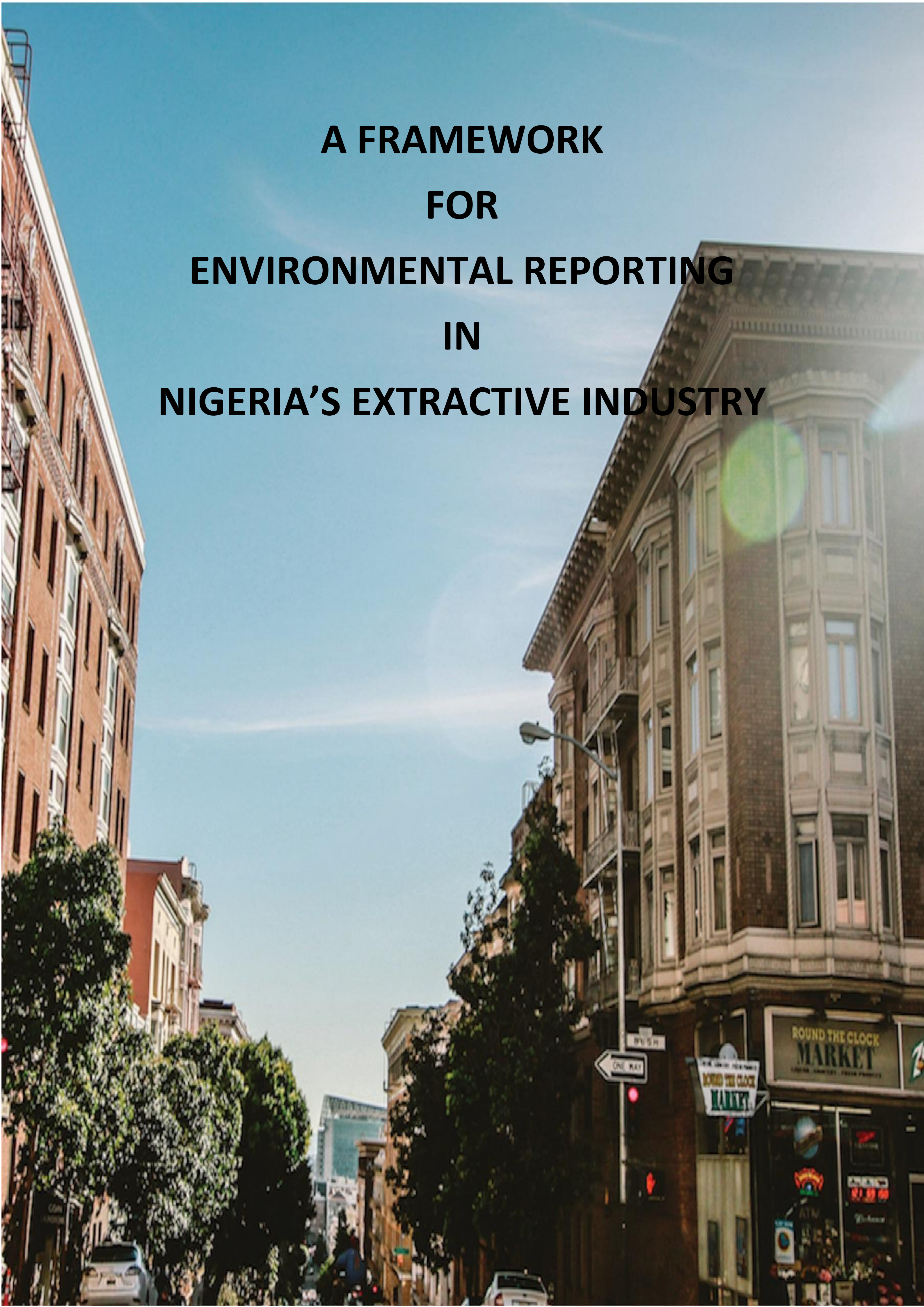
A FRAMEWORK FOR ENVIRONMENTAL REPORTING IN NIGERIA’S EXTRACTIVE INDUSTRY



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EXECUTIVE SUMMARY

The extractive industry covers oil, gas, and mining (solid minerals) sectors. This is a major driver of economic growth in the Nigerian economy.

In February 2022, EITI data showed the extractive industry 54.4% of government total revenues; 75.5% of exports; 8.6% of gross domestic product, and 0.01% of employment.

The 2019 EITI Standard, which is a set of requirements the EITI expects implementing countries to comply with, includes environmental reporting provisions that impose obligations to address both disclosure of data on required and discretionary payments connected to each country's environmental regulatory framework as well as information on environmental impact.

Also, the 2019 NEITI Work plan, developed to build on the NEITI's success in accomplishing the Federal Government of Nigeria's primary priority aim to improve on the 2018 EITI validation, identified "Sustainable Economic Development' as one of the country's core national priority objectives.

Consequently, the Nigeria subset of EITI sought to develop a framework that will guide the reporting of environmental issues in the extractive sector of the Nigerian economy.

In its 2019 EITI reports, NEITI provided information on the management and monitoring of the extractives industries' environmental impact. The report also contained information on the regulatory framework's environmental management methods.

This report, prepared in line with the principles of the global EITI as well as its Nigerian subset, NEITI, sets out the proposed framework for reporting the environmental impact of the Nigerian extractive industry.

The report comprises six sections, encompassing an introductory chapter, followed by chapters on the extant institutional and legal framework governing the Nigerian extractive industry, the disclosure of information on environmental and social issues in the extractive industry.

Finally, the report covers information on the proposed framework for environmental reporting in the extractive industry in fulfillment of the stipulations of the terms of reference for this assignment.

CHAPTER ONE: INTRODUCTION

1.1 Background

The extractive industry, which generates large revenues for corporations and governments, is a major driver of economic growth. But, the activities that yield these revenues come at a significant cost. Mineral extraction, for instance, poses a number of dangers to human health and the environment, including pollution, biodiversity losses and greenhouse gas emissions [1]. If certain safeguards are not satisfied, or badly managed, extractive activities can potentially degrade the quality of life and undermine human rights.

There is a growing commitment in the corporate world and in government to enhance the extractive industry's environmental performance through effective monitoring, implementation and reporting of environmental standards and practices.

Increasingly, environmental monitoring and reporting have become key elements of these standards that organisations and institutions have to implement. Environmental regulators have mandated monitoring and reporting of impact assessment and environmental management plans, while organisations have created and shared best practice recommendations on environmental management. Meanwhile, governments have not only demonstrated commitment to work, but are working with stakeholders on a global governance platform to enhance environmental outcomes through increased disclosure of environmental management practices and impacts.

The 2019 global EITI standard for extractive industries transparency, which is a set of requirements for implementing countries to comply with, includes environmental monitoring and reporting provisions[2].

Environmental reporting involved the sharing of information on the management and monitoring of the extractives industries' environmental impact. Apart from providing information on legal and regulatory provisions, environmental reporting also contains information on the regulatory framework's environmental management methods.

1.2 Project Objectives and Scope

[1] https://www.unep.org/explore-topics/extractives/why-does-extractives-matter
[2] https://eiti.org/environmental-reporting;

The overall objective of the project is to deepen knowledge, understanding and partnership in reporting environment impacts in the extractive industry, in line with EITI implementation in Nigeria.

The specific objective of the assignment is to produce a report which will inform Nigeria EITI's programmes and activities regarding environmental reporting in Nigeria's extractive industry within and beyond the current annual industry reporting.

The framework covers the scope of information to be published under the EITI, the environmental reporting provisions in the sectors' laws and regulations, and elements of global standards of environmental reporting in the industry. The report identifies the most suitable approach for publishing and generating debate and required policy interventions, including options for integrating disclosures in government systems and company portals.

The assignment is expected to achieve the following:

- collate all necessary information related to the impact of extractive industry operations on the environment in line with EITI's requirements;
- propose options for strengthening disclosure of information to ensure accessibility, reliability and complementarity with existing government and company systems;
- suggest aspects of environmental impact of extractive industry operations that are relevant for achieving the objectives of transparency, accountability, and sustainability;
- identify entities and stakeholders whose participation in EITI's environment processes are of material importance to achieving the objectives of EITI's principles and objectives of environmental reporting;
- identify any other objectives for environmental policies within Nigeria's national policy objectives and overall global standards necessary to achieving environmental transparency, accountability and sustainability in the extractive sector;
- assess the reliability and adequacy of available data as well as data that can be collected through existing sources and instruments for environmental reporting, and
- identify any barriers to disclosure of the requisite information and propose options for addressing them.

1.3 Methodology

In the development of this report, relevant extant documents that guide the implementation of the 2019 EITI Standard were extensively reviewed. Additionally, reports and guidance notes produced by NEITI's National Stakeholder Working Group (NSGW) and the EITI were reviewed.

Existing environmental reporting platforms of government and private sector institutions were scanned to assess the current level of systematic reporting in the extractive sector.

Essentially, government and corporate actors were consulted towards the development of the framework.

Some of these are the Federal Ministry of Environment (FMEnv); National Environmental Standards and Regulations Enforcement Agency (NESREA); Federal Ministry of Mines and Steel Development (MMSD); Nigerian Upstream Petroleum Regulatory Commission (NUPRC); National Oil Spill Detection and Response Agency (NOSDRA); Abuja Environmental Protection Board (AEPB); the Nigeria National Petroleum Company Limited (NNPCL), and the miners' association.

It is important to note that consultations with the above stakeholders ensured the development of the proposed reporting framework takes into cognizance of Nigeria's peculiar realities and system.

CHAPTER TWO: CONCEPTUAL FRAMEWORK

2.1 The global standard for extractive industry transparency

environmental impacts are usually discussed in the context of effects and the factors, in terms of the human activities that generate them.

For this reason, the discussion inevitably takes the course of accountability of the actors who conduct the activities that generate the negative environmental outcomes. Over the years, the discussion about environmental impacts has focused on the role played by the corporate world industrial expansion.

On the other end of the spectrum, concerns about the effects created by industrial activities have largely emanated from impacted constituencies, civil society and governance institutions, including the government.

Overtime, the obligation to disclose information about environmental practices and impacts have become as important as the activities, or their environmental impacts. Environmental disclosure is important to different constituencies for different but complementary reasons. Corporate environmental activities are communicated through environmental reporting. The importance of openness and disclosure in environmental management is measured in the interest it has generated among state and no-state actors at the national and international levels. As a result, businesses globally are increasingly driven to report on their activities and practices related to the environment[3]. Additionally, over time, evidence has demonstrated that effective governance instruments like transparency and accountability are essential and have substantial impact in a country's utilization of extractive industry funds. These principles hold true in the management of the environmental aspects of resource extraction.

On its part, business has found great corporate value in sustainability reporting. Particularly in the petroleum industry, sustainability reporting has become an important tool for firms to manage and measure their development. This is because it is a constructive stakeholder engagement method that promotes harmonic alignment of stakeholder issues. The inclusion of a sustainability report in annual reports is a necessary component of an effective corporate reporting mechanism. Without a sustainability report, corporate accountability is impossible to achieve, necessitating the incorporation of sustainability reports and their disclosure.

[3] Ismail, K., & Ibrahim, A. H. (2016). Social and Environmental Disclosure in the Annual Reports of Jordanian Companies. Issues in Social and Environmental Accounting, 2, 198-210;

The EITI is based on the principle that responsible exploitation and prudent management of natural resources is key to sustainable development. In extractive governance, this principle is guided by the recognition that extractive resources are finite (non-renewable) in nature, and their exploitation should be conducted in a way that guarantees optimum benefit and minimal cost to present and future generations.

Hence, it is stipulated that mineral extraction should be carried out in moderation and in an environmentally-friendly manner.

The effective management of environmental impacts of mineral extraction has become a core theme of global sustainable development policy and a key requirement of the EITI for advancing its sustainability principles. The EITI's environmental action plan consists of the regular disclosure of environmental management policies and actions, and the sector's engagement with stakeholders on environmental issues. This requirements are consistent with the expectations of the global goals on sustainable development.

Environmental sustainability objectives can be found across different themes of the global Sustainable Development Goals (SDGs). The objectives relevant to extractive industry operations are reflected in the goals on climate resilience, water and air quality, conservation and restoration of ecosystems, biodiversity protection, sustainable technology and risk management. Within the SDGs, the EITI's objectives on information dissemination, stakeholders engagements and partnerships are reflected in the goals related to environmental governance in particular and institutional effectiveness in general. They are covered by the specific targets on awareness raising and early warning on environmental issues, transparency in environmental funding and multi-stakeholder and civil society partnerships on data, monitoring and accountability.

2.2 Nigeria EITI

Like other implementing countries, Nigeria signed on to the global extractive industry transparency initiative to improve the management of the country's mineral assets.

Within the scope of EITI implementation, Nigeria's extractive industry includes oil, gas, and mining[4]. Nigeria is rich in natural resources, most notably petroleum and natural gas. The country also has significant deposits of several solid minerals which are currently being

[4]Although "mining" refers to all minerals extraction activities including oil and gas, it is used in this framework to denote only extraction of solid minerals;

exploited across the country. Almost 50 solid minerals have been identified in over 500 locations nationwide (Alison-Madueke, 2009).[5]

The Nigerian Upstream Regulatory Commission says apart from about 37.064 billion barrels of crude oil reserves, the country produces over 1.5 million barrels of crude oil per day. In addition, the Commission says the country, which is also endowed with proven gas reserve base of 208.62 trillion cubic feet (as of January 1,2022 estimates), is on track to grow the reserves volumes to 220TCF in the next decade. Besides, each of Nigeria's 36 states possesses in commercial quantity at least one type of mineral resource or another. As a result, mining is carried out in practically all the states of the Federation. While the mining industry has considerable potential to be an important driver of economic development and improved social and economic well-being (Bridge, 2008),[6] a large population remain poor, indicating little trickle-down effect from significant mining revenues.

On the other hand, mining communities continue to bear disproportionate negative social and environmental vices as impacts of mineral extraction. Before the country's implementation of EITI, the lack of transparency and accountability in the governance of the extractive industry afflicted the sector for a long time.

Revenues were not properly accounted for, while environmental impacts of exploration and production around the host and impacted communities were not effectively mitigated.

Hence, there was poor accountability in both revenue and environmental management.

Given Nigeria's significant mineral resources and the corresponding mismanagement of the benefits and cost of extraction to citizens, Nigeria became one of the first countries to adopt the extractive industry transparency initiative. The process for legislation led to the enactment of the NEITI ACT of 2007. Under the Act, NEITI is "charged with the responsibility of developing a framework for transparency and accountability in the reporting and disclosure by all extractive industry companies, of revenues due to or paid to the Federal Government of Nigeria"[7].

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[5]Alison-Madueke, D. (2009). *Opportunities in Nigeria's Minerals Sector*. Ministry of Mines And Steel Development, Abuja, Nigeria, 22nd April 2009;

[6]Bridge, G. (2008). *Economic geography: natural resources*. In: International Encyclopaedia of Human Geography.Eds. Kitchin and Thrift. Elsevier;

[7]https://eiti.org/files/documents/neiti_act_2007.pdf;

Since the establishment of NEITI, Nigeria has published 13 circles of oil and gas audit reports, covering 22 years (1999-2020); 11 cycles of solid minerals reports.

Since the launch of EITI's environmental reporting standards, NEITI has published environmental information for three years, covering 2018-2020. The Fiscal Allocation and Statutory Disbursement (FASD) audit, which x-rays the application of extractive industry revenues by government statutory recipients, has been conducted for three cycles, covering 2007-2019. The report includes information on spending of the Ecological Fund established by the government to address problems of environmental degradation across the country.

Although the fund is derived mostly from revenues from the extractive sector, it is applied to environmental problems, including ones that are not necessarily related to mineral extraction.

2.3 NEITI Audit Process

The NEITI's reporting functions are carried out through the industry 'audits'.[8] The industry audit processes consist of the *Financial audit*, which maps out the cash flows and their chain of custody, to understand the role and performance of individual actors, and a performance audit, which examines the role and performance of specific participants.

There is also Physical Audit, which maps out the sector's oil and gas and refined products flows, of which its main tool is a 'mass balance', requested from companies, detailing the volumes of all liquids entering their gathering systems and going to off-take points or export terminals. This is matched against data compiled by the various players.

The third, a *Process Audit*, examines how key agencies and departments manage five main areas of business, as well as the processes in place for upstream licensing, crude oil marketing, refining and product imports, budgeting, capital and operating expenditures[9].

2.4 2019 EITI Standard's Environmental Reporting Requirements

The 2019 EITI Standard introduced provisions for implementing countries to cover major environmental payments made by companies to government in their annual reporting.

The Standard also stipulates that contextual information about environmental monitoring should mandatorily be disclosed. Implementing countries are urged to disclose information on the management and monitoring of the extractive industries' environmental impact.

[8] The "audit" is a *reconciliation* by an Independent Administrator (IA) of EI companies' payments with government's record of receipts. It also encompasses other non-financial assessments in the process;

[9] NEITI-Nigeria's Extractive Industries Transparency Initiative Hand Book, 2013;

EITI Standard requires that this would involve:

a) A summary of key legal requirements and administrative procedures, as well as current practices in the country's environmental management and monitoring of extractive projects. This could include details of environmental impact assessments, certification schemes, oil, gas, and mining company licenses and rights as well as the roles and responsibilities of relevant government agencies in enforcing environmental rules and regulations. Also, it could provide details on any improvements being considered or are already happening.

b) Data on routine environmental monitoring procedures, government administrative and sanctioning processes, environmental liabilities, and environmental rehabilitation and remediation programmes[10].

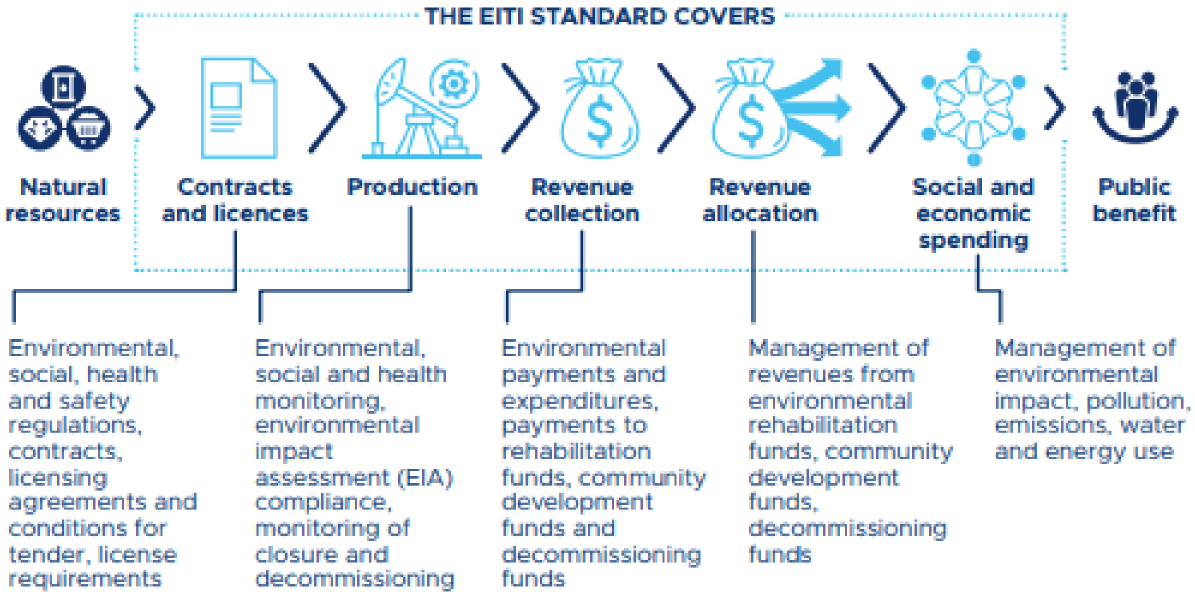

Figure 2.1: Environmental reporting across the value chain

[10] https://eiti.org/news/eiti-launches-2019-eiti-standard;

CHAPTER THREE: ENVIRONMENTAL AND SOCIAL ISSUES IN THE NIGERIAN EXTRACTIVE INDUSTRY

3.1: Preamble

The discussion on impacts of extractive industry operations recognizes that the sector carries both beneficial and negative economic, environmental, social, political, institutional, and cultural consequences.

Therefore, the economic advantages of extractive operations must be weighed against their environmental and social consequences in host communities.

Environmental and social consequences, on the other hand, are frequently analyzed using different criteria from those used to assess financial benefits, and the modeling, measurement, and reporting of these impacts is seldom linked with financial impacts.

Ultimately, an all round assessment of the impacts of the extractive industry produces an imperfect picture of benefits and costs occurring side-by-side. Therefore, a more comprehensive examination of the effects of extraction of minerals would aid politicians, regulators, businesses, residents, and impacted communities in making better informed decisions about whether and how mineral extraction should be carried out.

3.2: Environmental Impacts of the Nigerian Extractive Sector

To contextualize this discussion within the Nigerian operational environment, "extractive industries" refers to businesses that specialize in the exploration and extraction of non-renewable natural resources, such as oil, gas, and minerals.[11]

Within the country's national context, the extractive sector is described in terms of two sub-sectors, namely oi & gas in one category, and solid minerals in the other.

Over the decades, while the Nigerian social and economic life has become intricately linked with the extractive sector given the level of dependence on extractive commodities, the extractive industries, on the other hand, have also become synonymous with environmental pollution and deterioration due to the nature of the operations carried out in this sector. The consequences of the extractive industries on the environment will be explored seperately under the oil and gas and mining sub-themes

[11] Nenibarini, Z. (2004) Impacts of Extractive Industries on the Biodiversity of the Niger Delta Region, Nigeria;

3.2.1: Oil & Gas Extractive Companies and their Environmental Impacts

Oil and gas exploration and production, whether onshore or offshore, are intrusive operations that have significant impacts on ecosystems and human health.[12] Each phase is rife with pollution and attendant hazards to the ecosystem on a local, regional, and global scale.[13]

Deforestation, poisoning of land and water, ecosystem devastation, and long-term harm to flora and fauna are only a few of the repercussions. The environmental implications of oil and gas exploration and exploitation will be explored in detail here, starting with exploration and ending with decommissioning.

3.2.1.1: Petroleum Exploration And Production

The operations at this stage, which range from seismic and exploratory drilling to real oil and gas production, produce a wide range of operational discharges, some of which are more hazardous than others.[14] Furthermore, the environmental effect is relatively localized at this stage, with the exception of offshore development, where it may take on a trans-boundary dimension.[15]

Noise, vibration, numerous disruptions of the surrounding environment (vegetation and wildlife), soil erosion, and changes in surface hydrology are all factors that have an influence on the environment throughout the seismic and exploratory drilling phases.[16]

Furthermore, the discharges from exploratory drilling are generally made up of generated waters with varied salinities, waste disposal, air emissions, effluents including oil, chemicals, and other dangerous compounds, and drilling fluids and cuttings. Hydrocarbons, leftover treatment fluids, and surface-active compounds are commonly found in these discharges. Even while the environmental impact is typically small and limited in time and place during this phase of activities, it can be significant in sensitive locations.

[12] Dargin, J., Riding the Horns of a Dilemma: Environmental Enforcement in the Oil and Gas Sector. 7 OGEL 03 (2009). http://www.ogel.org/article.asp?key=2917. (Last Visited 21 March 2022);

[13] Dias, A., Oil and Human Rights. 1 OGEL 2 (2003). http://www.ogel.org/article.asp?key=115 (Last Visited 11 March 2022);

[14] Vinogradov, S., Environmental Protection in the Petroleum Industry in Encyclopedia of Hydrocarbons (2006). http://www.treccani.it/export/sites/default/Portale/sito/altre_aree/Tecnologia_e_Scienze_applicate/enciclopedia/inglese/inglese_vol_4/507-524_x10.3x_ing.pdf (Last Visited 11 March 2022);

[15] Ibid

[16] Ibid

Production activities have a greater impact since this phase involves active hydrocarbon recovery from producing formations. Exploratory and production activities are frequently marked by increasing hazards of inadvertent pollution by oil and water contamination due to spills and leakage.[17]

3.2.1.2: Transportation By Ships Or Pipelines

When oil and gas is delivered by ship, environmental contamination is caused by discharges of oily waters and drainage from ships, as well as oil spills caused by or resulting from accidents involving oil tankers.

Pipelines, on the other hand, have an environmental impact whether they are on land or under water. Inadvertently, the pipelines' construction and operation are linked to a variety of environmental impacts, ranging from habitat destruction and vegetation clearance during construction, to oil spillages and leakages resulting from possible pipeline ruptures due to natural and man-made causes, as well as the impact of having thousands of construction workers in that area.[18]

Furthermore, the environmental impact on wetlands and surface water bodies may be very severe. [19]

3.2.1.3: Decommissioning Of Site

Decommissioning is not harmful to the environment in and of itself. Its goal is to lessen the negative consequences on the environment and society.[20]

The site's failure to be decommissioned will result in increased environmental damage.

Rehabilitation, restoration, reinstatement, and reclamation are all terms used to describe decommissioning. Regardless of the many titles, it may be characterized as the process of refilling or replanting resource sites to return them to a safe state, or close to their prior state.

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[17] Ibid

[18] Vinogradov, S., Environmental Protection in the Petroleum Industry in Encyclopedia of Hydrocarbons (2006). http://www.treccani.it/export/sites/default/Portale/sito/altre_aree/Tecnologia_e_Scienze_applicate/enciclopedia/inglese/inglese_vol_4/507-524_x10.3x_ing.pdf (Last Visited 11 March 2011);

[19] Ibid

[20] Gao, Z., Environmental Regulation of Oil and Gas in the Twentieth Century and Beyond: An Introduction and Overview in Environmental Regulation of Oil and Gas 42 (London: Kluwer Law International Ltd., 1998);

Prior to the 1980s, the problem of decommissioning, particularly those of offshore sites, had received little attention. The Brent spur[21] issue, on the other hand, brought it to light.
Despite this occurrence, most oil and gas production corporations continue to ignore the decommissioning step to the disadvantage of the environment.

3.2.2 Mining Extractive Companies and their Environmental Impacts

Nigeria's vast solid mineral resources include some of the world's greatest known deposits of precious metals, stones, and industrial minerals, such as coal, tin, gold, bauxite, marble, limestone, and others.[22] Even though they have yet to be effectively utilized on a substantial scale, the core of these mineral reserves spread across the country, and remain a key attraction for both informal and traditional mining activity. Geoscience information on Nigeria’s mineral endowment shows more than 40 distinct types of unspoiled mineral deposits beneath the Nigerian soil that are yet to be explored. The market value of Nigeria's solid mineral reserves in various settings is estimated to be in hundreds of billions of dollars. Apart from these potentials, it is estimated that Nigeria loses about $50 billion each year due to a lack of sufficient data infrastructure to assess the sustainability of large resources of precious metals derived only from gold extraction.
Beyond these direct economic losses, environmental externalities based on human-nature interactions linked with mining, such as lead poisoning, air and water pollution, and other concerns throughout Nigeria, remains unquantified.[23]
Despite the current low exploitation of Nigeria’s solid minerals reserves, the discussion on the economic and environmental potential of mining activity is not mere conjecture, but based rather on evidence from recent country experience.
Before the oil boom crowded out other sectors of the economy, mining activity in the country was rife.
Revenues from solid minerals funded various government projects, such as infrastructure construction, education and health care.

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[21] See Kirby, A. (1998). Sci/Tech Brent Spar’s Long Saga. http://news.bbc.co.uk/1/hi/sci/tech/218527.stm. (Last Visited 11 March 2022);

[22] Musa, M.S. (2013). Mid Term Report For The Minerals and Metals Sector. Ministry of Mines and Steel Development. Abuja, FCT: Ministry of Mines and Steel Development;

[23] Haruna, M. (2011). An Assessment of Mining Activities On Vegetation in Bukuru. Jos Plateau State Using Normalized Differentiated Vegetation Index NDVI 4:6: 150-15;

However, the discovery of crude oil and over-dependence on petro-dollars brought about the solid mineral industry's decline.[24]

Despite decades of neglect, the mining industry has been undergoing a recovery with promising possibilities. The physical inventory of coal, estimated at over 639 million tons in proven reserves, plus an additional 2,750 million tons and a potential annual export value of $15 million, demonstrates the huge potential of Nigeria's natural assets.[25]

In 2013, the sector generated 60.54 million tons of mineral products and 1,254,200 rural employment, with monetary rewards from 1,710 quarries.[26]

In the absence of a clearly defined policy, stricter standards, and reforms, informal miners and corporations have been increasingly active in the extraction of solid minerals due to the petroleum industry's current dominance in the economy. This is supported by the fact that the country has 223 smallscale mining businesses, 195 mining leases, 845 artisanal mining cooperatives, and 2,048 exploration permits.

As a result, there were significant ecological consequences that harmed the host and neighboring towns.[27]

There are other dangers in the industry, such as inland sand mining and the consequences of artisanal mining, given the recurrent hazards from hundreds of abandoned mines around the nation, particularly in Jos Plateau.[28]

The biggest obstacles from mining include the concentration of poisonous leftovers from zinc, geological dangers, and ecological disruptions caused by the destruction of flora and animals.[29]

While artisanal and small-scale mining activities cause environmental issues, the consequences include toxic air pollution, deterioration of arable land, habitat loss, and poisoning of water supplies.

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[24] Onwuemenyi, O. (2016). Nigeria Struggles with Perception Issues in Investment. A Review of Nigeria’s Energy Industry. Sweet Crude;

[25] Musa, M.S. (2013). Mid Term Report For The Minerals and Metals Sector. Ministry of Mines and Steel Development. Abuja, FCT: Ministry of Mines and Steel Development;

[26] Ibid

[27] Ibid

[28] Edun, E.O. (2013). Inventory of Abandoned Mine Ponds/Dams On The Jos-Bukuru North Central Nigeria Using G.I.S And Remote Sensing Technique. The International Journal of Engineering and Science IJES. 2:5: 62-73;

[29] Adedeji, O.H. (2014). Assessing the Environmental Impacts of Inland Sand Mining In Parts of Ogun State Nigeria. Ethiopian Journal of Environmental Studies and Management. 7:5:478-487;

Invasions of built-up regions into natural areas, littering of mining wastes and abandoned quarries, radioactive pollution, and fatal occurrences of lead poisoning in an artisanal mining community are some of the other consequences.

If there had been no contacts between prospectors and mining sites, these negative externalities would not have evolved in their fatal manifestations, resulting in the ecological disasters. The ecological abnormalities are caused by a variety of socio-economic factors, including inefficient policies, economic variables, poor data infrastructure, and informal sector activity. This is due in part to the fact that the mining sector is relatively under-developed, with informal miners scouring minerals for a living and no governmental control to assure compliance with operating requirements.

Furthermore, the volumes of air pollutants emitted by the solid mineral distribution process, which includes limestone mining and the cement industry in Ogun state's Shagamu and Ewekoro districts, pose major public health risks. While public complaints of eye pains and respiratory tract problems, as well as attacks by airborne particulates laden with toxic dust, have occurred miles away, the concentration and effects of the plumes on flora have resulted in a decline in kola nut production from local plantations.[30]

Communities in the southern region of the country have been harmed by abandoned mines in a variety of ways. Over the years, the people of Plateau state have evidently borne the brunt of the hazards posed by abandoned mines across the country. Because of the devastation done to the area in previous mining dispensations, residents living near mining areas in Jos, Barkin-Ladi, Bukuru, Bossa, and Riyom districts are now often exposed to radioactive mine tailings.

Over 1,000 mine ponds dot abandoned minefields in the Jos Plateau, posing a threat. Many of the mining ponds within main roadways, farmlands, and human settlements in communities with higher levels of radiation caused strange fatalities in places that employed high quantities of monazite-rich sand for construction[31].

The presence of 1,100 to 4,000 abandoned tin and columbite mines in Jos causes major health risks to the city's population of around two million people. When flooded, the majority of these abandoned mines become death traps where inhabitants drown. This has been exacerbated by

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[30] Aigbedon, I. (2007). Environmental Effect of Mineral Exploitation in Nigeria. International Journal of Physical Sciences. 2:2:033-038;

[31] Faden, J. (2015). Jos a Century of Tin Exploration and Environmental Neglect. International Center for Investigative Reporting;

their exposure to 325 km^2 of polluted terrain in the Jos Plateau area, as well as the presence of carcinogenic radioactive compounds and the littering of brain-damaging mining wastes.[32]

Other fatalities as a result of mining have been reported in Madaka Rafi Local Government of Niger State in 2015. The outbreak was significantly more severe in the Kawo village region, which is located near the lower stream of the River Kaduna tributary, which is famed for its gem and gold mining. The disaster was marked by wealthy dealers' apparent exploitative sponsorship of poor artisanal miners working illegally with dangerous procedures and little regard for environmental concerns.

Under those circumstances, sediments from washed jewels and gold on surrounding streams flowing down Kawo village became a nightmare when residents unwittingly used lead poisoned water from the stream for household purposes. This exposed villages to lethal poisoning, which resulted in a large number of deaths[33].

Health risks have been linked to illicit lead mining, which resulted in poisoning and the deaths of 400 children in Zamfara state in Northern Nigeria in 2010[34], as well as water contamination threats from coal mines in the Enugu area. The 2000 dug pits from gold mining in the Igun-Ijesha area of Ogun state, as well as the fact that illicit mining in Afikpo, Ebonyi state, continues to decimate communities in the vicinity, pose a serious threat to the ecology.[35]

The advancement in the use of geo-spatial information systems in tracking the patterns and forms of mining impacts in the country, as well as the challenges posed by mining activities, can be assessed by looking at other studies where Geological Information System was used to pinpoint the spatial dimensions of ecological liabilities [36].

The impacts of extractive activities are surmarised in the following table.

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[32] Wapwera, D. (2005). Abandoned Mines, Potential Home For The People, A Case Study of Jos Plateau Journal of Civil Engineering and Architecture. 9: 425-445;

[33] Nmodu, A. (2015). Comments: How Illegal Mining Led To The Deaths of 28 Children in Niger;

[34] Katz, A., (2010). African Gold Rush Kills Children as Miners Discovers Lead Dust. Business Week.1-9;

[35] Merem, E.C. (2016c). The Geography of Wind Energy Use in the Mid-West Region of the US. Journal of Energy and Power. 6:1:1-15;

[36] Merem, E.C. (2016a). The Growing Issue of Mercury Exposure and the Threats in the African American Community. Journal of Frontiers in Science.1-15;

Table 3.1 Classification of Environmental Impacts based on sector

Sector	Oil and Gas	Mining
Impacts	**(i) Effects of spillage:** Crude oil or refined products spillage are common and persistent occurrence in oil and gas operations. Some historical spillages include the Funiwa 5 oil blow-out of 1st January, 1980 (400,000 barrels); Oyakama oil spillage of 10th May 1980 (about 30,000 bbl.); Oshika oil spill in 1979 (5,000 to 10,000 bbl.); Forcados terminal oil spillage of 6th July 1979 (570,000 bbl.); and lots more. Crude oil spills can harm the environment in a variety of ways. A floating oil coating on the water's surface could hinder natural aeration, resulting in the death of freshwater and marine life. Spilled oil or other high-oil-content food products may be consumed by fish. For a long time after an oil spill on land, vegetation growth is slowed and soil fertility is lost until natural processes restore equilibrium.	**(i) Air pollution:** Large amounts of small particles are released and spread by wind during blasting, explosions, and crushing. These dust particles are fewer than 10 microns in size. People's health is jeopardized when particulate matter (PM) is detected in the ambient air. Occupational hazards cause respiratory problems, silicosis, and lung diseases at maximum exposure via inhalation. The host communities' livelihoods are severely harmed. In the host and adjacent communities, these effects raise the risk of respiratory disorders, asthma, cancer, and early death, among other effects.
	(ii) Effects of petroleum products' induced fires: Various spillages of petroleum products caused by vandalism, negligence of oil pipeline maintenance, or accidents occurred at Jesse in Delta State, other areas of the Niger Delta, Ibadan in Oyo State, and other locations along the pipelines between 1996 and 2000. The Jesse (1998) and Adeje Oviri court fires, both caused by spilled petroleum products, resulted in the deaths of over 1,000 people, the reduction of other unquantifiable animal and biological populations, the destruction of bridges and electrical infrastructure, devastated vegetation, and caused extensive disequilibrium in the host community's ecosystem. These incidents made national and international headline news in the media that attracted the world's attention to dangers posed to human beings by the activities of the oil industry. Burnt vegetation also exposes the ground to gully and wind sheet erosion, resulting in soil fertility	**(ii) Water pollution:** In 2010, more than 200 children died in Zamfara State, Nigeria, as a result of lead poisoning. According to findings, a child dies every eight seconds due to water-related difficulties, with a total of five million deaths yearly due to water-related issues and diseases, .. Mining activities, particularly iron ore prospecting, have been blamed in Kogi State for causing gastro-intestinal symptoms such as alirritation, cathaesis, dehydration, dry skin, and tooth discoloration. Mine wastes containing magnetite, zircon, ilmenite, monazite, silica sand, thorite, and amethyst are piled high, posing a public health risk during rainfall due to seepage or probable flow to a neighbouring water supply. This causes the water to become murky, rendering it unsuited for aquatic life and residential use.

	loss due to leaching and eradication of agriculturally beneficial soil organisms and nutrients.	
	(iii) Effects on human health and other biological lives: Corrosive acid wastes, poisonous chemicals, and other dangerous industrial wastes are intermittently spilled into streams, rivers, and seas during oil drilling operations. Sulphur dioxide, nitrogen dioxide, carbon dioxide, hydrogen sulphide, lead, and other toxic gases are typically emitted into the environment by power plants that use high sulphur oil. In the presence of sunlight, these, along with injected particulate matter (soot, ash, and other particles), and unburned hydrocarbons, undergo a sequence of chemical reactions, resulting in the dense smog characteristic. Air pollution has a huge financial impact. Contaminants in the air have been linked to an increase in the prevalence of asthma, bronchitis, and emphysema, a dangerous and debilitating lung disease. As a result of gas flaring, forest and farmland vegetation burning, and oil spillage and production activities, heat introduced to the environment, lakes, and streams in an unnatural way. This thermal pollution elevates the temperature of the atmosphere (greenhouse effect) and of water bodies, potentially killing fish and other aquatic life while also causing discomfort in the human environment.	**(iii) Vegetation loss and deforestation:** Loss of vegetation and deforestation are two of the most serious consequences of mining exploitation in any region. The most common time for vegetation damage is during construction. On a larger scale, the mining industry is a major cause of vegetation loss and deforestation. Because of soil erosion and flooding, arable areas are rapidly depleted as a result of cutting vegetation, establishing camp sites, installing excavators and heavy gear, and building roads. This results in the loss of protecting plants, cash crops, and plantations, resulting in economic loss.
	(iv) Economic and social impacts: Pollution results in the loss of agricultural lands, economic crops, soil fertility, and the polluting of fresh and marine waters. Farmers, fisherman, and hunters who rely on these sources for a living have suffered significant and unquantifiable losses. Due to heavy competition for scarce cropland or fishing areas, widespread discontent, and anti-government sentiments in oil-producing regions, this results in social unrest, unemployment, and economic and social disruptions. The	**(iv) Landscape degradation and soil erosion/pollution:** Any environment's aesthetic characteristic is linked to its landscape formation. Thousands of abandoned mine pits, such as those found in Nigeria's Jos mining zone, have disrupted the region's tranquillity. Landscape devastation, pit creation, and indiscriminate heap dumping, as seen in granite quarries, are common instances. Because the environment is underlain by crystalline rocks, where quarrying activities occur on a daily basis, mining

	pervasive of political and social discontent in these places, have led inevitability to kidnappings and other violent crimes and outright sabotage in the areas. Some of these actions have further exacerbated the environmental and economic problems caused by unmitigated harmful effects of exploration and production activities.	activities such as excavation have exposed the entire landscape to severe erosion.
	(v) Impacts on surface and underground water sources: There is general agreement, supported by scientific evidence, that when hazardous chemical compounds used in the oil business are not properly disposed of, that they pollute not only surface water but also subsurface water, posing health risks to humans, animals, and underground species. Spilled oil and petroleum products penetrate into the subsoil over time, potentially polluting subsurface water. In various sections of Kano and Kaduna states, cases of extensive pollution of subsurface water have been documented. Water has the ability to break down or dissolve a wide range of materials, particularly organic molecules, which disintegrate when exposed to bacteria and enzymes for an extended period of time. Biodegradable waste poses a lower long-term environmental concern than more persistent contaminants like metals, plastics, and certain chlorinated hydrocarbons. These compounds persist in the water, making it poisonous to most living things. Nitrogen and phosphorus in large amounts induce microscopic water algae to bloom, or proliferate rapidly. When algae die, they require oxygen to breakdown. This creates oxygen deficiency in the water, which causes death of many aquatic organisms.	**(v) Geological and radiation hazards:** The disruption of natural environmental equilibrium caused by mining exploitation has resulted in a variety of geological hazards, including flooding, landslides, and subsidence. Obviously, this altered geological structure has ramifications, since it may result in the loss of lives and property. Aside from the geological distortions, both miners and residents of the host communities face the risk of radiation exposure.
	(vi) Acid rain: Sulphur dioxide emissions from petroleum extraction and refining interact with water droplets in the atmosphere to form acid rain, which falls to the earth. Despite the low sulphur	

	content of Nigerian oil, all of the components that cause acid rain in other parts of the world are present in the Nigerian environment, notably in the Niger Delta. Residents of Warri and Port Harcourt have noted a quick deterioration and rusting of car bodies. This could be due to acid rain rather than salt water. This is a difficult problem to investigate more scientifically by determining the pH levels of precipitation in these places.	

CHAPTER FOUR: ENVIRONMENTAL GOVERNANCE IN THE NIGERIAN EXTRACTIVE INDUSTRY

4.1 Preamble

Requirement 6.4 of the 2019 EITI Standard encourages implementing state parties to submit information on the management and monitoring of extractive activities' environmental impact. Stakeholders can agree on disclosure priorities based on national objectives for the industry and public demand for transparency at the national and local levels. The aforementioned requirement particularly encourages implementing parties to describe existing legal provisions and administrative norms for addressing environmental impact in their extractive industries. This information can assist stakeholders in gaining a general understanding of the relevant legal procedures and administrative rules, as well as the key actors involved, and can include laws, regulations, and specific provisions related to the management of extractive industries' environmental impact, as well as relevant agencies, their scope, roles, and responsibilities. This chapter provides a detailed description of the institutional, regulatory and legal framework governing environmental management in the extractive industry in Nigeria.

The section also discusses the custodians of environmental responsibilities, as well as their oversight functions, vis-à-vis environmental governance in the oil and gas and mining sub-sectors.

4.2. Legislations guiding Environmental Management in the Nigerian Extractive Sector

Over time, several legislations have been enacted to protect the environmental media from the adverse impacts of human activities, including activities from the extractive industry in Nigeria. Some of these laws generally govern the regulation of the Nigerian environment, while others are sectorial or spatial in coverage. The legislative framework that guides enivonmental management in the Nigeria extractive sector is set out in Table 3.1.

Table 4.1 Legislative Framework governing Environmental Management in the Nigeria Extractive Industries

<table>
<tr><th colspan="2">SECTOR</th></tr>
<tr><th>OIL & GAS</th><th>MINING</th></tr>
<tr><td colspan="2">National Policy on the Environment 1989 (Revised 1999)
The National Policy on the Environment describes the conceptual framework and strategies for achieving the overall goal of sustainable development in Nigeria. It underscores the need to put in place policies, strategies and management approaches that will ensure amongst others that:
▪ Environmental concerns are integrated into major economic decision- making process;
▪ Environmental remediation costs are built into major development projects;
▪ Economic instruments are employed in the management of natural resources;
▪ Environmentally friendly technologies are applied; and
▪ EIA is mandatorily carried out before any major development project is embarked upon.</td></tr>
<tr><td colspan="2">Federal Environmental Protection Agency (Now FMEnv) Act No. 58, 1988
This Act, which was issued in 1988 and amended by Act No. 59 of 1992, provides the setting up of the Federal Environmental Protection Agency, as the apex organization for the overall protection of the Environment and Conservation of Natural Resources. The act also makes environmental impact assessment (EIA) mandatory for all new major projects. In compliance with its mandate, FEPA issued the procedure, guidelines and standards for the execution of EIA with emphasis on the significance associated with current and potential impacts of such projects. The procedure also indicates the steps to be followed (in the EIA process) from project conception to commissioning to ensure that the project is executed with adequate consideration for the environment.</td></tr>
<tr><td colspan="2">Environmental Impact Assessment Act CAP E12 LFN 2004
The Act sets out general principles, procedures and methods to enable the prior consideration of Environmental Impact Assessment on certain public or private projects. The objectives of the Act are to promote the implementation of appropriate policies consistent with all the laws and decision-making processes through which the goal and objectives maybe realized. The Act also encourages the development of procedures for information exchange, notification and consultation between the organs and persons when proposed projects or activities are likely to have significant environmental effects on boundary or trans-state or on the environment of bordering towns and villages.</td></tr>
<tr><td colspan="2">FEPA (Now FMEnv) Nigeria's National Agenda 21 (1999)
Nigeria's National Agenda 21 was developed to: Integrate environment into development planning at all levels of government and the private sector, Intensify the transition to sustainable development, Address sectoral priorities, plans, policies and strategies for the major sectors of the economy and, Simultaneously foster regional and global partnerships.</td></tr>
</table>

<table>
<tr><th colspan="2">SECTOR</th></tr>
<tr><th>OIL & GAS</th><th>MINING</th></tr>
<tr><td colspan="2">Forestry Law CAP 51 LFN 1994
The Forestry Act 1958 which was amended as the Forestry Law CAP 51 LFN 1994 prohibits any act that may lead to the destruction of or cause injury to any forest produce, forest growth or forestry property in Nigeria. The law prescribes the administrative framework for the management, utilization and protection of forestry resources in Nigeria, which is applicable to the mangrove, and other forests of the Niger Delta.</td></tr>
<tr><td colspan="2">Land Use Act CAP 202 LFN 1990
The land-use Act of 1978 states that "… it is also in the public interest that the rights of all Nigerians to use and enjoy land in Nigeria in sufficient quality to enable them to provide for the sustenance of themselves and their families should be assured, protected and preserved".</td></tr>
<tr><td colspan="2">Endangered Species Act CAP E9 LFN 2004
This Act prohibits hunting, capture and trade of some endangered species like crocodile, alligator, turtles, Parrot, etc. The Endangered (Control of International Trade and Traffic) Decree (No. 11 of 1985) has been enacted by the Federal Republic of Nigeria specifically to implement CITES. It is broader than CITES in that it also covers domestic taking of listed species. Two schedules are included: Schedule I (Endangered Species – Animals in relation to which International Trade is absolutely Prohibited), and Schedule 2 (Animals in Relation to which International Trade may only be conducted under License). The decree prohibits taking of Schedule 1 species and requires that taking of Schedule 2 species be in accordance with a license issued under the decree.</td></tr>
<tr><td colspan="2">Territorial Waters Act CAP 428 LFN 1990
The territorial waters of Nigeria shall for all purposes include every part of the open sea within
twelve nautical miles of the coast of Nigeria (measured from low water mark) or of the seaward limits of inland waters. Any act or omission which-
(a) is committed within the territorial waters in Nigeria, whether by a citizen of Nigeria or a foreigner; and
(b) would, if committed in any part of Nigeria, constitute an offence under the law in force in that part, shall be an offence under that law and the person who committed it may, subject to section 3 of this Act, be arrested, tried and punished for it as if he had committed it in that part of Nigeria.</td></tr>
<tr><td colspan="2">Water Resources Act CAP W2 LFN 2004
The Water Resources Act vests the right to the use and control of all surface and groundwater and of all water together with the bed and banks in any watercourse affecting more than one state in the Government of the Federation. However, the Act essentially preserves existing rights, including customary rights, provided they are for domestic use, watering of livestock and personal irrigation schemes. A proviso to section 1(1) states that the subsection shall not be deemed to infringe or to constitute a compulsory right over or interest in property. Apparently, the idea is to separate rights over water resources from other rights in property.</td></tr>
<tr><td colspan="2">Employee's Compensation Act No. 13, 2010
The objectives of the Act are to— (a) provide for an open and fair system of guaranteed and adequate compensation for all employees or their dependents for any death, injury, disease or disability arising out of or in the course of employment ; (b) provide rehabilitation to employees with work-</td></tr>
</table>

SECTOR	
OIL & GAS	**MINING**
related disabilities as provided in this Act ; (c) establish and maintain a solvent compensation fund managed in the interest of employees and employers ; (d) provide for fair and adequate assessments for employers ; (e) provide an appeal procedure that is simple, fair and accessible, with minimal delays; and (f) combine efforts and resources of relevant stakeholders for the prevention of workplace disabilities, including the enforcement of occupational safety and health standards.	
The Mineral Oil (Safety) Act CAP 350 LFN 1990 Sections 37 and 40 of the Mineral Oil (Safety) Act CAP 350 LFN 1990 require provision of Personal Protective Equipment (PPE) and the safety measures for workers in drilling and production operation in accordance with international standards.	**Nigerian Minerals and Mining Act of 2007** The Nigerian Minerals and Mining Act (the "NMMA 2007") is the principal legislation that regulates all aspects of the exploration and exploitation of solid minerals in Nigeria. The Act vests control of all minerals in Nigeria in the State and prohibits unauthorized exploration or exploitation of minerals. The Act further provides that the use of land for mining operations shall have a priority over other uses of land and be considered (for the purposes of access, use and occupation of land for mining operations) as constituting an overriding public interest within the meaning of the Land Use Act.
EIA Sectoral Guidelines for Oil and Gas Industry Projects, 1995 In compliance with its mandate, FEPA issued the EIA Sectoral Guidelines for Oil and Gas Industry Projects, 1995. Contained in the Procedural Guidelines (pg. 8) are Category I projects (mandatory study activities) and listed under item 15, sub-item (a) on page 10) (Petroleum) is Oil and Gas Fields Development, making an EIA mandatory for the proposed project. The Procedural Guidelines also indicate the steps to be followed (in the EIA process) from project conception to commissioning to ensure that the project is executed with adequate consideration for the environment. Annex C contains the EIA writing format as required by FMEnv. The guidelines are intended to assist in the proper and detailed execution of EIA studies of projects in consonance with the EIA Act.	**National Guidelines for EIA (Act 86, 1992) Sectoral Guidelines: Mining** The National Guidelines for EIA Sectoral Guidelines for Mining was published in 2013 to provide useful advice in the formulation of site specific solutions to environmental and social issues during all phases of mining project from exploration through extraction and processing of minerals to post closure. The Guidelines provide an overview of the key environmental, socio-economic and cultural issues, both direct and indirect, that should be considered and addressed in the ESIA. Essentially, the Guidelines were published to provide guidance in the conduct of ESIA for mining projects. The main objectives of the Guidelines are to: i. Provide advice about mine planning, water management and rehabilitation which can assist the mining industry to manage exploration, mining operation and rehabilitation activities so as to satisfy the environmental objectives required by law.

SECTOR	
OIL & GAS	**MINING**
	ii. Assist proponents/ operators in the preparation of ESIA and management plan for all mine related environmental and social impacts.
National Inland Waterways Authority Act No 13 of 1997 This Act established the National Inland Waterways Authority with a view to improving and developing inland waterways for navigation, providing an alternative mode of transportation for the evacuation of economic goods and persons, executing the objectives of the national transport policy as they concern inland waterways. The Act also prescribes regulations and sanctions on the use and exploitation of resources of inland waterways such as dredging, sand or gravel, mining and erection of permanent structures within the right-of-way or diversion of water from a declared waterway.	**S.I. 15 - National Environmental Protection Management of Solid and Hazardous Wastes Regulation (1991) (FMEnv)** This provides that the objective of solid and hazardous waste management shall be to: • Identify solid, toxic and extremely hazardous wastes dangerous to public health and environment, • Provide for surveillance and monitoring of dangerous and extremely hazardous wastes and substances until they are detoxified and safely disposed of, • Provide guidelines necessary to establish a system of proper record keeping, sampling and labelling of dangerous and extremely hazardous wastes, • Establish suitable and provide necessary requirements to facilitate the disposal of hazardous wastes; • Research into possible re-use and recycling of hazardous wastes.
Petroleum Act CAP 350 LFN 1990 An Act to provide for the exploration of petroleum from the territorial waters and the continental shelf of Nigeria and to vest the ownership of, and all on-shore and off-shore revenue from petroleum resources derivable therefrom in the Federal Government and for all other matters incidental thereto.	**National Environmental (Mining and Processing of Coal, Ores and Industrial Minerals) Regulations, 2009. S. I. 31.** The purpose of this Regulation is to minimize pollution from mining and processing of coal, ores and industrial materials through the use of up-to-date, efficient and cleaner production technologies. For Mines using old operating methods, the Regulations specify that such mines shall take necessary measures to limit risks. Such measures may include the installing leachate collection tanks. Also, for mines using new designs to evaluate their installations and ensure that control routines are sufficient to prevent risks of pollution or accident.

SECTOR	
OIL & GAS	**MINING**
	The Regulations also make it mandatory for ESIA study to be conducted for new development in the mining sector and approval obtained from the FMEnv while comprehensive Environmental Evaluation Study (EES) is carried out on facilities without ESIA at the commencement of operations and Reports submitted to NESREA.
	National Environmental (Quarrying & Blasting Operations) Regulations, 2013 The objective of these Regulations is to control and regulate quarrying and blasting operations and their adverse effects on the environment and human health. Specifically, the Regulations aims to prevent environmental degradation; ensure the use of environment-friendly technologies in quarrying operations; sustain the carrying capacity of the Nigerian Land in particular and the environment in general; prevent the contamination of both surface and ground water; encourage the wise use and exploitation of natural resources and the protection of the ecosystem; prevent air and noise pollution; ensure control and safe use of commercial (blasting) explosives; avoid any interference or obstruction of the natural drainage channel and ensure safety of workers in the quarry and the public in general. The Regulations provides that an ESIA study must be conducted for all new quarries before the commencement of operations as required by the EIA Act of 1992 and Environmental Impact Statement (EIS) submitted to NESREA. Environmental Audit (EA) to be conducted on all existing quarries every three (3) years.
	National Environmental (Soil Erosion and Flood Control) Regulations, 2011 The overall objective of these Regulations is to check all earth-disturbing activities, practices or developments for non-agricultural, commercial, industrial and residential purposes.

<table>
<tr><th colspan="2">SECTOR</th></tr>
<tr><th>OIL & GAS</th><th>MINING</th></tr>
<tr><td>Nigerian Oil and Gas Industry Content Development Act 2010
The Act provides for the development of Nigerian Content in the Nigerian Oil and Gas Industry, Nigerian Content Plan, Supervision, Coordination, Monitoring and Implementation
of Nigerian content and for related matters. All regulatory authorities, operators, contractors, subcontractors, alliance partners and other entities involved in any project, operation, activity or transaction in the Nigerian oil and gas industry shall consider Nigerian content as an important element of their overall project development and management philosophy for project execution.</td><td>National Environmental (Noise Standards and Control) Regulations, 2009
The purpose of these Regulations is to ensure maintenance of a healthy environment for all people in Nigeria, the tranquillity of their surroundings and their psychological well being by regulating noise levels and generally, to elevate the standard of living of the people by (a) prescribing the maximum permissible noise levels a facility or activity to which a person may be exposed; (b) providing for the control of noise and for mitigating measures for the reduction of noise.</td></tr>
<tr><td></td><td>National Environmental (Surface & Ground Water Quality Control) Regulations, 2011
The purpose of these Regulations is to:
i. Restore, enhance and preserve the physical, chemical and biological integrity of the nation’s surface waters and to maintain existing water uses; and
ii. Protect groundwater sources by regulating the discharge of hazardous wastes, fossil fuels energy and any other substances having the potential to contaminate groundwater.
The Regulations also include amongst others, the application and general provisions of water quality standards for various uses such as agriculture, industrial, aquatic life and recreation.</td></tr>
<tr><td colspan="2">State Environmental Protection Edicts
Among the achievements of FEPA with the first decade of its existence is the establishment, nationwide, of State Environment Protection Agencies (SEPAs). FEPA did not directly establish the State Environmental Protection Agencies; rather, FEPA merely encouraged the various states to set up their own environmental protection agencies. Today, all the states of the federation have a State Environmental Protection Agency with a focus broader than the initial concentration on environment sanitation. The functions of the SEPAS have been codified in the various edicts promulgated between 1994 by the different state governments of the federations.</td></tr>
<tr><td colspan="2">Local Government Bye-Laws</td></tr>
</table>

<table>
<tr><th colspan="2">SECTOR</th></tr>
<tr><th>OIL & GAS</th><th>MINING</th></tr>
<tr><td colspan="2">In Nigeria, Local Government Councils are also empowered by the constitution to enact integrated rules and principles; i.e., legal norms, for the purpose of achieving environmental conservation.[37]</td></tr>
<tr><td colspan="2">Organisational Environmental Policies
An environmental policy addresses how a company manages and monitors its impact on the environment – both in its own operations and those of its supply chain. There is no set format but typically such policies cover use of energy and water, prevention of pollution, waste and recycling, and use of chemicals. As well as specific targets on reducing impact, a policy should also cover broader approaches to improving the environment such as changing work cultures, outreach and consumer behaviour.</td></tr>
</table>

[37] Constitution of the Federal Republic of Nigeria 1999, section 2 (2);

4.3 Applicable International Laws and Regulations

In addition to the national laws and regulations, Nigeria has also signed on to international laws and conventions. These environmental laws, regulations and treaties include:

(i) World Bank Guidelines on Environmental Assessment {EA} (1991);

(ii) International Union for Conservation of Nature and Natural Resources (IUCN) Guidelines;

(iii) Convention on the Migratory Species of Wild Animals (Bonn Convention);

(iv) Convention of Biological Diversity;

(v) Convention Concerning the Protection of the World Cultural and National Heritage Sites (World Heritage Convention);

(vi) Basel Convention on the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal; and

(vii) United Nations Framework Convention on Climate Change (1992)

4.4 Institutional Framework for Environmental Regulation in Nigeria

As laid out in the 2019 NEITI industry oil & gas and solid minerals reports, the main government entities tasked with environment management in Nigeria's extractive industry are the Federal Ministry of Environment (FMEnv), Ministry of Mines and Steel Development (MMSD), Nigerian Upstream Petroleum Regulatory Commission (formerly Department of Petroleum Resources (DPR), National Oil Spill Detection and Response Agency (NOSDRA), National Environmental Standards and Regulations Enforcement Agency (NESREA), State Environmental Protection Agencies (SEPAs) and Local Government Areas' Departments for Environmental Protection. Conceptually, each of the aforementioned Ministries and agencies perform both independent and complementary functions as set out in their enabling operational legislations as presented in Table 4.2.

Table 4.2: Environmental Regulators in the Nigerian EI

S/N	Entity	Overview of Functions
1	The Federal Ministry of Environment (FMEnv)	The Federal Ministry of Environment (FMEnv.) is responsible for the regulation of environmental matters as well as the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources in general. It also ensures coordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines.
2	National Environmental Standards and Regulation Enforcement Agency (NESREA)	National Environmental Standards and Regulations Enforcement Agency (NESREA) was established under the National Assembly Act of 2007. The Agency is responsible for the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources (in general and environmental technology). Furthermore, NESREA coordinates and liaises with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines.
3	Ministry of Mines and Steel Development (MMSD)	The MMSD is responsible for identifying the nation's solid minerals, advising government on the formulation and execution of laws and regulations guiding the various stages of prospecting, quarrying, and mining; handling the sale and consumption of solid minerals in the country through the issuance of permits, licenses, leases and collection of rents, fees and royalties;ensures, through its Mines Environment Compliance (MEC) Department, that mining companies comply with environmental controls especially the provisions of the Mineral Act (2007) and the Nigeria Minerals and Mining.

S/N	Entity	Overview of Functions
4	National Oil Spill Detection and Response Agency (NOSDRA)	NOSDRA was established in 2006 as an institutional body to coordinate the implementation of the National Oil Spill Contingency Plan (NOSCP) for Nigeria in accordance with the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC 90) to which Nigeria is signatory. Since its establishment, the agency has been ensuring compliance with environment legislation in the Nigerian petroleum sector.
5	Nigerian Upstream Petroleum Regulatory Commission (NUPRC)	NUPRC has the statutory responsibility of ensuring compliance with petroleum laws, regulations and guidelines in the exploration and production subsector of the Oil and Gas Industry and any other tasks on enforcing standards in the petroleum industry. The discharge of these responsibilities involves monitoring of operations at drilling sites, producing wells, production platforms, flow stations, crude oil export terminals, refineries, storage depots, pump stations, retail outlets, any other locations where petroleum or its products are either stored or sold, and all pipelines carrying crude oil, natural gas and petroleum products. In terms of environmental stewardship, NUPRC ensures that Health Safety & Environment regulations conform with national and international best oil field practice.

Figure 2.1: Government agencies with environmental oversight functions

CHAPTER FIVE: ENVIRONMENTAL REPORTING POLICY AND PRACTICE

5.1: Environmental reporting policy

Environmental reporting in Nigeria is governed by extractive industry laws as well as national environmental laws and policies. Environmental reporting requirements are embedded within the general framework that regulate environmental issues in Nigeria. The general policy framework for environmental reporting in Nigeria prescribes public awareness of, and participation in, environmental management. The National Policy on Environment "broad public participation in decision-making process" which would "enable many Nigerians to be aware of their role in environmental management and also enhance their access to timely and accurate information on the environment". The policy prescribes that sound environmental management should be based on "openness and inclusiveness". This is based on the principle of public trust in the state as custodial of natural resources for the interest of all constituencies and stakeholders.

5.2: Environmental Reporting Legal and regulatory provisions

Environmental reporting is required to be carried out in three ways representing the purposes for which the information is required. This framework identifies the three types of environmental reporting as follows: Administrative, regulatory, and public disclosure. Administrative reporting is the most prevalent reporting requirement occurring in the country's environmental policy and regulatory framework. These requirements prescribe the obligations of officials of extractive and environmental agencies to render reports to the minister or supervising body about their operations, or incidental or designated activities within their mandate.

Regulatory reporting are statutory obligations for industry operators to produce and submit to the regulator environmental information about their operations. Public disclosure (publication) of environmental information is prescribed in the relevant policy, law or regulation for the purpose of public information, participation and/or engagement.

The specific requirements for environmental reporting or disclosure in Nigeria's legal and regulatory framework are contained in the sectors' key laws and policies.

5.2.1 : Environmental Payments

There are legal provisions for the payment of fees in respect of the granting of environmental permits/ certificates for multi sector undertakings, including the extractive sector. These fees cover the entire lifecycle of projects (exploration, development, exploitation and decommissioning) and the determination of which, are set out in a separate fees and charges instrument, which is periodically reviewed and approved by the Nigerian legislative arm of government. Environment-related revenue streams in the Nigerian mining sector comprise fees for certification, permits, administration charges, direct investment in Environmental Management Plans (EMPs) and Community Development Projects as well as contribution to Environmental Protection and Rehabilitation Fund (EPRF). Table 3.1 presents an overview of the environmental payments payable by companies in the Nigerian mining sector as well as the oversight governmental agencies. For ease of understanding, the information contained in Table 3.1 is disaggregated by the typical phases that comprise a mining project's lifecycle.

In terms of the legal requirement for the proactive disclosure of receipts and expenditure of funds collected by public institutions in Nigeria, Section 2(3) of the Freedom of Information (FOI) Act, provides that a public institution shall cause to be published in accordance with subsection(4) of this Section, information relating to the receipt or expenditure of public or other funds of the institution.

Table 3.1 Applicable environmental payments in the Nigerian mining sector

Oversight Government **Agency** **Project Phase**	**FMEnv**	**NESREA**	**MMSD**	**SEPAs**
Planning	- EIA Registration Fee - Admin Charges			
Construction	Charges for IMM Mission			
Operation	Charges for IMM Mission	- Environmental Audit Certification Fee - EIA Violation Fee - Air Quality Permit - Waste and Toxic Substances Permit - Used Electrical and Electronic Equipment (UEEE) Permit - Biodiversity Conservation Permit		
Before Decommissioning				

1. <u>Administrative Reporting</u>

<u>Mining and Minerals Act (2007)</u>

Administrative reporting – The agencies established by the Act are required to exercise periodic administrative reporting functions.

(a) Mining Act and Regulations

The Mines and Environmental Compliance Department

- The Department is to periodically audit environmental requirements and obligations of mining license holders. The Department is to report its findings and recommendations to the Minister of Mines and Steel Development.
- The department is to review the Environmental Protection and Rehabilitation Programmes submitted by license holders and communicate its approval (or otherwise) within 60 days of the submission of such programme.

The Mines Inspectorate Department

The Act requires the Department to "prepare and render records, reports and returns" of its activities with respect to environmental management and covered by the Department's reporting obligations, which include:

- To supervise and enforce compliance by mineral title holders with mine health and safety regulations.
- Carry out investigations and inspections necessary to ensure that nineral title holders comply with the conditions of their mining lease.
- The Mines and Environmental Compliance Department is to keep record of environmental impact statements, maps and other documents for mines temporarily or permanently closed.
- The Mines Environmental Compliance (MEC) and Mines Inspectorate department (MID) are to keep records and reports of all mines inspections, including findings and compliance of titleholders with provisions of the Mining Act and regulations.
- A panel of inquiry set up by the Minister to investigate a mining incident or accident shall submit a report of findings to the Minister.
- The compliance and the inspectorate departments are to maintain reports of any special inquiry or mining accident investigations.
- The States Minerals and Environmental Management Committees and the Mining Cadastre Office are to conduct assessment of mining damage to crops, trees and building and compensation to be paid, and submit report to the Mines Environment Compliance Department.
- The Mines Environmental Compliance Department is required to make copies of air quality assessment reports with the Mines Inspectorate Department.
- The compliance department and the inspectorate department are to submit quarterly reports of its activities to other departments of the Ministry of Mines and Steel Development.

(b) Petroleum Industry Act (PIA)

- The Authority may issue regulations imposing public service obligations on environmental protection and health and safety on licences.

- The Commission and the Authority are to issue guidelines on decommissioning and abandonment to comply with standards prescribed by the International Maritime organisation on offshore petroleum installation and structures.
- The Commission or Authority is to notify a lease or license holder to commence decommissioning and abandonment of a well, installation, structure, utility and pipeline where such D&A is required under good international petroleum industry practices or the guidelines.

(c) National Oil Spill Detection and Response Agency (NOSDRA) Act

- The Agency is to prepare and submit a report of its activities for each year to the Federal Executive Council through the Minister of environment.

(d) National Environmental Standards and Regulations Enforcement Agency (NESREA) Act

- NESREA is charged with responsibility to create public awareness and provide environmental education on sustainable environmental management.
- The agency is to conduct public investigation of pollution and the degradation of natiral resources except oil spillage.

Mines Environmental Compliance Department

2. Regulatory reporting

(a) Mining Act and Mining Regulations

(e) Mineral license holders are required to produce and submit plans, studies and reports with respect to their environmental obligations. The Act also require submission of Environmental Impact Assessment Reports approved by the Ministry of Environment and mitigation plans by title holders. The Mines Environmental Compliance Department is mandated to review the plans (including an Environmental Protection and Rehabilitation Programme), studies and reports prepared and submitted by mining operators. The report should also contain information of environmental impact of mining operations.

(f) The lease holder is to produce a half-yearly report of progree in the implementation of the Environmental Protection and Rehabilitation Programme.

(g) The Mines Environmental Compliance Department is also required to carry out an environmental compliance audit of mining operations.

(h) Completed Community Development Agreements are to be submitted by title holders to the Mines Environmental Compliance Department.

(i) Holders are required to submit a community development action plan to the Mines Environmental Compliance department.

(j) The title holder would submit a half-yearly progress report on the implementation of the Community Development Agreement.

(k) A permit holder is required to submit to the relevant department of the ministry information which will include its techniques for drilling, excavation and other subsurface activities. The holder is would also include in the report information about its environmental and socially responsible conduct and compensation for use or damage to land.

(l) A titleholder is to carry out a regular air quality assessment to determine the concentration of gasses, dust and/or other toxic substances in the air and submit a quarterly report to the Mines Environmental Assessment Department.
(m) A mining operator is mandated to provide any information requested by an officer of the Mines Inspectorate Department who has been authorised to request such information.
(n) A permit holder should notify, in writing, the Mines Inspectorate Department of the discovery or presence of radioactive minerals or materials on its location.
(o) A title holder is required to give 30 days notice to the Mines Environmental Compliance Department before disposing its waste. The information shall specify the kind of waste to be disposed and describe the area where the waste is to be dumped.
(p) The title holder is to prepare and submit a report to Mines Environmental Compliance Department on the safety precautions and other measures it intends to take to protect the area around the dump site.
(q) The mineral title holder shall carry out weekly inspection of its dump and produce a report that would be open for inspection by an inspector of the Ministry.
(r) A titleholder is required to produce a periodic report stating the environmental status of a decommissioned dump not yet closed.
(s) The titleholder is to also produce and submit to the Mines Environmental Compliance Department, a periodic progress report on rehabilitation of the dump.
(t) A titleholder shall submit to the Mines Environmental Compliance Department, a report of an audit of the impact of a dump on the environment, prior to the closure of the dump.
(u) A mineral title holder shall carry out periodic audit of its compliance with Environmental Impact Statement and Environmental Management Plan, and report its findings to the Mines Environmental Compliance Department. (Mining Regulations)
(v) An annual reclamation statement is to be submitted by a titleholder to the Mines Environmental Compliance department stating the completion of a reclamation project and the area of land reclaimed. (Mining Regulations)
(w) A title holder is to report mining accidents to the Mines Inspectorate Department. The titleholder is to keep and maintain a register of accidents, dangerous occurrences and disease outbreak. A Health, Safety and Environment manager shall prepare the reports of incidents. Incidents are to be reported immediately to the Mines Inspectorate Department. Extracts from the register are to be submitted to the Department at the end of every quarter.
(x) A mining company is required to maintain a record of all injuries that occur in the course of mining operations.
(y) The Minister is to request a mining company to submit, in its mining plan, potential cases of health hazards and the proposed mitigation plan.
(z) Where a title holder suspends operations on site due to factors including environmental issues, the operator shall notify the Mines Inspectorate Department and, in extended cases of closure, the Mines Environmental Compliance Department, stating the measures being taken on maintenance and environmental restoration measures where mine abandonment is being contemplated. The Mining Cadastre Office should also be

notified of any intended abandonment by the licence holder, including details and reasons for abandonment.

(aa) A title holder is required to conduct an environmental audit of a mine and submit and audit report to the Mines Environmental Compliance Department before applying for closure of the mine.

(bb) A trustee appointed by the Minister to manage the Environmental Protection and Rehabilitation Fund shall keep proper records and cause the account to be audited, and submit the audited statement to the Minister and the State Mineral Resources and Environmental Management Committee.

(cc) Mineral title holders are to produce report on water discharge from restricted release zones, and submit such report to the Mines Environmental Compliance Department

(dd) The license of an exploration license holder, who fails to fulfil the reporting obligations of the Mining Act and the Mining Regulations, shall be revoked by the Mining Cadastre Office on the notification of the Mines Inspectorate Department.

(b) Petroleum Industry Act (PIA)

(ee) Each licensee or leasee is required to submit and environmental management plan to the Upstream Regulatory Commission of the Midstream Regulatory Authority within six months after the grant of the license or lease.

(ff) A licensee or lease is to assess her/his environmental liability annually to determine his/her financial contribution to the environmental remediation fund. (Section 103(6) implies that such annual assessment should be submitted to the Commission or Authority for review and approval.

(gg) A licensee or leasee is to notify the Commission or Authority, in writing, about its intention to decommission or abandon, and shall submit to the Commission or Authority an assessment of the social and environmental impact of decommissioning and abandonment, and a decommissioning or abandonment programme which shall be in line with good international petroleum industry practices and environmental development.

(hh) A settlor shall, immediately, after having been granted a license or lease, conduct a “host communities needs assessment” from a social, environmental and economic perspective, and shall produce and submit to the Commission or Authority, a host communities development plan based on the needs assessment.

(ii) A settlor is required to submit an annual report of the activities of the host communities development trust, with its audited accounts, to the Commission or the Authority.

(jj) A lees or license holder applying for decomminsioning and abandonment shall provide the Commission with necessary information to enable the Commission to indicate on the Commission’s website that the programme has been issued for consultation alongside a link to the consultation programme.

(c) PIA Regulations (NUPRC)

(kk) A lease holder shall make a written commitment, when making an application for shut-in that there would be no adverse environmental adverse environmental damage due to the sthut-in.

(ll) A license or lease holder shall submit the report of the public consultation on a proposed D&A, including measures taken by the licensee or lessee to take into account the outcome of the consultations, to the Commission with the application for D&A.

(mm) A gas producer shall prepare and submit to the Commision, an annual report consisting of a list of all flare sites "for which the producer has not yet executed a Connection Agreement".

(nn) A Producer shall record and submit a daily record of gas flared and vented to the Commission.

(oo) A permit holder shall prepare and submit to the Commission an annual report of volume of gas flared by the permit holder.

(pp) All producers are to comply with relevant reporting requirements on fugitive methane and greenhouse gases emissions.

(d) National Oil Spill Detection and Response Agency (NOSDRA) Act

(qq) <u>NOSDRA is to carry out activities concerned with surveillance, reporting, alerting, and other response activities as they relate to oil spillages.</u>

(rr) <u>An "oil spiller" is to report oil spill incidents to NOSDRA within 24 hours of the occurrence of the spill incidents.</u>

3. PUBLIC DISCLOSURE OF ENVIRONMENTAL INFORMATION

(a) Mining Act and Regulations

(e) The Mining Cadastre Office is required to "keep a complete and up-to-date ***open*** file of all reports submitted by mineral titleholders that are not confidential."

(f) The submitted reports and a register of mineral titles to be opened by the MCO, shall be readily and freely[38] accessible to the public.

(g) Exploration and mining plans and records are to be disclosed when required by the public in a manner prescribed by the regulations. For the purpose of this framework and as contained in the Mining Act, such plans are statutorily accompanied by environmental management plans.

(h) In the mining regulations, the Ministry of Mines and Steel Development is required to publish in a widely read newspaper, the manner in which tailings shall be managed by mining or quary title holders.

(i) The mining regulation requires the mining Cadastre Office to publish water use permit applications by title holders in the Gazette and also "post the application in a conspicuous place at the central and respective zonal mining cadastre offices. The notice is to allow anybody, including members of the public, "who might be prejudiced by the grant of the application to register a protest". The notice is required to be maintained in public domain for a period of 30 days.

[38] The text in Sections 105(5&6) imply that the public have free access to view and read the contents of the reports and registers. However, a member of the public would be required to pay a fee for the certified true copy of the reports or records;

(j) A panel of enquiry constituted by the Minister to investigate mining accidents shall sit in public to enable public access to the proceedings of the panel (Mining Regulations).
(k) The Mining Cadastre Office shall keep and make readily and freely accessible to the public, separate, complete and up-to-date mineral title register which shall include water use permits as well as open file of all reports submitted by the title holder which are not confidential. (Mining Regulations)
(l) A mineral titleholder shall carry our periodic inspection and maintain proper reports and records of the inspections carried out on decommissioned dumps and surrounding land extending up to 1000 meters, as well as areas covered by its environmental statement compliance. The reports highlighting defects and pollution of the environment shall be accessible to the public ***after five years***. (Mining Regulations)
(m) The public shall have access to environmental impact assessment studies, environmental impact statements, contributors to all Emvironmental Protection and Rehabilitation Fund maintained by the Mines Environmental Compliance Department.
(n) Information and data about areas that have been designated as "Restricted Release Zones" shall be made available to members of the public on request. Such zones are both surface and underground areas that the Mines Environmental Compliance Department has identified to be in contact with radioactive materials and "by-products of the ore treatment plant, or with the liquid effluent from the mine or the ore treatment plant." (Mining Regulations)
(o) The operator is to submit report to the Mines Environmental Compliance Department and the Mines Inspectorate Department reports and plans for tailings and water management system as well as plans for decomisioning and rehabilitation of tailings disposal areas. The plan shall include proposal for the treatment, method of transfer and final disposal of the tailings.

(b) Environmental Impact Assessment (EIA) Act

(p) Environmental Impact Assessment Reports for new projects are to be published for stakeholders, including "interested groups" and the public to examine and comment on the impact of the proposed activity.
(q) The regulatory decisions made on an environmental screening study and report shall be published in the official gazette and made available to the public at the registry maintained by the enforcing agency.
(r) Where a project is referred to a review panel, the information obtained to enable the panel to make a decision shall be made available to the public. The hearings of the review panel shall also be conducted in a manner that would enable the public to participate in the review, and the final decision of the panel is to be made available to the public. The enforcing agency is to notify (announce to) the public that the report is available and accessible. Other reports ordered by the agency, including mandatory study reports, shall be accessible to the public in the same manner, to enable members of the public file comments on the conclusions and recommendations of the reports. Generally, the agency shall notify the public about

its decisions on EIAs, mandatory study reports and review reports, i.e. its course of action on the proposed projects.

(s) The public is to be given opportunity to participate in the assessment of a project by a review panel.

(t) The agency shall inform the public about any mitigation measures planned to address the potential negative impacts of the proposed project.

(u) Any assessment of environmental impact of a project carried out by any other agency of government other that the one recognised by the EIA Act shall be valid if the Council is satisfied that the public has been given opportunity to participate in the assessment and that the report has been published.

(v) In order to facilitate public access to environmental assessment records, a registry shall be established for environmental assessment reports undertaken for every project.

(w) The registry is to contain records of environmental impact reports and the follow-up measures through the execution of the project.

(x) Section 57(4)(5) provides an exhaustive list of data and information should be held in the public registry.

(c) **Petroleum Industry Act**

(y) The Nigerian Upstream Regulatory Commission and the Midsream and Downstream Regulatory Authority are to maintain a public register of all authorisations issued by the Commission (Section 7f). Authorisations issued by the Commission to “regulate and enforce upstream health, safety and environmental measures and standards” in line with Section 7(c) are therefore covered by public disclosure.

(z) The Nigerian Midstream and Downstream Petroleum Regulatory Authority is to promote healthy, safe, efficient and effective midstream and downstream petroleum operations in an environmentally acceptable and sustainable manner.

(aa) The Authority is to publish a petroleum liquids midstream network code on its website, and physical copies made available to interested members of the public at a prescribed fee.

(bb) The Commission and the Authority are to consult with stakeholders (impacted and interested parties) for the purpose of developing regulations or initiating amendment to regulations. Notice shall be publish in at least two national newspapers with wide coverage inviting stakeholders and providing details that would make it possible for meaningful participation by stakeholders.

(cc) Where it appears that a license or lease holder has contravened, is contravening or is likely to contravene the conditions for the license or lease, the Authority or the Commission may publish a notice in a manner that it considers appropriate to draw the attention of parties affected or are likely to be affected by the contravention.

(dd) The Commission and Authority shall compile and make available to the public, continually and annually, a list (database) and current status of structures and pipelies on land and offshore used for petroleum operations in Nigeria. The database is to be made available on the Commission and Authority’s websites.

(ee) A decommissioning and Abandonment programme prepared by a licensee or lessee is to reflect considerations and recommendations raised by public consultations with stakeholders including affected communities, public authorities and bodies and other interested parties.

(ff) Public consultation on decommissioning and abandonment shall include announcements (public notice) by the licensee or lessee in at least two or more appropriate national and local newspapers, as well as on the licensee or lessee's publicly accessible website.

(gg) Copies of the D&A programme are to be accessible to the public, who shall be informed through the D&A announcement about their accessibility, and to whom their representations should be submitted, including the dates and locations of public consultation.

(hh) The Commission is to publish on its website necessary information to enable the Commission to indicate that the D&A programme has been issued for consultation, and the Commission shal provide a link to the consultation programme.

(ii) The mode of consultation chosen by the license or leese holder shall be appropriate for effective and inclusive engagement with stakeholders, taking into account the nature and location of the project and the key issues to be consulted on.

(jj) The license or lease holder is to ensure that appropriate information and risks are disclosed to stakeholders in a timely, comprehendible, accessible and appropriate manner and format, well in advance of the proposed consultations.

(kk) In addition to the public announcement of the D&A programme, the lease or licence holder is to hold meetings with relevant stakeholders, communities likely to be affected and the public to explain the impacts and proposed mitigation measures, and to receive their oral or written views.

(ll) The license or lease holder shall ensure that notice of consultations involving meetings should properly communicate the venues of and time for the meetings, and that they are convenient to the relevant stakeholders, communities and the public likely to be affected by the project.

(mm) The license or lease holder is to ensure that the comments received during consultations are recorded, made publicly available and taken into account in the finalisation of the decommissioning and abandonment programme.

(d) PIA Regulations

(nn) The Commision shall prepare and release on its website, an annual report describing flaring and venting by producers, including the total volume of disposed gas disaggregated into flare gas and vented gas as a percentage of all natural gas produced for each of the prior two years.

(oo) The report to be published by the Commission shall also include a comparison of upstream petroleum industry flaring and venting performance by producers against data from previous years, if available.

(pp) The data and analysis shall also include the volume of disposed gas received by the permit holder disaggregated into utilised, flared and vented.

(qq) The Commission is also required to carry out and publish a comparison of volume of disposed gas received by the permit holder disaggregated into utilized utilised flared and vented against data from previous years, if available; and

(rr) The flare penalties due in relation to the flaring and venting of natural gas produced in association with crude oil by each Producer.

(ss) Midstream license holders shall maintain a daily log of gas flaring and venting, which is to be submitted to the Authority at the end of every month.

(tt) are also required to submit an annual report to the Midstream and Downstream Authority annual report of flared gas data with respect to each facility including quantity of gas flared.

(uu) The license holder shall also submit quarterly report of flared gas to the Authority quarterly which shall be subject to quarterly and annual reconciliation.

(vv) NOTE: gas flare penalty is to be paid only on portion of flared gas beyond the limit set by the Authority. (Unlike the the updtream, this Midstream Regulation does not require Licence holders to publish gas flare penalties paid).

(e) National Oil Spill Detection and Response Agency (NOSDRA) Act

(ww) The Federal Ministry of Information and National Orientation is to provide up-to-date information about an oil spill and give an unbiased view of the response measures to avail the affected communities and the general public with a clear and true picture of the Federal Government's efforts.

(xx) The Ministry shall monitor the response activities' work in cooperation with outside media organisations to provide accurate reporting of any oil spillage.

(yy) The Ministry of Communications is to set up communication centers around the scene of any oil spillage.

(f) National Environmental Standards and Regulations Enforcement Agency (NESREA) Act

- NESREA is required to publish general scientific or other data resulting from the performance of its environmental functions.
- The agency is to collect and make publicly available basic scientific data and other information pertaining to environmental standards.

4. Information sharing among institutional stakeholders

(a) EIA Act

(g) The Environmental Impact Assessment Act states that the objective of the EIA is "to encourage the development of procedures for information exchange, notification and consultation between organs and persons when proposed activities are likely to have significant environmental effects on boundary or trans-state or on the environment on bordering towns and villages.

(h) The authorities in the location where a project shall be carried out is to notify counterpart authorities in other locations that are likely to be impacted by the project.

(b) Petroleum Industry Act

(i) Upon the submission of a decommissioning and abandonment programme by a licencee or leasee to the Commission or Authority, consultations shall be made with interested parties or aother relevant public authorities and bodies.

(c) ***National Oil Spill Detection and Response Agency (NOSDRA) Act***

(j) The Nigerian Institute of Oceanography and Marine Research is to provide data on oil spill trajectory for oil spillages in brackish and ocean waters.

(k) The Institute is to monitor and document the recovery rates of impacted areas. The documentation is required for future use and recommendations on clean-up effectiveness.

5.2.2 Disclosure of Environmental Regulations

The 2019 NEITI reports for the oil and gas and mining sectors provided an overview of the legal and institutional frameworks governing environmental management, but do not speak to the public disclosure of the documents containing environmental laws and regulations guiding the extractive industry in Nigeria. Public disclosure of legal and regulatory instruments in Nigeria is underpinned by the Freedom of Information Act, 2011 which was signed into law by former President Goodluck Jonathan on May 28, 2011, and came into force that same day. Section 2 (3) of the Act, provides that a public institution shall cause to be published in accordance with subsection (4) of this Section, the following information: substantive rules of the institution, statements and interpretations of policy which have been adopted by the institution and factual reports, inspection reports, and studies whether prepared by or for the institution. Materials prepared to set out environmental laws and regulations are available on various websites and in hard print at secretariats of the agencies performing oversight environmental management functions in the mining sector. Environmental issues must be communicated to the public by public authorities, according to law. Federal Ministry of Environment is required under the FEPA Act to collect and make information about pollution and environmental protection regulations available through publications and other acceptable ways, as well as through collaboration with public or private organizations. The EIA Act provides for the maintenance of a Public Registry to simplify public access to records relevant to environmental assessments. In the case of State Eenvironmental Protection Agencies, the Lagos State Environmental Pollution Control Law- as an instance- mandates that the Ministry of Environment and Physical Planning educate the general public on the types of waste disposal procedures that the State Government considers acceptable for home and industrial wastes. In addition under the Lagos State Environmental Protection Agency (LASEPA) law, LASEPA is mandated to conduct public enlightenment activities and educate the public on ways of environmental cleaning and management. The Federal Ministry of Environment also publishes publications that inform the public on the prohibition of environmental pollution and releases guidelines for environmental impact assessments for various businesses. Members of the public and anyone seeking clarity on environmental concerns can also visit the Ministry or the applicable State environmental agency for information on the environment.

5.2.3 Environmental Payments

The 2019 NEITI reports for the oil, gas, and mining sectors gave a general review of the institutional and legal frameworks for environmental management, but they said nothing about the information providing environmental rules and regulations affecting the extractive industry|.

The Freedom of Information Act, 2011, which former President Goodluck Jonathan signed into law on May 28 and which took effect the same day, serves as the foundation for the public disclosure of legal and regulatory instruments in Nigeria. In accordance with subsection4(4) of this Section, Section 2(3) of the Act mandates that public institutions publish the following information: the institution's substantive rules, adopted statements and policy interpretations.

5.2.4 Environmental and Social Safeguards (ESS) Instruments

The term "Environmental and Social Safeguards (or Standards)" (ESS) refers to policies, standards, and operational procedures designed to identify, mitigate, and minimize adverse environmental and social impacts that may arise during the implementation of development projects. ESS also has a proactive component to try to raise the likelihood that development3 initiatives will produce better results for people and the environment. In Nigeria, certain ESS Instruments such as Environmental Impact Assessment (EIA), Environmental Auditing (EA), Environmental Protection and Rehabilitation Programme (EPRP), Decommissioning Planning, Environmental Compliance Monitoring Programme and Community Development Agreement (CDA) are used to avoid, mitigate and compensate for the impacts associated with the mining sector. Each of the aforementioned safeguards instruments is administrated by one oversight government agency or the other. Importantly, applicable ESS safeguards instruments are documented in reports which are submitted, reviewed and cleared by the appropriate regulators. Table 3.2 presents the environmental obligations of mining companies in terms of the preparation of ESS instruments. For ease of understanding, the information contained in Table 3.2 is disaggregated by the typical phases that comprise a mining project’s lifecycle.

Table 3.2 ***Applicable Environmental and Social Safeguards Instruments in the Nigerian mining sector***

Oversight Government Agency Project Phase	**FMEnv**	**NESREA**	**MMSD**	**SEPAs**
Planning	- Environmental Impact Assessment - Environmental Management Plan (EMP) - Other sub plans		Agreed Community Development Agreement (CDA)	Environmental Impact Assessment (EIA
Construction				
Operation	- Environmental Compliance Monitoring (ECM)	Environmental Audit (EAs)		
Before Decommissioning	Decommissioning Plan			

5.2.5 International Best Practice

Given the importance of maintaining public access to environmental information, it's no wonder that right-to-know provisions are found in a vast number of international environmental treaties. Nigeria has ratified such (binding international) regimes, including the following:

- the Convention concerning the Protection of the World Cultural and Natural Heritage (WHC); (Adopted in Paris on 16 Nov. 1972, in force 17 Dec. 1975, Ratified by Nigeria on 23 Oct. 1974.);
- the United Nations (UN) Framework Convention on Climate Change (UNFCCC). (Adopted in New York on 9 May 1992, in force 21 Mar. 1994, Ratified by Nigeria on 19 Aug. 1994.);
- the UN Framework Convention on Biological Diversity (CBD)15 and its Cartagena Biosafety Protocol (Cartagena Protocol on Biosafety to the Convention on Biodiversity, adopted in Montreal, Canada, on 29 Jan. 2000, in force 11 Sept. 2003, Ratified by Nigeria on 15 July 2003.); and
- the UN Convention to Combat Desertification in Those Countries ExperiencingSerious Drought and/or Desertification Particularly in Africa (UNCCD), adopted in Paris, France, on 17 June 1994, in force 26 Dec. 1996, Ratified by Nigeria on 8 July 1997).

5.3: Nigerian Legislation

Despite the fact that Nigeria has ratified and committed to multiple international environmental treaties, some of which compel Nigeria to provide public access to environmental information, it is yet to give domestic effect, in line with the constitution, to some of these treaties due to a lack of legal mechanisms.

Public right of access to environmental information still faces some challenges. Despite the Freedom of Information Act, the Official Secrets Act makes it illegal for officials to give out classified official material, as well as for anybody to receive or replicate it without permission from the government.

The broad interpretation given to the word 'classified matter' is the most restrictive component of the FOI Act. The Act's implementation means that any government information might be subject to it.

In practice, nearly all information held by public institutions was strictly classified. In keeping with the spirit of the Act: newspaper clippings already in the public domain were still included in classified government files, and government departments withheld information from each other and, in some cases, even from the National Assembly (Parliament)[39].

Furthermore, the Nigerian Constitution does not clearly grant the public the right to access environmental data kept by government organizations.

Again, the Nigerian Constitution does not clearly grant the public the right to access environmental data kept by government organizations. None of the sections have been officially recognized or construed by a court as providing such a right of access, including Section 39(1), which stipulates the freedom to 'receive and impart ideas and information without interference.'

The outcome of existing legal and institutional framework on environmental information disclosure is that impediments to public access to environmental information, whether in policy or practice, carries pervasive damaging impacts on the environment and the general well-being of the people.

The oil-producing region of Nigeria, for example, is a prime illustration of how crude oil exploration and extraction have wreaked havoc on the ecosystem, particularly through frequent oil spills and continued gas flaring. Many residents in this region drink, cook, and wash in dirty water, consume crude-oil-contaminated fish, and breathe gas-polluted air, resulting in health problems that could have been prevented.[40]

Many residents are unable to make informed personal decisions because, according to Amnesty International, "they have absolutely little information on the repercussions of pollution."[41] [because] there is no law in Nigeria that requires the publishing of basic environmental monitoring data. Lack of access to environmental information has also fueled severe confrontations in the region between communities, governments, and private enterprises.[42]

It has weakened communities' ability to seek legal reddress for harm caused by extractive projects, by making public participation in environmental decision-making processes irrelevant.[43]

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[39] S. Olukoya, 'Rights-Nigeria: Freedom of Information Bill Proves Elusive', Inter Press Service, 21 June 2004, available at: http://ipsnews.net/africa/interna.asp?idnews524297.

[40] Amnesty International, Nigeria: Petroleum, Pollution and Poverty in the Niger Delta (Amnesty International, 2009), at p. 21, available at: http://www.amnesty.org/en/library/asset/AFR44/017/ 2009/en/e2415061-da5c-44f8-a73c-a7a4766ee21d/afr440172009en.pdf;

[41] Ibid

[42] Ibid

[43] Ibid

Nigeria has also signed and adopted the World Charter for Nature, Agenda 21,[44] and the Rio Declaration on Environment and Development, all of which contain clauses that require states to provide public access to environmental information (Rio Declaration).[45]

It is worthwhile to consider the legal position of Rio Declaration Principle 10, which, among other things, calls on nations to ensure that the public have proper access to environmental information held by public entities. This principle has helped in the crystallization and weighting of the issue of public access to environmental data. As a result, the importance of Principle 10 in international environmental law cannot be overemphasized.

It has influenced comparable clauses in a number of international environmental treaties, including the widely used UN Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters (Aarhus Convention).[46] Principle 10 has shaped the programmes of international institutions such as the World Bank[47], the World Trade Organization (WTO)[48], and the African Development Bank[49]. Although several countries accept that more needs to be done in this area, it is widely acknowledged that Principle 10 has objectively aided in the improvement of national environmental policy and practice.[50]

The principle has also provided instrument to facilitate public and stakeholders' involvement in environmental management, which is a key objective of the EITI principle.[51]

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[44] Adopted at the UN Conference on Environment and Development, Rio de Janeiro (Brazil), 3–14 June 1992, available at: http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf;

[45] Report of the United Nations Conference on Environment and Development, Rio de Janeiro (Brazil), 3–14 June 1992, UN Doc. A/CONF.151/26, 12 Aug. 1992, available at: http://www.un.org/documents/ ga/conf151/aconf15126-1annex1.htm;

[46] Aarhus (Denmark), 25 June 1998, in force 30 Oct. 2001, available at: http://www.unece.org/env/ pp/welcome.html;

[47] See N. Bernasconi-Osterwalder & D. Hunter, 'Democratizing Multilateral Development Banks', in C. Bruch (ed), The New 'Public': The Globalization of Public Participation;

[48] See N. Gertler & E. Milhollin, 'Public Participation and Access to Justice in the World Trade Organisation', in Bruch, ibid., pp. 193–202;

[49] See A. Fall, 'Implementing Public Participation in African Development Bank Operations';

[50] J. Foti, 'Rio120 in the Rear View: Countries Commit to Improve Environmental Democracy. http://insights.wri.org/news/2012/07/rio20-rear-view-countriescommit-improve-environmental-governance;

[51] See C. Bruch, 'Legal Frameworks for Public and Stakeholder Involvement', available at: http://iwlearn.net/abt_iwlearn/events/workshops/p2/20061207/p2lac07-bruch;

Significantly, the Convention has clarified the legislative and practical measures required to execute the more universal access standards in the aforementioned international regimes. The Convention was praised in a UN Economic Commission for Africa (UNECA) report on strengthening environmental public engagement in Africa as "a model of a public participation regime."[52]

In terms of environmental procedural matters, environmental rights activists in Nigeria see the Convention and other legal norms as a framework for their work and campaigns.[53]

5.4 Barriers to effective Disclosure of Environmental Information

Legal and regulatory barriers

The Mining Act prevents officials of the Ministry and the institutions set up to implement and enforce the Act from disclosing information that could “materially affect mineral exploitation activity”.

While this provision is intended to prevent conflict of interest in mining administration and regulation, its application may impede legitimate disclosure of environmental information because the section does not specify the kind of information that it applies to. The provision is also binding on past officials of the institutions.

With regards to the government's enquiry into mining accidents, the public would not be able to participate as prescribed by the regulation, if the relevant authority thinks that public participation would be “injurious” to Nigeria’s national interest.

No information about a closed mining operation shall be disclosed by officials until after six months post-closure, except with the written permission of the title holder.

This restriction on public disclosure does not however hold where such information had already previously been disclosed.

While complete and up-to-date information and reports relating to a mineral title are deemed to be ‘readily’ and ‘freely’ accessible to the public, however, if any member of the public wishes to obtain a copy of such a report, s/he shall pay a fee to obtain a “certified true copy of such document.

[52] UNECA, “Improving Public Participation in the Sustainable Development of Mineral Resources in Africa”. available at: http://repository.uneca.org/bitstream/handle/10855/5560/bib.%2039823_I.pdf?sequence51;

[53] SeeWest African Insight, ‘Oil Exploration, Environmental Rights, and the Future of Nigeria’s Niger Delta’, West African Insight, 10 Oct. 2010, available at: http://westafricainsight.org/articles/PDF/61;

Secondly, the fact that such reports and information can only be accessible to the public during "normal office hours" limits the intention or objective of "ready" accessibility.

Finally, accessibility to the information is only possible by physical visits to the location of the Mining Cadastre Office, which imposes additional time, cost and effort, in addition to the fact that the agency has limited capacity to physically respond to multiple requests by members of the public at any one time.

Regulation 101(2) of the Mining Regulations (2011) stipulates that data, information and reports produced and submitted in fulfillment of the requirements of the Mining Act or Mining Regulations "shall become state property upon the date of submission".

For the purpose of operation of the provision of the Act, and as outlined in this framework, the core environmental reporting responsibilities are carried out by mining license holders.

These are environmental information required to be submitted to the relevant industry regulators by the license holder. Other kinds of reports are required to be produced and submitted to other public institutions charged with responsibilities for implementing the Act. Notwithstanding the purpose or intention of the provision, Regulation 101(2) may create doubts among officials of relevant institutions and may encourage the treatment of information as 'government property' rather than public information.

Further to the above regulatory restriction on information disclosure, Regulation 102 further states that information produced and submitted by any leaseholder would not be disclosed until six months after the closure of a mining operation, unless such disclosure is authorized by the leaseholder. The provision however clarifies that the restriction does not apply if disclosure of information is to be carried out:

a) To comply with specific requirements of the laws and regulations for such information to be disclosed;
b) By government entities carrying out governmental duties or to fulfil and obligation imposed by law;
c) To any person who is approved by the minister in writing, as the proper person to receive such information;
d) For the purpose of producing government's statistical data on mining operations;
e) To determine the obligations and liabilities of titleholders with respect of payments related to mining activities;
f) In connection with any subject or for any purpose defined by contract;
g) If such information has already previously been publicly disclosed.

This chapter of the report provides a snapshot of the availability, comprehensiveness, disclosure and accessibility of key environmental reporting aspects as required by Requirement 6.4 of the 2019 EITI Standard.

Additionally, this section of the report considers the legislative and institutional frameworks for access to environmental information at national and multi-lateral platforms.

CHAPTER SIX: PROPOSED FRAMEWORK FOR ENVIRONMENTAL REPORTING

6.1: Preamble

The EITI requirement for environmental disclosure presents two complementary agendas for EITI information disclosure practices.

In the first instance, the environmental disclosure requirements entail identifying what applicable data to disclose. The second level of decision is to determine how to report the information. This framework identified data needs from EITI disclosure requirements and from existing legislation and regulations on environmental information disclosure.

The framework adopts a hybrid disclosure model that accommodates current traditional EITI disclosure practices and the new (recommended) standard for data mainstreaming and systematic disclosure.

6.2: Stakeholders Consultation and inputs

The NSWG of NEITI approved the development of the framework for environmental reporting in the 2022 country workplan. Stakeholders were invited to develop a methodology for the framework in February 2022. The stakeholders comprised mainly environmental researchers and key regulators. The draft framework was presented to an expanded stakeholder group in May 2022. Stakeholder groups who participated in the consultations include civil society organisations, government institutions/ regulators, researchers and academics in the field of environment, industry participants and the media.

6.3: Objectives of Environmental Reporting

The objectives of disclosure of environmental information in the extractive industry are established primarily from the review of Nigeria's environmental laws and regulations and from stakeholders' assessments of the key environmental issues in the extractive industry as well as their expectations for effective environmental management in the extractive industry.

From the findings, the objectives of environmental disclosure are identified as follows:

- To establish the scope of environmental regulatory framework in the extractive industry.
- To clarify institutional responsibilities for environmental policies and regulation in the extractive sector.
- To strengthen accountability in environmental management by increasing stakeholders' knowledge and understanding of obligations of operating entities in the extractive industry.
- To strengthen accountability in environmental management through adequate stakeholders' awareness of environmental impacts of extractive industry operations.
- To facilitate inclusive and participatory environmental management policies and programmes.
- To monitor and track industry compliance with environmental policies and regulations as well as industry's responsiveness to environmental issues.

- To assess outcomes and impacts of environmental management programmes, including environmental and social contributions in the extractive industry.
- To facilitate equitable tax assessment and remittances.
- To empower communities and non-state actors with information to seek redress for unremedied environmental impacts.
- To minimize conflicts between companies and stakeholders in the oil, gas and mining communities.
- To facilitate effective institutional decisionmaking.

These objectives guided the development of this framework for environmental reporting, and hence the expected outcomes of disclosure.

In terms of actual reporting, the framework identifies the responsibilities for disclosure according to the corresponding institutional responsibilities for generating or enforcing the responsibilities for generating environmental information as stipulated in the extant law, regulation or policy.

6.4: Data Mainstreaming

Mainstreaming, or systematic disclosure, is the disclosure of EITI data through existing government systems. These systems refer to government's regulatory or administrative institutions with statutory mandates to collect and publish data.

Mainstreamable data include data contained in annual reports or information portals of institutions or companies in the extractive industry. Such data routinely published by agencies of government independent of EITI data collection process are regarded as part of country EITI reporting when links are provided to the original data sources through EITI industry reports.

With new disclosure requirements, and as Nigeria EITI moves towards deepening transparency, the NSWG sets the criteria for this framework to include mainstreaming of environmental disclosure within existing ministries, departments and agencies with mandates on environmental management.

This objective is contained in the terms of reference for the development of this framework. The report provides a scope of disclosure requirements in line with existing regulatory provisions. It identifies the gaps in current reporting by assessing the breath of current disclosure practices against the scope of reporting requirements.

The framework itself outlines the array of currently accessible environmental data sources that would be linked in EITI industry reports.

For data that is not currently published by institutions with the corresponding responsibilities to do so, the framework guides the collection and reconciliation of such data by the Independent Administrator through ongoing annual EITI industry reporting. For the long term, the framework recommends full mainstreaming of country data in EITI report, or other tools that may be designed to facilitate extractive industry transparency and accountability.

6.5: Reporting responsibilities

The leading institution for environmental policy and regulation in Nigeria is the Federal Ministry of Environment. The ministry is involved fully in environmental regulation of the extractive industries in Nigeria (Oil, Gas and Mining Sectors). It is also responsible for enforcing reporting obligations of operators in the oil, gas and mining industries. Most of these reporting activities, however, are conducted between the reporting entities and the ministry as required by law. The Ministry has a registry that archives Environment and Social Impact Assessment (ESIA) and Environment and Social Management Plan (ESMP) audits and other environmental tools. The nature and format of storage is, however, inadequate to allow for effective mining of data, since it is not automated.

The functions of other environmental regulation institutions, including the Federal Ministry of Mines and Steel Development (MMSD), National Oil Spill Detection and Response Agency (NOSDRA), National Environmental Standards Regulation Enforcement Agency (NESREA) and Nigeria Upstream Petroleum Regulatory Agency (NUPRC) are surmarised in Table 2.2

PROPOSED SUMMARY FRAMEWORK FOR ENVIRONMENTAL REPORTING IN THE EXTRACTIVE INDUSTRY

REPORTING ENVIRONMENTAL INSTITUTIONAL FRAMEWORK					
Variable	**Disclosure Instrument**	**Regulation/ reporting Responsibility**	**Regularity**	**Disclosure Objective**	**Disclosure Outcome/Impact Indicator**
Constitutional provision on environmental protection and preservation, including fundamental rights of citizens	EITI reporting – with link to gazette Constitution of the Federal Republic of Nigeria	Nigeria EITI	Annual EITI industry reporting	• To emphasize Nigeria's national strategic environmental goal; • Promote environmental management as a fundamental and collective national agenda; • Promote political accountability in environmental management	Environmental laws, policies and enforcement in line with the fundamental principles and objectives of the constitution
Environmental laws and regulations	EITI reporting with link to gazette laws, regulations and policies	Nigeria EITI	Annual EITI industry reporting	• To establish the scope and adequacy of environmental regulatory framework in the extractive industry; • To clarify institutional responsibilities for environmental regulation and	Improved stakeholders' awareness of industry environmental obligations
Administrative policies and rules on environme- ntal enforcement and management	EITI reporting with link to relevant environmental policies and guidelines; or published appendices in EITI reports	Sector regulators, Nigeria EITI	Annual EITI industry reporting		Improved industry environmental compliance

Environmental management obligations/ clauses in oil, gas, and mining contracts/ Community Development Agreements	Systematic disclosure of contracts in contracts registries/ websites by industry regulators; EITI industry reports, with links to relevant contracts and CDAs published by industry regulators	Sector regulators, Nigeria EITI	Annual and routine reporting	enhance implementation of environmental policies in the extractive sector;. ● To strengthen accountability in environmental management by increasing communities and stakeholders' knowledge and understanding of obligations of operating entities in the extractive industry. ● To empower stakeholders including communities and non-state actors with information to seek dress for unremedied environmental impacts ● To facilitate reforms and improvement in the effectiveness of the environmental institutional framework	Improved stakeholders' awareness of industry environmental obligations
Publish list of government agencies and corresponding responsibilities for enforcement and management; Highlight any challenge(s) to environmental policy implementation related to the existing institutional framework	Descriptive narratives in EITI industry reports Findings and recommendati-ons published in policy briefs and special reviews	Nigeria EITI	Annual EITI industry reporting; Periodic policy papers		Improved institutional accountability; streamlined functions and improved functioning of the national environmental management system
Highlights of key environmental management obligations including standards and list of environmental payments applicable to oil and gas and mining operations	Descriptive narratives in EITI industry reports	Nigeria EITI	Annual EITI industry reporting		Improved stakeholders' awareness of industry environmental obligations

REPORTING ENVIRONMENTAL PAYMENTS					
Variable	**Disclosure Instrument(s)**	**Regulation/ reporting Responsibility**	**Regularity**	**Disclosure Objective**	**Disclosure Outcome/Impact Indicator**
Project[54] level contribution to Host Community Trust Fund	Company annual, project and financial reports; Routine reporting in regulatory filings and company websites and as per industry regulation; EITI reconciliation and reporting	Upstream, midstream and downstream company; Host Community Trust; NUPRC; NMDPRA; Nigeria EITI	Annual and routine activity reporting	• Monitor industry compliance; • Strengthen accountability	Increased participation of communities, stakeholders and public in debate about the operation and management of Host Community Trust Fund
Project[55] level expenditure from HCTF	Settlor's (company responsible for Host Community Developme- nt Trust) annual and project report; Host Community Development Trust's annual and financial report to be published on Settlor's website; EITI reconciliation and reporting	Upstream, midstream and downstream company; Host Community Trust; NUPRC; NMDPRA; Nigeria EITI	Annual and routine activity reporting	Strengthen accountability in the management of HCTF	
Contribution to environmental remediation fund	Company annual financial reports;	Upstream, midstream and downstream company; Host	Annual and routine activity reporting	• Monitor industry compliance; • Strengthen accountability	Increased participation of communities, stakeholders and

[54] Refers to oil and gas upstream projects;

[55] Refers to projects executed for the benefit of relevant host communities;

	Routine reporting in regulatory filings and company websites and as per industry regulation; EITI reconciliation and reporting	Community Trust; NUPRC; NMDPRA; Nigeria EITI			public in debate about the operation and management of Environmental Remediation Fund
Project level detail of utilization of the Environmental Remediation Fund	Company's remediation project and annual financial report; Remediation implementation report published on regulator's website; EITI reconciliation and reporting	Upstream, midstream and downstream company; NUPRC; NMDPRA; Nigeria EITI	Annual and routine activity reporting	Strengthen accountability in the management of HCTF	
Contribution to the decommissioning and abandonment fund	Company annual financial reports; Routine reporting in regulatory filings and company websites and as per industry regulation; EITI reconciliation and reporting	Upstream, midstream and downstream company; NUPRC; NMDPRA; Nigeria EITI	Annual and routine activity reporting	• Monitor industry compliance; • Strengthen accountability	Increased participation of communities, stakeholders and public in debate about the operation and management of the Decommissioning and Abandonment Fund
Provide company level detail and description of the basis for assessing company's payment to the environmental management fund	Regulator's assessment of companies' compliance published on regulator's website; Routine reporting in regulatory filings and company; EITI reconciliation and reporting	Upstream, midstream and downstream company; NUPRC; NMDPRA; Nigeria EITI	Annual and routine activity reporting	Deepen stakeholders' understanding and enhance equity in environmental management and accountability	Increased stakeholders and public participation and engagement on the Environmental Management Fund

For oil and gas facilities affected by acts of vandalism, publish cost of rehabilitation and restoration for purpose of reconciliation of company's contribution to Host Community Trust Fund.[56]	Midstream company's annual financial reports Routine reporting in regulatory filings and company websites and as per industry regulation EITI reconciliation and reporting	Midstream companies; NMDPRA; Nigeria EITI	Annual and routine activity reporting	• Strengthen accountability in regulatory compliance • Deepen community understanding of rights and obligations in extractive sector governance	Increased stakeholders and public participation and engagement on the Host Community Trust Fund; more inclusive governance and community participation in management of oil and gas assets
Disclose beneficial owners of midstream operating entities to enable effective implementation and operation of the decommissioning and abandonment fund.[57]	Mandatory disclosure of persons of significant control in corporate registry Beneficial ownership declaration in license applications by oil and gas industry operators Beneficial Ownership Reporting in EITI industry reports	NUPRC; NMDPRA; Corporate Affairs Commission; Nigeria EITI	Company registration and oil and gas license application stages; annual EITI reporting	Facilitate accountability in the management of the Decommissioning and Abandonment Fund	Effective enforcement of decommissioning and abandonment regulation
Other social and environmental contributions: describe purpose, beneficiary and value at the time of making the expenditure	• Company annual financial reports • CSR and sustainability reports published on company website and as	Upstream, midstream and downstream company; Host Community Development	Annual and routine activity reporting	• Monitor industry compliance • Strengthen accountability	Increased participation of communities. stakeholders and public in debate about the operation and

[56] Section 257(2) of the Petroleum Industry stipulates that communities withing which damage to oil facilities occur shall forfeit contributions from companies that bear the cost of repairs, whereby the amount forfeited shall be equivalent to the cost of repairs;

[57] Section 233(1) of the PIA stipulates that the decommissioning and abandonment fund established by an operator shall be held by a financial institution that is not an affiliate of the operator;

(including value of in-kind payments). Where applicable, disaggregate environmental contributions to central, regional or local governments, communities, non-governmental organisations or other third parties	stipulated by industry standards ● EITI reconciliation and reporting	Trust; NUPRC; NMDPRA; Nigeria EITI			management of Host Community Trust Fund
Present environmental payment data as a percentage of (i) company operating expenditure (ii) total industry expenditure as percentage of local budget	EITI reconciliation, reporting and analysis	Nigeria EITI	Annual EITI reporting	To show significance of environmental payments	Increased stakeholders' interest in. and opportunities for, engagement on environmental spending in the extractive industry
Application and management of environmental payments and environmental funds by government, companies, communities, NGOs etc	Financial and annual reporting by companies, Trusts etc; Material payments and funds to be covered in NEITI FASD audit	Custodial institutions and organisations for environmental funds; Nigeria EITI	Annual reporting	Facilitate and broaden stakeholder and public scrutiny and accountability on application of environmental funds	Increased public debate on application of environmental funds
REPORTING ENVIRONMENTAL IMPACTS OF INDUSTRY OPERATIONS					

Variable	Disclosure Instrument(s)	Regulation/ reporting Responsibility	Regularity	Objective	Outcome/Impact Indicator
Volume of oil spill from ruptured pipeline, seepage and equipment failure; further disaggregate volume by cause of spill	Routine reporting in regulatory filings and company websites and as per industry regulation; EITI reconciliation and reporting; Press releases from incident reports	Upstream O&G companies; NUPRC; NOSDRA; NEITI	Annual; real-time	• Facilitate debate on the integrity of oil and gas facilities in the country • Create national and political level consciousness on the continuing incidence and scale of oil spills in the producing communities • Deepen understanding of the severity of impact on the environment, lives and livelihoods • monitor and track effectiveness of ongoing measures to curb large-scale oil spill; • enhance knowledge and understanding of the causal factors; • stimulate policy and operational response to oil spill problem	Sustained engagemen- ts and advocacy on severity oil impacts of spills on environment, lives and livelihoods; Continuous evaluation review of government's strategy to curb oil spill
Volume of spill from facility vandalism and sabotage by foreign party	Routine reporting in regulatory filings and company websites and as per industry regulation; EITI reconciliation and reporting; Press releases from incident reports	Upstream O&G companies; NUPRC; NOSDRA; NEITI	Annual; real-time		Host communities' awareness of the effect of vandalism, crude theft and crude loss on companies' contribution to the Host Community Trust Fund; Material incentive for host communities'' collaboration on efforts to curb vandalism of oil facilities Stakeholders' action in monitoring tracking variations in companies'

				● provide evidence for stakeholders' advocacy and engagement on the problem of oil spill in the producing areas ● disaggregation to enable stakeholders monitor and track changes in company remittances to the Host Community Fund ● create incentive for communities to participate in efforts to curb acts of facility vandalism.	remittance to the HCTF
Detailed information and data on scale of occurrence in terms of physical breath and depth, the spatial distribution (land and/or water), immediate and potential impacted communities, population size affected. A more detailed impact assessment should specify immediate and potential impact on biodiversity and the ecosystem, impacts lives and livelihoods etc.	Incident reports by operators published on company websites; Annual report by operator Independent assessment reports by NOSDRA, NUPRC, NMDPRA, published on regulators' websites; Reconciliation reports by NEITI	Relevant upstream and midstream operator per incident, NOSDRA, NUPRC, NMDPRA, Nigeria EITI	Real time reporting; annual reporting		
Volume of drilling fluids, drilling waste, flowback, etc. generated in exploration, production and related processes	Activity reporting in regulatory filings and company websites and as per industry regulation; Impact assessment reporting	Upstream companies; NUPRC; NOSDRA; Environmental Assessment Department	Annual; real-time	Deepen stakeholder understanding and facilitate advocacy on the sustainability potential of current mineral extraction methods	Evidence-based engagements and advocacy on sustainability of extractive practices in the oil and gas industry
Volume of water use in crude oil extraction and processing	Activity reporting in regulatory filings and company websites and as per industry regulation' Impact assessment reporting		Annual and activity reporting		

Concentration of hydrocarbon and effluents per volume of wastewater discharged into ground, surface and sea water	Activity reporting in regulatory filings and company websites and as per industry regulation; Impact assessment reporting		Annual real-time		
Describe actions taken within the operating and/or reporting period to *prevent/ reduce* spills, discharges, and drilling waste due to operations in line with preexisting environmental management plan. For drilling waste also describe the composition of waste (i) diverted from disposal and (ii) directed to disposal	Routine reporting as above; EITI reporting	Upstream O&G companies; NUPRC; NEITI	Annual; other, as prescribed by PIA and relevant environmental regulation	• To facilitate accountability for the negative outcomes of oil and gas operations; • monitor and track industry compliance with environmental standards	Effective enforcement, ongoing review of sustainability practices in the oil and gas industry; Reduction in industry contribution to GHG emissions in line with provis9ons of the PIA and other regulations
Describe actions taken to *mitigate /remediate* impacts of oil spills, fluids and wastewater discharged into ground, surface and sea water from company operations	Routine reporting as above; Press releases by extractive company	Upstream O&G companies; NUPRC	Annual; real-time disclosure		

Volume of gas flared and vented during production, storage and refining; processes including emissions from piping and leaks	Routine reporting in regulatory filings and company websites and as per industry regulation; EITI reconciliation and reporting	Upstream O&G companies; NUPRC; NOSDRA; NEITI	Annual; other	Monitor and track industry compliance with environmental regulations on adoption of clean technology and processes	Informed debate and benchmarking of local processing systems with global standards
Describe actions taken within the operating period to *prevent/reduce* flaring and venting in line with preexisting environmental management plan.	Routine reporting as above	Upstream O&G companies; NUPRC	Annual	• To facilitate accountability for the negative outcomes of oil and gas operations; • monitor and track industry compliance with environmental standards and specifically on new provisions in the Petroleum Industry Act for ending gas flaring	Effective enforcement, ongoing review of sustainability policies and practices in the oil and gas industry
Describe actions taken to *mitigate /remediate* impacts of flaring and venting	Routine reporting as above Press releases by company	Upstream O&G companies; NUPRC	Annual; real-time disclosure		
Describe policies and plans to prevent net biodiversity loas from oil and gas operations	Extractive companies' sustainability reports Extractive companies' environmental management plan/ impact mitigation plan/ decommissioning and abandonment plan Extractive companies' compliance with key environmental safeguards, including biodiversity	Extractive industry companies; Nigeria EITI	Routine company reporting; annual EITI reporting	• Facilitate effective monitoring of industry environmental and social safeguards; • facilitate industry accountability to stakeholders; • promote harmony and constructive engagements	More constructive and less adversarial engagements between operators and extractive communities

	preservation plan, to be summarized in EITI reports			between industry and impacted communities	

REPORTING ENVIRONMENTAL MANAGEMENT PROCESS ASSETS					
Variable	**Disclosure Instrument**	**Regulation/ reporting Responsibility**	**Regularity**	**Objective**	**Outcome/Impact Indicator**
Environmental Impact Assessment reports	Systematic disclosure through publication on regulator's website EITI reporting with links to impact assessment reports published by regulator	Environmental Assessment Department; Nigeria EITI	Real-time; annual industry reporting	● Enhance communities' awareness of the potential impact of extractive operations on their lives and livelihoods; ● Enable communities' and stakeholders' participation in mitigation planning and activities; ● facilitate accountability of government and industry operators in extractive projects' decision-making and mitigating practices	Inclusive policies and decisions on extractive projects and impact mitigation; Less contentious engagements by stakeholders on extractive projects and operations
Mitigation plans for EIA report	Systematic disclosure through publication on company and regulator's website EITI reporting with links to mitigation plans published by regulator	Extractive company; Environmental Assessment Department; relevant regulator; Nigeria EITI NUPRC; NMDPRA; Nigeria EITI (reporting responsibility for other types of environmental plans should be	Routine reporting per industry regulation and standards; annual EITI reporting		
Report of implementation of mitigation plan, including outcome and impact of mitigation	Systematic disclosure through publication on company's and regulator's website EITI report (summary/ reconciliation of remediation plan and implementation report) with links to full report published by operator/regulator				

Environmental Management Plan for oil and gas projects in line with provisions of the PIA	Systematic disclosure through publication on regulator's website EITI reporting with links to impact assessment reports published by regulator	undertaken in consideration of the specific circumstance)			
Other plans and program -mes for environmental management in industry operations	Other environmental plans and programmes to be published in line with industry regulation, global standards and best practices and consistent with the above reporting requirements as applicable				
Decommissioning, abandonment and restoration plan for oil and gas and mining assets	Approved decommissioning plan to be published by operator on company website	Upstream/ midstream company	On approval of plan by regulator		
List and location of host communities associated with each project in the implementation of the Host Community Trust Fund (also describe basis for determination of host community status	Published data on company website Disclosure to be made along with disclosure of contracts EITI reporting in disclosure of contracts and licenses	Upstream companies; NUPRC; Nigeria EITI	On disclosure of contracts; annual industry reporting	• Facilitate transparency in the criteria for allocation of entitlements and benefits from resource extraction; • Broaden stakeholder participation in facilitating accountability and deepening benefit sharing practices	More enlightened and targeted engagements by stakeholders on host community development
Composition of each Host Community Trust, specifying the nature	Information to be published on settlor's (company's) website	Upstream company; Nigeria EITI	Routine ongoing and		Strengthened represen- tation and accountabili- ty of

and basis of representation/ membership	Links to data in NEITI website		real time disclosure		settlor and Host Community Trust
List and status of installations, structures and pipelines on land and offshore used for petroleum operations[58]	Information to be published on settlor's (company's) website Summary of major facilities' status in country EITI's process audit Links to data to be embedded in NEITI website	Upstream company; Nigeria EITI	Regularity to be determined by company policy and industry standards	• To establish the integrity of oil and gas installations	Regular stakeholder engagements and discussions on integrity of extractive equipment, systems and processes
Sustainability reports	Extractive industry companies; Links to the reports on NEITI data and information platform	Extractive industry companies; Nigeria EITI	Annual reporting	• To increase knowledge and deepen understanding of extractive industry sustainability performance; • To facilitate reputational accountability and benefits	Regular and more informed stakeholder engagement and public debate on sustainable management of extractive resources
REPORTING ENVIRONMENTAL ENFORCEMENT AND COMPLIANCE					
Variable	**Disclosure Instrument**	**Regulation/ reporting Responsibility**	**Regularity**	**Objective**	**Outcome/Impact Indicator**
Environmental monitoring procedures, including administrative	Regulations to be published on ministries, departments and regulators' websites	Relevant ministries and regulators;	Routine publication and updates	To enhance accountability and stakeholders' oversight	Increased engagements on

[58] This is required by Section 232(14) of the PIA in accordance with the industry's decommissioning and abandonment procedure;

and sanctioning procedures	Operating manuals to be published on ministries, departments and regulators website Summaries and relevant links to be provide NEITI's information portal	Nigeria EITI			effectiveness of institutions
Environmental compliance status (environmental certification) of oil & gas and mining companies	Environmental compliance reporting by regulator; Certification and compliance status on companies' websites Summary of industry compliance in Nigeria EITI annual industry and progress reports	Industry/sector regulator, extractive company; Nigeria EITI	Annual reporting	To facilitate reputational accountability, benefits, and sanctions	More proactive environmental commitments by industries' operators
Details of sanctions and fines for non-compliance with environmental standards	Cases summaries and outcomes, including of judicial processes, to be published by regulator	Industry regulator	Annual reporting; other	To enhance accountability of industry regulators and operators	Use of information by non-state accountability actors for engagement and advocacy; More proactive environ- mental commitments by industries' operators

REPORTING ENVIRONMENTAL MANAGEMENT PROCESS ASSETS					
Variable	**Disclosure Instrument**	**Regulation/ reporting Responsibility**	**Regularity**	**Objective**	**Outcome/Impact Indicator**
Disclose air pollutants emissions applicable to each mine site (including hazardous air pollutants, particulate matter emissions and significant air emissions) using appropriate industry metrics	Environmental Impact Assessment reporting Company sustainability/ annual report published on the company website Statutory filings to regulator to be published on regulator's website Summary of data disclosure in EITI SM industry report	MMSD (MEC); FMEnv (EAD); Mining company; Nigeria EITI	Annual reporting	• To enhance communities' awareness of the environmental and health effects of mining activities. • To facilitate effective communities' and stakeholders' engagement on environmental mitigation. • To monitor and assess the effectiveness of environmental management practices in the mining industry • Facilitate accountability of government and industry operators in mining projects' decisions. • To increase awareness and understanding of mining companies' environmental management and mitigation practices.	More enlightened engagements by stakeholders on mining impacts. Increased participation in policies and decisions on extractive projects and impact mitigation; Improved regulatory oversight of mining operations. Less adversarial engagements between communities/ stakeholders and mining operators.
Disclose concentration of effluents per volume of wastewater discharged into ground, surface and seawater, parks and sanctuaries					
Project level data on tailings deposited by mining					

operator in a natural watercourse					
Publish information on dumpsites, including any defect detected during routine inspection and remedial measures taken; also disclose actions taken for decommissioning and rehabilitation of the dump					
Publish the register of mining accidents, dangerous occurrences and disease outbreak					
List and status of tailing facilities	Annual reports on company website Information collected and published on regulator's website EITI reporting with links to	MMSD (MEC); FMEnv (EAD); Mining company; Nigeria EITI	Annual reporting	• To facilitate effective communities' and stakeholders' engagement on environmental mitigation. • To monitor and assess the effectiveness of environmental management practices in the mining industry • Facilitate accountability of government and industry	Enlightened engagements by stakeholders on mining impacts. Improved regulatory oversight of mining activities. Improved community relations

				operators in mining projects' decisions. ● To increase awareness and understanding of mining companies' environmental management and mitigation practices	
Disclose list and details about Restricted Release Zones associated with each mining operation				●	
Disclose volume of water including concentration of effluents, contaminants etc released from Restricted Release Zones into underground and/or surface water body. Information to include rate and period of discharge				●	
Planned methods, procedures and activities for environmental management,	Community development agreements or standalone plans on contracts disclosure portals				

including mine waste disposal plan	Company sustainability reporting on company websites				
Project-level environmental impact assessment statement	Impact assessment reporting	MMSD; FMEnv; mining licence holder			
Project-level Environmental Protection and Rehabilitation Program		MMSD MEC; FMEnv EAD; mining licence holder; Nigeria EITI			
Publish air quality models, in relation to emissions from mines, developed by lease holder to protect human health and biological resources					
Publish report of periodic environmental audit of impact of exploration, mining and quarrying periodically conducted by environmental expert as prescribed by	Compliance reporting on regulator and operator’s website/ publications; sustainability reporting on operator’s website/ publication; EITI reporting with	MMSD MEC; FMEnv EAD; mining licence holder; Nigeria EITI	Annual reporting; ongoing real time reporting	● To monitor industry and regulatory compliance with environmental policies, programmes and standards ● To facilitate accountability in environmental regulations and standards ● To facilitate stakeholders’ participation and engagement on	Increased stakeholders’ engagements on environmental standards and compliance.

Mining Regulations. (The report would contain assessment operator's compliance with Environmental Impact Statement and Environmental Management Plan)	contextual information			environmental standards and compliance in the mining sector	
Publish report of environmental compliance audit					
List mined-out sites including licence holder, mine location, date of last mining activity and reclamation status					
Project-level update on compliance with land and/or riverbank restoration obligations					
Publish orders made by the minister, in line with the Mining Act, for land restoration for each project	MMSD website; MEC web portal; NEITI contextual information/ mainstreamed disclosure	MMSD; MEC; Nigeria EITI	Annual; ongoing	● To monitor and track implementation of environmental provisions in the Mining Act ● To facilitate effective communities' and stakeholders' engagement	Increased stakeholders' engagement on policy-level environmental decisions in the mining sector

				on environmental management ● Facilitate accountability in the environmental decisions and practices in the mining sector	
Publish government's approval, including justifications, to deposit tailings above the regulatory threshold					
Publish approvals for amendment of water licence, including details and justification for approval	Publication of approvals on the Ministry and regulator's website Contextual disclosure on Nigeria EITI Website Summary of approvals in SM industry reports	MMSD; MEC Department; EAD; Nigeria EITI	Annual, ongoing	● To enhance stakeholders' awareness of environmental decision-making in the mining sector ● To monitor and track implementation of environmental provisions in the Mining Act ● To facilitate effective communities' and stakeholders' engagement on environmental management ● To facilitate accountability in environmental decisions in the mining industry	Increased stakeholders' engagement on policy-level environmental decisions in the mining sector
Relevant project-level data on alterations in water					

supply in the mining area; publish any government approval to alter					
Publish approvals for discharge of water (including approved concentration limits) from restricted release zone					
Publish approval for discharge of tailings from uranium mill					
Publish Discharge Authorisation(s) issued by Mines Environmental Compliance Department to lease holder to					
Publish agreements between mining company and affected communities on water licence granted to mining operator in line with Mining Act	Company website; regulators' environmental disclosure portal; EITI contextual information on NEITI's website	Mining company; MEC department; MMSD	Annual, ongoing	● To enable public scrutiny of CDAs to assess their environmental content ● To monitor companies' compliance with specific environmental obligations and regulatory requirements ● To facilitate accountability and enhance industry compliance with contractual	Increased public knowledge and engagements on communities' mining agreements

				obligations to mining communities ● To enable stakeholders' engagement and informed public debate on mining community agreements	
Publish community development agreements including date of review of agreement					
Publish Community Development Action Plan					
Project-level financial contributions to the Environmental Protection and Rehabilitation Fund	Companies' annual and sustainability reporting published on operator's website; audited statement of environmental fund published on the Ministry's website; EITI reporting.	Mining company; MMSD; Nigeria EITI	Annual reporting	● To monitor and track remittances to the environmental fund ● To promote compliance with statutory environmental funding requirements ● To facilitate accountability in remittances and management of environmental funds	Increased stakeholders' engagement with communities, operators and regulators on remittances, management and application of environmental payments
Audited statement of Environmental Protection and Rehabilitation Fund					

Project-level compensation to communities by mining companies				• To monitor compliance by companies with regulatory requirements • To provide opportunity for stakeholders' assessments and engagements on adequacy of compensation to communities • To facilitate accountability within local community groups and leadership • To show companies' social and environmental performance • To enhance operator-community relations	Increased stakeholders' engagement with mining industry on appropriate compensation for mining operations Increased participation of community members in compensation issues Improved community relations
Details of sanctions for unauthorised alterations to water supply as well as other environmental violations by operators	Information published on regulators' website; periodic analysis of data by NEITI published on organisation's website.	MMSD; MEC department; Nigeria EITI	Annual; periodic; ongoing	• To enhance public participation and monitoring of regulatory enforcement activities • To promote accountability in environmental compliance	Increased public debate on regulatory effectiveness
Details of sanctions for failure by licence holders to remit to the fund					

Description of sanction/action taken for compensation violation					
Variable	**Disclosure Instrument**	**Regulation/ reporting Responsibility**	**Regularity**	**Objective**	**Outcome/Impact Indicator**
Details of sanctions and fines for non-compliance with environmental standards	Cases summaries and outcomes, including of judicial processes, to be published by regulator	Industry regulator	Annual reporting; other	To enhance accountability of industry regulators and operators	Use of information by non-state accountability actors for engagement and advocacy; More proactive environmental commitments by industries' operators

6.2 Disclosure of Statutory Documents – Environmental Plans and Reports

The Federal Ministry of Environment has a registry that archives Environment and Social Impact Assessment (ESIA) and Environment and Social Management Plan (ESMP) audits and other environmental tools. The nature and format of storage is however inadequate to allow for effective mining of data, since it is not automated. This framework proposes that these plans and reports, including other statutory environmental filings by industry regulators, should be disclosed through automated systems on a central information portal.

However, this proposal does not preclude other disclosure instruments and methods that are suitable to the respective internal systems. Such disclosure would be linked (mainstreamed) as proposed in the framework.

1. **Harmonization of Relevant Silo Data into a Single Database**
    - A Data Centre would need to be set up in various bodies having these data in non usable format. The data should be converted into usable format using a robust database that allows data mining to be conducted seamlessly.
2. **Develop Central Portal that Manages Database and Allows Plug In from Collaborating Bodies**
    - It is advised that the Central Portal should be situated in the Federal Ministry of Environment, which already maintains an information registryThis registry is, however, not automated for this purpose.
    - The Central Portal should have a Central Server with trained IT Support Staff to enable functionality. This portal should be able to mine data that would not or cannot be systematically disclosed as recommended by EITI standard and from the agencies or bodies that have diverse data and generate required reports that fit into NEITI's reporting standards. It should also be robust enough to provide data usable for stakeholders and researchers.

Figure 6

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6.3: Esse

Essential

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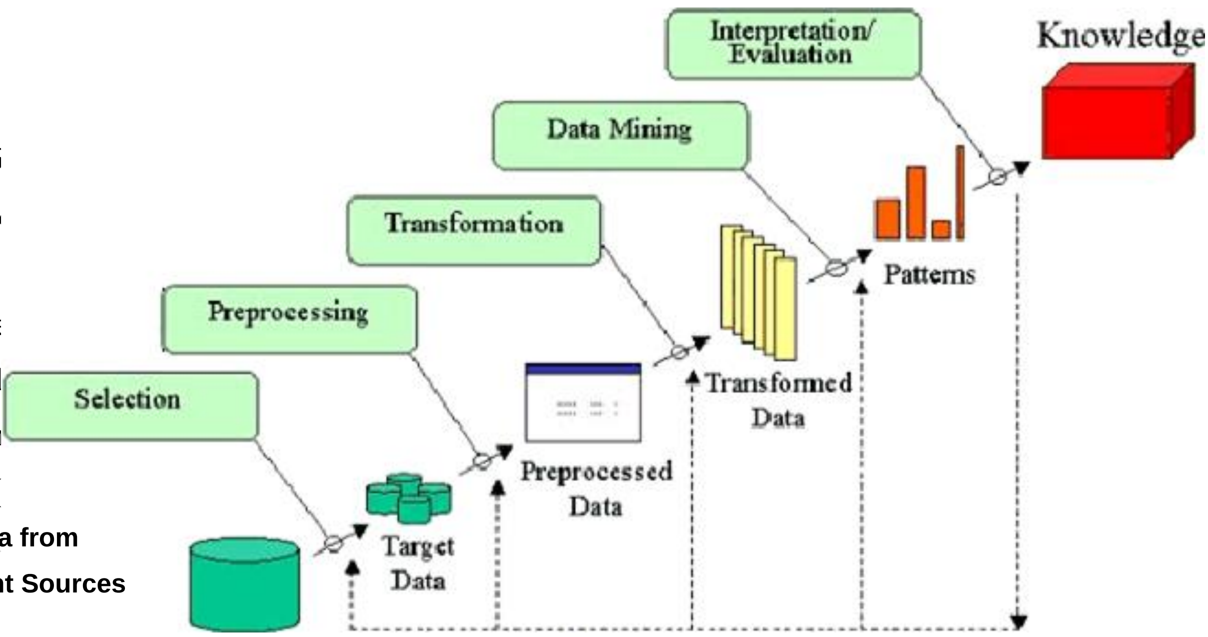
system"(



of the necessity for accurate and continuous information on the atmosphere, land, and oceans to monitor the earth's climate, and understand past, current and future climate variability (*Bojinski et al. 2014; Brummitt et al. 2017; Turak et al. 2016*).

Understanding the dynamics of ecosystems is important to efficiently manage them, and to assess where the changes are occurring, at what rate and how they will evolve in the future. Despite the concept of essential variables being extensively explored in the climate, ocean and biodiversity domains (*Pereira et al. 2013; Reyers et al. 2017*), the implementation of essential variables in the extractive field has not yet been investigated.

The concept of essential variables puts the focus on the key elements of a system in order to identify essential dimensions of natural system changes and to incorporate monitoring efforts into an efficient natural system management framework (*Reyers et al. 2017*).

Essential variables represent the element translating primary observations (e.g. raw data, earth observation products) into useful information needed at various scales of decision-making (*Pereira et al. 2013*).

They have assumed the role of monitoring tools in the context of policy implementation and compliance (*Geijzendorffer et al. 2015; Blonda et al. 2016*).

By defining a set of minimum social, environmental and economic measurements, it is possible to derive multiple indicators used to measure the progress made towards the implementation of the SDG targets (*Stafford-Smith et al. 2017; Convention on Biological Diversity 2013*).

6.3.1: Proposed Essential Variables Categories

6.3.1.1: Variables related to environmental-related revenue streams

This group of variables comprises environmental payments made by extractive companies to oversight actors.

In Nigeria, these flows comprise fees for certification, permits, administration charges, direct investment in Environmental Management Plans (EMPs) and Community Development Projects as well as contribution to Environmental Protection and Rehabilitation Fund (EPRF). This group also includes sanctions and penalties for contravening environmental regulations.

6.3.1.2: Variables related to Emissions

This group of variables include data on gas flaring and emission of air pollutants.

Data on GHG (greenhouse gas) emissions should be expressed in terms of the gross direct emissions of the six major GHG (CO_2, CH_4, N_2O, CFCs, HFCs, PFCs, SF_6), expressed in CO_2 equivalents.

6.3.1.3: Variables related to Water Use

The variables proposed in this group consider some of the impacts deriving from different extraction methods. In particular, they address effects on the hydrology of the landscape where the mine is located in terms of changes in the volume of groundwater and superficial water, and river diversion.

6.3.1.4: Variables related to Energy and Fuel Consumption

This group of variables include total energy consumption by extractive companies in terms of primary energy use, purchased electricity, and electrical system energy losses. This should also entail the disclosure of information of the volume of fuel (premium motor Spirit (PMS) and automotive gas oil (AGO) utilized for the purpose of power generation and transportation.

6.3.1.5: Variables related to Green Cover

This group of variables cover the areas of deforestation and afforestation by extractive companies. Particularly, it is recommended that information on the numbers of trees removed or planted by extractive industry companies should be disclosed.

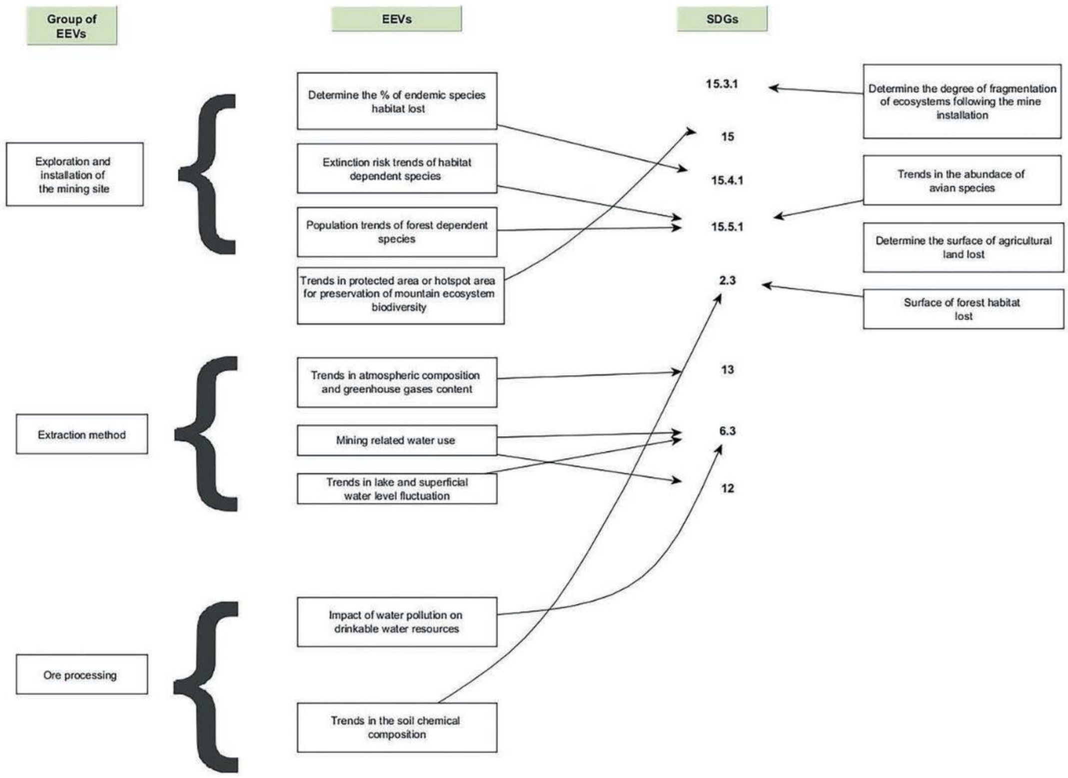


Figure 6.2 Essential variables

Figure 6.2 above offers an appreciation of quantifiable variables important for achieving sustainable development in the extractive industry.

6.4: EITI's Open Data Policy

To achieve the sustainable development of the Nigerian extractive industry and meet the requirements of the 2019 EITI Standard, it is recommended that all disclosures in the context of environmental and social reporting be made in line with EITI Open Data Policy.

This policy contains recommendations on open data in the implementation of the EITI within the agreed scope of EITI implementation at the national level. It complements the requirements regarding open data as per Requirement 7. It builds on lessons emerging from national level implementation and emerging international best practice and encourages systematic disclosure. The EITI Standard requires EITI disclosures to be "comprehensible, actively promoted, publicly accessible, and contribute to public debate" (EITI Requirement 7.1). Improving the accessibility, reliability, relevance, timeliness and comparability of EITI data is essential to realize these objectives. To help realize the EITI principles, the EITI Board has agreed that systematic disclosure of EITI data through government and company systems is now the default expectation. The EITI encourages routine disclosure from the reporting entities in open formats at the national level within the agreed scope of EITI implementation.

CHAPTER SEVEN: CHALLENGES AND RECOMMENDATIONS

Several experts have asserted that the lack of transparency and accountability and weak enforcement of regulatory laws in the Nigerian extractive industry sector are undermining the sector and the nation's economy[59].

The enforcement of environmental standards and laws is one of the most important tools for effectively managing the harmful impacts attendant to the operational activities in the extractive industry. It is projected that the quality of the environment would be significantly decreased without an efficient environmental enforcement culture capable of guaranteeing compliance by enterprises.

If regulation is weak, businesses would have little incentive to comply with environmental standards that increase cost and limit profit, since the essence of the business is to maximize profit, while limiting losses.[60] The importance of environmental enforcement in lowering the production of greenhouse gases into the atmosphere, a key driver of climate change and global warming, is increasingly being recognized globally. This is evidenced by the fact that, over the years, the global community has observed a number of international conferences and summits aimed at reducing companies' harmful environmental effects.

As previously stated, the topic of how to enforce compliance with the commitments reached at these conferences continue to occupy the attention of participants and state parties at these events. As a result, implementing these significant environmental choices has been the focal point of these gatherings.

The actions of oil multinational corporations and their impact on the environment in the oil-producing areas have been damaging to their host communities, impacting the people's economic basis and source of sustenance. This has resulted in poverty and unrest in the region. For example, oil spills have been a persistent problem that has harmed the ecosystem in the Niger Delta region.

An estimated 9,1911,426 barrels of crude oil spilled into the environment in the Niger Delta between 1976 and 2009, with at least 55 percent going into rivers, creeks, and shorelines, and

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59 https://www.premiumtimesng.com/news/more-news/397727-experts-condemn-violation-of-regulatory-laws-in-nigerias-extractive-industry.html;

60 Edo, Z. O. (2012). The challenges of effective environmental enforcement and compliance in the Niger Delta region of Nigeria. *Journal of Sustainable development in Africa*, *14*(6), 261-276;

45 percent going into farmlands, residential villages, communal access roads, and drinking water sources.[61]

The majority of oil spills are caused by the rupturing of extremely old pipelines, some of which have not been updated in over 40 years and are still being used to transport highly pressured crude oil on a regular basis. At least some oil majors have admitted in the past that old pipelines in the Niger Delta are prone to rupturing owing to corrosion and rust wear and strain.

Also, gas flaring has become a serious economic and social problem (aside from Nigeria losing billions of dollars due to this unsustainable practice, studies have also highlighted its negative impact on the health of those who are exposed to it, as well as its direct link to low agricultural productivity and other issues.

Nigeria flares more than 70 million cubic meters of gas every day, releasing an estimated 70 million tons of CO_2 into the environment each day.

As a result, Nigerian oil companies emit more greenhouse gases than all other sources in Sub-Saharan Africa combined.

While environmental rules exist to limit the consequences of resource extraction, they are poorly implemented, and when they are, the rules are not enforced fully enough to hold the extractive companies fully accountable.

This framework examines these regulations critically, as well as the obstacles that face effective implementation of these environmental standards, particularly in relation to extractive firms and the impact of their operations on the Nigerian environment.

The lack of an efficient environmental enforcement programme has been blamed on a variety of factors.

Some of the issues border on inadequate funding of institutions in the sector, while others relate to poor management or misallocation of available resources.[62]

True, the aforementioned issues might function as severe barriers to executing environmental legislation alone or in combination. It does not, however, explain the absence of stiff, dissuasive sanctions for activities that cause substantial environmental harm in the country, as the issue of gas flaring has demonstrated.

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[61] Kingston, K., (2011). "The dilemma of minerals depended economy: the case of foreign direct investment and pollution in Nigeria". African Journal of Social Sciences Vol. 1(1), February;

[62] Ibaba, S.I. (2010). "Environmental protection laws and sustainable development in the Nigeria Delta". Africana. Vol. 4 (1). June;

This is evident in the repeated failure to meet the target on zero-gas flaring. Correspondingly, this continues to put the people's economic well-being and health at risk as a result of continuous gas flaring. Despite the fact that gas flaring has been banned in Nigeria since 1984, and different courts have ruled against it, it persists unabated.

Previously regarded as the country with the most flared gas, Nigeria is today ranked second behind Russia.

As already observed, lack of funds remains a major problem. The agencies must be financially sustainable in order to satisfy their responsibilities and perform their tasks successfully[63].

An assessment commission to review environmental management practices at the subnational level indicates severe resource constraints in funding of environmental management activities at those levels. Lessons learned from the exercise reveal that due to a lack of finance, local governments lack the necessary people and material resources to perform environmental management. However, this has an impact on effective environmental law enforcement. Except for the Lagos Pollution Fund, all earnings from fines in Lagos State go to the federal government and not to the State Environmental Protection Agency.[64]

Without direct gain from enforcement through increased agency revenue, there is still little incentive to pursue enforcement aggressively.

Local governments are often starved of funds or could not attract the required high-level manpower, they are therefore under staffed. They could neither attain the sophisticated expensive equipment nor meet the demands of varied responsibilities.

Overall, the paucity of resources coupled with mismanagement and inadequate governance systems have an impact on the implementation of environmental regulations.

Another key obstacle to environmental law enforcement is a lack of contemporary technologies.

Given the scale of historical and ongoing oil spillage in oil producing regions in Nigeria, there should be continuous innovative approaches to effective spill management in the affected locations. This would require the deployment of technologies to not only identify incidences of oil spills, but to scientifically and comprehensively assess the accurate scale and volume of spills, precise area (depth and breath) affected and the severity of impact.

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[63] Okorodudu-Fubara, M. T. (1998). Law of Environmental Protection. Caltop Publications Nigeria Limited;

[64] Ogbuigwe, A. (1996). Report on the Review of Environmental Protection Agency in Enugu State. Anpez Environmental Law Centre Port Harcourt for Enugu State Environmental Protection Agency, Enugu;

However, officers in charge of environmental monitoring do not yet have the necessary modern technology to improve monitoring of various environmental issues. Critical agencies like the National Oil Spill Detection and Response Agency (NOSDRA) lack critical modern equipment like Unmanned Aerial Vehicle (UAV) to increase monitoring, inspection, and geological mapping for accurate environmental impact assessment.

There is also inadequate constitutional protection for the environment.[65]

In comparison to the extent and degree of environmental degradation in Nigeria, the Nigerian constitution has few provisions for and places less emphasis on environmental conservation and management.[66]. The 1999 constitution has relatively few provisions enabling persons to protect their basic rights to a clean environment, and such right is not even justiciable. This has led to a lack of citizens' interests in the preservation and the protection of the environment. There is also limited institutional capacity of regulating organisations to effectively enforce compliance with extant environmental standards.

The main body in charge of enforcing environmental regulations in Nigeria, NESREA, has no enforcement authority over the oil and gas industry. As a result, NESREA lacks the authority to enforce regulations concerning pollution, petroleum exploration, and natural gas development. Therefore, environmental justice is hampered as a result of this.

In environmental management in Nigeria, there are also role conflicts.

There is no clear separation of responsibilities among the current agencies associated with the management of the environment. As a result, they have role conflicts.

For example, until the establishment of the Federal Ministry of Environment (FMEnv) (formerly Federal Environmental Protection Agency, FEPA), certain tasks and authorities were exercised by six different ministries/agencies with environmental management responsibilities[67].

The lack of clearly defined structure in the relationships between national institutions on the one hand, and between institutions at different levels of government affects the efficiency of environmental protection, monitoring, and enforcement.

[65] Nwafor, J. C. (2006). Environmental Impact Assessment for Sustainable Development: The Nigerian Perspective (1st ed.). EDPCA Publishers;

[66] See Sections 20 and 6(6) (c) of the 1999 Constitution of the Federal Republic of Nigeria;

[67] Nwafor, J. C. (2006). Environmental Impact Assessment for Sustainable Development: The Nigerian Perspective (1st ed.). EDPCA Publishers;

Another significant impediment to effective environmental management in Nigeria is the problematic justice administration system.

The courts' excessive recourse to legalism, rather than substance, poses a major problem to effective resolution of cases and sanctions for environmental crimes.

For instance, the issue of locus standi is one of the most difficult aspects of enforcing environmental regulations in Nigeria.

Individuals do not have the legal standing (locus standi) to pursue environmental issues in a court of law. To bring a claim of infringement of a specific environmental right or legislation, the claimant must be competent to establish that s/he has incurred significant loss or suffering as a result of the defendant's acts.

However, courts in Nigeria are far from liberalizing topics connected to environmental civil litigation, which prevents private citizens from participating in the implementation of environmental protection legislation.[68]

Limited number of experts in the environmental field to give evidence in court also frustrates environmental litigation in Nigeria.[69]

It's also worth noting that victims of environmental contamination have a difficult time establishing their claims in court.

For instance, in Shell Petroleum Development Company Nigeria Limited versus Chief G.B.A Tiebo VII & Ors[70], the trial court granted damages for the loss of raffia palms and drinking water as a result of the plaintiff's property, rivers, and lakes being contaminated by crude oil. The defendants took their case to the Court of Appeals and then to the Supreme Court, arguing that the lower court erred in awarding extraordinary damages when there was insufficient evidence. The Supreme Court ruled that stringent proof was necessary for showing extraordinary damages.

Another flaw in the implementation of environmental regulations in Nigeria is the lack of required disclosure of information by industries and operators of facilities whose operations are likely to pollute the environment.

[68] Nwafor, J. C. (2006). Environmental Impact Assessment for Sustainable Development: The Nigerian Perspective (1st ed.). EDPCA Publishers;

[69] See Seismographs Services V Benedict Onokposa (1972) 4 SC 123;

[70] (1976) 4 N.W.L.R (Pt 445) 657;

Hence, there is a lack of obligatory information disclosure by extractive companies, which makes monitoring difficult. There is no legal structure in place for industries to comply with the requirements for compliance with pollution abatement standards. The industries hide or cherry-pick the interpretation of quantitative or qualitative impact data. The limited environmental information available, the breadth, type, and variety of information necessary, as well as the scope of work itself, must all be considered by NESREA. There is no legislative framework in Nigeria that ensures public access to information on industry and facility compliance monitoring. However, as the number of legal requirements grows, so does the need to raise public understanding of environmental laws and regulations at the national and local levels through training and information dissemination on Environmental Impact Assessment (EIA).

Suggested Reforms

While the challenges of environmental management and enforcement above describe the Nigerian legal and institutional set-up, the difficulties in enforcing environmental laws are however worldwide.

Several nations have sought to develop and revise legislation to enhance effective enforcement of environmental regulations in their own unique ways.[71]

The following are some legislative and institutional reforms proposed for the effective enforcement of environmental regulations in Nigeria's extractive industry.

Environmental Law Awareness

Strategies should be put in place to increase awareness about the dangers and effects of environmental pollution throughout the country - in every state and local government area. The government, through the National Orientation Agency, should educate the public about the necessity of maintaining a healthy environment and the benefits of the environment to the economy.

Such environmental education programmes are particularly necessary in communities hosting extractive industry companies.

[71] For instance, Chinese legislators amended the country's environmental protection law on the 24th April 2014; this amendment will apportion greater powers to environmental authorities and harsher punishments for polluters;

Targeted media campaigns should be carried out to enlighten people about the country's environmental issues and the ways to minimize them. Individuals and communities should be encouraged to take part in environmental protection and preservation activities as well. Appropriate operating and compliance standards, especially for operators in the extractive industry, should be defined and publicized online for the public's benefit and ease of access[72]. This way, members of the public and other accountability actors can be equipped with information to hold corporate entities to account.

For efficient implementation, monitoring, evaluation, and improvement, national environmental policies should be coordinated at the community level.

Capacity Building

Government should deploy sufficient resources to equip enforcement agencies with the capacities and tools they need to guarantee that environmental laws are enforced effectively.

All project programmes that are expected to have a major negative impact on the environment, especially when environmental criteria have been established, will require an effective environmental monitoring programme. As a result, officials from the agencies should be well trained to enforce the laws effectively.

Effective Environmental Monitoring

Monitoring the environment entails checking, observing, and recording data about the environment in order to prevent it from being destroyed by human activities, particularly those involving sophisticated technology, to plan for future resource exploitation, and to control the negative consequences of environmental mismanagement.[73]

Instruments for environmental monitoring should be made available for effective enforcement. This will improve the collection, analysis, and distribution of relevant data to state and local governments for environmental impact assessment, policy analysis, and environmental monitoring.

Adequate Funding

[72] "Addressing the Many Challenges of NESREA" accessed on 21 January 2014;

[73] Ogidiolu, A., & Balogun, F. T. (2000). Techniques of Environmental Monitoring and Management: In Jimoh & Ifabiyi (Eds.), Contemporary Issues in Environmental Studies (p. 71), Haytee Press & Publishing Co. Ltd.;

The government should provide more funds at all levels to improve the implementation of programmes aimed at improving the environment.

As previously said, findings from an assessment of effectiveness of some environmental management agencies revealed that local governments lack the necessary people and material resources to manage the environment. The local government bylaws are neither well-articulated nor well-designed programme tools for environmental protection.

Stiffer Punishments for Environmental Offences

As noted earlier, environmental law enforcement is partly influenced by the courts' attitude and reluctance to establish the liabilities of those who break environmental regulations. Courts should take a favourable approach to environmental justice in their varied rulings. Judicial rulings should be issued to compensate private persons (communities) who seek restitution in a court of law for harm to their physical surroundings.

High and commensurate penalties for those found guilty of environmental offenses would improve the enforcement of the set rules and regulations, because potential violators would be forced to follow the regulations and guidelines of environmental laws.

Private Litigation

This is known as "Concerned Citizens Action," and it is used to enforce environmental rules and regulations when individuals or institutions embark on actions that threaten or are harmful to the environment. The "polluter" must bear the consequences of his or her conduct. This is a useful strategy for enforcing environmental regulations and ensuring that the environment is a priority concern for citizens' and the government. The citizen should have a stake in the human environment, which he feels obligated to maintain and defend[74].

Any commercial or governmental entity that threatens to act or acts in a way that is harmful to the environment might be designated as an action agent by a citizen of the nation.

A person who has been wronged has a human right to go to court to enforce his or her rights, likewise an administrative body on behalf of society.[75]

This would improve the country's environmental law enforcement.

[74] Nwafor, J. C. (2006). Environmental Impact Assessment for Sustainable Development: The Nigerian Perspective (1st ed.). EDPCA Publishers;

[75] Ladan, M. T. (2009). Law, Cases and Policies on Energy, Mineral Resources, Climate Change, Environment, Water, Maritime and Human Rights in Nigeria. Zaria: Ahmadu Bello University Press.

CHAPTER EIGHT: CONCLUSION

The overall objective of the project is to deepen knowledge, understanding and partnership in reporting environment impacts in the extractive industry, in line with EITI implementation in Nigeria.

The objective of the assignment is to produce a report that will inform the NEITI's programmes and activities regarding environmental reporting in Nigeria's extractive industry.

The framework should cover the scope of information to be published under the EITI and the most suitable approach for publishing and generating debate and required policy interventions. This should include considering the options for integrating disclosures in government systems and company portals.

In line with the ToR that frames the scope of this assignment, the first chapter of this report provide background information and the scope and objectives of the assignment; Chapter two provides a snapshot of environmental governance in the Nigerian extractive industry; Chapter three offers an appreciation of the present practice, in terms of environmental disclosure, and Chapter four sets out the major environmental and social issues prevalent in the Nigerian extractive industry.

The framework proposed in this report has been developed as a birthchild of extensive research and consultations with stakeholders in the Nigerian extractive industry.

The framework, which is reflective of the peculiar characteristics of the Nigerian extractive industry, has also been curated to ensure that the NEITI meets the environmental and social reporting requirements of the 2019 EITI Standard as well as best practice in terms of the transparent, accountable and timely disclosure of environmental information.

It is believed that this study and the framework proposed herein will further EITI implementation in Nigeria by contributing to the attainment of the objectives of transperancy, accountability and policy engagements.

REFERENCES