time of this study, EIA follow-up of the conditions specified should have commenced. The sections of the EMP and project activities to be monitored are highlighted below (see Table 8.5).

Table 8.5: EMP sections and project activities to be monitored for OML 148 (ERL 2011)

Sections of EMP for OPL 135	Project activities to be monitored according to EMP of OPL 135
<ol style="list-style-type: none"> 1. Introduction 2. Environmental Management Organization <ol style="list-style-type: none"> a. Waste management b. Chemical management c. Oil spill contingency plan d. Blow out contingency plan e. Training program f. Environmental monitoring and g. Environmental auditing 3. Environmental Management Plan 	<ol style="list-style-type: none"> 1. Mobilization to site (equipment & personnel) 2. Site preparation (vegetation clearing) 3. Excavation of route 4. Demobilization (equipment and personnel from site) 5. Dismantling site clean-up 6. Land acquisition 7. Geotechnical investigations 8. Site office construction 9. Deck construction 10. Construction of landing steps 11. Restoration

Apart from the project activities contained in the EMP, the final approval was granted subject to four conditions on the 09/12/2011 (see Table 8.4).

8.2.4 Implementation of EIA follow-up program in OML 148

OML 148 has same regulators as OPL 135 (DPR and FME). The proponent in this case is Enageed Resource Limited (ERL) and the local communities in Isan west, Omuro, Ojumole, Polobo, Opuama, Ugba, Koko, Oziengbe South, Tsekelewu, Sapele and Gili gili. The proponent is also required to submit compliance reports to the same offices as OPL 135. Since the final EIA approval by the DPR, neither the FME nor the DPR has visited OML 148. Therefore, compliance checking by both regulatory bodies had not commenced. However, documentary evidence showed that on the 23/12/2016, a Preliminary Environmental Impact Assessment Report (PEIAR) was submitted by the proponent to the DPR for the construction of a pipeline and mooring point. The PEIAR was approved by the DPR on the 24/01/2017 without the need of conducting an EIA. This was due to the DPR considering the project not to require an EIA. This implies that EIA follow-up program for OML 148 has not yet commenced, almost seven years after the issuance of the final approval by the DPR. In the case of the FME, seven years after the approval of the project by the DPR; the proponent cannot provide a final approval or EIS approved by the FME.

8.3 Analysis of case studies (OPL 135 and OML 148)

In conducting the case studies on projects by the PRMOC (OPL 135) and the PRIOC (OML 148) (see 8.1 and 8.2), documents were collated from both proponents and interviews conducted with the project managers. The good practice criteria developed is used in analyzing the practice of EIA follow-up in both cases (see Chapter 2) and grades are awarded to both practices based on the information available in the documents collated and interviews. This helps us in understanding the practice of EIA follow-up within the Nigerian oil sector.

8.3.1 Regulation and institutional arrangement

There are seven criterions in this category and all of them were answered based on documentary analysis and interviews from the project managers (n=2). Table 8.6 summarizes the grades awarded to the respective projects based on each criterion. Unlike in the earlier chapter (see Chapter 7) where the perception of stakeholders was graded, in this section; the case studies are graded based on compliance to the actual legal requirement.

Table 8.6: Grades awarded based on performance of case studies to criterions on regulation and institutional arrangement

Criteria	PRMOC	PRIOC
8. Is the EIA follow-up process based on clear and specific formal requirements?	C	E
9. Are there any stages specified in the formal requirements?	B	D
10. Are there any time limits for the various steps in the EIA follow-up process?	E	F
11. Is there a strong commitment to conduct EIA follow-up by the regulators?	E	G
12. Is there a role for independent verifiers within the EIA follow-up process?	G	G
13. Are proponent self-regulation tools (ISO 14001, ISO 14040) permitted within the EIA follow-up process?	C	E
14. Are there incentives to encourage good practice (proponent voluntarism)?	G	G
Overall grade of Regulation and Institutional arrangement	D	E

Clear and specific formal requirements: There was a clear and specific legal requirement in the case of OPL 135. The project obtained clearance from FME and the DPR, which implies that the EMP has been analyzed and approved by both regulatory bodies according to the EIA Act No. 86 of 1992 and the Environmental Guidelines and Standards for the Petroleum Industry in Nigeria issued in 1991 (revised 2002). Compliance checking has commenced by the FME, since the issuance of the final approval; compliance monitoring has been conducted twice. However, in the case of compliance checking by the DPR, there has been no evidence to suggest any compliance check has been conducted since the inception of the project. It can therefore be concluded that EIA follow-up in OPL 135 is partially based on specific legal provisions and has been graded a **C**.

OML 148 obtained clearance from the DPR and within the conditions highlighted was the need to ensure the EMP was fully implemented. There was no evidence of compliance checks being carried out by the DPR on OML 148. Also, there was no evidence of an EIS or final approval being issued on this project by the FME. Thus, the project is working without an approval by the FME and as such no compliance check has taken place to date. Therefore, in practice legal and institutional provisions are only partially implemented and as a result this criterion has been graded an **E**.

Stages specified in EIA follow-up: In OPL 135, the EMP specifies project activities like land acquisition, vegetation clearing are to be done based on approved monitoring frequency and timing. The EMP specifies timings for the implementation project activities. This is approved by the FME and DPR and is expected to be adhered to during EIA follow-up. Based on the existence of timings, OPL 135 has been graded a **B**.

In the EMP of OML 148, project activities were mentioned along with the frequency of monitoring expected on such activities, which includes the stage of the project in which such activities are to be monitored. The EMP of OML 148 was approved by the DPR but the evidence suggests there was no approval of the EMP by the FME. Currently, both the DPR

and the FME have not conducted EIA follow-up on OML 148 and as such it cannot be confirmed if the monitoring frequency is complied with. Based on this, OML 148 has been graded a **D**.

Time limits for EIA follow-up activities: Based on the EMP of OPL 135, time limits exist for the various project activities. The EMP mentions if project activities should be conducted as one offs, monthly, bi weekly for six months, every six months etc. Although compliance checks have been conducted on the project by the FME, both reports highlighted the need for the PRMOC to 'submit the in-house environmental monitoring reports to the ministry for evaluation on quarterly bases' as such we cannot confirm time limits are followed thoroughly in practice. Thus, grade **E** has been given to this criterion.

In the case of OML 148, time limits also exist for the different activities listed in the EMP. As EIA follow-up has not been conducted by either of the regulatory bodies on this project, we can conclude that in practice time limits for EIA follow-up are not being implemented. Thus, grade **F** has been given to this criterion.

Commitment by regulators to conduct EIA follow-up: Based on the EIA follow-up feedback collected from OPL 135, the project has been visited for inspection by the FME in 2013 and 2014 since final approval was granted by the FME in 2009 and the DPR in 2011. In both feedbacks, demands were made by the DPR for the environmental monitoring reports; but there was no evidence to suggest that sanctions were issued for the failure to submit them as at when due. In the case of the DPR, till date no visitation has taken place at OPL 135. This is not in accordance to the conditions set in the final approval issued in 2011 and can also be termed as a violation of the EGASPIN regulation. As such commitment by regulators can be deemed unsatisfactory due to irregular monitoring by the FME and no monitoring at all by the DPR. Hence the commitment by regulators to conduct EIA follow-up has been graded an **E**.

In the case of OML 148, according to the proponent; neither the DPR nor the FME has visited the project for monitoring. The project received the consent to operate from the DPR in 2011, which makes it mandatory for the regulating authorities to visit it. In the case of the FME final approval has not been issued on the project. For these reasons, grade **G** has been accorded for this criterion.

Role of independent verifiers: No independent verifier exists for OPL 135, as the attendants of the monitoring exercise were the FME, SME and LGA representatives; whom are all paraphernalia of government. Grade **G** has been accorded to this criterion.

Similarly, OML 148 also lacks independent verifiers. In its own case, as highlighted above monitoring has not even taken place by either of the statutory regulating authorities. As such, they have also been graded a **G**.

Integration of self-regulation tools within EIA follow-up: In the case of OPL 135, ISO 14001 is integrated into the EIA follow-up program. The EMP incorporates requirements of the DPR, FME and international treaties signed by NAOC. The proponent established the 'Environmental and Quality Control (EQC) unit of HSE department' with one of its mandate requiring it to 'offer expert advice on protection measures and also monitor performance in line with HSE policy and in accordance with ISO 14001: 1996'. Based on this consideration, OPL 135 has been graded a **C**.

Like OPL 135, the EMP of OML 148 also incorporates the requirements of the regulatory bodies and the HSE policy of ERL. But unlike OPL 135, there is no evidence of specific treaties signed into by ERL or being integrated into the EMP and during interview it was specifically highlighted there are no ISO standards in place. As such, grade **E** was accorded to the performance of OML 148 against the criteria.

Incentives for proponent voluntarism: In OPL 135, there was no evidence of proponent voluntarism. Rather as highlighted earlier, the proponent was being encouraged by the FME in both feedback reports to submit their in-house monitoring reports, which is a statutory

duty of the proponent. So, in case of the OPL 135 there was no evidence of the proponent being encouraged for voluntarism, neither was there evidence of community pressure ensuring the EIA follow-up program is being implemented. Based on this, OPL 135 has been graded a **G**.

In OML 148 there was also no evidence of incentives to encourage proponent voluntarism. Currently, considering the commitment of regulators to the implementation of the EIA follow-up program (see above); a lot of improvement is required for the regulators to get to the level of providing incentives for proponent voluntarism. Based on this, OML 148 was also graded **G**.

8.3.2 Approaches and techniques adopted

In the approaches and techniques adopted category, sixteen criteria exist (see Chapter 2 and Chapter 7). Table 8.7 provides details of grade awarded against individual questions under this category. Interviews (n=2) and documentary analysis have been used to obtain the answers to the criterions.

Table 8.7: Grades awarded based on performance of case studies to criterions on approaches and techniques adopted

Criteria	PRMOC	PRIOC
1. Does EIA follow-up start at the pre-decision stage of the EIA process?	E	G
2. Is EIA follow-up designed according to stages of the project (construction, operation, decommissioning)?	D	E
3. Is screening conducted during EIA follow-up?	C	E
4. Is there any scoping done during EIA follow-up? If yes, is it objective-led and continuous throughout the project cycle?	D	E
5. Is the EIA follow-up program documented in the EIA report?	D	E
6. Is existing data used in the EIA follow-up program?	F	D
7. What type of monitoring (compliance, command and control) is adopted in the EIA follow-up program?	C	C
8. Is there any provision of rigorous monitoring data? In case rigorous methods are not possible, is there any provision for simple techniques for conducting follow-up?	D	D
9. Does the proponent have any formal EMS in place? If yes, is it well integrated with EIA follow-up?	C	G
10. Does EIA follow-up meet its functions (conformance, performance, dissemination, tackling uncertainty)?	D	E

Criteria	PRMOC	PRIOC
11. Are all the components of EIA follow-up complied with?	D	F
12. What approach is adopted for EIA follow-up in the Nigerian oil context?	D	E
13. What is the scope adopted for EIA follow-up (environmental, social and health issues)?	C	D
14. Are there indirect impacts due to projects taking into account during EIA follow-up?	D	G
15. Are the approaches adopted in accordance with the local 'EIA culture'?	E	E
16. Are the efforts of the regulators harmonized towards implementing the EIA follow-up program?	F	G
Overall grade of Approaches and Techniques adopted	D	E

Early start of EIA follow-up: In the case of OPL 135, EIA follow-up by the FME started in 2013 although both regulatory agencies had approved the project by 2011. Based on law, EIA follow-up is to be conducted at least once a year after final approval has been granted. As is evident from the discussions above, the DPR is yet to conduct EIA follow-up since the final approval was granted in 2011. Based on this reality, the start of EIA follow-up with respect to OPL 135 has been graded an **E**.

EIA follow-up is yet to commence by either the FME nor the DPR in OML 148. Although the project was approved by the DPR in 2011. As such OML 148 has been graded a **G**.

EIA follow-up based on project evolution: For OPL 135, each project activity (e.g. land acquisition, vegetation clearing, dredging) has been designed based on the stages expected during a 3D seismic data acquisition and exploratory well. Some of the stages specified include; pre-land acquisition, land acquisition, before drilling, during design and site preparation among others. Thus, grade **D** has been given to OPL 135 on this criterion.

The EIA follow-up in OML 148 was not designed to accommodate the different stages of the oil project. The EMP as approved by the DPR categorized some aspects of EIA follow-up based on the stages of the oil project. For example, backfilling is to be monitored before and after back filling. Based on this, the practice in OML 148 has been graded an **E**.

Screening for EIA follow-up: In both the EGASPIN and the EIA Act 86 of 1992, oil projects are activities in the mandatory list requiring an EIA approval (see Chapter 6). Based on this, both OML 148 and OPL 135 were screened prior to the submission of the final EIA report. Considering there is no proof of an EIA approval being issued to OML 148, it cannot be determined if screening was conducted by the FME. Based on this the OPL 135 has been graded a **C** and OML 148 an **E**.

Scoping for EIA follow-up: Scoping was conducted for OPL 135 by both the FME and DPR (see Table 8.1 and 8.2). These were based on oil, environment and labor laws; which establishes the conditions that need to be complied with. Prior to final approval being issued by both the FME and DPR, conditions were added in the final approval letters issued after final EIA report considerations. Based on this, scoping conducted during the process of OPL 135 has been graded a **D**.

In the case of OML 148, Scoping was conducted prior to the collection of the first, wet or dry season sample (see 8.4). But unlike in the case of OPL 135, there is no evidence a panel for scoping was constituted by the FME or the date of sitting of such a panel. Further conditions were also issued on the final approval issued by the DPR. Based this, OML 148 was graded an **E**.

Documentation of EIA follow-up program: Both OPL 135 and OML 148 have a chapter that contains the EMP (in OPL 135 it is contained in chapter 7 and in OML 148 it is contained in chapter 6). The chapters are highly technical and cumbersome, containing conditions to be monitored during EIA follow-up at various stages of the project by the proponent. The perhaps technical and cumbersome nature of both EMP chapters presents a challenge for EIA follow-up implementation. Based on both feedbacks issued by the FME on OPL 135, quarterly compliance reports were requested from the proponent. The highly technical nature of the chapters might also make it difficult for third party EIA follow-up to occur. Based on this, OPL 135 was graded a **D** and OML 148 has been graded an **E**.

Use of Existing data in EIA follow-up: There was no evidence of existing data being used in the EMP of OPL 135. Likewise, no evidence of existing data was found to be used in OML 148. But in this case, a subsequent PEIAR was submitted for the construction of a pipeline within the OML (see above) and the PEIAR utilized existing data from the original EIA report of OML 148. In both cases, proponents and regulators highlighted the insufficiency of data exchange between organizations and the secrecy with which information in relation to EIA is guarded. Also highlighted in OML 148, was the poor practice of data storage amongst organizations. Thus OPL 135 was graded an **F** and OML 148 a **D**.

Type of Monitoring: In both OPL 135 and OML 148, the type of monitoring subscribed to is compliance monitoring. Based on proponents liaising with the DPR and FME, environmental parameters are set in the EMP; these are expected to be continuously measured to ensure that the set regulatory requirements are met. In both OPL 135 and OML 148, baseline monitoring (see Chapter 3) has been conducted in chapter four of their EIA final reports, covering conditions of project sites prior to project implementation. A grade of **C** has been accordingly allocated to both projects.

Type of Technique adopted (rigorous or simple): For both OPL 135 and OML 148, the techniques adopted are highly technical and rigorous. All the projects are large scale based on the EGASPIN and categories of guidelines of EIA Act 86 of 1992. In both cases, labs are sometimes required to analyze multiple samples. This also highlights there is further scope to develop less expensive and simpler techniques for EIA follow-up implementation. Based on this, OPL 135 and OML 148 have been granted a **D** in both criterions.

Integration of EMS within EIA follow-up: OML 148 does not currently have a formal EMS in place, thus there is no need to integrate EMS into the EIA follow-up design. Based on this fact, OML 148 has been graded a **G** on this criterion.

As highlighted under criterion six of the regulation and institutional arrangement category, NAOC expects all oil projects implemented by their organization; to integrate ISO 14001

within their environmental management framework. As a result of this, a formal EMS is in place with respect to OPL 135. There is no specific requirement by any of the regulators for projects by proponents to have EMS in place. OPL 135 has been graded a **C** on this criterion, based on the integration of ISO 14001 within its EMP.

Functions of EIA follow-up: For OPL 135, EIA follow-up meets most of its functions partially. None of the functions are properly done, the strongest function being met is conformance follow-up as the FME has conducted two compliance checks on the project since inception. While the weakest function is dissemination, the FME in both feedback reports highlighted the need for the proponent to submit in-house monitoring reports. While the community (see Chapter 7) has highlighted failure on the part of both the regulators and the proponent with respect to the dissemination of information. This criterion has been graded a **D**.

None of the functions of EIA follow-up can be deemed strong in the context of OML 148, conformance follow-up in the form of compliance monitoring is yet to be conducted by either of the regulators. As a result of this, dissemination has also not been done by the regulator nor the proponent. However, the EMP includes an oil spill contingency plan and a blowout contingency plan, which to some extent tackles uncertainty. As a result of this, grade **E** has been given to this criterion.

Components of EIA follow-up: Monitoring is the strongest component of the EIA follow-up practice in the Nigerian oil sector, although it faces major challenges. For example, in OML 148 monitoring has not been conducted, while in OPL 135 only one regulatory body has conducted monitoring. Auditing is weak in OPL 135, as highlighted above; the in-house monitoring reports were not submitted when due by the proponent to the regulators for auditing to be conducted. In the case of OML 148, neither auditing is nonexistent. The data generated from monitoring in OPL 135, informed the recommendations in the feedback report that required management. This was expected to be done by the proponent, however there was no evidence it was adhered to. Communication is weak in both OPL

135 and OML 148 especially with respect to the community. Based on this OPL 135 is graded a **D** and OML 148 an **F**.

Approach adopted for EIA follow-up: Both projects adopt a command and control approach to EIA follow-up. Although as highlighted earlier, there are major challenges in its implementation. This is based on legislation being set by the regulators (command) and ensuring the proponents adhere to the legislations (control). Elements of this can be seen in both OPL 135 and OML 148, but there is a lot of room for improvement. Based on this, OPL 135 has been graded a **D** and OML 148 an **E**.

Scope of EIA follow-up: In the case of OPL 135, environmental, social and health impacts of the project were considered in the EIA follow-up program. Based on the project activities identified, the EMP addressed issues of an environmental, social and health impact nature. For example, under the project activity movement and transportation of materials and personnel, an impact ‘third party agitation’ was identified; this is a social issue. Under the project activity drilling, an impact ‘hearing impairment/ respiratory/ disorder/ eye irritation resulting from noise and dust pollution’ was identified; these are health issues. Based on this, OPL 135 has been graded a **C** as apart from environment; health and social impacts are also covered.

Similar to OPL 135, the EMP of OML 148 also covers social and health issues. For example, under the project activity ‘demobilization (equipment and personnel from site)’ loss of employment/ income has been identified as an impact and this is a social issue. Injuries and deaths which constitutes health impacts were also identified under same project activity. OML 148 has been graded a **D**.

Taking into account indirect impacts: In the case of OPL 135, the feedback letters by the FME highlighted areas within the project requiring further monitoring, which were not earlier identified during scoping and not included for management in the EMP. But the EMPs for both projects did not highlight any indirect impact as a result of the oil projects. The

project manager of OPL 135 highlighted during interviews situations where unexpected indirect impacts of the project on the community has to be taken into account to ensure peace exists in the society for the project to operate. These tend not to be included in the EMP nor the EIA follow-up report. As a result of this, OPL 135 has been graded a **D** and OML 148 has been graded a **G**.

Impact of local culture on approaches adopted: In both the OPL 135 and OML 148, the local culture has an impact on the approach adopted for EIA follow-up. Perhaps due to the culture of poor environmental management in general within the context, the command and control approach is adopted for EIA follow-up. This makes EIA follow-up mandatory and makes the proponent liable for failure to implement EIA follow-up. Based on this, both projects have been graded an **E**.

Harmonization of regulators: In OPL 135, there was no evidence of harmonization between the regulators with respect to EIA follow-up. In both visits to OPL 135, the FME was not accompanied by the DPR. Similarly, the feedback provided to the proponent was not jointly produced by the regulators and neither was the DPR copied to ensure that they have a knowledge on the current state of follow-up on the project. Similarly, the demand for in-house monitoring reports by the FME did not suggest that same should be sent to the DPR. Based on these, the OPL 135 has been graded an **F** and OML 148 a **G**.

8.3.3 Resources and capacity available

There are fourteen criteria in this category. The answers to these questions have been obtained from documentary analysis, interviews with the project managers of the case studies (n=2) and observation. Table 8.8 summarizes the grades awarded to each project based on each criterion.

Table 8.8: Grades awarded based on resources and capacity available for EIA follow-up

Criteria	PRMOC	PRIOC
15. Is responsibility clearly allocated to finance EIA follow-up?	D	D
16. Is responsibility clearly allocated to stakeholders to conduct EIA follow-up?	D	E
17. Is responsibility clearly allocated to evaluate/audit EIA follow-up?	F	F
18. Is responsibility clearly allocated to manage the changes if required?	D	F
19. Is responsibility clearly allocated for someone to prepare the report?	G	G
20. Is responsibility clearly allocated for someone to whom the results are reported to, or, who checks compliance?	E	G
21. Is responsibility clearly allocated for someone to communicate the EIA follow-up report to the community?	F	G
22. Is local knowledge taken into account for designing EIA follow-up?	F	F
23. Is there any provision of 'institutional memory' and knowledge brokering (contract with universities or research institutes for knowledge sharing)?	D	D
24. Is there any kind of training or education and capacity building imparted for EIA follow-up?	C	E
25. What is the strength of EIA follow-up teams?	B	E
26. Is there any independent monitoring agency involved in the EIA follow-up program?	G	G
27. Are resources made available to build capacity of community stakeholders to participate in the EIA follow-up program?	G	G
28. Is finance made available to aid participation of community in EIA follow-up program?	G	G
Overall grade of resources and capacity available	F	F

Financing EIA follow-up: The cost for conducting EIA follow-up in both OPL 135 and OML 148 based on the EIA reports are to be provided by the proponents. This includes, cost of accommodation, logistics and inspection by the regulatory bodies. The regulator informs the proponent when a compliance check is due, and arrangements are made for the regulator to visit. Based on this, both projects were graded a **D** as the practice of the proponent covering the costs of the regulator can be perceived to influence the report produced by the regulator.

Conduct EIA follow-up: In both OPL 135 and OML 148, the proponent is to conduct EIA follow-up. But as highlighted earlier in both feedbacks provided by the FME on OPL 135; requests were made for the in-house Environmental Monitoring Reports conducted on OPL 135. As such it cannot be confirmed if EIA follow-up was conducted on this project by the

proponent, prior to the compliance check conducted by the FME. In the parent company of OPL 135, a department exists for environmental issues and within it separate cells exist with a mandate to handle pre-decision issues and EIA follow-up and a team is also in place to manage the EMP. For OML 148, an environmental protection system also exists; this is a two-man team with the mandate to handle all environmental issues. Based on this, OPL 135 has been graded a **D** and OML 148 an **E**.

Evaluation/audit EIA follow-up: The proponent evaluates EIA follow-up and is expected to submit a report on the areas of divergence with the EMP to the regulators with potential actions taken to mitigate the impacts. In both OPL 135 and OML 148 this has not been seen and as such they have been graded a **F**.

Managing changes: The proponent is expected to play a major role in this criterion. As highlighted earlier, in the feedback received by OPL 135 from the FME; areas requiring actions by the proponent were highlighted by the FME and the proponent is expected to implement the required actions. But there was no evidence this was done in OPL 135. Based on this, OPL 135 has been graded a **D** and OML 148 a **F**.

Preparing report: The proponent is expected to prepare the EIA follow-up report. However as none of the mandatory in-house Environmental Monitoring Report was cited, it cannot be determined if the monitoring report is produced by the proponent or by a consultant on behalf of the proponent. Based on this, both projects have been graded a **G**.

Checking compliance: Ideally once the in-house Environmental Monitoring Reports are produced by the Environmental Liaison Officer (ELO) in the case of OPL 135, this is then transmitted to the site HSE coordinator who check and ensure the practice in the projects meet the conditions set in the EMP and NAOC's HSE laws. As highlighted above, this is then transmitted to the regulators. Once the Environmental Monitoring Reports is transmitted, as highlighted on OPL 135 this was not done; the regulators are expected to conduct

compliance monitoring visits which was conducted. This criterion has been graded an **E** for OPL 135 and a **G** for OML 148.

Communicating report to community: There was no evidence that the in-house Environmental Monitoring Reports requested by the FME in the case of OPL 135 or the feedback report received from the FME were communicated to the community. But this is highly doubtful considering the FME whom is a regulator also did not have access to the reports and the feedback reports submitted by the FME was not shared with the other regulator (DPR). In the case of OML 148 this is graded a **G** as there was no attempt while in the case of OPL 135 this criterion has been graded a **F**.

Local knowledge during design: The EIA follow-up design in both OPL 135 and OML 148 were exactly the same. The conditions set by the regulators also seem to be a standard format in both projects. In both case studies, the impacts identified on project activities were based on scoping of the project area and inputs and recommendations by the regulators. Little or no evidence existed on the use of local knowledge within the design of both projects. As a result of this, both OPL 135 and OML 148 have been graded a **F**.

Provision for knowledge brokering: In both OPL 135 and OML 148 during discussions with project managers, comments were made with respect to knowledge brokering which took place during the design of their EIA/EMPs. In both cases, references were seen to be used from data available in academic institutions and other knowledge-based institutions. Based on this, both projects have been graded a **D** on this criterion.

Capacity building for EIA follow-up: Annual courses are held on EIA follow-up during the HSE conference organized by the DPR. Apart from such opportunities provided by the DPR, the PRMOC proponents were also found to provide opportunities for regular training to their staff involved in EIA follow-up. This was not the case with the PRIOC's, where a limited availability of opportunities for capacity building on EIA follow-up was identified. Accordingly, the PRMOC has been graded a **C** and the PRIOC has been graded an **E**.

Strength of the EIA follow-up teams: In OPL 135, the proponent constitutes a team made up of five persons to monitor and manage the EMP. Figure 8.3 highlights the team managing EIA follow-up in OPL 135.

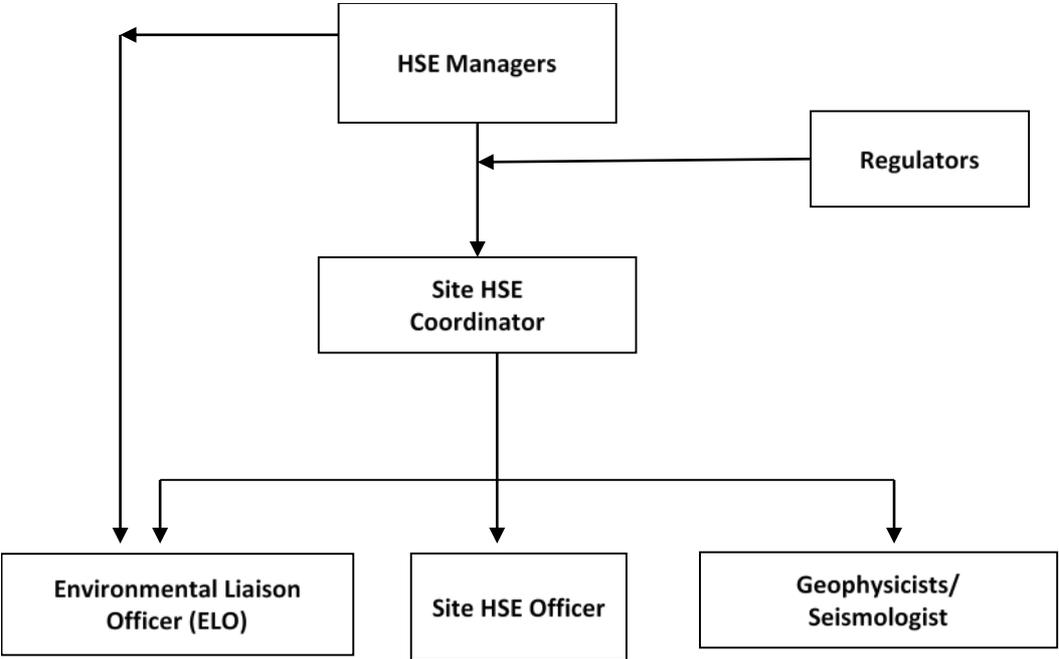


Figure 8.3: Line of authority for the implementation of the EMP in OPL 135

The ELO liaises with the geophysicist/seismologist to collate data on monitoring parameters set in the EMP. The ELO is mandated to ensure compliance with regulatory standards as well as NAOC HSE guidelines. The ELO shares the result with the HSE manager based in the environmental unit at the NAOC regional office in Port Harcourt. The HSE manager shares the information with the regulator, site HSE coordinator and site HSE officer. Similarly, compliance check feedback is received from the regulator by the Site HSE coordinator who feeds it to the site HSE officer for further action. Based on this, the strength of EIA follow-up team for OPL 135 has been graded a **B**.

In the case of OML 148, the proponent constitutes a team made up of two to three persons to monitor and manage the EMP. Figure 8.4 below highlights the team managing the EMP in OML 148.

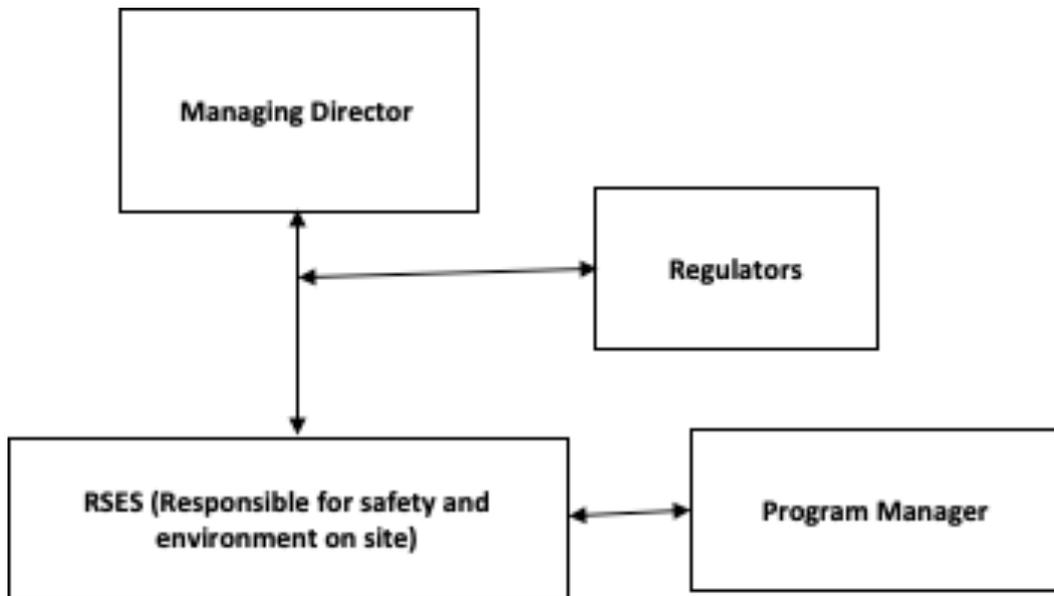


Figure 8.4: Line of authority for the implementation of the EMP in OML 148

The RSES personal is mandated to collate data on conformity of the project with the EMP requirements. He is expected to achieve this, with the utilization of consultant on a need basis. The report he produces is to be submitted to the managing director and if approved forwarded to the regulators. The regulator liaises directly with the RSES with respect to scheduling compliance checks. For special projects, a program manager could be employed to liaise with the RSES in project activities. Thus, OPL 135 has been graded a **B** and OML 148 an **E**.

Independent monitoring agencies: Within the EIA follow-up program designed for OPL 135 and OML 148, there are no provisions for independent monitoring agencies. The roles are strictly divided between the proponent and the regulatory bodies. See Figure 8.3 and 8.4 below. As a result of this, there has been no attempt with respect to OPL 135 and OML 148 and they have accordingly been graded a **G**.

Community capacity building: In both OPL 135 and OML 148 there was no provision made by the proponents to build the capacity of the communities where the oil projects are located. Based on this, they have been graded a **G**.

Finance to aid community participation: Similarly, in both projects, no finance was made available to aid the participation of communities in the EIA follow-up program. As such, both OPL 135 and OML 148 have been graded a **G**.

8.3.4 Project type

There are five criteria in this category of which four are constant due to same parameters being utilized in the case studies (see Chapter 2 and 8). Similar to the earlier categories, interviews with project managers (n=2), documentary analysis and observation have been utilized in collating data on this category. Table 8.9 summarizes the grade awarded to the projects based on this criterion.

Table 8.9: Grades awarded based on project type in EIA follow-up

Criteria	PRMOC	PRIOC
1. During the implementation of an EIA follow-up program, is the ownership (PRMOC or PRIOC) of the project considered?	D	F

Ownership of project: The regulations governing EIA follow-up in Nigeria (see Chapter 6) does not segregate based on ownership of project. However, based on observation in practice, the implementation of EIA follow-up laws on OPL 135 differs when compared to the implementation of same laws in OML 148. For example, compliance checks have been conducted annually on OPL 135 since the commencement of drilling while in the case of OML 148 compliance checks are yet to be conducted. Divergence and similarities between OPL 135 and OML 148 in the practice of EIA follow-up will be further discussed (see Chapter 9). Based on the observed difference in the practice of EIA follow-up as a result of ownership of project, OPL 135 has been graded a **D** and OML 148 an **F**.

8.3.5 Stakeholder involvement

Nine criteria exist under this category (see Chapter 2). Interviews with project managers (n=2) and documentary analysis have been utilized in the collation of data for this category.

Table 8.10: Grades awarded based on involvement of stakeholder in EIA follow-up

Criteria	PRMOC	PRIOC
1. Does community participation take place at the pre-decision stage?	C	C
2. How are community members notified to attend a community participation exercise?	D	E
3. How are community members selected for a community participation exercise?	D	E
4. Are the EMPs available to communities at project locations?	E	E
5. Are the results of EIA follow-up reports available online?	G	G
6. Are public concerns represented in EIA follow-up?	D	C
7. Do regulators ensure that EIA follow-up is carried out in accordance with the regulations?	E	F
8. Is EIA follow-up viewed as a useful exercise?	D	F
9. Is EIA follow-up regulator, proponent or community driven?	D	F
Overall grade of stakeholder involvement	E	F

Community Participation in EIA follow-up: As highlighted earlier (see Chapter 6) public participation is dependent on the category a project falls into. In oil projects such as OPL 135 and OML 148, public participation is mandatory for an EIA to be approved. Public participation is the main opportunity available for oil host communities to share their views on the prospective project to be situated in the communities. In OPL 135, public consultation was conducted in the headquarters of the LGA's (Aniocha South, Oshimili South, Ndokwa East and Oshimili North) where OPL 135 is situated and as such community participation started at the pre-decision stage. The public participation was conducted prior to the production of the EMP and the final EIA report. This criterion has been graded a **C**.

For OML 148, consultations were held with community participants at different locations within the project site (Abialla I, Abialla II, Ajoki and Ajamimogha). The consultations were held prior to the preparation of the EMP and the final EIA report. Mainly, the consultation process highlighted socio economic and cultural needs of the communities interviewed. Based on this, OML 148 was granted a **C**.

Notification of community members: In both OPL 135 and OML 148, the project managers highlighted that notice for community participation are displayed at LGA headquarters.

Apart from this, they also highlighted radio stations within the LGA's are used to also draw attention of the community to the public participation exercise. Apart from these methods, the project manager of OPL 135 also highlighted visits are paid to traditional elders in the headquarters of the LGA to drum up support for the public participation process. As a result of this, OPL 135 has been graded a **D** and OML 148 was graded an **E**.

Selection of community members: The method of selecting community members for public participation was not highlighted in the EIA's of OPL 135 and OML 148. However, the project manager of OPL 135 highlighted the existence of key stakeholders in each community such as traditional heads whom are engaged and recommend participants. The project manager also highlighted that; public hearings are held in town halls within the Local Government Area (LGA) headquarters to encourage accessibility of members of the public's participation. This criterion for OPL 135 was graded a **D**.

In the case of OML 148, consultants are utilized to liaise with the communities within the project site and this produces the participants that participate in the EIA process. In this process, traditional rulers and elders of community are also involved in the selection process. Based on this, OML 148 was graded an **E**.

Availability of EMP at project location: The EMP is considered a confidential document. The document is available to the proponent who developed it and the regulators whom it is submitted to. Based on EIA Act 86 of 1992, the EMP is expected to be made available at the LGA offices where the projects are located. Whether this is done or not could not be determined. However, based on my experience trying to access the EMP and final EIA reports of OPL 135 and OML 148; accessing the documents was found to be near impossible, requiring a lot of effort and personal contacts and even when they were accessed, it came with strict warning for the documents to not be shared with third parties. Thus, similar challenges were encountered in both projects. Based on this, grade **E** has been granted to both projects.

Availability of EIA follow-up reports online: Both proponents did not make available their EIA follow-up reports online. Although a provision within EIA Act 86 of 1992 made provision for EIA follow-up reports to be made available online, this is currently not the practice. Thus, both OPL 135 and OML 148 have been graded a **G**.

Public concerns in EIA follow-up: The public participation exercise conducted on OPL 135 raised issues particularly with respect to socio economic activities and health issues. These were at best partially integrated into the EMP. For example, under project activity land clearing; increase in social vices such as commercial sex, alcohol and substance abuse, crime and violence along with pressure on housing and social amenities which were issues highlighted during the public participation process were incorporated into the EMP and are followed up on. Grade **D** has been given to OPL 135 with respect to this criterion.

During the public participation process for OML 148, issues raised by the public related to; livelihood and employment, socio-cultural issues, health concerns, physical impacts, pollution and security concerns. The stakeholders also deliberated on solutions to these problems. Most of these issues are addressed in the EMP, for example community agitation is extensively covered in the EMP; being a major concern highlighted by the community. This criterion has been graded a **C** for OML 148.

Responsibility of regulators in ensuring compliance: In OPL 135 only the FME has been active so far. They have repeatedly conducted compliance checks and provided feedbacks to the proponent. This cannot be said of the DPR. Based on this, OPL 135 has been graded an **E**. Nothing can be said in the case of OML 148, as none of the regulators have visited the project since inception. OML 148 has been graded an **F** on this criterion.

Importance of EIA follow-up: For OPL 135, although numerous challenges do exist in the implementation of its EIA follow-up program; it can be deduced that EIA follow-up is considered important by the proponent and the FME regulator. As such, this criterion has been graded a **D** as there remains a lot of room for improvement.

For OML 148, little to no importance has been given to the implementation of the EIA follow-up program. Since the approval of the project in 2011, there has been no compliance checks on this project by either of the regulatory bodies. This has rendered the EMP of this project at best ineffective. As a result of this, OML 148 has been graded **F** on this criterion.

Driver of EIA follow-up: In both OPL 135 and OML 148 EIA follow-up is regulator driven. In both projects, there was partial community involvement, although this was stronger in OML 148 than in OPL 135. The level to which EIA follow-up is driven by the regulator in OPL 135 has been graded a **D** and for OML 148 a **F**. The grade awarded is based on the degree to which the regulator is perceived to drive EIA follow-up in the context of both projects.

8.4 Chapter Summary

The case studies namely, OPL 135 and OML 148 revealed significant similarities and differences in the implementation of EIA follow-up on a multinational oil company (MOC) and an indigenous oil company (IOC) project. The case studies also highlighted areas of strength and weakness in the overall implementation of EIA follow-up in the Nigerian oil sector. The table below summarizes the findings of the different categories of the good practice criteria based on the EIA follow-up practice in OPL 135 and OML 148.

Table 8.11: Summary of good practice categories for OPL 135 and OML 148

	Regulation & institutional	Approaches & techniques	Resources & capacity	Project type	Stakeholder involvement
OPL 135	D	D	F	D	E
OML 148	E	E	F	F	F

In all categories, the EIA follow-up practice in OPL 135 performed better than that in OML 148. This is apart from on the category of resources and capacity available, where they both were graded an **F** (very unsatisfactory with important tasks poorly attempted). No category performed satisfactory in practice for either of the case studies and overall, all categories require improvement for EIA follow-up practice in the oil sector to be deemed satisfactory or above. The category on resources and capacity available was the weakest for OPL 135 and in the case of OML 148 the categories for stakeholder involvement, resources and capacity and project type were the weakest.

PHASE THREE

[Synthesis Phase]

CHAPTER NINE: EIA FOLLOW-UP IN THE NIGERIAN OIL SECTOR

This chapter is divided into two sections, it synthesizes the perspectives of stakeholders and the case studies on EIA follow-up practice within the Nigerian oil sector. The first section presents the current practice of EIA follow-up in the Nigerian oil sector and identifies its challenges. The second section makes recommendations to improve current practice. Both sections of this chapter, utilize the good practice criteria in presenting results. On certain criteria, the practice of EIA follow-up within the projects analyzed (OPL 135 and OML 148) was better than what was perceived by the proponents. Such cases will be highlighted in the summary.

9.1 EIA follow-up practice in the Nigerian oil sector

To evaluate the EIA follow-up practice in the Nigerian oil sector, its regulatory requirements were explored through documentary analysis (see Chapter 6). The regulatory framework formed the baseline upon which the perception of stakeholders was established (see Chapter 7) (perception) and finally, through case studies; actual implementation of EIA follow-up was analyzed (see Chapter 8) (practice). The abridgment of perception and practice under the categories of the good practice criteria (regulatory and institutional arrangement, approaches and techniques, resources and capacity, project type and stakeholder involvement) highlights the actual practice of EIA follow-up in the Nigerian oil sector.

9.1.1 Regulation and institutional arrangement

The regulation and institutional arrangement in place to conduct EIA follow-up within oil projects initiated by the PRMOC (OPL 135) and PRIOC (OML 148) was below average in perception and practice (see Table 9.1 below). Although based on perception, there is a clear and specific formal requirement for EIA follow-up in the practice of the PRMOC; in practice,

this was at best satisfactory. For the PRIOC, specific formal requirement in both perception and practice were unsatisfactory to not satisfactory (see 7.5.1 and 8.3.1). There was ambiguity in the perception and practice of both PRMOC and PRIOC; with respect to the stages that exist in the formal requirement of the EIA follow-up process. Responses by the PRMOC and PRIOC were very unsatisfactory in these regards (see 7.5.1 and 8.3.1), but in practice there were very clear stages in the EMP of OPL 135 (PRMOC) and also an attempt was clearly made to structure the EMP of OML 148 (PRIOC) based on stages. The existing gap could be as a result of poor knowledge of the implementation of EIA follow-up in practice by the respondents, which contradicted survey results on knowledge of stakeholders (see 7.2.3). Consultants play a key role in the day to day implementation of EIA follow-up programs in the Nigerian oil sector, which is similar to practices in some other jurisdictions (Khan et al. 2018; O'Faircheallaigh 2007). Time limits within which the stages of the EIA follow-up process are to be implemented were not clearly defined in both perception and practice of the PRMOC. For the PRIOC, the perception on implementation of time limits were deemed not satisfactory and in practice there was no evidence the EMP of OML 148 had ever been implemented. The ineffectiveness in the implementation of EMP's is a serious challenge facing EIA follow-up (Bashour 2016; Marshall 2005; Tanvir and Shakil 2016). Although none of the PRMOC responded regarding the commitment of regulators to conduct EIA follow-up, in practice there was some commitment although unsatisfactory. The PRIOC perceived a lack of commitment to implement EIA follow-up by the regulators and there was no evidence it was conducted at all on OML 148 (Hullet and Diab 2002). Weak implementation of EIA follow-up is a general issue in multiple contexts (Ahammed and Nixon 2006; Chang et al. 2018; Jalava et al. 2015; Kabir and Momtaz 2011; Khosravi et al. 2019; Marshall et al. 2005). There are no roles for independent verifiers or incentives to encourage proponent voluntarism within both practices. Independent verifiers are extremely valuable especially in a context with multiple regulators (see Chapter 4). The

PRMOC perceived the existence of self-regulation tools (EMS) and in practice it did exist and was deemed satisfactory. No EMS was perceived to exist by the PRIOC, but in practice OML 148 had an in-house EMS incorporated, but this was unsatisfactory as it did not conform to any known international standard. Marshall (2005) highlighted the benefits of an EMS to the practice of any proponent. Overall the perception and practice of PRMOC on regulation and institutional arrangement was graded an E and D respectively. Which signifies the perception as unsatisfactory (revealing significant omissions or inadequacies), but in practice parts were found to be well attempted but on the whole performance is unsatisfactory.

Table 9.1: Performance of PRMOC and PRIOC against the category of Regulation and Institutional arrangement in the good practice criteria

Criteria	PRMOC		PRIOC	
	Perception	Practice	Perception	Practice
1. Is the EIA follow-up process based on clear and specific formal requirements?	B	C	D	E
2. Are there any stages specified in the formal requirements?	F	B	F	D
3. Are there any time limits for the various steps in the EIA follow-up process?	D	E	E	F
4. Is there a strong commitment to conduct EIA follow-up by the regulators?	G	E	F	G
5. Is there a role for independent verifiers within the EIA follow-up process?	G	G	G	G
6. Are proponent self-regulation tools (ISO 14001, ISO 14040) permitted within the EIA follow-up process?	C	C	G	E
7. Are there incentives to encourage good practice (proponent voluntarism)?	G	G	G	G
Regulation and Institutional arrangement grade for PRMOC and PRIOC	E	D	F	E

As for the overall perception of the PRIOC on regulation and institutional arrangement, performance was deemed very unsatisfactory (F) (with important tasks poorly attempted) but in practice was deemed not satisfactory (E) (revealing significant omissions or

inadequacies). This was due to all criteria based on both perception and practice being deemed either very unsatisfactory or not satisfactory (see Table 9.1). Some of the key challenges identified in this category for both PRMOC and PRIOC are as follows:

Ineffectiveness of proponent: In both practices, weaknesses existed in the implementation, monitoring and submission of monitoring reports by the proponents to the regulator. In OPL 135, compliance monitoring was conducted annually by the FME; but both feedbacks suggested the need for monitoring reports to be submitted (see Chapter 8). OML 148 was no better, as no evidence existed to suggest that compliance checks had been conducted by either of the regulators. The project manager also highlighted he had never seen a monitoring report since resuming in his role as project manager, although his previous boss highlighted; a consultancy company handles monitoring on behalf of the company (see Chapter 7). In both practices, it was clear the proponents are ineffective in implementing EIA follow-up.

Weak enforcement: The first challenge above, raised the question of regulatory enforcement. If the proponent is ineffective in its implementation of the EIA follow-up program, what actions are taken by the regulator to ensure compliance? Based on perception, some respondents believed the regulators impose fines and are strict with respect to enforcing regulation, while others felt more could be done by the regulators with respect to enforcement of regulation (see Chapter 7). In practice, enforcement was found to be weak in both OPL 135 and OML 148 (see Chapter 8). In OPL 135, there was no evidence to suggest compliance checks had been conducted by the DPR since commencement of the project, while in OML 148; there was no evidence either regulator had conducted any checks on the project. This is in flagrant abuse of set conditions in the EMP and final EIA approval.

Role of Independent verifiers: There is no identified role existing for independent verifiers within the legislation governing EIA follow-up in the Nigerian oil sector. An independent verifier, independent from all stakeholders (proponent, regulator and community) could

play a key role in the EIA follow-up process. They can provide information that is transparent, and none biased to any particular stakeholder's view.

Lack of incentives for proponent voluntarism: There is currently no incentive for proponent voluntarism within the legislation in the Nigerian context. Considering the proponents have been ineffective in the implementation of EIA follow-up and the enforcement of regulations is weak, incentives would have been expected to be provided for proponents to voluntarily do the right thing.

9.1.2 Approaches and techniques adopted

The stage at which the EIA follow-up program starts, was deemed satisfactory for OPL 135 and nonexistent in the practice of OML 148 (see 7.5.2 and 8.3.2). EIA follow-up is designed based on the project stage in the perception of the PRMOC, but this was not necessarily the case in practice; As such, the performance was unsatisfactory due to failure to monitor OPL 135 based on set stages. Both perception and practice were unsatisfactory for the PRIOC (see 7.5.2 and 8.3.2). Screening didn't exist based on the perception of both proponents. But in practice, both projects were screened by at least one regulatory body. Screening in the Nigerian context is done at the pre-decision stage. This was the practice in multiple jurisdictions (see 4.1.1 and 4.4.2). Scoping was conducted for OPL 135 and OML 148, although it is not continuous across the project life cycle. Like screening, scoping takes place at the pre-decision stage (see 4.1.2). In perception and practice, the EIA follow-up program was documented in the EIA report (EMP) (see 7.5.2 and 8.3.2) of the PRMOC. None of the PRIOC identified the EMP to exist within the final EIA report but in practice, an EMP existed within the final EIA report of OML 148. The PRMOC perceived the use of existing data in the preparation of EIA reports, but in the EIA report of OPL 135; there was no evidence of existing data being utilized. None of the PRIOC perceived the use of existing data in their EIA follow-up program, but in practice existing data was utilized in the design of an EIA

follow-up program for a pipeline project situated in OML 148. None of the proponents had any knowledge on the type of monitoring taking place in either practice, its level of rigor, if EIA follow-up meets its objectives, if its components are complied with and if the approaches adopted conforms to the local EIA culture. But in practice, it was clear both practices utilized command and control, a highly technical and rigorous technique, objectives and components of EIA follow-up was not satisfactorily met, and neither are the approaches adopted in compliance with local culture. This was contrary to the results of the survey on knowledge (see 7.2.3), where most of the PRMOC and PRIOC respondents believe; they have a moderate and above level of knowledge on EIA follow-up respectively. The lack of knowledge on EIA follow-up is a major barrier to its practice in varying contexts (Arts et al. 2001; Macharia 2005). None of the PRIOC acknowledged the presence of a standardized EMS and neither was it identified in practice. EMS does exist in the perception and practice of the PRMOC and a satisfactory attempt was made to integrate it to the EIA follow-up program. Social and health issues were perceived to exist in the scope of the EIA follow-up program, and this was the case in practice.

Table 9.2: Performance of PRMOC and PRIOC against the category of Approaches and Techniques adopted in the good practice criteria

Criteria	PRMOC		PRIOC	
	Perception	Practice	Perception	Practice
1. Does EIA follow-up start at the pre-decision stage of the EIA process?	E	E	G	G
2. Is EIA follow-up designed according to stages of the project (construction, operation, decommissioning)?	B	D	D	E
3. Is screening conducted during EIA follow-up?	G	C	G	E
4. Is there any scoping done during EIA follow-up? If yes, is it objective-led and continuous throughout the project cycle?	E	D	G	E
5. Is the EIA follow-up program documented in the EIA report?	C	D	G	E
6. Is existing data used in the EIA follow-up program?	C	F	G	D
7. What type of monitoring (compliance, command and control) is adopted in the EIA follow-up program?	G	C	G	C

Criteria	PRMOC		PRIOC	
	Perception	Practice	Perception	Practice
8. Is there any provision of rigorous monitoring data? In case rigorous methods are not possible, is there any provision for simple techniques for conducting follow-up?	G	D	G	D
9. Does the proponent have any formal EMS in place? If yes, is it well integrated with EIA follow-up?	D	C	G	G
10. Does EIA follow-up meet its objectives (conformance, performance, dissemination, tackling uncertainty)?	G	D	G	E
11. Are all the components of EIA follow-up complied with?	G	D	G	F
12. What approach is adopted for EIA follow-up in the Nigerian oil context?	G	D	D	E
13. What is the scope adopted for EIA follow-up (environmental, social and health issues)?	C	C	C	D
14. Are there indirect impacts due to projects taking into account during EIA follow-up?	G	D	D	G
15. Are the approaches adopted in accordance with the local 'EIA culture'?	G	E	G	E
16. Are the efforts of the regulators harmonized towards implementing the EIA follow-up program?	D	F	E	G
Approaches and Techniques adopted grade for PRMOC and PRIOC	F	D	F	E

None of the proponents had any knowledge of the approach adopted for EIA follow-up. But in practice, a legal based approach is implemented in both OPL 135 and OML 148 (see 8.3.2). Both proponents highlighted a level of harmonization by the regulators, but in practice it ranged from 'very unsatisfactory' to 'does not exist at all'. Overall the perception of approaches and techniques were graded unsatisfactory, while practice was found to be unsatisfactory in OPL 135 and not satisfactory in OML 148. Some of the key challenges identified in this category are as follows:

Poor start of implementing EIA follow-up post decision phase: In both cases, the EIA follow-up program can be adjudged to have started at the screening phase of the pre-decision stage; where it was determined if EIA follow-up is required or not (see Chapter 6). But in terms of implementing the post-decision stage, both EIA follow-up programs suffer from poor starts. The implementation of the EIA follow-up program is yet to commence by the

regulatory bodies on OML 148, while for OPL 135; implementation commenced by the FME two years after the issuance of the EIS and there is no evidence of compliance by the DPR.

Poor continuous scoping: Effective scoping and the use of existing data, increases the likelihood of an EIA follow-up program being fit for purpose. An EIA follow-up should be commensurate with the anticipated environmental effect. As each project is unique in terms of specific design, location and proposed stakeholders. To achieve this, continuous scoping is needed in EIA follow-up. In both cases there was no continuous scoping, the lack of continuous scoping affects the resources and capacity available to implement the EIA follow-up program.

Level of harmonization among regulators: The two regulatory bodies do not coordinate their approach when dealing with the proponents. Each regulator conducts her process without the input of the other regulator, this creates gaps; that could be exploited by the proponents. It is common to find a project approved by one regulator however still under review by the other (this was the case at some point in both OPL 135 and OML 148). Ineffective harmonization amongst regulators affects knowledge sharing, duplicates actions, in fighting amongst organizations on superiority and increases the cost of the process.

Gaps in knowledge on approaches and techniques: In both perception and practice, gaps were found in the knowledge of proponents on the EIA follow-up practice within the Nigerian context. The proponents had poor knowledge of the components of the approaches and techniques implemented within their EIA follow-up (see above). This finding does not correspond to the survey results on knowledge of respondents (see 7.2.3).

Prolonged pre-decision stage: The process of obtaining an EIS and final approval from both regulators is too tedious. The need for EIA follow-up is determined at the start of this stage and it is a very important stage, considering it takes into account comments from the public amongst other important steps. The proponents have to labor to obtain final approval and

EIS; consuming a lot of time and resources. As such, once approval and the EIS is obtained; the proponents resume construction and pay less interest to EIA follow-up.

9.1.3 Resources and capacity available

Responsibility to finance the EIA follow-up program, is not clearly allocated based on the perception of the proponents. Both proponents also highlighted the need for the regulator to do more in funding the EIA follow-up program (see Chapter 7). In practice, the EIA follow-up program of OPL 135 and OML 148 were to be funded by the proponents (see 8.3.3). A range of organizations were highlighted by the PRIOC as being involved in the implementation of EIA follow-up, compared to specific organizations highlighted by the PRMOC (see Chapter 7). In practice both proponents made attempts to assign responsibilities for the implementation of EIA follow-up; but it was poorly defined. Evaluation and auditing were perceived as the responsibility of the proponents but in practice there was a clear failure in their ability to perform this role. Responsibility was allocated to manage changes based on the perception of the PRMOC and in practice this was well attempted in parts but poor overall. In perception and practice, managing changes was poorly attempted by the PRIOC. Both proponents acknowledged responsibility is clearly allocated for the preparation of monitoring reports (see 7.5.3). But in the practices of OPL 135 and OML 148, neither project produced any monitoring reports (see 8.1.4 and 8.2.4).

Table 9.3: Performance of PRMOC and PRIOC against the category of Resources and Capacity available in the good practice criteria

Criteria	PRMOC		PRIOC	
	Perception	Practice	Perception	Practice
1. Is responsibility clearly allocated to finance EIA follow-up?	F	D	F	D
2. Is responsibility clearly allocated to stakeholders to conduct EIA follow-up?	C	D	D	E
3. Is responsibility clearly allocated to evaluate/audit EIA follow-up?	E	F	E	F
4. Is responsibility clearly allocated to manage the changes if required?	B	D	F	F

Criteria	PRMOC		PRIOC	
	Perception	Practice	Perception	Practice
5. Is responsibility clearly allocated for someone to prepare the report?	B	G	E	G
6. Is responsibility clearly allocated for someone to whom the results are reported to, or, who checks compliance?	D	E	G	G
7. Is responsibility clearly allocated for someone to communicate the EIA follow-up report to the community?	E	F	E	G
8. Is local knowledge taken into account for designing EIA follow-up?	D	F	G	F
9. Is there any provision of 'institutional memory' and knowledge brokering (contract with universities or research institutes for knowledge sharing)?	E	D	G	D
10. Is there any kind of training or education and capacity building imparted for EIA follow-up?	B	C	F	E
11. What is the strength of EIA follow-up teams?	C	B	F	E
12. Is there any independent monitoring agency involved in the EIA follow-up program?	G	G	G	G
13. Are resources made available to build capacity of community stakeholders to participate in the EIA follow-up program?	D	G	F	G
14. Is finance made available to aid participation of community in EIA follow-up program?	G	G	G	G
Resources and Capacity available grade for PRMOC and PRIOC	D	F	F	F

The PRIOC were not clear on who is required to check compliance, while the PRMOC highlighted the regulator as being expected to fulfill this role. In practice, OPL 135 had a clear structure with regards to compliance checking although; not well implemented while OML 148 had no structure at all. Communication with the community is key in avoiding ambiguity, this was extremely lacking in both practices. Similarly, local knowledge was barely taken into account during EIA follow-up and institutional memory and knowledge brokering did not exist. Training for EIA follow-up was found to be available in both perception and practice of the PRMOC. This differed to the case of the PRIOC where perception amongst stakeholders on training was very poor and in practice training opportunities were scarce. The PRMOC have by far stronger teams in place to conduct EIA follow-up, when compared

to the PRIOC (see Figure 8.3 and 8.4). There is no independent monitoring in both practices, neither is there finance made available to assist the participation of communities. The PRMOC provides resources to train community members; recruited to aid in conducting EIA follow-up on site. Apart from that, no resources are allocated by either party towards building capacity of community members to participate in EIA follow-up. Though the perception of the PRMOC regarding resources and capacity available to execute EIA follow-up is below average, in practice for the PRIOC it is deemed very unsatisfactory. Some of the key challenges identified in this category are:

Multiplicity of regulatory bodies: The DPR and FME responsible for regulating EIA follow-up in the Nigerian oil sector have overlapping responsibilities. Their efforts are not harmonized (see 9.1.3), as a result; resources and efforts are wasted without achieving the objectives of the program.

Resources for community participation: Currently, resources are not allocated by either proponent towards encouraging community participation. This is necessary to build trust between the communities and the proponents and would also encourage transparency and openness, creating a more conducive environment to work in. This is especially useful for the Niger delta, where there is a lack of trust from the community towards the regulator and the proponent; as a result of years of poor environmental practice within the oil sector.

Insufficient capacity to implement EIA follow-up: The regulators FME and DPR both do not have sufficient capacity to effectively implement, monitor and regulate the EIA follow-up program of an oil sector. In the case of the FME, a national team of less than twenty staff are expected to monitor all EIA follow-up programs across all sectors. Apart from staff strength, there is also a serious lack of infrastructure required to conduct monitoring. Most oil projects are situated in heavily inaccessible areas and offshore (see Chapter 8), as such: the regulators depend on the proponent to provide both logistical support and

accommodation for them to monitor projects. This provides a breeding ground for corruption to thrive.

Underfunded regulator: During the interviews and from observation, it was clear: The Ministry, Department and Agencies (MDA) within the environmental sector are underfunded; when compared to counterparts in other sectors such as, oil, telecommunication and security. This creates desolation amongst staff and a general lack of enthusiasm to perform their duties of regulating the oil sector players.

9.1.4 Project type

The PRMOC perceived imbalances with regards to enforcement of EIA follow-up legislation in the oil sector when compared to other sectors. In practice, this was noticed both in the context of the oil sector compared to some other sectors (agriculture, manufacturing, telecommunication etc.) and also within the oil sector when comparing the practice of PRMOC against the PRIOC.

Table 9.4: Performance of PRMOC and PRIOC against the category of project type in the good practice criteria

Criteria	PRMOC		PRIOC	
	Perception	Practice	Perception	Practice
1. During the implementation of an EIA follow-up program, is the ownership (PRMOC or PRIOC) of the project considered?	D	D	G	F

There was clearly more of an effort on the part of the regulator to implement; the EIA follow-up program of the PRMOC than that of the PRIOC (see Chapter 8). The major challenge affecting project type was identified as:

Ownership differentials: The regulations governing EIA follow-up in the Nigerian oil sector are constant for both the PRMOC and PRIOC (see Chapter 6), but in practice; there was clearly better implementation and monitoring of the EIA follow-up program by the regulator on OPL 135 than OML 148. This is perhaps as a result of better resources and capacity

provided by the PRMOC to facilitate the implementation of the EIA follow-up program than what is allocated by the PRIOC (see 9.1.3). Also, there is a greater burden on the PRMOC to maintain environmental standards than the PRIOC (see 9.1.1) and past judgements of courts have held the PRMOC liable for environmental pollution; leading to hefty international fines.

9.1.5 Stakeholder involvement

In perception and practice, public participation was deemed to take place at the pre-decision stage of the PRMOC’s EIA follow-up process and it was deemed satisfactory (see Chapter 8). The PRIOC perceived the frequency of conducting public participation to be below average, but in practice it was found to be satisfactory (see Chapter 8). The methods utilized by the PRMOC in notifying community members were unsatisfactory (see Chapter 7 and 8) and the case was no better in the practice of the PRIOC. A similar situation was found in the selection of community members for community participation exercises. The PRIOC perceived it is the responsibility of the regulator to make available EMP’s at project locations, but the PRMOC overwhelmingly highlighted they take the responsibility to ensure it is available at project locations (see Chapter 7). In both practices, most community members had never seen an EMP and the researcher only accessed them after a high level of difficulty (see Chapter 8). Public concerns were found to exist in the EMP of both projects. This was at variance, to the PRIOC highlighting public concerns are not taken into account during EIA follow-up. This might be due to his consideration of the EMP as a pre-decision stage activity.

Table 9.5: Performance of PRMOC and PRIOC against the category of stakeholder involvement in the good practice criteria

Criteria	PRMOC		PRIOC	
	Perception	Practice	Perception	Practice
1. Does community participation take place at the pre-decision stage?	C	C	E	C
2. How are community members notified to attend a community participation exercise?	D	E	G	E

Criteria	PRMOC		PRIOC	
	Perception	Practice	Perception	Practice
3. How are community members selected for a community participation exercise?	D	E	G	E
4. Are the EMP available to communities at project locations?	B	E	F	E
5. Are the results of EIA follow-up reports available online?	E	G	G	G
6. Are public concerns represented in EIA follow-up?	C	C	F	C
7. Do regulators ensure that EIA follow-up is carried out in accordance with the regulations?	D	F	F	F
8. Is EIA follow-up viewed as a useful exercise?	A	F	C	F
9. Is EIA follow-up regulator, proponent or community driven?	Regulator Driven	D	Regulator Driven	F
Stakeholder involvement grade for PRMOC and PRIOC	C	E	F	F

The PRMOC believed the efforts of regulators were unsatisfactory towards the implementation of EIA follow-up. Both OPL 135 and OML 148 were found to be very unsatisfactory (see Chapter 8). EIA follow-up is viewed as a useful exercise by both proponents (see Chapter 7), however in practice this was not the case (see Chapter 8). As there were too many omissions and in some cases failure by players to perform their responsibilities. EIA follow-up is regulator driven and this was highlighted in both perception and practice, but the level of implementation differed between both projects. Some of the key challenges identified in this category include:

Inaccessibility of project sites: Oil projects are considered sensitive assets requiring high security in the Nigerian context (see Chapter 5). This is due to the volatile nature of the Niger delta area coupled with the location of most oil projects (swampy areas or deep-sea offshore). As a result, accessibility to sites is strictly limited and in some cases; requires the use of a helicopter. This inhibits the possibility of the community or independent actors visiting the site; without authorization and logistical support from the proponent.

Ineffective notification method: The method of notification for public participation exercises include; national newspapers, radio stations and Local Government Area (LGA)

offices (see Chapter 8). These are rather exclusionist; as people in most of these areas live under \$2 a day and cannot afford newspapers, radios or in some cases transportation to visit LGA offices.

Stakeholder communication: In general, feedback is poor between the different stakeholders participating in the EIA follow-up program. In both projects, the regulators raised issues with respect to the need to receive monitoring reports on time from the proponents (see Chapter 8). The proponent and the regulator on the other hand are not sure who is meant to communicate with the communities with respect to the status of implementing the EIA follow-up program (see Chapter 7). Some community members were not sure on the right persons to contact; if they had issues with respect to a project in their communities (see Chapter 7).

9.2 Recommendations to improve EIA follow-up in Nigeria

EIA follow-up in Nigeria has been evaluated in detail and compared against the good practice criteria (see Chapter 2). The study revealed at present, EIA follow-up suffers from significant inadequacies and omissions and as a result its overall performance is not satisfactory. The study also shows the practice of the PRMOC is well attempted in parts but overall unsatisfactory and for the PRIOC, their practice is very unsatisfactory with significant parts attempted but others not attempted at all. Furthermore, the study showed ownership differentials do exist in the implementation of EIA follow-up in the Nigerian oil sector. However, this is not considered in the current regulation and institutional arrangement, approaches and techniques adopted and in making available resources and capacity to conduct EIA follow-up. In order to improve current practice, it is pertinent to recommend solutions to ownership differentials along with other challenges identified during evaluation.

9.2.1 Recommendations for regulation and institutional arrangement

Ineffectiveness of proponent: In both OPL 135 and OML 148 there was ineffectiveness on the part of the proponent to submit compliance monitoring reports to the regulators. This challenge has also been identified in the Ghanaian context (Appiah-Opoku and Bryan 2013). Rather than repeatedly requesting for such reports to be submitted as was done in OPL 135 (see Chapter 8), the regulator should utilize present regulations in issuing permissible fines to such proponents that fail to submit compliance monitoring reports when due. The regulations should also be strengthened to issue punitive damages for failure to implement EIA follow-up. Stricter penalties are enforced by the regulator on defaulters. Like in the case of Hong Kong, were ‘stiff penalties of up to HK \$2Million and six months’ imprisonment for first time offenders are issued (EPD 2002: 8).

Weak enforcement: The regulating authorities (FME and DPR) must do more to check compliance to conditions set in the final EIA approval and the EMP. The EMP becomes insignificant if it is not complied with after the decision has been made. To support the regulators with compliance monitoring, easily accessible platforms can be created for communities and interested members of the public to raise concerns on enforcement. This was found to be useful in Hong Kong, where a dedicated EIAO website enabled the public to compare EIA predictions with results and make comments and ask questions (Tang et al. 2016: 4). In the Niger delta context, due to poor internet penetration in rural areas; analog methods such as town hall meetings might be of more benefit.

Role of Independent verifiers: Due to the challenges faced by the stakeholders (proponent, regulator and community) in ensuring effective implementation of the EIA follow-up program of the case studies; it is pertinent a role is created to for independent verifiers, to provide an extra voice in achieving the goals of the EIA follow-up program. A role for independent verifiers will further increase transparency and openness in the implementation of the EIA follow-up program. A role for independent verifiers as proposed

by Wessels et al. (2015) within an EIA follow-up practice has added value within different contexts (Appiah-Opoku and Bryan 2013; Ross et al. 2004; Tang et al. 2016) and will also improve the Nigerian practice.

Lack of incentives for proponent voluntarism: As highlighted earlier (see 9.1.1), there are currently no incentives for proponent voluntarism within EIA follow-up in the Nigerian context. Programs should be designed to encourage proponents to voluntarily implement EIA follow-up programs. Marshall (2005) highlights numerous benefits accruable to proponents for implementing EIA follow-up, this can be packaged by the regulator to design incentives that will ensure proponents voluntarily implement EIA follow-up programs.

9.2.2 Recommendations for approaches and techniques adopted

Poor start of implementing EIA follow-up post decision phase: Improving the start of implementing the EIA follow-up program requires improving effectiveness of first-person follow-up and enforcement of conditions. The proponent is expected to monitor the conditions in the environmental approval, EIS and the EMP and report findings quarterly to the regulators. The ineffectiveness of proponents in EIA follow-up, ensures the EIA follow-up program of a project suffers from a poor start (Marshall 2005) and in a context where enforcement is weak, further weakens the start of the EIA follow-up program (Cashmore et al. 2009; Chang et al. 2018). As a result of these factors, to improve the start of EIA follow-up implementation, enforcement of regulations should be improved.

Poor continuous scoping: In both cases, there was a clear ineffectiveness in continuous scoping. Continuous scoping ensures the EIA follow-up program is fit for purpose at every phase of the project development (Arts and Meijer 2004). Continuous scoping is recommended to ensure changes in pre-decision conditions or external new events or arising from auditing are taken into account within the scope of the EIA follow-up program (see Chapter 3).

Level of harmonization among regulators: the research also identified poor coordination and harmonization among regulators as a major liability inhibiting practice (see 9.1.2). The regulatory agencies involved in the EIA follow-up process need to work closer together to draw benefits from each other's strength (Paliwal and Srivastava 2012). This will involve joint compliance checks to project sites and sharing results of such compliance checks. An example of such collaboration happened between the government of New Brunswick and Canada, 'where a harmonized EIA process was implemented for the Sisson Project. In doing this, they jointly defined the scope and conducted public participation exercises' (CEAA 2013: 4). This will ensure regulatory bodies are up to date on the implementation of EIA follow-up programs on projects.

Gaps in knowledge on approaches and techniques: In order to improve the knowledge of proponents on approaches and techniques in EIA follow-up, environmental education on a regular basis is required (Appiah-Opoku and Bryan 2013). This should be organized jointly by the regulators and funded by the proponents, the aim of which is to raise awareness on new approaches and techniques in implementing EIA follow-up within the oil sector. It will also provide an opportunity for proponents to ask questions with regards to current regulations and raise issues with respect to same. Capacity building programs could also be developed in partnership with multilateral agencies (UN, WB, DFID, JICA) towards improving capacity of EIA follow-up stakeholders in Nigeria and the ECOWAS (Economic Community of West African States) sub-region. A similar program exists between the UN and South Asian countries to build capacity in environmental assessment (UN 2018).

Prolonged pre-decision stage: Various options could be utilized in decreasing the time it takes to process an EIA and get a decision. These include streamlining regulatory bodies and processes (see 9.2.3). Apart from streamlining regulatory bodies, introduction of time limits for stages of the FME's EIA process could also be utilized. Currently, prolonging the pre-decision stage is not an offence as there are no time limits within the legislation. But by

having time limits like Egypt, Tunisia and Turkey; punitive actions can be taken against the parties for prolonging the pre-decision stage beyond legally allocated time limits (Ahmad and Wood 2002). Existing data from prior oil projects (see 9.1.2) could also be utilized in reducing the time taken in collecting primary data for baseline studies during the development of the EIA report.

9.2.3 Recommendations for resources and capacity available

Multiplicity of regulatory bodies: Considering the insufficient resources available to regulators (see 7.5.3), there is a need to streamline the regulatory agencies by merging the environmental department of the DPR into the FME. Streamlining the regulatory agencies; simplifies the regulatory framework, removes duplication of functions and ensures more resources are available for the FME, who are more suitable to take up the responsibility of compliance checks and enforcement of environmental regulations (Paliwal and Srivastava 2012). If this is done, the DPR will continue in its role of granting oil licenses to prospective companies, while the FME will be solely in charge of approving the EIA reports of such companies prior to a license being granted by the DPR. In this regard, compliance checks and recommendations of the FME on projects should be shared with the DPR for enforcement.

Resources for community participation: Due to the prevailing poverty rate in Nigeria and the Niger delta states (64.2% of Nigerians live below \$2 a day) (NBS 2011), community participation within EIA is ineffective. Some of the reasons for its ineffectiveness include; poor finance and logistics available to attend public participatory events conducted at Local Government Area (LGA) headquarters. To improve this, legislation can be enacted mandating proponents or regulators to provide adequate resources to ensure community members from hinterlands impacted by the project are able to attend such community participation processes organized.

Insufficient capacity to implement EIA follow-up: Both the FME and DPR are severely understaffed to carry out EIA follow-up compliance checks and enforcement of regulation within the oil sector (Jha-Thakur 2011). Considering the Environmental Assessment Department (EAD) in the FME also covers other segments of the economy (telecommunication, health, water, energy etc.), there is a gross insufficiency in capacity to implement EIA follow-up. The government is encouraged to recruit more staff in these offices and pursue partnerships with sister organizations in countries with a rich history within the field of EIA (e.g. USA, UK, Germany and Netherlands) for regulators from Nigeria to visit such countries to attend trainings, seminars and to study regulatory departments and their processes. An example of such partnership is between the Netherlands Commission for Environmental Assessment (NCEA) and numerous developing countries in Africa, towards building their capacities (NCEA 2018). This will improve the capacity of regulators to implement EIA follow-up programs in Nigeria.

Underfunded regulator: The inadequate funding allocated to regulatory bodies, majorly inhibits their ability to ensure the implementation of EIA follow-up. Considering the difficult terrain within which oil projects are located in the Niger delta region (see Chapter 5), regulators in most cases; require helicopters and four-wheel drive vehicles to access project sites (dependent on if it is offshore or onshore) for compliance checks. The poor funding available to regulators implies that they are dependent on the proponents in carrying out their core mandates. Provision of adequate funds to the regulatory authorities is central to the provision of adequate and skilled manpower, infrastructure and training that will result in effective implementation of EIA follow-up (Kirchhoff 2006).

9.2.4 Recommendations for project type

Ownership differentials: the clear differential identified within this research needs to be addressed to improve the EIA follow-up practice in the Nigerian oil sector. To address this

challenge, the tier system of the UK environmental law sentencing guideline could be utilized (UKDOE 2004). The tier system allows companies to be ranked based on the resources they have available to fully comply with the oil sector regulations and to adopt industry best practices in the management of the environment in the oil sector. These companies could be ranked perhaps based on annual turnover. For example:

- Micro companies (annual turnover up to £2 million)
- Small companies (annual turnover of between £2 million to £10 million)
- Medium companies (annual turnover of between £10 million to £50 million)
- Large companies (annual turnover of GB£50 million and over)
- Very large companies (annual turnover very greatly exceeds the £50 million threshold)

Such a tier system will ensure companies entrusted with large oil fields are able to cater for the demands associated with such oil fields. Secondly, the mandate of the Nigeria Extractive Industry Transparency Initiative (NEITI) should be expanded to not only cover the management of the financial aspects of the oil sector by NNPC but also the environmental regulation by the DPR and the FME. This will ensure an independent body monitors the regulator and reports on potential bias and excesses.

9.2.5 Recommendations for stakeholder involvement

Inaccessibility of project sites: Oil host communities should form pressure groups, mandated to liaise with the proponent and regulators on behalf of the community. Membership to this pressure group should be from the community stakeholders via a transparent and traditional form of nominating representatives acceptable to the community members. Such pressure groups exist in the South African and Canadian practice. Within the South African practice, Permit Advisory Panel (PAP) was established for the Sappi-Saiccor mill situated at Umkomaas on the KwaZulu-Natal south coast (Hullet and

Diab 2002). Also at the Ekati mine project in Canada, community led monitoring exists in the form of an independent watchdog (Noble and Storey 2005). Similar to the role played by the proponent in facilitating the attendance of compliance checks by the regulators, the proponents should facilitate visitation of project sites by the pressure group on an agreed number of times yearly.

Ineffective notification method: Notification methods that are fit for purpose should be adopted in notifying the community members about public participation exercises (fit for purpose notification methods are the methods utilized in local communities to provide information to residents). The Aarhus convention extensively covers good practices to be adopted for EIA public participation, the Nigerian practice can learn from these practices (Hartley and Wood 2005). These methods will vary from one community to the other. Traditional institutions should also be engaged in the notification process.

Stakeholder communication: A transparent channel of communication needs to be established between the proponent, regulator and the community. This channel will ensure the community is kept informed on actions that have been taken by both the proponent and the regulator regarding the project and its impacts on the environment. The channel also provides an opportunity for non-technical versions of the quarterly monitoring reports submitted by the proponent to the regulator and the audit reports submitted by the regulators to the proponent to be shared with the community. It is further advised, that these non-technical reports should be translated into local dialects understood by community stakeholders.

9.3 Chapter Summary

This chapter presented the current practice of EIA follow-up in the Nigerian oil sector, it achieved this by synthesizing the results of the perception and practice of the two proponents (PRMOC and PRIOC) earlier discussed (see Chapter 7 and 8). Based on the synthesis, it was identified that on certain criterions of the good practice criteria; the

practice of EIA follow-up was better than the perception of the proponents. Such criteria were identified and highlighted below.

Regulation and institutional arrangement: The practice of the PRMOC was better than perception on the following criteria: specified stages in the formal requirement and commitment of regulators to conduct EIA follow-up. While in the case of the PRIOC, practice was better than their perception on the criteria on stages specified in the formal requirements and usage of self-regulation tools (ISO 14001 and 14040) within EIA follow-up process.

Approaches and techniques adopted: The practice of the PRMOC were better than perception on the following criteria: screening, type of monitoring adopted, rigour of data monitoring, EIA follow-up meeting its objectives, compliance with components of EIA follow-up, approach adopted on EIA follow-up, scope adopted for EIA follow-up, taking into account indirect impacts due to project and the adoption of approaches in accordance with local EIA culture. While in the case of the PRIOC, the criteria on: screening, scoping, documentation of EIA follow-up program, usage of existing data, type of monitoring, rigour of data monitoring, EIA follow-up meeting its objectives, compliance with components of EIA follow-up and adoption of approaches in accordance with local EIA culture were found to be better than perception.

Resources and capacity available: In the case of this category, the practice of the PRMOC was found to be better than their perception on allocation to finance EIA follow-up, provisions for institutional memory' and knowledge brokering and strength of EIA follow-up teams. While for the PRIOC, practice was found to be better than perception for the criteria on local knowledge taken into account during the design of an EIA follow-up, provisions for institutional memory' and knowledge brokering, allocation of responsibility to finance EIA follow-up, training or education provided for EIA follow-up and strength of EIA follow-up teams.

Project type: In the practice of the PRIOC, the criterion on project ownership consideration was better than its perception.

Stakeholder involvement: The practice of the PRMOC did not grade better than perception on any of the criteria. In the case of the PRIOC, practice was better than perception on the following criteria; community participation, notification of community members for participation exercise, selection of community members for public participation, availability of EMP at project location and representation of public concerns in EIA follow-up.

The chapter further progressed to identify challenges inhibiting current practice and make recommendations to improve same. The categories of the good practice criteria were utilized in categorizing the challenges and recommendations (see Table 9.6 below).

Table 9.6: Summary of challenges and recommendations for EIA follow-up in the Nigerian oil sector

Good practice	Challenges identified	Recommendations
Regulatory and Institutional arrangement	<ul style="list-style-type: none"> ▪ Ineffectiveness of proponent ▪ Weak enforcement ▪ Role of independent verifiers ▪ Lack of incentives for proponent voluntarism 	<ul style="list-style-type: none"> ▪ The regulator should utilize present regulations in issuing permissible fines to such proponents that fail to submit compliance monitoring reports when due. ▪ The regulations should also be strengthened to issue punitive damages for failure to implement EIA follow-up. Stricter penalties are enforced by the regulator on defaulters. ▪ The regulating authorities (FME and DPR) must do more to check compliance to conditions set in the final EIA approval and the EMP. ▪ To support the regulators with compliance monitoring, easily accessible platforms can be created for communities and interested members of the public to raise concerns on enforcement. ▪ It is pertinent a role is created to for independent verifiers, to provide an extra voice in achieving the goals of the EIA follow-up program. ▪ Programs should be designed to encourage proponents to voluntarily implement EIA follow-up programs.
Approaches and techniques adopted	<ul style="list-style-type: none"> ▪ Poor start of implementing EIA follow-up post decision phase ▪ Poor continuous scoping ▪ Level of harmonization among regulators ▪ Gaps in knowledge on approaches and techniques ▪ Prolonged pre-decision stage 	<ul style="list-style-type: none"> ▪ To improve the start of EIA follow-up implementation, enforcement of regulations should be improved. ▪ Continuous scoping is recommended to ensure changes in pre-decision conditions or external new events or arising from auditing are taken into account within the scope of the EIA follow-up program. ▪ The regulatory agencies involved in the EIA follow-up process need to work closer together to draw benefits from each other's strength. ▪ Environmental education on a regular basis is required. ▪ Time limits should be set and strictly enforced by both regulators ▪ Existing data from prior oil projects should also be utilized where possible in reducing the time taken in collecting primary data for baseline studies
Resources and Capacity available	<ul style="list-style-type: none"> ▪ Multiplicity of regulatory bodies ▪ Resources for community participation ▪ Insufficient capacity to implement EIA follow-up ▪ Underfunded regulator 	<ul style="list-style-type: none"> ▪ Regulatory bodies should be streamlined. ▪ Legislation can be enacted mandating proponents or regulators to provide adequate resources to ensure community members from hinterlands impacted by the project are able to attend such community participation processes organized. ▪ The government is encouraged to recruit more staff in these offices. ▪ Pursue partnerships with sister organizations in countries with a rich history within the field of EIA. ▪ Provision of adequate funds to the regulatory authorities should be central.
Project type	<ul style="list-style-type: none"> ▪ Ownership differentials 	<ul style="list-style-type: none"> ▪ The tier system of the UK environmental law sentencing guideline could be utilized in addressing ownership differentials. ▪ The mandate of the Nigeria Extractive Industry Transparency Initiative (NEITI) should be expanded to not only cover the management of the financial aspects of the oil sector by NNPC but also the environmental regulation by the DPR and the FME.
Stakeholder involvement	<ul style="list-style-type: none"> ▪ Inaccessibility of project sites ▪ Ineffective notification method 	<ul style="list-style-type: none"> ▪ Oil host communities should form pressure groups, mandated to liaise with the proponent and regulators on behalf of the community.

Good practice	Challenges identified	Recommendations
	<ul style="list-style-type: none"> ▪ Stakeholder communication 	<ul style="list-style-type: none"> ▪ Notification methods that are fit for purpose should be adopted in notifying the community members about public participation exercises (fit for purpose notification methods are the methods utilized in local communities to provide information to residents). ▪ A transparent channel of communication needs to be established between the proponent, regulator and the community.

CHAPTER TEN: CONCLUSIONS

This chapter draws out the final conclusions from this research and it has been divided into three sections. The first section evaluates the extent to which the aim and objectives of the research have been achieved. The second reflects on the original contribution of the research to knowledge and the third section focusses on the limitations of the research.

10.1 Evaluation of aim and objectives

The research sets out an aim **‘to evaluate EIA follow-up in the Nigerian oil sector and make recommendations for its improvement’**. To achieve this aim, four objectives were set:

1. Develop good practice criteria for EIA follow-up based on literature and a critical review of eight countries with an extractive industry
2. Examine the EIA system in the Nigerian oil sector and understand its peculiarities
3. Analyze EIA follow-up through two case studies with a special focus on ownership differentials in the Nigerian oil sector
4. Make recommendations to improve EIA follow-up in Nigeria

Based on the aim and objectives, a methodology was designed to achieve these objectives.

The findings from the research are set in subsequent paragraphs.

10.1.1 Objective one: Developing a good practice criterion

The first objective of the research was to develop a good practice criterion to be used in evaluating EIA follow-up in the Nigerian oil sector. The good practice criteria, was based on the ‘Best Practice List’ by Morrison-Saunders et al. (2003), ‘Good Practice List’ by Jha-Thakur (2011) and also takes into consideration EIA follow-up theory (see Chapter 3), International practice of EIA follow-up especially focussing on eight countries with an extractive industry (see Chapter 4), Environmental impacts of oil projects (see Chapter 5) and EIA system in the Nigerian oil sector (see Chapter 6). The four chapters have been integrated into the good

practice criteria (see Chapter 2). The broad categories of the good practice criteria consisted of regulations and institutional arrangement, approaches and techniques adopted, resources and capacity available, project type and stakeholder involvement. See Table 2.6.4 for the detailed good practice criteria.

Based on the survey results, the following questions emerged and were added to the good practice criteria to make it uniquely suited to the context being studied:

- Approaches and techniques:
 - Are the efforts of the regulators harmonized towards implementing the EIA follow-up program?
- Resources and capacity available:
 - Is responsibility clearly allocated for someone to communicate the EIA follow-up report to the community?
 - Are resources made available to build capacity of community stakeholders to participate in the EIA follow-up program?
 - Is finance made available to aide participation of community in EIA follow-up program?
- Project type:
 - During the implementation of an EIA follow-up program, is the ownership (PRMOC or PRIOC) of the project considered?
- Stakeholder involvement:
 - How are community members notified to attend a community participation exercise?
 - How are community members selected for a community participation exercise?

10.1.2 Objective two: Examine the EIA system in the Nigerian oil sector

In objective two, the research aimed to examine the EIA system in the Nigerian oil sector and understand its peculiarities. To achieve this, the research started by reviewing the EIA systems in twenty African oil producing countries to lay a context upon which the EIA system in the Nigerian oil sector will be reviewed.

EIA system of African oil producing countries

The twenty African oil producing countries reviewed to understand their characteristics included: Algeria, Angola, Cameroon, Chad, Congo (Brazzaville), Congo (Kinshasa), Ivory Coast, Egypt, Equatorial Guinea, Gabon, Ghana, Libya, Mauritania, Morocco, Niger, Nigeria, South Africa, South Sudan, Sudan and Tunisia. Ahmad and Wood (2002) systematic evaluation criteria for EIA systems was adapted to conduct this review. The three main categories within these criteria were:

- **EIA legislation** (provisions for EIA, year of enactment, status of EIA regulation, legal provision for appeal, time limit, SEA provision)
- **EIA administration** (regulatory bodies, review committee, sectoral authority role)
- **EIA process** (screening, scoping, alternatives, specified report content, public participation, EMP requirement, requirement for impact mitigation, experience in SEA and EIA implementation monitoring)

Based on the review of the twenty countries, the EIA legislation, administration and process of the selected countries were discussed. The following characteristics were identified:

- Lack of legal requirement for appeal in most jurisdictions;
- General deficiency in allocating specific time limits to stages of the EIA process, in most cases; time limits exist only with respect to determining a final decision;
- Absence of formal provisions for SEA in majority of the countries reviewed;
- Lack of specification of sectoral responsibilities and weak coordination where roles have been defined between bodies;

- In most jurisdictions, legislation on provision for alternatives is non-existent;
- Provision for public participation is still lacking in legislations of certain contexts;
- Absence of requirements for EMP's is a major weakness within legislations;
- SEA experience is lacking in most jurisdictions, but this is understandable considering more contexts lack a SEA requirement within their legislations;
- Impact monitoring is still lacking in some countries reviewed.

Overall, Egypt, South Africa and Ghana were found to have the most advanced EIA systems in place. With regards to Nigeria, much work is needed to improve practice to the level currently in place in the three aforementioned countries.

EIA System in the Nigerian oil sector

The review of the EIA systems in the African oil sector, laid a background for the EIA system in the Nigerian oil sector to be examined and its peculiarities highlighted. In examining this, documentary analysis was conducted on the regulatory framework, legislation and guidelines. Based on the examination of the regulatory framework, two regulatory bodies at the federal level were identified (see Figure 6.2). These bodies were: Federal Ministry of Environment (FME) and the Ministry of Petroleum Resources (MPR). Within the FME, the Environmental Assessment Department (EAD) regulates the EIA, while in the MPR; the Department of Petroleum Resources (DPR) regulates the EIA process.

The legislation utilized by both regulatory bodies was examined, the EIA Decree No. 86 of 1992 for FME and the Petroleum Act of 1969 for the DPR are the legislations governing EIA with the respective regulatory bodies. In the case of guidelines, the environmental impact assessment procedural guidelines were analysed for the FME and Environmental Guidelines and Standards for the Petroleum Industry in Nigeria for the DPR. Based on the documentary analysis of the regulatory framework, legislations and guidelines, Table 6.4 captured the peculiarities of the two EIA systems in the Nigerian oil sector.

The Nigerian EIA system, was found to have the following hindrances:

- provision for appeal
- only had time limit for stages
- No provision for SEA
- No requirement to consider project alternatives
- No experience implementing SEA

For the Nigerian EIA system to improve to the standard of that in Egypt, Ghana and South Africa; the hindrance's highlighted above must be addressed.

10.1.3 Objective three: Analyze EIA follow-up through case studies

Objective three was split into two distinctive parts, perception and practice. An overview of EIA follow-up in the Nigerian oil sector was conducted using a survey to set a background upon which; interviews were conducted to collect data on the perception of stakeholders. Finally, two case studies were undertaken to understand practice.

Overview of EIA follow-up in the Nigeria oil sector

Stakeholders identified in the Nigerian EIA follow-up context were surveyed: regulators (n=6), proponents (n=17), community members (n=30), community experts (n=2) and consultants (n=9). The survey aimed to collect specific variable data (gender, age, stakeholder group, experience, knowledge) along with data on importance of EIA follow-up, level of implementation, impact on future decision of EIA follow-up and training provided for EIA follow-up. Based on the survey, an overview of EIA follow-up in the Nigerian oil sector was established. Some of the issues identified included:

- Level of participation of COM in EIA follow-up
- Level of experience in EIA follow-up of PRMOC compared to PRIOC
- Level of experience of REGF compared to REGD
- Level of knowledge of COM on EIA follow-up

- Level of knowledge of PRMOC compared to PRIOC
- Perception of importance of EIA follow-up in the oil sector by PRMOC compared to PRIOC
- Perception of importance of EIA follow-up in the oil sector by REGD compared to REGF
- Perception of COM on the importance of EIA follow-up in the oil sector
- Perception of PRMOC compared to PRIOC with respect to level of implementing EIA follow-up
- Perception of PRMOC compared to PRIOC with respect to Impact of EIA follow-up on future decision making
- Perceptions of respondents with respect to level of ‘training provided by their organizations for EIA follow-up

These formed some of the questions included in the good practice criteria (see Chapter 2) to adapt it for the evaluation of EIA follow-up in the Nigerian oil sector context.

Perception of EIA follow-up in the Nigeria oil sector

Utilising the good practice criteria, data collected via semi-structured interviews were analysed to understand the perception of stakeholders on EIA follow-up in the Nigerian oil sector. The result of this is presented based on the categories of the good practice criteria.

Regulation and institutional arrangement: The perception of the PRMOC and PRIOC on regulation and institutional arrangement in the Nigerian oil sector was studied and found to be an **E** (Not satisfactory revealing significant omissions or inadequacies) and **F** (very unsatisfactory with important tasks poorly attempted) respectively. Based on perception, there was a lot of room for improvement in the practices of the PRMOC and the PRIOC.

Approaches and techniques adopted: Grade **F** was allocated to both the PRMOC and PRIOC for approaches and techniques based on perception. Rigorous techniques were found to be used for EIA follow-up by both PRMOC and PRIOC. EIA follow-up was also found to be

predominantly compliance oriented. There was clearly poor knowledge of approaches and techniques amongst PRMOC and PRIOC stakeholders.

Resources and capacity available: The resources and capacity made available for EIA follow-up by the PRMOC and PRIOC were graded a **D** (indicates parts being well attempted but performance is unsatisfactory because of omissions or inadequacies) and **F** respectively. There was a perceived insufficiency of resources and capacity for EIA follow-up in both practices. However, this was more glaring in the perception of the PRIOC stakeholders as compared to the PRMOC.

Project type: This category was graded a **D** and **G** (task not completed at all) for the PRMOC and PRIOC respectively. Based on perception, ownership differentials (implementation of EIA follow-up differently in the practice of one proponent compared to the other) was identified in the perception of the PRMOC, compared to that of the PRIOC.

Stakeholder involvement: The PRMOC were graded a **C** (Just satisfactory despite some omissions or inadequacies) and the PRIOC a **F**, with respect to perception of stakeholder involvement in EIA follow-up. The perception of the PRMOC was found to be better than that of the PRIOC.

In the practice phase of achieving objective three, case studies from PRMOC (OPL 135) and PRIOC (OML 148) were utilized in understanding EIA follow-up in the Nigerian oil sector. Similar to the perception phase, the good practice criteria was utilized in analysing documentary and interview data collected from the two project managers of the two case study projects.

Regulation and institutional arrangement: OPL 135 was graded a **D** and OML 148 was graded an **E**. This signified a below average performance in the practice of both projects. Although this was the case, the practice in the PRMOC was better than that in the PRIOC.

Approaches and techniques adopted: Similar to the grades on regulation and institutional arrangement, OPL 135 was graded a **D** and OML 148 an **E** for approaches and techniques.

Resources and capacity available: On the category of resources and capacity available for EIA follow-up, both projects were graded a **F**. Resources and capacity was deemed the weakest category for the PRMOC. While for the PRIOC, it was deemed weak along with two other categories (project type and stakeholder involvement).

Project type: OPL 135 was graded a **D** and OML 148 was graded a **F** for project type. EIA follow-up in the Nigerian context, was found to be better implemented in the PRMOC project (OPL 135) than in the PRIOC project (OML 148).

Stakeholder involvement: This category was graded an **E** for OPL 135 and a **F** for OML 148. Both projects were found to be weak in relation to involving community stakeholders in the implementation of the EIA follow-up program.

Based on the analysis of case studies using the good practice criteria, challenges were identified in the implementation of the Nigerian EIA follow-up practice of both the PRMOC and PRIOC. These are listed below:

- Ineffectiveness of first party EIA follow-up
- Weak enforcement of EIA follow-up
- Role of independent verifiers within the EIA follow-up program
- Lack of incentives for proponent voluntarism
- Poor start of implementing EIA follow-up post decision phase
- Poor continuous scoping
- Level of harmonization among regulators
- Gaps in knowledge on approaches and techniques
- Prolonged pre-decision stage
- Multiplicity of regulatory bodies
- Poor resources for community participation
- Insufficient capacity to implement EIA follow-up
- Underfunded regulators

- Ownership differentials in the implementation of EIA follow-up
- Inaccessibility of project sites to community stakeholders
- Ineffective stakeholder notification method
- Poor communication amongst stakeholders

10.1.4 Objective four: Recommendations to improve EIA follow-up in Nigeria

Based on the challenges identified in the overall practice of EIA follow-up in the Nigerian oil sector, recommendations were provided on how to improve the EIA follow-up practice along with the feasibility/ time frame for implementation (feasible [short term 0 to one year], feasible [medium term two to five years], feasible [long-term five years and above]). These were presented under the five categories of the good practice criteria (see Table 10.1).

Table 10.1: Recommendations, feasibility and timeframe for implementation

Good practice	Recommendations	Feasibility and timeframe for implementation
Regulatory and Institutional arrangement	<ul style="list-style-type: none"> ▪ The regulator should utilize present regulations in issuing permissible fines to such proponents that fail to submit compliance monitoring reports as at when due. ▪ The regulations should also be strengthened to issue punitive damages for failure to implement EIA follow-up. Stricter penalties are enforced by the regulator on defaulters. ▪ The regulating authorities (FME and DPR) must do more to check compliance to conditions set in the final EIA approval and the EMP. ▪ To support the regulators with compliance monitoring, easily accessible platforms can be created for communities and interested members of the public to raise concerns on enforcement. ▪ It is pertinent a role is created to for independent verifiers, to provide an extra voice in achieving the goals of the EIA follow-up program. ▪ Programs should be designed to encourage proponents to voluntarily implement EIA follow-up programs. 	<ul style="list-style-type: none"> ▪ Feasible [short term]: current regulations in place contains fines that should be enforced. ▪ Feasible [medium term]: currently a new legislation is in the process of being enacted, this can be incorporated. ▪ Feasible [short term]: this requires the federal government supporting regulators and setting compliance check targets to ensure compliance checks are conducted. ▪ Feasible [short term]: town hall meetings, community visits and social media platforms can be provided. ▪ Feasible [long term]: based on current practice, regulators will not be very comfortable with a role for independent verifiers. ▪ Feasible [long term]: based on current practice, there is no evidence; to confidently believe proponents will voluntarily implement EIA follow-up if given an opportunity to do so.

Good practice	Recommendations	Feasibility and timeframe for implementation
Approaches and techniques adopted	<ul style="list-style-type: none"> ▪ To improve the start of EIA follow-up implementation, enforcement of regulations should be improved. ▪ Continuous scoping is recommended to ensure changes in pre-decision conditions or external new events or arising from auditing are taken into account within the scope of the EIA follow-up program. ▪ The regulatory agencies involved in the EIA follow-up process need to work closer together to draw benefits from each other's strength. ▪ Environmental education on a regular basis is required. ▪ Time limits should be set and strictly enforced by both regulators ▪ Existing data from prior oil projects should also be utilized where possible in reducing the time taken in collecting primary data for baseline studies. 	<ul style="list-style-type: none"> ▪ Feasible [short term]: current regulations in place for enforcement of regulations to be improved. ▪ Feasible [medium term]: currently a new legislation is in the process of being enacted, this can be incorporated. ▪ Feasible [long term]: this will require merging both agencies by repealing and replacing existing law. I do not see this happening for the foreseeable future, due to political reasons. ▪ Feasible [medium term]: currently a new legislation is in the process of being enacted, this can be incorporated.
Resources and Capacity available	<ul style="list-style-type: none"> ▪ Regulatory bodies should be streamlined. ▪ Legislation can be enacted mandating proponents or regulators to provide adequate resources to ensure community members from hinterlands impacted by the project are able to attend such community participation processes organized. ▪ The government is encouraged to recruit more staff in these offices. ▪ Pursue partnerships with sister organizations in countries with a rich history within the field of EIA. ▪ Provision of adequate funds to the regulatory authorities should be central. 	<ul style="list-style-type: none"> ▪ Feasible [long term]: due to political reasons. ▪ Feasible [medium term]: currently a new legislation is in the process of being enacted, this can be incorporated. ▪ Feasible [short term]: recruitment currently taking place. ▪ Feasible [medium term]: partnerships can be proposed to countries with strong ties to Nigeria. ▪ Feasible [medium term]: requires a strong case to be put forward on the need for more funds to be provided.
Project type	<ul style="list-style-type: none"> ▪ The tier system of the UK environmental law sentencing guideline could be utilized in addressing ownership differentials. ▪ The mandate of the Nigeria Extractive Industry Transparency Initiative (NEITI) should be expanded to not only cover the management of the financial aspects of the oil sector by NNPC but also the environmental regulation by the DPR and the FME. 	<ul style="list-style-type: none"> ▪ Feasible [long term]: this will require amending legislation and will be bound to create heated debates from the proponents. ▪ Feasible [long term]: similar to the above, bound to be controversial although will have the backing of the community.
Stakeholder involvement	<ul style="list-style-type: none"> ▪ Oil host communities should form pressure groups, mandated to liaise with the proponent and regulators on behalf of the community. ▪ Notification methods that are fit for purpose should be adopted in notifying the community members about public participation exercises (fit for purpose notification methods are the methods 	<ul style="list-style-type: none"> ▪ Feasible [short term]: this has started happening, although they lack structure and proper funding. Can be improved. ▪ Feasible [medium term]: this requires amendment of the legislation.

Good practice	Recommendations	Feasibility and timeframe for implementation
	utilized in local communities to provide information to residents). <ul style="list-style-type: none"> ▪ A transparent channel of communication needs to be established between the proponent, regulator and the community. 	<ul style="list-style-type: none"> ▪ Feasible [long term]: this will require concerted effort over time to build transparency and trust in the process and stakeholders.

10.2 Research contribution

This research was an attempt to address the main challenges impeding the implementation of EIA follow-up within an oil sector of a developing country with particular reference to Nigeria. To achieve this, the thesis constructed a good practices criterion for EIA follow-up in the Nigerian oil sector. In the process of developing this, prior criteria by Morrison-Saunders et al. (2003) and Jha-Thakur (2011) were advanced upon to ensure the criteria are better suited to the Nigerian oil sector by incorporating results of surveys conducted. This is a significant contribution to research, as future researchers could utilize this criterion to review EIA follow-up in similar contexts. Secondly, in laying the context for the evaluation of EIA follow-up in the Nigerian oil sector, it was pertinent that the EIA system in Nigeria is reviewed. Prior to reviewing the EIA system in Nigeria, the EIA system of twenty oil exporting countries in Africa were reviewed. The research found Ghana, South Africa and Egypt having the most advanced systems in place. Thirdly, the research reviewed the Nigerian EIA system and discussed peculiarities between the systems implemented by the two regulating bodies. This brought into perspective the peculiarities of the Nigerian EIA system, within which EIA follow-up is situated. It further raised challenges inhibiting the Nigerian EIA system, attaining similar stature to the EIA systems currently implemented in; Ghana, Egypt and South Africa. Further to this, through semi-structured interviews and case study investigations, a clear understanding was developed about the challenges affecting EIA follow-up in the Nigerian oil sector. In doing this, the research identified there is a gap in the knowledge of stakeholders with regards to EIA follow-up practice. It also identified that

dependent on which proponent owns a project, EIA follow-up is implemented differently by the regulators (ownership differential). This research therefore provides helpful findings for other developing countries that may have similarities with the Nigerian case. It also provides an opportunity to evaluate the practice of EIA follow-up in other countries to identify if ownership differential exists within their EIA follow-up practice. The research also identifies, the challenges of implementing EIA follow-up within complex infrastructural projects in the oil sector of an African country.

10.3 Limitations of research

The research has focussed on evaluating EIA follow-up practice within the oil sector in the Nigerian context. In doing this, it established the current EIA follow-up practice in Nigeria and highlighted challenges faced in its implementation. In conducting this research, certain challenges were faced, which include:

Sector specific: This research focussed on the oil sector, although the results represent EIA follow-up practice in Nigeria to some extent; other sectors would need to be evaluated for a more comprehensive result on EIA follow-up in Nigeria.

Generalisation from case studies: The case studies have been chosen to represent the implementation of the EIA follow-up program in the practice of the PRMOC and the PRIOC. These case studies are generalised, as every single project currently being undertaken cannot be studied. Studying more cases will widen the scope of data available and could possibly highlight different problems and opportunities as no two EIA follow-up programs are implemented exactly the same.

Limited geographical coverage: The Niger delta in Nigeria is restricted to the extreme south of Nigeria. Although some oil reservoirs have been predicted to be available in the North central, South West and North East, these reservoirs are not as established as the ones currently in the Niger delta. The environmental conditions in other parts of Nigeria, vary

considerably to that in the Niger delta. As such, a wider area coverage of the Nigerian context might have brought up other challenges.

Inaccessibility of information: Gathering required information was very difficult for each case study, due to poor record keeping by the proponents and regulators. Not all information was also available to collect specifically related to EIA monitoring reports and audit reports. Thus, the researcher depended on key informants in each body, who were identified during multiple visits to these bodies. Still with all this effort, some information was not available until the end of this research.

END

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Appendix A: Questionnaire and Semi-structured interview materials

EIA Monitoring: crude oil projects in Nigeria (Questionnaire and Semi-structured interviews)

Good day Sir or Madam, my name is Maulud Tafida-Isa and I am a doctorate candidate at the University of Liverpool. Today I will be talking with you about Environmental Impact Assessment monitoring. The aim of this discussion is to understand the implementation of environmental monitoring in practice within the crude oil sector.

As many of you might be aware, the Nigerian EIA Decree No. 86 1992 has an Environmental monitoring component. My research seeks to understand the factors influencing EIA monitoring outcome in Nigeria. The information derived from this research will be used to develop a conceptual framework for EIA monitoring in Nigeria.

Today I ask for your cooperation and honesty in participating in this interview. The day's events will take the form of a semi-structured interview. You will be participating as an individual. I expect this process to take approximately 45mins to one hours to complete. Your identity will remain anonymous and you can leave the event at any time. Thank you for your assistance!

More about you

1. What is your gender?

Please, tick the appropriate answer.

- Female
 Male

2. Which age bracket do you belong to?

Please, tick the appropriate answer.

- Under 18
 Between 18 and 25
 Between 26 and 39
 Between 40 and 59
 Over 60
 I do not wish to answer this question

3. What group do you belong to?

Please, tick the appropriate answer.

- Regulator (FMENV)
 Regulator (DPR)
 Project developer (private)
 Project developer (Joint Venture)
 Community member
 Independent Observer

4. Have you any experience participating in EIA monitoring on crude oil project?

Don't Know	Not at All	A little	Moderate	Somewhat	Considerable
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4a. Any other comments you wish to add about the experience?

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Part 2 - Factors that could influence EIA monitoring in Nigeria

1. What do you understand by Environmental Impact Assessment?

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2. How would you rate your knowledge about EIA Monitoring?				
None	A little	Moderate	Somewhat	Considerable

2a. Is there any legal provision for conducting EIA monitoring in Nigeria?

3. Is there any timeframe for conducting EIA monitoring?

4. What do you think are the stages of EIA monitoring?

5. Is there any special importance given to EIA monitoring within the crude oil sector?					
Don't Know	None	A little	Moderately	Somewhat	Considerably

5a. What could be done to improve the importance of EIA monitoring within the crude oil sector?

6. Once the EIS has been granted how do you ensure that monitoring is implemented on ground?

6a. How often do you feel monitoring is conducted after obtaining EIS?					
Don't Know	Not at all	A little	Moderately	Somewhat	Considerably

7. Do you feel EIA monitoring influences decision making?					
Don't Know	Not at all	A little	Moderately	Somewhat	Considerably

7a. Please explain your answer?

8. Which of these resources do you feel are sufficiently allocated for EIA monitoring?				
People	Finance	Infrastructure	Political will	Capacity building

9. What is the scope of EIA monitoring? (Does it include social and health issues)

10. How are EIA monitoring reports communicated to the community?

11. How many MDA's participate in EIA monitoring on ground?

12. Are the EIA monitoring reports from MDA's harmonised?

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13. Do you feel EIA monitoring is making a difference on ground?

14. Is there any type of training provided for EIA monitoring?				
Not at all	Sometimes	Optional	Periodically	Compulsorily

15. Is there anything else you wish to add about EIA monitoring in Nigeria?

Thank you for your responses. All information that is collected from this interview is done so with complete anonymity. You are free to opt out of this interview at any point.

Maulud Tafida-Isa
Research,
University of Liverpool, United Kingdom.

Appendix B: Interview list

STAKEHOLDER GROUP	ORGANIZATION	REPRESENTATIVES	PERSONS ROLE	PERSONS EXPERIENCE	CODE NAME
REGULATORS					
	Department of Petroleum Resources	3 Representatives	Environmental Protection Officers	10 to 16 Years	REGD-1, REGD-2, REGD-3
	Federal Ministry of Environment	3 Representatives	Director EIA AND 2 Deputy Directors Monitoring and Scoping	16 to 20 Years	REGF-1, REGF-2, REGF-3
PROPONENTS					
	IOC (Indigenous Oil Company)				
	Enageed Resources Limited	3 Representatives	Head Environmental Division and 2 Environmental Division Officers	3 to 5 Years	PRPO-1, PRPO-2, PRPO-3, PRPO-4, PRPO-5, PRPO-6
	CAMAC Holdings	3 Representatives	Head Environmental Division, 2 Officers of the Environmental Division	7 Years	
	MOC				
	Nigeria Petroleum Development Company	3 Representatives	Assistant General Manager, 2 Departmental Officers	16 to 24 Years	PRJV-1, PRJV-2, PRJV-3, PRJV-4, PRJV-5 PRJV-6, PRJV-7 PRJV-8, PRJV-9, PRJV-10, PRJV-11
	Shell Petroleum Development Corporation	5 Representatives	Head of Compliance Monitoring and 4 Snr Managers within the Monitoring division.	10 to 25 Years	
	Nigeria Agip Oil Company	3 Representatives	Head of Compliance monitoring, Head of Pipeline protection, Assistant Manager remediation	10 to 20 Years	
COMMUNITY					
	Community members				
		30 Representatives	(COMMUNITY) Random sample of Bodo community with	N/A	COM-1, COM-2, COM-3, COM-4, COM-5, COM-6,

			an age range of 18 to 70		COM-7, COM-8, COM-9, COM-10, COM-11, COM-12, COM-13, COM-14, COM-15, COM-16, COM-17, COM-18, COM-19, COM-20, COM-21, COM-22, COM-23, COM-24, COM-25, COM-26, COM-27, COM-28, COM-29, COM-30
COMMUNITY EXPERTS					
	<i>Pressure Group</i>				
	CEHRD	2 Representatives	Chief Head Environmental Conservation. Rector CHERD		CEXP-1, CEXP-2
CONSULTANTS					
	Cares Group	6 Representatives	Head Environmental Division, Deputy head environmental division and 4 Officers of the Environmental Division	5 Years	CON-1, CON-2, CON-3, CON-4, CON-5, CON-6, CON-7, CON-8, CON-9
	Dave & Rose	3 Representatives	Head Environmental Division, Consultant compliance monitoring and 2 Officers of the Environmental Division	10 Years	

Appendix C: Participant Consent form

Committee on Research Ethics

PARTICIPANT CONSENT FORM

Title of Research Project: ENVIRONMENTAL IMPACT ASSESSMENT
FOLLOW-UP: CRUDE OIL PROJECTS IN NIGERIA

Researcher(s): Maulud Tafida-Isa, Dr Urmila Jha-Thakur

Please initial
box

1. I confirm that I have read and have understood the information sheet dated 1st April 2017 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my rights being affected. In addition, should I not wish to answer any question or questions, I am free to decline.
3. I understand that, under the Data Protection Act, I can at any time ask for access to the information I provide and I can also request the destruction of that information if I wish.
4. I agree to take part in the above study.

_____	_____	_____
Participant Name	Date	Signature
_____	_____	_____
Name of Person taking consent	Date	Signature
_____	_____	_____
Researcher	Date	Signature

Principal Investigator:

Dr Urmila Jha-Thakur
Work Address:
Work Telephone
Work Email

Student Researcher:

Mr Maulud Tafida-Isa
Work Address:
Work Telephone:
Work Email:

Version 2.1 February 2017

Optional Statements

- The information you have submitted will be published as a report; please indicate whether you would like to receive a copy.

- I understand that confidentiality and anonymity will be maintained, and it will not be possible to identify me in any publications **[or explain the possible anonymity options that you are offering participants and provide appropriate tick box options accordingly]**.

- I agree for the data collected from me to be used in future research and understand that any such use of identifiable data would be reviewed and approved by a research ethics committee.

- I understand and agree that my participation will be audio recorded /video recorded **(please delete as appropriate)** and I am aware of and consent to your use of these recordings for the following purposes **(which must be specified)**

- I understand that I must not take part if... **[list exclusion criteria, for example pregnancy]**

- I agree for the data collected from me to be used in relevant future research.

- I would like my name used and I understand and agree that what I have said or written as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognised.

- I understand that my responses will be kept strictly confidential **[only if true]**. I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.

- I understand and agree that once I submit my data it will become anonymised and I will therefore no longer be able to withdraw my data.

FOR MARIARC PROJECTS ONLY:

- I agree that my GP may be contacted if any unexpected results are found in relation to my health.