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# NIGERIA'S MINING SECTOR GOVERNANCE LANDSCAPE AND PROSPECTS

A DIAGNOSTIC REPORT



# **NIGERIA'S MINING SECTOR GOVERNANCE LANDSCAPE AND PROSPECTS**

A D I A G N O S T I C R E P O R T

# ACKNOWLEDGMENTS

The authors would like to thank all individuals and institutions who participated in this study. We are also grateful to the Government of Nigeria for the support provided in developing this report.

The team expresses profound gratitude to the Ford Foundation in funding the project. We thank all stakeholders in the public and private sectors, civil society, diplomatic community, development partners and academia for their contributions to this study.

This report was prepared by Professor Gbenga Okunlola (Professor of Geology and Steering Committee member, Mining Thematic Group, NESG) and Lumun Amanda Feese (Technical Adviser to the Honourable Minister of Mines and Steel Development on Mining Strategy and Governance, and Mining Thematic Lead, NESG), with technical support from Chilenye Nwapi PhD. The extended team includes Adedotun Seyingbo, Shakirudeen Taiwo, Mbotidem Jackson, Folahan Johnson, Oyinkansola Odidi, Victoria Okereke, Adedeji Kehinde, and Ifedolapo Falope.

We also acknowledge the rigorous work of Dr Osasuyi Dirisu (Executive Director, Policy Innovation Centre) and Adekemi Omole (Gender, and Inclusion Advisor, Policy Innovation Centre).

Johnson Kuje, Henry Egbe and Sheriff Aderibigbe supported the report's design.

This report benefited from the overall guidance of Mr 'Laoye Jaiyeola, the Chief Executive Officer of the Nigerian Economic Summit Group (NESG), and Dr Tayo Aduloju, Chief Operating Officer of the Nigerian Economic Summit Group (NESG). We also thank Dr Olusegun Omisakin, the NESG's Chief Economist, Mr Femi Awofala, the Manufacturing and Mining Policy Commission Facilitator and other members for their invaluable support from project inception.

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# LIST OF ACRONYMS

ACP	African, Caribbean and Pacific
AMREC	African Mineral and Energy Resources Classification and Management System
AMV	Africa Mining Vision
ASC	Ajaokuta Steel Company
ASM	Artisanal and Small-scale Mining
ASMD	Artisanal and Small-scale Mining Department
CAC	Corporate Affairs Commission
CAMA	Companies and Allied Matters Act 2020
CBN	Central Bank of Nigeria
CDA	Community Development Agreement
CITA	Companies Income Tax Act
CMV	Country Mining Vision
COMEG	Council of Mining Engineers and Geoscientists
COVID-19	Coronavirus Disease 2019
CRIRSCO	Committee for Mineral Reserves International Reporting Standards
CSP	Concentrated Solar Power
CSR	Corporate Social Responsibility
ECA	Economic Commission for Africa
ECOWAS	Economic Community of West African States
EDT	Tertiary Education Tax
EIA	Environmental Impact Assessment
EPRF	Environmental Protection and Rehabilitation Fund
ERGP	Economic Recovery and Growth Plan
ERPF	Environmental Protection and Rehabilitation Fund
ESIA	Environmental and Social Impact Assessment
EU	European Union
FDI	Foreign Direct Investment
FG	Federal Government



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FGN	Federal Government of Nigeria
FIRS	Federal Inland Revenue Service
FPIC	Free, Prior, and Informed Consent
FTF	Funds, Trusts, or Foundations
FTS	Flow-Through-Shares
FX	Foreign Exchange
GDP	Gross Domestic Product
GHG	Green House Gas
MCO	Mining Cadastre Office
MEC	Mines Environment and Compliance
MECD	Mines Environment and Compliance Department
MID	Mines Inspectorate Department
MIREMCO	Mineral Resources and Environmental Management Committee
MITA	Mineral Income Tax Act
ML	Mining License
MMSD	Ministry of Mines and Steel Development
MSM	Mainstream Mining
MSME	Micro, Small and Medium Enterprises
MTI	Metallurgical Training Institute
NBS	National Bureau of Statistics
NCMMRD	National Council for Mining and Minerals Resources Development
NCS	Nigeria Customs Service
NDP	National Development Plan
NEITI	Nigeria Extractive Industries Transparency Initiative
NESG	Nigerian Economic Summit Group
NESREA	National Environmental Standards and Regulations Enforcement Agency
NGN	Nigerian Naira
NGSA	Nigerian Geological Survey Agency
NIMEP	Nigerian Integrated Minerals Exploration Project
NIMG	Nigerian Institute of Mining and Geosciences
NIOMCO	Nigerian Iron Ore Mining Company

NMDC	Nigerian Metallurgical Development Centre
NMMA	Nigerian Minerals and Mining Act 2007
NMMR	Nigerian Minerals and Mining Regulations 2011
NRDF	Natural Resources Development Fund
NREAP	National Renewable Energy Action Plan
NSRMEA	National Steel Raw Materials Exploration Agency
OECD	Organisation for Economic Cooperation and Development
PAGMI	Presidential Artisanal Gold Mining Initiative
PAYE	Pay-As-You-Earn
PIA	Petroleum Industry Act
PITA	Personal Income Tax Act
PPP	Public-Private Partnerships
PTDF	Petroleum Technology Development Fund
PV	Photovoltaic
REE	Rare-Earth Elements
SDG	Sustainable Development Goal
SIA	Social Impact Assessment
SMDF	Solid Mineral Development Fund
SME	Small Medium Enterprise
SWF	Sovereign Wealth Fund
SWOT	Strengths, Weaknesses, Opportunities, Threats
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNFC	United Nations Framework Classification for Resources
UNIDO	United Nations Industrial Development Organisation
US	United States
VAT	Value Added Tax
WASH	Water, Sanitation and Hygiene
WHT	Withholding Tax

## Executive Summary

Despite the enormous potential of the mining sector to accelerate Nigeria's economic growth and prosperity, several factors have continued to impede the sector's capacity to perform optimally. The several decades during which the sector was neglected (majorly due to the discovery of oil) played a significant role in its sub-optimal performance. While several attempts are being made to revive the sector, it is clear that there is still a lot to be done, especially around strengthening the legal, regulatory, and institutional environment to provide the appropriate conditions that attracts foreign investments.

This report provides a diagnostic of the state of the Mining sector in Nigeria, critically examining the status, strengths, weaknesses and opportunities for improvement. Key areas reviewed were the existing regulatory, legal, administrative and intergovernmental frameworks, minerals standards & reporting, minerals control & ownership, and the development and future minerals landscape. Some of the weaknesses identified in the sector include artisanal mining issues, ineffective taxation, highly centralised revenue distribution & management, lack of statutory clarity on the functions of the Minister vis a vis other institutions, lack of clarity on the precise definition of an independent regulator, environmental & social costs of mining activities, among others.

This report also examined the policy framework for mining development in Nigeria. A key document considered was the Roadmap for the Growth and Development of the Nigerian Mining Industry 2016, which contains the Government's strategy for the mining industry. Among many things, this roadmap highlights inconsistency in the implementation of policies, laws and regulations in the mining sector and its impact on sector performance and investor confidence. This is not unfamiliar given that sustainable policy implementation is a systemic challenge within the broader Nigerian context. Another major issue this roadmap highlights is the lack of adequate, accessible and reliable geological data on available mineral resources and their locations, which has a direct effect on the sector's

ability to attract investors – every investor requires access to appropriate data before deciding to onboard their capital.

Given that the sector is critical to the achievement of sustainable growth, the report evaluates the sector's alignment with the Sustainable Development Goals (SDGs) and the African Union's Agenda 2063. A gender assessment was also done to identify gaps and opportunities for promoting gender equality within the sector. To further streamline the challenges and prospects of the sector, a Strengths, Weaknesses, Opportunities and Threat (SWOT) analysis was carried out and the findings underscored the urgent need to implement strategic policy imperatives within the sector. Some of these include the need for Nigeria to develop a more comprehensive, inclusive, and participatory national strategy and policy in line with the Africa Mining Vision, National Development Plan 2022-2025, Agenda 2050, and the SDGs, the need to establish a more inclusive and participatory mineral resource federalism framework under the constitution, and the need to integrate the mining sector with the rest of the Nigerian economy. A scenario analysis was also carried out to show the sensitivity of socio-economic variables to the proposed policy imperatives.

The scenario analysis shows that a complete transformation of the current Mining sector landscape – in terms of transparency, inclusiveness, clarity & harmonisation of regulatory procedures and strategic policy formulation & implementation – will result in increased availability of jobs and increased opportunities for investments in the sector, especially as it relates to sustainable energy transitions. The magnitude of this positive impact on the sector is also directly proportional to the degree of implementation of the recommended policy imperatives. Finally, insights from this report reveal that these proposed recommendations, if adopted and implemented, will allow for the development of a holistic stakeholder's collaborative framework for improved sectoral performance.



## Chapter One

### Introduction

Nigeria is richly endowed with solid minerals. Before the discovery of oil in commercial quantities in the late 1950s, the mining sector was the mainstay of the economy. Furthermore, the sector was the major industrial capital and economic powerhouse, with its proceeds used to sustain the civil service of the colonial administration. However, following the discovery of oil, the mining sector was neglected by successive administrations, resulting in the sector becoming practically moribund for decades. The sector's contribution to Gross Domestic Product (GDP) plummeted. While the Government has recognised the immense potential of the sector to accelerate economic development in the country, the current scale at which the minerals are being exploited is below expectations and not adequate for sustainable economic development, especially in light of dwindling oil revenue<sup>1</sup>.

When compared to several other African countries, such as Botswana, Ghana, and South Africa, Nigeria is lagging behind in the development and exploration of its solid mineral resources. While the Government has taken several initiatives to rehabilitate the moribund sector to attract foreign investments and accelerate the growth of the sector, those initiatives are far from yielding the expected results as there has not been much progress and contribution of the sector to reducing unemployment and alleviating poverty in the country. Tax revenue from the mining sector remains awfully low, local investors still struggle to access finance, environmental challenges remain strong despite the existence of environmental regulatory frameworks and the regulatory institutions still lack the human and material resources needed to effectively regulate the sector.

Furthermore, local communities where mining activities take place are yet to see

the benefits of mining while the negative impacts remain largely unabated and despite efforts to formalise Artisanal and Small-scale Mining (ASM), informality still largely dominates. Relationships among the three tiers of government over the exploitation of the resources and the equitable sharing of revenues accruing from mining activities are yet to witness meaningful improvement. All these are symptoms of poor governance which all contribute to a general failure to meet the imperatives of sustainable development.

This report reviews and analyses the governance landscape and prospects in the solid mineral sector in Nigeria. The goal is to highlight the key areas of weaknesses in Nigeria's mining sector, identify the key governance issues involved, which relates to the system of rules by which common affairs are organised, and propose reforms needed to stimulate meaningful development in the sector. The report also attempts to build scenarios that assess the economic impacts of increased investments and strengthened institutional governance, or otherwise, within the sector. The report is set in the context of development initiatives at national, regional, and continental levels relevant to the solid mineral sector in Nigeria, especially within the past decade. Those developments include, perhaps most notably, the Government's adoption of the Roadmap for the Growth and Development of the Mining Sector 2016; the Economic Recovery and Growth Plan (ERGP), and the National Development Plan 2021–2025; the Economic Community of West African States' (ECOWAS) adoption of the ECOWAS Directive c/dir.3/05/09 on the Harmonisation of Guiding Principles and Policies in the Mining Sector; the African Union's adoption of the Africa Mining Vision (AMV) 2011; the African Union Agenda 2063, and the African Continental Free Trade Agreement in 2019; and the United Nations' adoption of the 2030 Agenda for Sustainable Development in 2015. The report provides a diagnosis of these frameworks and how they can be leveraged to strengthen governance in Nigeria's mining sector.

<sup>1</sup>(Oyewole et al., 2018). Assessment of the implementation of government policy on local extraction of solid minerals in south-western Nigeria. *British Journal of Earth Sciences Research*, 6(1), 1–19.

Following this introduction, the report is divided as follows: Chapter two provides an overview of the mining sector in Nigeria to highlight its history and its contribution (or lack thereof) to the socioeconomic development of Nigeria. Chapter three provides a strategic review of the existing governance and management regime with a view to identifying its gaps and weaknesses. The policy, legal and institutional frameworks are diagnosed, and their weaknesses are highlighted. Chapter four looks at strategic minerals, with a focus on the imperative need for Nigeria to have policies, legislation, and regulations around its strategic and critical minerals.

This chapter also assesses “development minerals”, its challenges and the reform imperatives needed to overcome the challenges and the challenges and key reform imperatives connected with the development of “future minerals” critical to the energy transition. Chapter five focuses

on national and regional reform frameworks relevant to the mining sector, using the Sustainable Development Goals (SDGs) as the overarching analytical framework. Particular attention is paid to the AMV and its domestication in Nigeria. In chapter four, the report looks at strategic minerals. Chapter six highlights findings from a gender assessment carried out to understand the sector’s gender gaps, and also outlines challenges and opportunities for gender mainstreaming within the sector. Chapter seven analyses specific sectoral governance gaps and reform imperatives based on the reform frameworks discussed in previous chapters. Chapter eight contains a scenario analysis to understand and quantify the economic impact of policymakers’ actions or inactions on the contribution of the sector to select socio-economic variables such as revenue generation, poverty reduction, etc.





## Chapter Two

# Nigeria's Mining Sector

### Diagnostics: An Overview of The Sector

#### Nigeria's Minerals and Mining Landscape

Nigeria has over 44 different varieties of minerals, which include both precious and base metals, located, at varying quantities, in numerous locations across the 36 states and the Federal Capital Territory. Despite their abundance, however, these minerals are still largely undeveloped. The minerals can be broadly categorized into five groups according to their use:



#### Industrial Minerals

(such as barite, kaolin, gypsum, feldspar, and limestone)



#### Energy Minerals

(such as bitumen, lignite, and uranium)



#### Metallic Ore Minerals

(such as gold, cassiterite, columbite, iron ore, lead-zinc, and copper)



#### Construction Minerals

(such as granite, gravel, laterite, and sand)



#### Precious Stones

(such as granite, gravel, laterite, and sand)

The mining of these minerals began in an organised manner around 1902 following the commissioning of mineral surveys of the Southern and Northern Protectorates by the

British Colonial Administration. Tin ore was the earliest recorded mineral mined, which was conducted by the Royal Niger Company in 1905. Gold mining began around 1914 while coal began around 1916 (Ministry of Mines and Steel Development, 2016). By 1958, there were about 8,000 people working directly in coal mining in Enugu, which was producing over 900,000 tonnes of coal per year. The outbreak of the civil war in 1967 led to coal production shutdowns and despite the end of the war in 1969, the coal industry is yet to fully recover. Meanwhile, gold production peaked before World War II, and received a hard blow because of the outbreak of the war, and the sector, just as the coal industry is also yet to fully recover and live up to its potential.

Early on, particularly in the 1960s and early 1970s, Nigeria was a major exporter of several minerals, including tin, columbite and coal. These minerals served as the key drivers of Nigeria's industrialisation and development. Coal mining, for instance, led to remarkable growth in the railway industry while tin ore mining supported the establishment of the first power plant in Nigeria in 1928. Also, iron ore mining led to the establishment of industrial complexes such as the Ajaokuta Steel Company (Ministry of Mining and Steel Development, 2016).

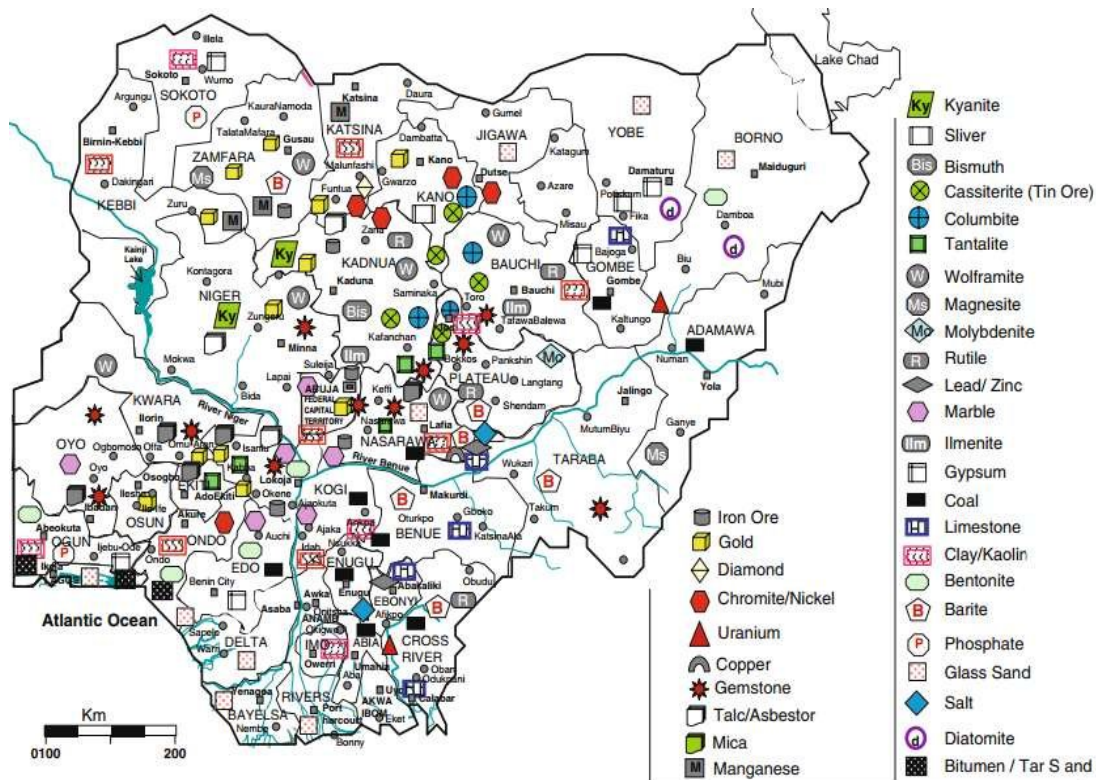
However, the oil boom of the late 1970s shifted the Government's attention almost exclusively to oil and drove the mining sector to dormancy as a major source of foreign exchange and a key driver of economic development. Investments inflow into the solid mineral sector consequently declined for decades. The sector was, not surprisingly, left largely unregulated. Licence approval processes were not improved to meet the challenges of modern times. This discouraged investment and resulted in the growth of informal artisanal and small-scale mining (ASM), which continues to dominate the mining sector to date despite efforts by the



Government to formalise the sector. Informal ASM operators are composed mainly of individuals, families, and groups while the formal operators are composed mainly of a

few cooperatives, several small-scale mining companies, and two international junior mining companies quoted on the Australian<sup>2</sup>, Canadian, and London<sup>3</sup> stock exchanges.

Figure 1: Distribution of minerals across the 36 states of Nigeria and the Federal Capital Territory



Coupled with the near-exclusive policy focus on oil, the indigenisation policy of the 1970s, under which foreign investors were required to forfeit 30 per cent of their investments, also contributed in no small measure to the decline of the mining sector.<sup>4</sup> The inflow of foreign capital drastically reduced, leading to lack of investments in mining and other sectors. The mining sector was particularly hit because most of the foreign investments flowing into the country prior to that went to the mining sector.<sup>5</sup> With the retreat of foreign investors and their expatriate professionals, most of the mining operations by the private sector

devolved to small-scale indigenous miners. This led to production declines, especially with metallic minerals. Indigenisation came with direct government participation in the mining industry, exemplified by the establishment of the Nigerian Mining Corporation as a public company in 1972 to invest directly in the exploitation of minerals (Ministry of Mines and Steel Development, 2016).

Due to several decades of neglect of the mining sector in Nigeria, policy and regulatory actions were more or less abandoned until the return of democracy in 1999, when efforts

<sup>2</sup> Kogi Iron Limited, the owners of the Agbaja iron ore project in Agbaja, Kogi State, is quoted on the Australian

<sup>3</sup> Thor Exploration Limited, the owner of the Segilola gold project in Osun State, is quoted on the Canadian and London

<sup>4</sup> Ogu, J. M. (2019, 1 April). Inconsistency in government policies stalled Nigeria's mining industry growth - Okunlola. BusinessDay. <https://businessday.ng/real-sector/article/inconsistency-in-government-policies-stalled-nigerias-mining-industry-growth-okunlola/#:~:text=For%20example%2C%20the%20indigenisation%20policy%20of%20government%20in,Taraba%20Government%20orders%2024%20hours%20stay%20at%20home>

<sup>5</sup> Obasi, N. N. (2015). Foreign direct investment policies and the sectors of the Nigerian economy. *International Journal of Academic Research in Business and Social Sciences*, 5(11), 94–109.

to revamp the sector were undertaken. The Nigerian Minerals and Mining Act 2007 (NMMA) together with the Nigerian Minerals and Mining Regulations 2011 (NMMR) was enacted to replace the old legal regime to provide the enabling legal environment for mining that would align with modern mining legislation and fiscal regimes. In 2008, the Nigerian Mining and Metals Policy was adopted to provide policy direction for the development of the sector while in 2011 the Nigerian Minerals and Mining Regulations 2011 (NMMR) were adopted to facilitate the implementation of the 2007 NMMA. Soon after the enactment of the NMMA, the Mining Cadastre Office (MCO) granted 50 mining leases and 952 exploration licences (Reuters, 2007).

In 2016, the Government adopted the Roadmap for the Growth and Development of the Nigerian Mining Industry to provide more comprehensive strategic direction for the growth of the sector. In the roadmap, the Government retained its original list of i “Seven Strategic Minerals” for priority development as part of its efforts to revive the mining sector and diversify the national economy. The strategic minerals include coal, bitumen, limestone, iron ore, barites, gold, and lead/zinc. Around 2016, the Government committed an intervention fund of 30 billion naira to the Bank of Industry to boost the sector, with a priority focus on artisanal and small-scale mining of these strategic minerals. The 2017 Economic Recovery and Growth Plan (ERGP) and the more recent National Development Plan (NDP) placed a strategic focus on the solid mineral sector as part of the Government’s economic diversification agenda.

With the outbreak of the COVID-19 pandemic, the solid mineral sector suffered a setback. The lockdowns and social distancing measures initiated in response to the pandemic halted or disrupted the conduct of mining operations. However, the Government recognised the economic impacts of the pandemic and responded with an announcement in mid-

2020 of a proposal of N2.3 trillion to boost the mining and other sectors of the economy post-COVID-19.

### **Mining Sector Relevance - Sectoral Contribution To Growth, Revenue Generation, Job Creation, Poverty Reduction And Sustainable Development**

The availability of considerable amounts of mineral commodities in Nigeria provides enormous opportunities for socio-economic growth through multiple channels, namely: exports and use in domestic industries for generation of foreign exchange and internal revenue emergence of new industrial and downstream products emergence of new supply chain companies increased employment of Nigerians, particularly in the rural areas where the minerals are found. The multiplier benefits to the citizenry are enormous. In fact, the Mining sector can very easily be the largest employment sector of the economy, since deposits abound in virtually every State of the Federation increased opportunities for technology transfer and development of infrastructure, especially in the rural areas (roads, hospitals, rail, electric power installations, gas installations, schools, and housing) to support economic diversification into other productive sectors of the economy and support rural development.

The National Bureau of Statistics (NBS) publishes its Gross Domestic Product (GDP) report on a quarterly basis. Its reports define the mining and quarrying sector as consisting of “Crude Petroleum, Natural Gas, Coal Mining, Metal Ore, and Quarrying and other Minerals sub-activities” (NBS, 2022). This sector saw a nominal growth rate of by 8.65% (year on year) in Q4 2021. Quarrying and Other Minerals showed the highest growth rate of all the sub-activities at 88.44%, followed by Coal Mining activity at 79.86%. However, Crude Petroleum and Natural gas was the main contributor to the sector with a weight of 77.12% in Q4 2021 (NBS, 2022). From a historical perspective, there was a rise of 20.97% points and a rise of

13.30% points compared to Q4 2020 and Q3 2021 respectively. The Mining and Quarrying sector contributed 5.25% to overall GDP in Q4 2021, lower than the contributions recorded in Q4 2020 at 5.46% and lower than the previous quarter recorded at 6.32%. Annual contribution of the sector to nominal GDP stood at 6.19% (NBS, 2022).

The NBS report further shows that in real terms, the Mining and Quarrying sector grew by -6.16% (year-on-year) in Q4 2021. This growth was higher than the growth in Q4 2020 by 12.28% points and higher than in Q3 2021 by 4.40% points. Quarter on quarter, growth rate recorded was -21.33%, while annual growth rate stood at -7.79% in 2021. The contribution of Mining and Quarrying to Real GDP in Q4 2021 stood at 5.50%, lower than the rate of

6.09% recorded in the corresponding quarter of 2020 and lower than a 7.66% contribution rate recorded in Q3 2021.

The 2013 NEITI Solid mineral audit reports put total revenue from the mining sector in 2013 at N33.86 billion and in 2014 at N55.82 billion, accounting for just 0.11 percent of GDP.<sup>6</sup> Annual share of GDP generated by the mining and quarrying sector in 2020 was put at 0.42 percent.<sup>7</sup> This however represents an increase from 0.33 percent in 2015 (MMSD, 2016) but a decrease from 0.55 percent in 2016. The decrease from 2016 levels is attributed to the lockdowns occasioned by the COVID-19 pandemic. Below is a comparison of annual GDP contributions, share of total GDP, and annual growth rate in the mining sector from 2017 to 2020.

Table 1: Performance of Solid Minerals, Mining and Steel Development (2017–2020)

A. Output (GDP in Current Basic Prices) (N'bn)				
	2017	2018	2019	2020
Cola Mining	9.44	9.78	12.91	11.48
Metal Ores	7.93	10.90	11.14	11.59
Quarrying and Other Minerals	108.66	204.10	344.95	633.10
<b>Total Solid Minerals</b>	<b>126.03</b>	<b>224.79</b>	<b>369.00</b>	<b>656.14</b>

B. Share in Total GDP (%)				
	2017	2018	2019	2020
Cola Mining	0.01	0.01	0.01	0.01
Metal Ores	0.01	0.01	0.01	0.01
Quarrying and Other Minerals	0.10	0.16	0.24	0.42
<b>Total Solid Minerals</b>	<b>0.11</b>	<b>0.18</b>	<b>0.26</b>	<b>0.43</b>

<sup>6</sup>(Alade and Oguntuase, 2018). Solid minerals: Harnessing Nigeria's alternative resource to crude, Banwo & Ighodalo. <https://www.banwo-ighodalo.com/assets/greymatter/bfd7631091ed3b8c29fa9a1d949dd4a5.pdf>.

<sup>7</sup>(NBS, 2022; Statista, 2021). Share of gross domestic production (GDP) generated by the mining and quarrying sector in Nigeria as of 2020. <https://www.statista.com/statistics/1207943/gdp-by-mining-and-quarrying-sector-in-nigeria/>.

<b>C. Growth rate (%)</b>				
	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Cola Mining	1.45	5.81	13.15	20.50
Metal Ores	1.12	10.33	5.63	21.16
Quarrying and Other Minerals	0.14	10.11	5.00	15.72
<b>Total Solid Minerals</b>	<b>0.83</b>	<b>1.90</b>	<b>2.27</b>	<b>1.92</b>

Source: Nigerian National Development Plan 2021–2025

The 2019 NEITI solid minerals report and previous reports demonstrate that Nigeria's mining sector's contributions to revenues, GDP growth, and national economic development is also hindered by a weak mineral production, export, and revenue assessment and collection framework. About ninety percent of Nigeria's mineral production is from the quarrying of limestone, shale, granite, sand, and laterite while mining of metallic minerals, which have the potential to provide the highest export revenues, namely gold, lead-zinc, tin, columbite, gemstones, and manganese is sporadic. Mining of metallic minerals is largely hindered by the low level of mineral exploration, which is the backbone for finding deposits, growing the mining sector, and increasing its contribution to the economy in Nigeria.

Nigeria is largely under-explored as shown by investment in exploration compared to its neighbours<sup>8</sup> in West Africa, which are attracting more global exploration investments on average than Nigeria. Under the current mineral export framework, most of Nigeria's minerals are exported in raw form with little or no beneficiation. In 2009, the total exported mineral ores and concentrates was 7,019,297.27 tonnes with an FoB value of US\$2,531,910,885. Gross discrepancies have been found between

the export data of the MMSD and the Nigeria Customs Service (NCS) due to weak coordination between both organizations, leading to revenue losses to the government and high rates of smuggling.

However, the contributions of mining are not to be measured only by its direct GDP contributions to the economy, as there are indirect contributions and multiplier effects that cannot be captured in GDP terms. NBS statistics show that the total number of employees in the mining and quarrying sector had a steady growth between 2010 and 2012. It stood at 1,031,033 in 2010 and grew by 16% in 2012 to 1,358,795.<sup>9</sup> Thus, with increased investments in the sector, mining has the potential to reduce unemployment in the country, which, according to 2021 NBS statistics stood at 33.3%.<sup>10</sup> This will have significant positive impacts on livelihoods not only through the salaries, wages and compensations received by the employees but also through the impacts of such compensations on their health and social well-being. Other economic contributions associated with mining flow from growth in the mining supply chain, which creates linkages with other sectors of the economy, thereby helping those other sectors to grow.

<sup>8</sup> Ghana, Senegal,

<sup>9</sup> (NBS, 2015). Nigerian mining and quarrying sector: Summary report 2010 – 2012. <https://www.nigerianstat.gov.ng/pdfuploads/nbs%20Mining%20and%20Quarrying%20Report%202010-12.pdf>.

<sup>10</sup> (NBS, 2021b). Unemployment and underemployment report.

As in other countries, however, the COVID-19 pandemic has had a significant impact on mining development in Nigeria. Reduced mining operations due to the lockdowns have led to production declines and in some cases to premature closure of mines. According to the National Bureau of Statistics, the mining and quarry sector declined nominally by -16.02% in the second quarter of 2020 (year on year). While this was 0.80% points higher than the growth rate in the previous year (Q2 2019), it was -5.45% points lower than the preceding quarter. Similarly, the mining and quarry sector's contribution to GDP in Q2 2020 plummeted by -6.60%.<sup>11</sup> The uncertainty surrounding the pandemic has led to volatility in commodity prices, although the price of gold has surged arguably because gold is viewed as a reliable store of value. The surge in gold prices also led to a surge in gold smuggling and illegal gold mining, as was witnessed in some states in Nigeria.

Furthermore, while mining sector development has the potential to accelerate socio-economic development, it also creates significant negative environmental and health impacts as well as impacts on the social fabric of society. Sources of

environmental damage include gaseous emissions from mineral processing plants, dust from quarrying and cement factories, liquid waste from processing plants, and poor management of mine tailings, each of which has serious health impacts. The lead poisoning incident in Zamfara State in 2010 that led to the death of hundreds of children and animals and a similar incident in Niger State area in 2015 are notable examples of the health impacts in Nigeria. There have also been reported incidents related to the destruction of the social fabric of society, such as gender and sex-based violence in mining sites and communities in Nigeria, community conflicts, crime and insecurity, and land dispossession (especially farmland). These negative impacts undermine the value of mining's economic contributions.

Thus, sustainable mining sector development requires not only a consideration of the economic contributions of a mineral asset but also an appraisal of its socio-environmental and health impacts. The potential of mining as a catalyst for sustainable development cannot be fully realised unless there are also improvements in the social and environmental aspects.



<sup>11</sup> See National Bureau of Statistics, Nigerian Gross Domestic Product Report (Q2 2020), P. 8, [https://www.nigerianstat.gov.ng/pdfuploads/GDP\\_Report\\_Q2\\_2020.pdf](https://www.nigerianstat.gov.ng/pdfuploads/GDP_Report_Q2_2020.pdf).



## Chapter Three

# Mining Sector Governance and Management: Diagnostic Review

### Introduction

This chapter provides a strategic review of the existing governance and management regime with a view to identifying its gaps and weaknesses for necessary policy action and legal and regulatory reforms. To provide context, the chapter examines the entire governance framework for mining including the constitution, policy, roadmap, law, and regulations.

### Review of The National Strategy And Policy Framework For Mining Sector Development In Nigeria

The policy framework for mining development in Nigeria consists of two key documents:

- » The National Minerals and Metals Policy 2008
- » Roadmap for the Growth and Development of the Nigerian Mining Industry 2016

### National Minerals And Metals Policy 2008

The development of the National Minerals and Metals Policy 2008 closely followed the enactment of the Nigerian Minerals and Mining Act (NMMA) 2007. This was akin to putting the cart before the horse, as the law itself was meant to be based on the policy and not the other way round. Notwithstanding, the policy was useful in articulating the Government's intent to accelerate the nation's economic, social, and political development through the mining industry and as such would guide the implementation of the Act. Among its bases for action, the Policy identifies social equity and benefit-sharing for mining communities and emphasises the importance of providing extension services to Artisanal and Small-Scale Mining (ASM) operators, improving sustainable livelihoods in ASM communities,

and establishing mineral buying centres. Despite this, the NMMA has not been revised to incorporate the policy's vision.

While the NMMA addresses minerals, it barely mentions metals. Key objectives of the NMMA include the development of a legal and regulatory framework and the formalisation of informal ASM operators that reflects international best practices. Five years after the passage of the NMMA, the Nigerian Minerals and Mining Regulations were adopted in 2011. This five-year gap between the passage of the Act and the adoption of the Regulations potentially created uncertainty around the implementation of the Act and arguably undermined the growth of the sector.

### Roadmap For The Growth And Development Of The Nigerian Mining Industry 2016

The Government's Roadmap for the Growth and Development of the Nigerian Mining Industry 2016 replaced the Roadmap for the Development of the Mining Sector 2012, which did not seem to have yielded any significant growth in the mining sector. The Roadmap drew from regional frameworks, including the Africa Mining Vision and the Country Mining Vision Guidebook for Domesticating the Africa Mining Vision. The roadmap provides a clearer focus for the transformation of the mining sector than the 2012 roadmap by discussing the challenges facing the mining industry in Nigeria and outlining the strategies and action plans that the Government intends to utilise to address them.

One of the biggest challenges that the 2016 roadmap highlights is the inconsistency in implementation of policies, laws, and regulations in the mining sector and its impact on sector performance and investor confidence. This issue is an aspect of a broader systemic problem in Nigeria associated with weak regulatory enforcement and ineffective implementation of policies. Policies are not

implemented in a sustained manner, due in part to funding constraints and lack of political will.

Another major challenge in the mining industry that the roadmap highlighted is with attracting exploration and mining investors. The lack of adequate, accessible, and reliable geological data on available mineral resources and their locations has affected the ability of investors to support investment decision-making. Ultimately, it has also affected the government's ability to realise the goals and targets established in the roadmap. Since mining is highly capital-intensive, investors would be hesitant to invest unless they have a reasonable basis to believe that minerals exist in commercial quantities. Financial institutions also need a reasonable basis to believe that loans will be

repaid, which in turn is primarily dependent on the confirmed existence of minerals in commercial quantities. This lack of funding might explain why artisanal miners dominate the mining sector in Nigeria and even then, with little resources to fund their operations. Furthermore, the decades neglect of mining in the country led to low professional training in fields relevant to mining, such as geosciences and mining engineering, which eventually led to a shortage of relevant skills.<sup>12</sup> Table 1 summarises the types of barriers, their severity and the constraints/challenges facing the mining industry in Nigeria identified in the roadmap. Based on the barriers identified in the roadmap and from this diagnostic study, table 2 summarises the Nigerian mining governance framework's strengths, opportunities, weaknesses, and threats (SWOT).

Table 2. Mining Sector Barriers

No.	Type of Barrier	Severity	Constraints/Challenges
1	Geoscientific data and information	Moderate to high	Despite recent progress, the mechanisms for gathering, disseminating, and archiving critical geological data required by investors and policymakers are weak.
2	Industry participants	Moderate to high	Operators across the entire mining value chain face challenges related to insufficient infrastructure to poly uncertainty, all of which combine to constrain investor confidence/interest
3	Stakeholders	Moderate	The historical decline in the growth of the industry dampened the interest and focus of potential stakeholders, thereby reducing resource inflows (financial resources, talents, partnerships)
4	Institutions and governance	Moderate	The organisational design of the ministry coupled with the mix of regulatory agencies undermined effective enforcement of extant policies, laws, and regulations
5	Key enablers	Moderate to high	Other requirements needed for the proper functioning of the minerals and mining ecosystem, e.g., competent workforce, infrastructure (such as railroads), competitive financing systems, mine and asset security, and other support services, are inadequate.

Source: Roadmap for the Growth and Development of the Nigerian Mining Industry 2016

<sup>12</sup> Akper, P. T., & Ani, L. (2020). Legal and policy issues in the development of Nigeria's mining sector: charting the way forward. Nigerian Institute of Advanced Legal Studies. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3563005](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3563005).



Table 3: A SWOT analysis of the Nigerian Minerals Sector

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>» Wide diversity of mineral deposits- high-value minerals, development minerals, energy minerals, and energy transition minerals</li> <li>» Transparency and accountability principles are generally infused in the NMMA and NEITI Acts</li> <li>» Security of tenure through the process of awarding mineral titles</li> <li>» Competitive, attractive, and sound fiscal regime</li> <li>» Key environmental law principles (e.g., Polluter Pays Principle, Prevention Principle) are enshrined in the NMMA</li> <li>» Transfer of social benefits enshrined in the NMMA through Community Development Agreements between mining companies and host local community before mining operations commence</li> <li>» Existence of taxation legislation, including transfer pricing regulations, to enhance revenue generation</li> <li>» Regional initiatives, such as the AMV, Africa 2050 integrated into the mining section of the National Development Plan 2021–2025)</li> </ul>	<ul style="list-style-type: none"> <li>» Weak and inconsistent implementation of laws, policies, and strategies</li> <li>» Low level of enforcement of compliance with technical, environmental, and social obligations, and in the informal ASM subsector</li> <li>» Absence of an independent regulator shielded from political interference to guarantee xx</li> <li>» Lack of attention to gender issues in the mining sector under the NMMA</li> <li>» Inadequate statutory clarity on the functions of the Minister in relation to those of the Mining Cadastre Office, especially for applications for a mineral title</li> <li>» Significant discretionary power remains with the Minister for the award of licences</li> <li>» Absence of a framework for strategic and critical minerals</li> <li>» State governments have a limited role to play leading to increased tensions</li> <li>» Inadequacy of accessibility to reliable geological data to inform investment decisions</li> <li>» Inadequate infrastructure for mining and downstream mineral operations</li> <li>» Limited access to capital for Nigerian mineral exploration companies</li> <li>» Inadequate legal and regulatory provisions on social impacts of mining</li> <li>» Conduct of EIAs is not a prerequisite for the award of a mineral title although it is a precondition before mining commences</li> <li>» Social impacts of mining are neglected in the NMMA in environmental legislation</li> <li>» Inadequate policy and strategic focus on development minerals and future minerals</li> <li>» Low private sector investments in mineral processing and downstream facilities</li> <li>» Highly informal mineral trading process leading to high levels of smuggling and illicit mineral trade linked to violence</li> <li>» Inadequate assistance programmes for ASM operators to improve their financial and technical capacity</li> </ul>

Strengths	Weaknesses
	<ul style="list-style-type: none"> <li>» Inadequate amount of mining skilled labour force</li> <li>» Lack of a skills development, education, and vocational training policy and strategy for the mining sector. The petroleum sector has a petroleum university and the Petroleum Training Development Fund (PTDF)</li> <li>» Prevalence of informal mining across the country, linked to security threats</li> <li>» Inter-agency rivalry especially about regulating the environmental and social impacts of mining</li> <li>» Policy mindset that is focused on high-value minerals while largely ignoring development minerals</li> <li>» Lack of adequate human capacity and supporting tools and equipment within the Ministry to regulate/supervise mining operations</li> <li>» Inadequate alignment of state and local level policies and strategies with national policies and strategies in the mining sector</li> <li>» Lack of adequate financing of the regulatory departments</li> <li>» Multiplicity of environmental management agencies and laws</li> <li>» Lack of funding to support exploration and mining – the Solid Mineral Development Fund has yet to be fully operationalised to play a catalytic role</li> <li>» Low level of involvement of civil society threatens public buy-in into mining policies, strategies and programmes</li> </ul>

Opportunities	Threats
<ul style="list-style-type: none"> <li>» Nigeria has a largely unexplored mineral potential that can position it as a favored exploration destination through public access to enhanced geological and geoscience data generated through the NIMEP</li> <li>» Existing public finance management system based on transparency and accountability</li> <li>» Potential to leverage the AfCFTA and AMV to build an extensive mineral supply chain and value chain</li> <li>» Potential to revive the domestic steel to meet high domestic demand for steel products through imports</li> <li>» Regional initiatives, such as the AMV, AfCFTA, the ECOWAS Mining Directive, etc., can be leveraged to enhance domestic policies, regulations, and strategies</li> <li>» MIREMCO can be strengthened to better facilitate inter-governmental collaboration and host community participation in exploration and mining decisions</li> <li>» Leverage, to the extent possible, the provisions of the new Companies and Allied Matters Act 2020 to require beneficial ownership disclosure on all grant of mineral rights and</li> </ul>	<ul style="list-style-type: none"> <li>» Weak coordination links between federal, state, and local level institutions threatens the whole-of-government approach to mineral development</li> <li>» Significant leakages of mining tax and inefficient tax revenue collection and administration</li> <li>» Insecurity in many parts of the country has also interrupted business activities in the mining sector</li> <li>» Supply chain challenges for global mining equipment and services due to COVID-19 pandemic disruptions</li> <li>» Commodity price volatility</li> <li>» Inadequate infrastructure to support mining, mineral processing, supply chain, and mineral value chain activities</li> </ul>

Yet, despite the strong points of the roadmap in providing a guide to transform the industry, the roadmap is not without its own deficiencies and has not triggered the desired sector transformation. The roadmap does not address in any meaningful way, environmental and social issues connected with the mining sector. This contrasts clearly with the roadmap's treatment of other issues, such as geoscientific data. In fact, the challenges that Nigeria is facing because of adverse environment and social impacts from mineral operations is not even mentioned among the key challenges and constraints facing the sector. A roadmap for the growth and development of the mining sector must necessarily account for the

environmental and social impacts of mining since any gains coming from other aspects (such as enhanced investments) may be eroded if the environmental and social impacts are not addressed. Also, the roadmap does not provide for a monitoring and evaluation framework for monitoring and measuring progress in its implementation. As it is commonly said in policy circles, what cannot be measured cannot be achieved.

The inability of the 2016 Roadmap to drive the development of the mining sector has been associated with "poor or non-implementation of its objective and the strategies adopted by government"<sup>13</sup> as well as inadequate funding

<sup>13</sup> Akper, P. T., & Ani, L. (2020). Legal and policy issues in the development of Nigeria's mining sector: charting the way forward. Nigerian Institute of Advanced Legal Studies. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3563005](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3563005).

for sector development. Section 34 of the NMMA established the Solid Mineral Development Fund (SMDF) for the purpose of funding human and physical capacity building in the mining sector, including funding geo scientific data gathering, storage and retrieval, equipping mining institutions to enhance their performance of their statutory functions; funding essential services to ASM operators, and provision of infrastructure in mines land. However, the SMDF has not yet been established as an agency under law while the funds through which it will catalyse and mobilise funds and investments from third parties have not been established. Good governance principles, such as transparency and accountability, particularly those based on the Santiago principles, would also be required for its efficient management when established.

The Government acknowledged the funding challenge and took a revolutionary effort to overcome it. In 2016, the Government approved a US\$30 billion intervention fund from the country's Natural Resources Development Fund (NRDF) to finance the Nigerian Integrated Minerals Exploration Project (NIMEP) and formalise artisanal and small-scale miners (ASM). The ASM funds were warehoused with the Bank of Industry (BoI), but disbursement has been low to date. Furthermore, the World Bank has provided support to the government to implement the roadmap through the Mineral Sector Support for Economic Diversification (MinDiver) project, which was approved in 2018.

*Through NIMEP, the Government has undertaken a major step to better understand the type and locations of minerals available in the country. NIMEP, which the government began in 2018 involves the government carrying out detailed field geological and geophysical mapping of several areas to obtain reliable geoscientific information that would help de-risk the sector by helping prospective investors to make investment decisions in the sector.<sup>14</sup> Public sources suggest that the NIMEP report (preliminary) was submitted to the Government in October*

*2021 by the consultants engaged to carry out the mapping exercise.<sup>15</sup> However, the report is currently not publicly available. Inaccessibility of such reports presents a serious governance issue, as it can induce investors to adopt unscrupulous methods to access such reports. The Government needs to establish a mechanism for accessing such reports in an efficient manner. Moreover, the Government needs to embark on a robust stakeholder sensitisation regarding the availability of such a report to ensure that those who need it are aware of its existence. For sustainability, the government will need to adopt a systemic approach and establish a legal and regulatory framework for NIMEP so that its funding is guaranteed, and its reports are available and accessible to the public.*

### Review of the Legal and Regulatory Framework for Mining

The legal framework for the mining sector in Nigeria consists principally of the 1999 Constitution, the Nigerian Minerals and Mining Act 2007 (NMMA), and the Nigerian Minerals and Mining Regulations 2011 (NMMR). The procedures for application for licenses and leases are provided for in the NMMR. Other relevant pieces of legislation that affect the mining industry in Nigeria include:

- » the Explosives Act 1964
- » the Land Use Act 1979
- » the Environmental Impact Assessment Act 1992
- » the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007
- » the Companies and Allied Matters Act 2020
- » the Company Income Tax Act
- » the Value Added Tax Act
- » the Nigerian Investment Promotion Act 2004
- » the Finance Act 2019
- » the National Environmental (Mining and Processing of Coal Ores and Industrial Minerals) Regulations 2009

<sup>14</sup>(Enemana, 2021). NIMEP: Mecron Geology submits final report to FG. The Rockpost. <https://rockpostng.com/2021/10/nimep-mecron-geology-submits-final-report-to-fg/>.

<sup>15</sup>(Nwakaudu, 2021; Kadiiri, 2021). Mining: Time to revive Nigeria's buried prosperity - FG. National. Retrieved from <https://www.sunnewsonline.com/mining-time-to-revive-nigerias-buried-prosperity-fg/>. NIMEP report a gateway to mining investment in Nigeria - Minister. The Truth. Retrieved from <https://www.truthng.com/nimep-report-gateway-mining-investment-nigeria-minister.html>.

- » the National Environmental (Base Metals, Iron and Steel Manufacturing/Recycling Industries) Regulations 2011
- » the National Environmental (Non-Metallic Minerals Manufacturing Industries Sector) Regulations 2011
- » the National Environmental (Quarrying and Blasting Operations) Regulations 2013

The above laws and regulations are administered by various government agencies and departments, including the Federal Ministry of Environment, the Nigerian Nuclear Regulatory Agency and the state government ministries of land and environment.



Table 4. Overview of laws and regulations governing the mining sector

S/No	Law/regulation	Key areas of focus/features
1	The 1999 Constitution	Vests ownership and control of all minerals under the exclusive authority of the Federal Government (Section 44 (3)).
2	NMMA 2007	Establishes the manner in which mineral rights are to be awarded as well as the roles of the various agencies and departments of Government in the administration of mineral titles.
3	NMMR 2011	Prescribes the manner in which the NMMA shall be implemented.
4	Land Use Act 2004	Vests ownership of all land within the territory of each state in the state Governor and defines the extent of rights that individuals and other persons can acquire over land.
5	Environmental Impact Assessment Act 2004	Provides for the conduct of EIAs with regard to development projects in Nigeria, defines the criteria for determining when an EIA may be conducted, and establishes the manner in which such EIAs are to be conducted.
6	Companies and Allied Matters Act 2020	Establishes the framework for registration of companies and other forms of business organisations.
7	Nigerian Investment Promotion Act 2004	Establishes the Nigerian Investment Promotion Commission to encourage and promote investment in the Nigerian economy, including in the solid mineral sector. It emphasises the need to ensure an investment-friendly climate for all businesses.
8	NESREA Act	Establishes NESREA as the principal environmental regulatory agency with the primary task of ensuring environmental compliance, including in the mining sector.
9	Company Income Tax Act	Regulates the taxation of companies in Nigeria and is administered by the Federal Inland Revenue Service.
10	Value Added Tax	Establishes the imposition of VAT on certain goods and services and for the administration of tax matters relating to such impositions.
11	Finance Act 2019	Focuses on increasing Federal Government revenue and to curb tax evasion and avoidance.
12	National Environmental (Mining and Processing of Coal Ores and Industrial Minerals) Regulations 2009	Adopted to minimise pollution from the mining and processing of coal, ores and industrial minerals.
13	National Environmental (Base Metals, Iron and Steel Manufacturing/Recycling Industries) Regulations 2011	Adopted to prevent and minimise pollution from all operations and ancillary activities related to base metals, iron and steel manufacturing.
14	National Environmental (Non-Metallic Minerals Manufacturing Industries Sector) Regulations 2011	Adopted to prevent and minimise pollution from all operations and ancillary activities related to non-metallic minerals.
15	National Environmental (Quarrying and Blasting Operations) Regulations 2013	Adopted to control the effects of quarrying and blasting operations on the environment and human health.

## 1999 Constitutional Framework

### Ownership and control of mineral resources is vested in the Federal Government

One of the most critical issues in the Nigerian legal framework is ownership and control of mineral resources. Section 44(3) of the Constitution vests ownership and control of all mineral resources in the Federal Government of the Federation. This provision is mirrored in section 1(1) of the Minerals and Mining Act, 2007 (MMA). Not only ownership, but also the power to regulate the development of minerals is also vested exclusively in the Federal Government under Item 39, Part 1 of the Second Schedule to the Constitution (the Exclusive Legislative List). This regulatory power gives the Federal Government control over the resources. The Federal Government's control has been described as "all-inclusive".<sup>16</sup> This is because it encompasses not only the creation of the policy, legal, fiscal, and institutional frameworks for the development of the resources but also the regimes for managing all other aspects of mining, such as the environmental impacts.

### Nigeria's Mineral Revenue Management and Distribution System is centralised

Nigeria's revenue management and distribution system is another critical issue because it is highly centralised, so state and local governments depend on statutory allocations enabled by the Constitution. The large size of informal mining is undermining revenue generation from mining. One of the key issues in revenue management and distribution in Nigeria is transparency and accountability. A major issue connected with this is the remission of taxes by mining companies. The huge size of informal mining that goes on means that much revenue is lost, since it is difficult, if not impossible, to tax informal miners whose real identities are not even known. In addition, while NEITI audit reports have highlighted the extent of revenues derivable from the mining sector, how the public can make use of such information to push for action towards accountability does not have an easy answer. Moreover, efforts so far have focused almost entirely on the federal

government, with little effort being left for subnational governments – including state and local governments.

Another issue around revenue management is how revenues from mining could be managed for the benefit of present and future generations. Until relatively recently, provisions for future generations were based on political arrangements between the federal and state governments. Those political arrangements were most symbolised by the establishment, in 2004, of the now abandoned Excess Crude Account (ECA), which, however, was focused exclusively on revenues from oil. Controversies over the management of the ECA led to its replacement in 2011 with the establishment of a new sovereign wealth fund (SWF) under the Nigeria Sovereign Investment Authority Act. The objectives of the Act include building a savings base for the benefit of future generations, building infrastructure development in critical sectors, and protecting the economy from shocks associated with oil price volatility. Accordingly, the Act establishes three separate funds to meet each of these goals: a Future Generations Fund, an Infrastructure Fund, and a Stabilisation Fund. Contributions to the fund come mainly from the Federation Account, which is funded mainly through resource revenue, principally from oil (the mainstay of the economy) but also from mining and other resources.

### Derivation Principle

Nigeria's derivation principle is also applied in the distribution of mineral revenues in line with section 162 of the 1999 Constitution. Under current arrangements, a mineral-bearing state receives 13 percent of the revenues from minerals produced from its territory. However, this 13 percent is the floor rather than the ceiling.<sup>17</sup>

### Examples from other mining countries

Management and control of mineral revenues also varies across other federated jurisdictions around the world and is often a focus of discussions and contention around natural resource federalism.<sup>18</sup>

<sup>16</sup>Public wealth management and distribution in the extractive industry in Nigeria. In E.G. Pereira, R. Spencer and J.W. Moses (eds.), *Sovereign wealth funds, local content policies and CSR: Developments in the extractives sector* (29–53). Springer.

<sup>17</sup>(Nwapi, 2021). Public wealth management and distribution in the extractive industry in Nigeria. In E.G. Pereira, R. Spencer and J.W. Moses (eds.), *Sovereign wealth funds, local content policies and CSR: Developments in the extractives sector* (29–53). Springer. <sup>18</sup>(Bauer et al. 2018). *Natural Resource Federalism: Considerations for Myanmar*. Natural Resource Governance Institute, 2014.

In some countries, some subnational governments collect revenues directly and sometimes even determine their own tax and royalty rates as a way of compensating them for the negative impacts of extraction and for mitigating or preventing conflict. However, in most countries, a middle road is pursued.

Table 2 and 3 provides an overview of mineral tax collection responsibilities in federal mineral and petroleum resource-rich countries. Compared to the mining sector, subnational institutions tend to have a lesser role in the oil and gas sector because in oil and gas, decision-making is often more centralized.

Table 5. Mineral tax collection by level of government in selected countries

Country	Corporate Income Tax		Royalties		Property/Land Tax	
	National	Sub	National	Sub	National	Sub
Australia	X		X*	X	X*	X
Brazil	X		X		X	
Canada	X	X	X*	X	X*	X
India	X			X		X
Malaysia	X	X		X		X
Mexico	X		X		X	
Nigeria	X		X			
Russia	X	X	X			X
U.A.E.		X		X		X
U.S.	X	X	X*	X		X

Source: Bauer et.al. 2018

**Legend**

N= National governments  
 S=Subnational governments (States, provincial, regional, or municipal)  
 \* Only applicable in Federally administered territories

Table 6. Petroleum tax collection by level of government in selected countries

Country	Corporate Income Tax		Royalties		Property/Land Tax	
	National	Sub	National	Sub	National	Sub
Australia	X		X*	X		X
Brazil	X		X			X
Canada	X	X	X*	X		X
India	X		X**	X		X
Malaysia	X		X		X	
Nigeria	X		X			
U.A.E.		X		X		X
U.S.	X	X	X*	X		X

Source: Bauer et.al. 2018

**Legend**

N= National governments  
 S=Subnational governments (States, provincial, regional, or municipal)  
 \*Only applicable in Federally administered territories  
 \*\*Only offshore



Recognising that subnational ownership and control of natural resources may lead to inequality among the various subnational governments, Canada uses an equalisation policy. Under the policy, certain provinces are required to transfer some funds to the national government, to be used to support the less endowed states. In Australia, fiscal equalisation is also used to reduce the vertical fiscal imbalance between the revenue and spending powers of the Australian Government and the state governments and to offset interstate differences in the capacity to raise revenues.<sup>19</sup> States with very high capacity to raise revenue from mining production have the highest financial capacity with Western Australia being the state with the highest financial capacity of all states.

### Review of the Mechanisms for Inter-governmental Coordination – A Focus on Federal-State Collaboration

Although, Nigeria has not taken any major step to decentralise certain aspects of mineral resource governance to the subnational, there are currently few legislative, regulatory, and policy mechanisms for federal-state coordination and collaboration.

» Foremost among the mechanism for federal-state coordination and collaboration is, perhaps, the Mineral Resources and Environmental Management Committee (MIREMCO), which under section 19 of the NMMA is to be established in every state of the federation to, inter alia, advise the Minister of Mines and Steel Development on matters relating to environmental pollution and land degradation and matters relating to compensation payable for damage caused by mining operations, and to facilitate issues of collaboration among all tiers of government and other stakeholders on social and environmental issues. The composition of the committee reflects an intention to promote intergovernmental cooperation. For instance, among the Committee's

members are: (i) a representative of the Local Government Council when matters affecting the Council are being considered by the Committee; (ii) a representative of the State Environmental Department or Agency; and (iii) a representative of the Federal Ministry of Environment in the State. Despite this laudable intention, MIREMCO has several limitations that make its utility as a tool for intergovernmental cooperation and citizen engagement difficult. Its biggest limitation is that the role of the committee members is mainly advisory to the Minister without operational powers to enforce and implement.

It must be emphasised that MIREMCO is not a regulatory agency and therefore should not be viewed as such by miners, communities, or the larger public. Its permission is not required before licence holders can do their work. Another limitation is with the structure as the chairman of the committee is meant to be the MEC officer in the state who is usually lower in rank to other members of the civil service. Furthermore, representatives of host communities and even non-state actors in the committee are not included in the committee. Regulation 163 of the NMMR allows the MIREMCO to seek the advice of host communities if it so desires when faced with a matter affecting the community. However, the language of the regulation shows that the involvement of host communities is at the discretion of MIREMCO. There is therefore the risk of an affected community being involved only to give an appearance of inclusion or not being involved at all. The objectives of the Committee might be better served if community involvement is statutorily required rather than encouraged.

» Another collaboration mechanism is the Federal-State Regulatory Dialogue on Compliance and Enforcement, initiated by

<sup>19</sup> Spasovejic, J., & Nicholas, M. (2013). Fiscal Equalisation in Australia. *Australian Journal of Public Administration*, 72(3), 316-329.

the National Environmental Standards Regulatory and Enforcement Agency (NESREA), with support from United Nations Development Programme. The Dialogue is a platform intended to provide a forum for officials in the various regulatory agencies at both Federal and State levels to share ideas and experience that would enhance the implementation of environmental laws and regulations in Nigeria. While the Dialogue is focused on environmental protection, its conversations cover the mining sector as well. While the Dialogue is a useful step to foster synergy between Federal and State environmental regulatory agencies and build a national coalition to address the social and environmental aspects of mining, it has no clear strategy for carrying forward its discussions. There is no link between the NESREA dialogue mechanism and MIREMCO.

- » The establishment of the National Council for Mining and Minerals Resources Development (NCMMRD) as a national forum for policy deliberation and assessment is also relevant in this regard. The Council brings together diverse stakeholders, including the private sector, academia, trade unions in the mining sector, practitioners, and the government at all levels to review trends in the mining and minerals sector and brainstorm on how the country can leverage opportunities to increase mining contribution to national development. The Council's inaugural meeting was held in 2017.<sup>20</sup> It is however not clear if the

NCMMRD has the structure to guide its discussions and to develop those discussions into meaning actionable programmes that are also measurable.

- » Despite these mechanisms, the agitation for mineral resource devolution to the subnational remains high. The decline in oil prices in 2014 put a lot of states under pressure to boost their internally generated revenue and many believed mining would provide additional income (Mining roadmap). They also had an erroneous belief that the shareable revenue would be as high as petroleum revenues but were low because they were not shared equitably even though the allocation formulas are similar. Furthermore, they believe that de-listing mineral revenues from the exclusive list in the constitution will give them greater control over mineral resources and revenue. Despite the exclusivity provided to the federal government, several states have established ministries to oversee mineral resource developments and tried to use their authorities under the Land Use Act to interfere with legitimate mining decisions made by the MCO and other Ministry agents. To pacify them and incentivise them to support mining industry development within their states, the roadmap encourages state governments to participate in the sector as full or partial equity investors. Despite these incentive and mechanisms, none of the states have closed their mining ministries.

<sup>20</sup> (Vanguard, 2019). Minister of Mines, others storm Ekiti for Council of Mining, Mineral Resources Dev. Retrieved from <https://www.vanguardngr.com/2019/11/minister-of-mines-others-storm-ekiti-for-council-of-mining-mineral-resources-dev/>.

## Legal and Regulatory Framework - Nigerian Minerals and Mining Act 2007 (NMMA), and Nigerian Minerals and Mining Regulations 2011 (NMMR)

### Mineral Licensing Process

- » The mining contracts and licensing process does not prioritise technical competence. The NMMA establishes several types of mineral rights, namely, reconnaissance permit, exploration licence, small-scale mining lease, mining lease, quarry permit, each of which confers a different set of rights on its holder. A reconnaissance permit allows less penetrative search for minerals than an exploration licence. Successful exploration is one that progresses to small-scale mining or mining, in which case the holder of the exploration licence shall be issued with a small-scale mining lease or a mining lease.

The NMMA establishes two licensing methods: first-come-first-served and competitive bidding. Both methods represent international best practice in specific situations. Where mineral prospectivity is low, first-come-first-served is usually the preferred method because competition for investments is likely to be low. It thus makes sense for the Government to engage directly with any investor that shows an interest to negotiate a mining agreement. Where prospectivity is high, there is potential for more than one investor to show an interest in exploring for minerals. Competitive bidding is the preferred method in such a situation because it has the potential to lead to the grant of a mineral licence to a highly competent investor. It also allows the Government to set the licensing standards high, so that only serious investors with high technical

and financial capabilities are likely to apply for a licence. The competitive bidding process also tends to be more transparent than first-come-first-served. This is because first-come-first-served is usually completed with little or no public oversight whereas competitive bidding typically has requirements for publication of the bid process, allowing for public oversight. However, there is nothing inherent in first-come-first-served that prevents the licensing authority from following an open and transparent process to ensure that licences are granted to competent investors. Competitive bidding can also be more cost intensive and time consuming to implement than first-come-first-served since the licensing authority will be dealing with multiple applications at the same time. Regardless of which licensing method is adopted, the expectation is that the exploration licence holder will progress to actual mining within a reasonable time.

The regular method adopted in Nigeria is first-come-first-served. This is understandable given the dearth of data on mineral prospectivity. While the first-come-first-served approach is in line with international leading practice, the current state of its implementation in Nigeria has not seen a significant percentage of competent companies with exploration licences advancing to mining leases. Exogenous factors, such as global downturn in commodity price likely contribute to this.

- » The disclosure of beneficial owners has not been statutorily authorised in the mining industry. Another big challenge in mineral contracts and licensing in Nigeria is transparency of the process and disclosure of beneficial owners. While Nigeria has made progress in

implementing beneficial ownership disclosure in the mining (and oil and gas) industry, especially through NEITI and the enactment of a new company's law, much work still needs to be done. First, most of the measures adopted to promote transparency are at the policy level as the NMMA has not yet been amended to statutorily operationalise those policies. This has made it difficult for NEITI to effectively promote transparency in the mining and larger extractive industry. One exception is beneficial ownership disclosure, which received greater recognition under the new Companies and Allied Matters Act 2020 (CAMA), which extends disclosure obligations to private companies (which include mining companies). However, CAMA 2020 has been found to retain many of the weaknesses of CAMA 2004. For instance, it says nothing about "ultimate ownership", which is the focus of international standards on beneficial ownership.<sup>21</sup>

## Mining Taxation

- » The government does not have a reliable mechanism for assessing, collecting, and forecasting taxation in the mining sector. The regime for mineral taxation in Nigeria is established principally under the Companies Income Tax Act (CITA), Capital Gains Tax Act, Value Added Tax Act, and Personal Income Tax act (PITA). The NMMA provides for the payment of royalties on minerals obtained during exploration and mining (section 33), as well as annual surface rents (section 102). PITA establishes the tax regime for individuals, employees, and partnerships. Mining-related incomes taxable under the PITA include gains or profits derived from mining by the many individuals and unincorporated entities that are involved in informal
- artisanal mining. However, the challenge is how to ensure that these individuals and organisations report their income. There are also indirect taxes that are not tied to a company's income or profits but are imposed to fund specified government programmes. An example is the Tertiary Education Trust Fund Act, which mandates companies to pay 2 percent of their assessable profits into the Tertiary Education Trust Fund to help support tertiary education in Nigeria. Tax incentives are also provided, especially under the NMMA.
- » One of the key issues in mining taxation in Nigeria is the accuracy of income and profits reporting by mining companies. Since much of the mining takes place in the informal sector, monitoring the companies' activities is difficult. The Government does not seem to have developed a reliable mechanism for ascertaining the accuracy of financial reports submitted by companies. It is not clear if it even has the human and technology driven capacity to develop such mechanisms.
- » Nigeria's fiscal regime does not provide investors with fiscal stability. Except for royalties and a few other fees, the bulk of mining taxation is governed by the general CITA, which can be changed at any moment and therefore does not provide investors with much needed fiscal stability. Nigeria has specialised mining legislation in the form of the Mineral and Mining Act, but it does not have a specialised mineral income tax unlike several other mining jurisdictions. Nigeria should develop a Mineral Income Tax Act (MITA) with the aim being to eliminate duplications and complexities and provide investors with firm guarantees of tax stability. It should be largely based on the current tax regime

<sup>21</sup> (Nwapi, Ezeigbo, & Oke, 2021). Developments in beneficial ownership disclosure in the extractive industries in Nigeria. *The Extractive Industries and Society*, 8(1), 443–456.

for mining but in a simplified version. Through the MITA, the government will be stabilising mining taxation by taking the mining fiscal regime outside of the general corporate fiscal system. This can be achieved by using specialised taxes and/or royalties which are separate from the overall tax regime of a given country. Unifying this into a mining tax code is the strongest and most efficient way to stabilise mining taxation.

- » Another key issue in mining taxation in Nigeria is whether existing tax incentives are working and whether additional tax incentives are needed to generate more investor interest to accelerate growth in the sector. Part III of the NMMA establishes several tax incentives, such as capital allowance, exemptions from customs and imports duties, and tax relief periods. There are also incentives under CITA.<sup>22</sup> Analysts believe, however, that existing incentives are adequate to incentivise investors and therefore that additional incentives are not necessary, except for investments in research and development.<sup>23</sup> On their own, tax incentives are not enough to attract investors who tend to base their investment decisions on a suite of factors including access to data on geological potential, stable policies, security of tenure, available infrastructure. The weakness of these factors has also contributed to Nigeria's poor performance in attracting global exploration investments almost two decades after the NMMA was passed into law. So far, it has only managed to attract 0.12 percent of global exploration investments compared to other countries in the West African region who are (on average) receiving a 5 percent share of exploration investments worldwide

(Mineral Sector Support for Economic Diversification Project Appraisal Document).

*Without considerable investments in exploration, it will be difficult, and near impossible, for Nigeria to have exploration success that would lead to future mines. Canada is one of the most competitive countries today because of its success in attracting exploration investment through its active promotion of government exploration and mineral focused policies and tax incentive programmes.<sup>24</sup> Its use of flow-through-shares (FTS)<sup>24</sup>, which is a tax-based financing incentive, has helped exploration companies to finance their exploration and project development activities and provided their investors access to certain tax benefits. To replicate Canada's success, Nigeria will also need to carefully design tax-based financing incentives and provide an enabling environment that will attract global junior mining companies to co-invest in grassroots exploration with Nigerian investors. Linked to using exploration and mineral focused tax incentives as Canada has done to attract global exploration investment,*

## Environmental and Social Management

Effective management of the environmental impacts of mining is a precondition for achieving sustainable outcomes in mineral development. However, the legal, regulatory, and institutional framework for environmental and social impacts does not adequately leave room to account for, mitigate, and offset the environmental and social costs of mining activities. Measures, including action plans and response procedures, must be put in place to minimise, if not prevent, adverse environmental

<sup>22</sup> (Baba, 2018). Are additional tax incentives needed to stimulate the Nigerian mining industry? – Part 1, Retrieved from <https://www.pwc.com/ng/en/assets/pdf/mining-tax-incentives-prt1.pdf>.

<sup>23</sup> (Ajayi and Akin-Moses, 2017). The national petroleum fiscal policy – Old wine in a new bottle? PricewaterhouseCoopers, <https://www.pwc.com/ng/en/assets/pdf/tax-watchmarch-2017-draft-npfp.pdf>.

<sup>24</sup> (Khindanova, 2012). Impacts of Tax Incentive Programs on Mineral Exploration Expenditures in Canada: An Empirical Analysis Irina Khindanova University of Denver, Journal of Management Policy and Practice vol. 13(5) 2012.

<sup>25</sup> Under the FTS, the exploration or mining company agrees to incur eligible exploration and development expenses in an amount up to the consideration paid by the taxpayer for the shares, which are the taxpayer's expense for tax purposes. The only expenditures that are eligible for the FTS include grass roots expenditure (for carrying out geological surveys, drilling by rotary, or trenching, digging test pits and preliminary sampling) and pre-production expenses for bringing a new mine into production in reasonable commercial quantities.

impacts during the entire life cycle of a mining project – from exploration all the way down to closure. There are several decision-making tools needed to achieve this. To this end, the NMMA provides for the conduct of EIAs (section 119) and the development of Environmental Rehabilitation and Closure Programmes (section 120). The conduct of EIAs is governed by the EIA Act.

» **Inadequate provisions for social impacts.**

There are however several concerns to be raised about Nigeria's mining safeguards regime. One, the regime does not include some other important decision-making tools to address social impacts, Social Impact Assessments (SIAs) and Resettlement Action Plans (RAPs). To be fair, however, section 56(1)(d) of the NMMA also requires mineral operations to be conducted in an "environmentally and socially responsible manner." Also, the EIA Act requires that an EIA should consider any change a project may have not only on the environment, but also on "health and socio-economic conditions" (section 61(1)). This is also the common practice in most jurisdictions (one exception being South Africa, where mining licence applicants are required to submit Social and Labour Plans<sup>26</sup>, but it comes with some problems because environmental impacts are different from social impacts. For instance, those affected by the social impacts of mining may be different from those affected by the environmental impacts. Also, the process for undertaking an SIA may be different from the process for undertaking an EIA. While the EIA Act provides insights into how environmental impacts can be accounted for, it has no companion provision on social impacts. Thus, SIAs are treated as a shadow of EIAs. Furthermore, it does not explicitly

include socio-economic assessments and sustainability planning and is weak on citizen engagement and the use of the Free, Prior, and Informed Consent (FPIC) principles as well as gender considerations, and grievance redress mechanisms.

Given the high level of social risks associated with mining in Nigeria, it is doubtful that social impacts can be effectively addressed through EIAs. Most EIA experts are natural scientists with little or no social science expertise.<sup>27</sup> The result is that the social impacts of mining on local communities may not be fully appreciated by EIA experts, leading to a poor assessment of social impacts.

- » **Inadequate provisions for environmental and social impacts of the informal ASM sector.** The Act is also weak on the environmental and social impacts of the informal ASM subsector, which is conducted largely by people with little or no knowledge of health, safety and environmental standards and with very rudimentary equipment. The Zamfara lead poisoning incident demonstrated how serious the environmental and health risks posed by informal ASM are.<sup>28</sup>
- » **EIAs are not being maximised in the mineral licensing process.** Another issue of concern is the exact role the environmental decision-making tools play in the mineral licensing process. Mineral development involves two fundamental stages: exploration and exploitation. Due to the risky nature of exploration, a holder of an exploration licence that has made discoveries of the licensed mineral in commercial quantities is given an automatic right to

<sup>26</sup> (Nwapi, 2015). Governance considerations relating to social impact assessments for mining development in African communities. *Journal of Environmental Assessment Policy and Management*, 17(2), 1550019. DOI: 10.1142/S1464333215500192.

<sup>27</sup> Du Pisani, J. A., & Sandham, L. A. (2006). Assessing the performance of SIA in the EIA context: A case study of South Africa. *Environmental Impact Assessment Review*, 26(8), 707-724.

<sup>28</sup> Udiba, Akpan and Antai, (2019). Soil lead concentrations in Daret Village, Zamfara, Nigeria. *Journal of Health & Pollution*, 9(23). doi: 10.5696/2156-9614-9.23.190910.

apply for and be granted mining lease for the mineral. Section 65(2) of the NMMA proclaims that “No Mining Lease shall be granted in respect of any area within an Exploration Licence Area or a Small-Scale Mining Area except to the Holder of the Exploration Licence or Small-Scale Mining Lease covering such area.” This is intended to provide the exploration licence holder assurance that if it discovers commercial quantities of the licensed mineral, its investments would not be in vain. The question, however, is whether the exploration licence holder would be required to demonstrate that it has met all its environmental obligations before it can be granted the mining lease. Must the exploration licence holder submit an EIA before a mining lease can be granted? The NMMA requires that EIAs be submitted before commencement of operations – and this applies to both exploration and exploitation operations (as well as to quarrying operations and water use) (section 119). This requirement undermines the regulatory role that an EIA is supposed to play in the grant of a mineral right. The submission of at least a preliminary EIA should be required at the time of application.

In some jurisdictions, such as Quebec, Canada<sup>29</sup>, exploration licence holders are not granted automatic or even priority rights to an exploitation licence for the explored area. This means that an exploration licence holder competes with other applicants for an exploitation licence in respect of the area explored by the exploration licence holder. While this may seem to deny the exploration licence holder the advantages conferred by the regime under the NMMA, the exploration licence holder in Quebec has a comparative advantage over other applicants because having explored the area in question, it possesses more geoscientific data about

the area than other applicants and so is likely to put forward a stronger application. The advantage of Quebec’s approach is that it gives the Quebec government an opportunity to consider all regulatory requirements before deciding. From a developing country’s perspective, however, it may not be the best approach to attract investors. For Quebec, the system works because of the existence of strong governance institutions. A middle approach that Nigeria should consider is to provide a priority right to the exploration licence holder to be considered for an exploitation licence rather than an automatic right to be granted the licence. Such a priority right would allow other companies to be considered for an exploitation licence in respect of the area in question assuming that the exploration licence holder fails to comply with established regulatory requirements. Legal provisions should then be added to require the submission of an EIA as well as demonstration by the exploration licence holder that it has complied with all the terms and conditions of its exploration licence (including those relating to environmental and social issues) before it can be granted an exploitation licence.

- » [Procedures for public participation in the EIA process are weak.](#) Other issues relating to the effective conduct of an EIA for mining projects include inadequacy of reliable baseline data, the extent of public participation involved in the EIA process (including the stage in the process at which public participation is allowed), lack of provisions for appeal of an EIA decision, issues relating to post-EIA monitoring, and multiplicity of institutions with environmental regulatory authority.<sup>30</sup>
- » [The Environmental Protection and Rehabilitation Fund \(EPRF\) has not been operationalised.](#) In addition, the

<sup>29</sup> (Quebec Mining Act 2019)

<sup>30</sup> (Ingelson & Nwapi, 2013).

NMMA provides for the establishment of the Environmental Protection and Rehabilitation Fund (EPRF) for the “purpose of guaranteeing the environmental obligations of Holders of Minerals title” (section 121). The EPRF is funded by contributions from mineral title holders. The actual amount to be contributed by a mineral title holder is specified in an approved Environmental Protection and Rehabilitation Programme. However, this Fund has not yet been established. Good governance principles, such as the Santiago principles on transparency and accountability, would be required for the efficient management of the Fund.

- » **Low level of compliance with environmental legal and regulatory provisions.** Low level of compliance with existing laws by license holders is another major hurdle. This is particularly the case with environmental requirements, including rehabilitation and remediation obligations and social requirements, including the process by which companies obtain consents from landowners and negotiate CDAs with communities and even implement them.<sup>31</sup>

### Artisanal and Small Scale Mining Management and Development

- » **The development of the ASM Sector needs to be better managed.** Mining operations are mostly at the ASM level. Mining operations in Nigeria are mostly at the ASM level, which constitutes over 90 percent of the industry.<sup>32</sup> While tremendous efforts to formalise the sector have been made and continue to be made, much informality still exists. A key area of concern is the capacity of the MMSD to effectively monitor ASM

operations. There are conflicting reports about the number of ASM operators in Nigeria. One report, credited to the Artisanal and Small-scale Mining Department in the MMSD, states that more than 500,000 Nigerians are directly involved in ASM (News Agency of Nigeria, 2019) while another report, credited to the Minister of Mines and Steel Development, Olamilekan Adegbite, put the number at 1759.<sup>33</sup> Another report credited to the former President of the Nigerian Mining and Geosciences Society and Chairman of the Mining Implementation and Strategic Team, Professor Olugbenga Okunola, states that Nigeria has over 1000 illegal mine sites.<sup>34</sup> This share number – whether it is 500,000 or 1759 – can overwhelm even a well-resourced regulatory agency.

Furthermore, with the share number of illegal mine sites, environmental monitoring would be extremely difficult for the MMSD. This is in part because the MMSD may not even be aware of the location of the sites. The operators are also likely to be unskilled and lacking in scientific knowledge of environmental issues associated with mining.

The above facts have strong links with the growth in the mining of conflict minerals, which is driving Nigeria’s increasingly high insecurity. Illegal gold mining has been identified as one of the underlying drivers of conflict in the north, especially in Zamfara State and recently in Niger State. A study by the Institute for Security Studies notes that 80 percent of mining in the north is conducted illegally and that illegal mining leads to violent conflicts in at least two ways: The first is that sponsors of illegal mining fight over control of mine fields. The second is that the sponsors

<sup>31</sup> Usman, N.L. (2015). Environmental regulation in the Nigerian mining industry: Past, present and future. *Journal of Energy and Natural Resources Law*, 19(3), 230–243.

Ingelson, A. and Nwapi, C. (2014). Environmental impact assessment process for oil, gas and mining projects in Nigeria: A critical analysis. *Law, Environment and Development Journal*, 10(1), 35–56.

Ladan, M. T. (2012). Review of NESREA Act 2007 and Regulations 2009–2011: A ne dawn in environmental compliance and enforcement in Nigeria. *Law, Environment and Development Journal*, 8(1), 116–130.

<sup>32</sup> (Uchechukwu, 2021). FG to site ASM cluster centre in Cross River — Minister. 1 February, FG to site ASM Cluster centre in Cross River — Minister - Vanguard News ([vanguardngr.com](http://vanguardngr.com)).

<sup>33</sup> (Mogbede, 2019). Minister says 1,759 artisanal mining sites identified across the country. 8 November, <https://www.vanguardngr.com/2019/11/minister-says-1759-artisanal-mining-sites-identified-across-the-country/>.

<sup>34</sup> (Punch, 2017). Over 1,000 illegal mining sites dot Nigeria - NMGS. <https://punchng.com/over-1000-illegal-mining-sites-dot-nigeria-nmgs/#:~:text=More%20than%201000%20mining%20sites%20across%20the%20country,Conference%20of%20the%20NMGS%20in%20Abuja%20on%20Thursday.>



fund banditry in mining communities to force community residents to flee and create space for illegal mining to continue in those communities undisturbed.<sup>35</sup>

- » **Other tax related issues include transfer pricing.** It is not yet clear the extent to which this is occurring in the mining sector in Nigeria. The risk of transfer pricing is especially high where the mineral value chain is not well understood by the Government. This is especially so in Nigeria where the Government cannot account for much of the movement of minerals from one chain to another. However, transfer pricing regulation has become more stringent in Nigeria since the adoption of the Income Tax (Transfer Pricing) Regulations 2018 (the 2018 Regulations), which replaced the 2012 regulations. One of the main drivers of this development is an increase in the availability and accessibility of data through an ongoing exchange of information between the Federal Inland Revenue Services and competent authorities in other countries.<sup>36</sup> Still, the regulations' usefulness for addressing transfer pricing in the mining sector depends substantially on the Government's understanding of the mineral value chain. It is therefore important for the Government to have technical experts conversant with mineral value chains for every one of the various minerals being mined.

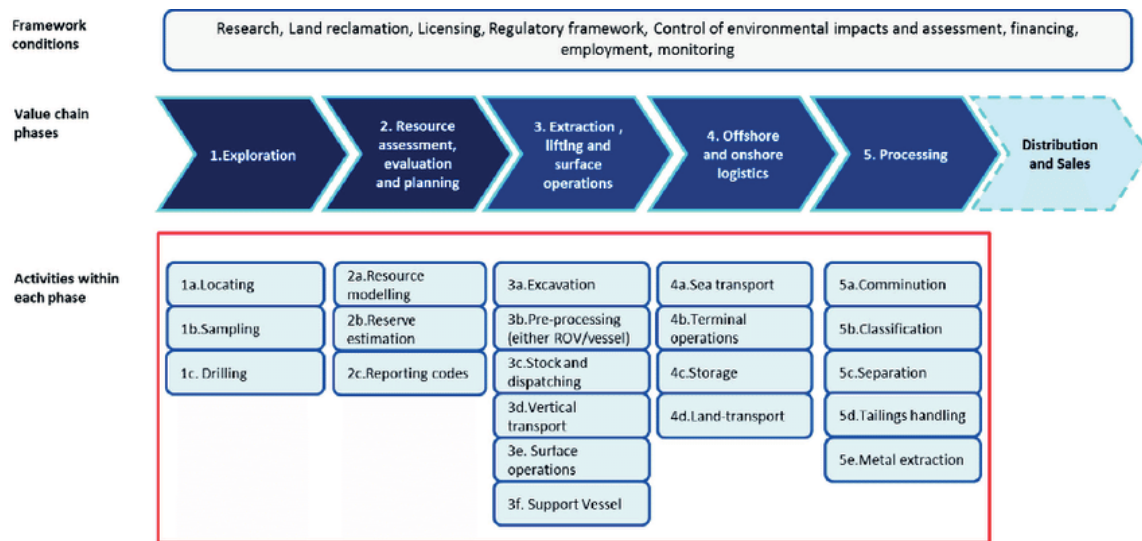
## Mining Linkages

- » **Nigeria's approach to mineral supply and value chains is not holistic.** The AMV calls for a holistic approach to mineral development in Africa to fully realise the potential benefits of mineral resources. This approach requires not only seeking to optimise revenues collected from companies through royalties and taxes, but also acting strategically to retain the value of the resources extracted

by establishing linkages between the mining sector and other aspects of the economy. One of the policy objectives for mining sector development under the ERGP is to "Encourage and promote mineral processing and value addition industries that strengthen backward and forward linkages".<sup>37</sup> The linkages include downstream (or forward) linkages into mineral beneficiation and manufacturing, upstream (or backward) linkages into mining capital goods, consumables and service industries, spatial linkages into infrastructure, such as power, logistics, communication and water, and knowledge linkages into skills and technological development.<sup>38</sup> The benefits of mining cannot be fully realised unless the Government adopts a whole-of-supply-chain and value-chain approach to mineral development, which the NDP proposes.

- » **Value Chain.** The Nigerian Government has acknowledged the importance of value chain and has begun to introduce initiatives aimed at minimising the export of raw materials and increasing industrial and manufacturing activities. The Government's current priority is gold (one of its strategic minerals), where part of its goal is to minimise illegal gold mining and smuggling and create jobs. The Presidential Artisanal Gold Mining Initiative (PAGMI) was launched in 2009 to promote the production and refining of gold for purchase by the Central Bank of Nigeria (CBN) under a Federal Gold Reserve Treasury Scheme.<sup>39</sup> Two gold refineries are currently being built by private sector companies to enhance value addition.<sup>40</sup> Plans have also been announced to site ASM cluster centres for selected minerals in various states.<sup>41</sup> The figure below shows a typical mineral value chain.

Figure 2: A Typical Mineral Value Chain



While the rationale for value addition is undeniable, its process is challenging. One of the major challenges is that it involves long-term thinking and huge capital investments. For example, the construction of refineries and smelters to support mineral beneficiation requires huge capital expenditures and long-term investment as well as a well-established power, transport, and logistics network.<sup>42</sup>

One recent study found that in the barite industry, the challenges include:

- » Availability of few processing plants;
- » Long distance between mining sites and processing plants;
- » Poor technologies for removing impurities from barite ores;
- » Scarcity of technical professionals with skills for operating beneficiation machines;
- » Most of the needed technologies are imported;

- » Lack of sustained orders from end-users;
- » Inadequate infrastructure (access roads, electricity, water);
- » Poor access to funds for industrial machines; and
- » Multiple taxations from local authorities<sup>43</sup>.

The study found that poor access to funds for industrial machines was the challenge considered most important by the miners surveyed, followed by poor technologies for removing impurities, and multiple taxations from local authorities.

- » **Supply Chain.** However, the Government has given lesser priority to the supply chain, but the gains of value chain cannot be fully realised without a development of the supply chain as well. At the same time, sustainable supply cannot be ensured without an understanding of the different

<sup>35</sup>(Ogbonnaya, 2020). Criminal networks fuel community violence in a bid to exploit untapped mineral deposits in the Northwest. Institute for Security Studies. Retrieved from <https://issafrica.org/iss-today/how-illegal-mining-is-driving-local-conflicts-in-nigeria>.

<sup>36</sup>(Ososami, Eimunjaze and Jawando, 2021). The transfer pricing law review: Nigeria. Udo Udoma & Belo Osagie. Retrieved from <https://thelawreviews.co.uk/title/the-transfer-pricing-law-review/nigeria>.

<sup>37</sup>See Federal Republic of Nigeria Economic Recovery & Growth Plan 2017 – 2020, p.62

<sup>38</sup>(UO NGOZI Institute, 2017). Enhancing value addition in the extractive sector in Africa: Why is it important and how can it be achieved? Retrieved from <https://uongozi.or.tz/wp-content/uploads/2018/11/Enhancing-Value-Addition-in-the-Extractive-Sector-Africa.pdf>.

<sup>39</sup>(ThisDay, 2020). Going for gold. August 3, <https://www.thisdaylive.com/index.php/2020/08/03/going-for-gold/>.

<sup>40</sup>(Nwakaudu, 2021). Mining: Time to revive Nigeria's buried prosperity – FG. National. Retrieved from <https://www.sunnewsonline.com/mining-time-to-revive-nigerias-buried-prosperity-fig/>.

<sup>41</sup>(Uchechukwu, 2021). FG to site ASM cluster centre in Cross River — Minister. 1 February, FG to site ASM Cluster centre in Cross River — Minister - Vanguard News ([vanguardngr.com](http://vanguardngr.com)).

<sup>42</sup>(UNGOZI Institute, 2017). Enhancing value addition in the extractive sector in Africa: Why is it important and how can it be achieved? Retrieved from <https://uongozi.or.tz/wp-content/uploads/2018/11/Enhancing-Value-Addition-in-the-Extractive-Sector-Africa.pdf>.

<sup>43</sup>(Otoijamun et al., 2021). Fostering the sustainability of artisanal and small-scale mining (ASM) of barite in Nasarawa State, Nigeria. Sustainability, 13, 5917.

components of the value chain to identify the weak links and bottlenecks in the supply chain.<sup>44</sup> Understanding the various components of the mineral value chain would be approached on a mineral-by-mineral basis since each mineral has its own value chain despite the similarities that may exist between them. It is also essential to understand the characteristics of the actors within the supply chain as this would help to shape policies and programmes to better address the needs of supply chain actors and the challenges they face. An example is barite whose value chain is linked to the oil and gas industry's supply chain and local content policy. The Government is said to be driving towards ensuring that all barite used in the oil and gas industry in Nigeria is sourced locally. This is part of the Government's local content policy in the oil and gas sector, but its realisation hinges on a good understanding of the supply chain of barite to ensure a sustainable supply of barite to the oil and gas industry.

### Community Development Agreements

» Nigeria is not maximising the local impact inherent in the Community Development Agreements (CDA). There are provisions in the NMMA and NMMR designed to enhance the positive impact of mining at the local level while minimising its negative impacts. Among the instruments adopted is Community Development Agreements (CDAs). A CDA is defined as "a legally binding contract between the holder of an authorization granting mineral extraction rights, and communities that will be affected by the exercise of those rights, that addresses matters of community development".<sup>45</sup>

It defines the relationship between a mining company and its host community with the goal of ensuring that a mining project contributes to the sustainable development of the community. CDAs help to ensure the transfer of social and economic benefits to the community through the provision of scholarships, apprenticeship, technical training, and employment opportunities for indigenes of the communities. They are valuable in helping to manage expectations, reduce company-community conflicts, and enables mining companies to obtain a social licence to operate.

The negotiation of CDAs is mandated by section 116 of the NMMA, making Nigeria one of the few but growing number of jurisdictions where CDAs are mandated by law. Under section 117 of the NMMA, the objective of a CDA is to "specify appropriate consultative and monitoring frameworks between the mineral title holder and the host community, and how the community may participate in the planning, implementation, management and monitoring of activities carried out under the agreement." Section 116 requires a CDA to contain undertakings regarding the socioeconomic contributions that the project in question will make to the sustainability of the community. Issues it may address include:

- » educational scholarship, apprenticeship, technical training, and employment opportunities for indigenes of the community
- » financial or other forms of contributory support for infrastructural development and maintenance such as education,

<sup>44</sup>(Otoijamun et al., 2021). Fostering the sustainability of artisanal and small-scale mining (ASM) of barite in Nasarawa State, Nigeria. Sustainability, 13, 5917.

<sup>45</sup>(Otto 2017). How do we legislate for improved community development? Working Paper.102. Helsinki: UNU-WIDER.

- health or other community services, roads, water and power
  - » assistance with the creation, development and support to small-scale and micro enterprises agricultural product and marketing; and
  - » methods and procedures for environmental and socioeconomic management and enhance of local governance.
- » **ASMs are not required to negotiate CDAs with host communities.** However, artisanal miners are not required to negotiate CDAs with their host communities. This is based on regulation 193 of the NMMR, which refers only to holders of a quarry lease, a mining lease, and a small-scale mining lease, without mentioning artisanal miners. This exclusion may have been informed by practical considerations, given the relatively short-term duration of artisanal mining projects.
- » **Communities do not have the capacity to negotiate with companies.** There are also issues around whether a CDA can be enforced by a community, the capacity of communities to negotiate CDAs with companies, and whether local governments should have any role in the negotiation and/or implementation of CDAs. Regulation 193(5) of the NMMR defines a “host community” as the community located on or nearest to the mineral title area. Where this is not easily ascertainable, the Minister, in consultation with various public entities, shall determine which community is the host community”. There is a legitimate question as to why the Minister, rather the local government or the Governor, should be the authority to intervene when there is a controversy over which communities qualify as host communities. A localised approach to resolving the controversy is better. The Minister is too far removed from the site of controversy to be able to appreciate the issues and sentiments at play.

- » **CDAs are not being maximised in the licensing process.** The NMMA requires CDAs to be concluded before the commencement of a “development activity within the leased area”. However, reports show that CDAs are frequently negotiated years after the commencement of development activities. There are also issues around corruption and capture of the benefits of CDAs by local elites. Power imbalance between communities and companies may also affect the negotiation of CDAs.

There is a strong need to make it mandatory in the NMMA for CDAs to be approved before the ML is approved. Serious consideration should be given to revising the NMMA and NMMR and including the use of funds, trusts, or foundations (FTF) within CDAs as vehicles and instruments for sharing the benefits of mining projects with the surrounding communities. Specifically, they can be used for delivering community investment programs, facilitating the use of government payments derived from mining for development, and managing compensation funds. Under the Petroleum Industry Act (PIA), oil companies are required to establish and incorporate host community trusts at the CAC on behalf of a collective of settlers/ host communities and to establish host communities’ development funds to foster sustainable prosperity within host communities.

### Inter-agency Co-ordination

Furthermore, the MMSD has entered into Memoranda of Understanding with some other ministries, such as the Federal Ministry of Environment to jointly address the environmental impacts of mining. The purpose of the MoU is to address regulatory overlaps relating to the environmental aspects of mining. While the MECD is responsible for ensuring environmental compliance in the mining sector, the Federal Ministry of Environment and NESREA have statutory environmental

protection functions as well that are applicable to the mining sector. There is thus a need to streamline the reporting obligations of mining companies regarding Environmental Impact Assessments (EIAs) and related matters. The said MoU sets out the framework for collaboration between the two ministries on the procedure for approval of EIA and aims to improve the capacity of EIA officers in both ministries to deal with mining-related environmental matters. However, the MoU has a limited scope, as it focuses solely on the EIA process, ignoring post-EIA monitoring. The entire lifecycle of a mining project generates environmental impacts that need to be jointly addressed by the two ministries.

### Review of the Institutional Framework for Mining

The institutional framework consists of the Minister and multiple departments established under the NMMA. The departments include the Mining Cadastre Office (MCO), the Mines Environment and Compliance Department (MECD), the Mines Inspectorate Department

(MID), the Artisanal and Small-scale Mining Department (ASMD), the Metallurgical Inspectorate and Raw Material Development, and the Steel and Non-ferrous Metals Department. The agencies include the Nigerian Geological Survey Agency (NGSA), the Nigerian Institute of Mining and Geosciences (NIMG), the Nigerian Metallurgical Development Centre (NMDC), the National Steel Raw Materials Exploration Agency (NSRMEA), the Metallurgical Training Institute (MTI), Ajaokuta Steel Company (ASC), the Nigerian Iron Ore Mining Company (NIOMCO), and the Council of Mining Engineers and Geoscientists (COMEG). The following summary of functions in Table 7 focuses on the Minister, the MCO, the MECD, the MID, and the ASMD.

Table 7. Summary of some Institutional Functions

Institution	Key Functions
Minister	<p>Overall supervisory authority over the development of the mining sector to:</p> <ul style="list-style-type: none"> <li>» Ensure the orderly and sustainable development of Nigeria's Mineral Resources.</li> <li>» Develop a well-planned and coherent programme of exploitation of mineral resources taking into account the economic development, ecological and environmental factors.</li> <li>» Monitor compliance with Community Development Agreements by industry operators.</li> <li>» Establish the procedure for monitoring developments in the mining sector and encourage the private sector investment in mineral resources development.</li> <li>» Ensure that in the exploitation of the mineral resources, equitable balance is maintained between foreign and indigenous interests.</li> <li>» Create an enabling environment for the private investors, both foreign and domestic by providing adequate infrastructure for mining activities and identify areas where Government intervention is desirable in achieving policy goals and proper perspective in mineral resources development.</li> <li>» Accelerate the development of technical and professional manpower required in the mineral sector.</li> <li>» Establish environmental procedures and requirements applicable to mining operations.</li> <li>» Maintain liaison between investors and Government Departments and Agencies set up for the purpose of development of mineral resources and allied projects; and collaborate with other Ministries and agencies of the Federal Government whose functions relate to the objectives of this Act.</li> <li>» Develop a geo-scientific databank and collate detailed data concerning the identity, quantity and quality of Nigeria's Mineral Resources.</li> <li>» Initiate, organise and participate in mineral investment promotion.</li> <li>» Introduce investment friendly local contents measures for mining projects.</li> <li>» Facilitate the development of indigenous technical and professional manpower required in the mineral resources sector.</li> <li>» Cooperate on behalf of the Federal Government with other Governments and international agencies in respect of matters relating to Nigeria's mineral resources.</li> </ul>

Institution	Key Functions
MCO	<ul style="list-style-type: none"> <li>» Responsible for the day-to-day administration of the NMMA.</li> <li>» Consider applications for mineral titles and permits, issue, suspend and with the Minister's approval revoke mineral titles.</li> <li>» Receive and dispose of applications for the transfer, renewal, modification and relinquishment of minerals titles or extension of title areas.</li> <li>» Maintain a record of all mineral title applications.</li> <li>» Undertake such other activities that are reasonably necessary for the purpose of carrying out its duties under the NMMA.</li> </ul>
MID	<ul style="list-style-type: none"> <li>» Responsible for the general supervision over all reconnaissance, exploration and mining operations to ensure compliance with the Act.</li> <li>» Supervise and enforce compliance by mineral title holders with all mine health and safety regulations prescribed under this Act and any other law in force.</li> <li>» Prepare and render records, reports and returns as required by the Minister or as prescribed by Regulations.</li> <li>» Take custody of mineral resources required by any Court to be forfeited to the Government.</li> <li>» Disposal of mineral resources forfeited to the Government.</li> <li>» Carry out investigations and inspections necessary to ensure that all conditions relating to mineral titles and the requirements of this Act are complied with.</li> <li>» Review and recommend to the Minister, programmes for controlling mining operations.</li> </ul>
ASMD	<ul style="list-style-type: none"> <li>» Responsible for supporting and assisting artisanal and small-scale miners.</li> <li>» Ensuring that ASM activities are restricted to the established mineralisation zones.</li> </ul>
MECD	<ul style="list-style-type: none"> <li>» Responsible for the enforcement of social and environmental best practices in mining activities in Nigeria.</li> <li>» Has oversight over: <ul style="list-style-type: none"> <li>i. review of plans, studies and reports related to the environmental control and obligations of mineral titles.</li> <li>ii. enforcement of environmental regulations;</li> <li>iii. promotion of environmental audits and making of recommendation for correcting liabilities of mines; and</li> <li>iv. liaison with other government agencies involved in mining operations, closure and reclamation of disturbed mine land.</li> </ul> </li> </ul>

## Minister

- » **Lack of statutory clarity on the functions of the Minister vis a vis other institutions.** There is inadequate statutory certainty regarding the functions of the Minister and those of the various departments, such as the MCO. For instance, section 5(5)(a) authorises the MCO to “consider applications for mineral titles and permits, issue, suspend and upon the written approval of the Minister, revoke any mineral titles”. On the other hand, section 65(1) grants the Minister the authority to “grant and issue ... a Mining Lease” to a person who has submitted a “valid application”. The confusion noted here is created largely because the Act does not contain an interpretation section to statutorily distinguish between a “mining licence” and a “mining lease”. While a closer reading of the Act might suggest that the MCO, rather than the Minister, has licensing authority, such a reading might strain the nerves and there is simply no reason for such confusion. Regardless of what has been the practice within the Ministry, there is need for statutory certainty on what the Minister and the MCO can do and cannot do.
  - » **Inadequate statutory clarity in the provisions relating to the transfer of mineral titles.** The MCO is empowered by section 5(5)(b) to “receive and dispose of applications for transfer...”. On the other hand, section 147(1) of the Act requires that a transfer shall be approved by the Minister, subject to section 147(5). However, section 147(5) provides that the MCO “shall approve a transfer of a mineral title ... if the transferee is a qualified applicant”. It is thus not clear if the role of the MCO is to receive and process applications for transfer and then pass them on to the Minister for approval, or whether the MCO can itself approve transfer applications without recourse to the Minister.
  - » **Furthermore, there appears to be a contradiction between the NMMA and the NMMR about the conduct of bid rounds.** Section 9(2) of the NMMA authorises the MCO to consider competitive bids and to “select” the most beneficial bid having regard to factors enumerated in the Act. However, this authority seems to have been purportedly taken away by Regulation 24 of the NMMR, which not only authorises the Minister to establish the procedure and guidelines for the grant of licences and leases, but also to receive bid applications and to set up a bid committee to conduct the bid. Regulation 24(7) even allows the Minister to appoint external persons to join the bid committee – a potential violation of section 15 of the NMMA which establishes the independence of the MCO, and 5(4) of the NMMA which establishes the MCO as “the sole agency responsible for the administration of mineral titles.”
- Flowing from the foregoing is that the MCO’s independence is highly compromised by the very statute that establishes its independence. While there is no absolute independence – since all organs and departments of government are interconnected and should be interconnected if the affairs of government are to run smoothly – the independence of the MCO is very minimal. For instance, it is minimised by Regulation 24 of the NMMR, which allows the Minister to establish the procedure and guidelines for granting licences and leases, to receive applications for bids, and to establish a bid committee to conduct the bid. These powers deeply interfere with the MCO’s powers under section 9(2) of the NMMA discussed earlier. While the MCO is established



as a “body corporate” with power to “sue and be sued in its corporate name” (NMMA, section 4(1)), its independence in decision-making is not effectively guaranteed by the Act.

### Mining Industry Regulator

- » Unlike other sectors in the country, there is no independent regulator in the mining sector. There is no precise definition of an independent regulator. However, an independent regulator is believed to have certain characteristics, namely, (1) a separate legal personality, (2) whose members may not be removed by the political organs of government except for cause, rather than simply because the President, for instance, no longer wishes them to serve, (3) independent decision-making authority without interference from the political organs of government, and (4) usually rule-making and adjudicative functions.<sup>46</sup>

An independent regulatory regime is regarded as an aspect of good governance because by taking technical decisions away from the hands of politicians into the hands of experts, it leads to better decisions and promotes accountability.<sup>47</sup> Like petroleum operations and telecommunications, mining is a specialised field of activity requiring regulatory decisions to be made by experts trained in the various fields of mining. A related benefit of independent regulation is it protects decisions from political interference or at least minimises the likelihood of such interference.

There are however also limitations to independent regulation. One of them is the power of the President to remove

the board of an independent regulatory agency. Such power of removal may be abused unless there are provisions in the establishment statute enacting stringent conditions for removal of the board and the executive director. Another limitation in Nigeria stems from the discretionary power of the Attorney General under section 174 of the 1999 Constitution to ‘institute’, ‘continue’ or ‘discontinue’ any criminal proceedings against any person in any court with respect to an offence enacted under federal law. Under the power, the Attorney General can interfere in the criminal enforcement of regulations by an independent regulatory agency. While the power is to be exercised with due ‘regard to the public interest, the interest of justice and the need to prevent abuse of legal process’, studies show that this power has been abused on several occasions.<sup>48</sup> There is thus no absolute independence.

Moreover, statutory independence is not enough. The independent regulator also needs to be provided the institutional space to exercise its independence. A guaranteed source of funding can help to provide institutional space. In addition, the independent regulator needs support from the political organs of government, especially the president, to withstand pressure from powerful special interests.

By way of comparison, in the petroleum sector the Government has moved to an independent regulatory model whereby regulatory functions have been taken away from the hands of the Minister and placed exclusively in the hands of two independent regulators (one for upstream operations and the other for

<sup>46</sup> Morrison, A. B. (1988). How independent are independent regulatory agencies. *Duke LJ*, 252.

<sup>47</sup> Scott, C. (2014). Independent regulators. In *The Oxford Handbook of Public Accountability*.

<sup>48</sup> (Bello and Alkali, 2019). Discretionary powers of the attorney general: Whether or not a clog in the wheel of justice delivery in Nigeria. *International Review of Law and Jurisprudence*, 1(1), 41–47.

midstream and downstream operations) established under the Petroleum Industry Act 2021. The independent regulators are the Upstream Petroleum Regulatory Commission and the Midstream and Downstream Petroleum Regulatory Authority. Each is a separate legal entity responsible for the technical and commercial regulation of petroleum operations in their respective spheres. The Minister's role is limited to policy making and overall supervision of the petroleum industry. A similar approach has since been adopted in the telecommunications sector where the Nigerian Telecommunications Commission serves as an independent regulator, allowing the relevant

Minister to focus on policy making and overall supervision of the sector. The mining sector needs a similar reform. Coincidentally, the 2016 mining roadmap proposes to improve the enforcement of existing regulations by streamlining and merging the current functions of the Mining Cadastre Office, Mines Inspectorate and Mines Environmental Compliance into a new "super" Regulatory Agency. Subsequently, the government developed and submitted a bill to replace and 2007 Act and establish the Nigerian Mining & Minerals Commission. The proposed bill underwent two readings in the House in February and November 2018 but was not passed into law before the end of the last assembly.



## Chapter Four

# Strategic and Critical Minerals

### Overview of Nigeria's Strategic and Critical Minerals Landscape

Over two decades ago, the Government designated gold, coal, iron ore, limestone, lead/zinc, barites, and bitumen as Nigeria's strategic minerals. Designation of strategic and critical minerals tends to be country specific and is also meant to be a dynamic and periodic process. Although there is no global definition of critical minerals, which are also known as strategic minerals, by definition, they are important minerals. As important minerals, their designation is generally based on their criticality to the economy and national security and vulnerability of their supply chains to disruption and are what should drive the country's mineral strategy. Their criticality can change with time based on supply and demand, geopolitics, technological development, policy priorities etc.

Australia and Canada both have critical minerals strategies, policies, or plans along with lists, which usually overlap and are updated periodically, to guide public investment and decisions and secure minerals for their high-technology and energy-transition industries. In Australia, a federal Critical Minerals Strategy seeks to grow its critical mineral sector, expand downstream processing of these minerals, help meet future global demand for critical minerals, and contribute to its national security and economic prosperity. The critical list includes minerals with high domestic geological potential, each with a plan for their development by attracting investment and driving innovation. The strategy is linked to other major government resources development, manufacturing, and technology development initiatives. Although some provinces already have their individual strategies, Canada is currently developing a

Critical Minerals Strategy. The purpose of the strategy is to help advance the development of critical mineral resources and value chains to power the domestic and global green and digital economy. The value chain starts from mineral exploration and extraction to processing, refining, manufacturing, and recycling. The strategy is built on leveraging Canada's expertise in research and development.

China, European Union, Japan, and the United States also have critical minerals strategies, policies, or plans for the same general reasons as Australia and Canada have. China's strategic mineral list is included in its broader National Mineral Resources Plan to safeguard national economic and defence security and meet the development needs of strategic emerging industries. The strategy is built on directing state resources to developing the capacity to identify, mine and process critical minerals. With the EU, the Action Plan on Critical Raw Materials seeks to secure the EU's access to critical raw materials and develop its own capacity for extraction, processing, recycling, refining and separation of rare earths. To achieve the EU's objectives, the Action Plan includes ten actions with indicative timelines. In the US, the current goal of U.S. mineral policy is to promote an adequate, stable, and reliable supply of materials for U.S. national security, economic well-being, and industrial production. It is based on an executive order on America's supply chains to find ways to diversify sustainable sources, as well as expand domestic mining, production, processing, and recycling of critical minerals and materials. The strategy is linked to the Energy Act of 2020 and the Infrastructure Investment and Jobs Act that all seek to significantly strengthen the US domestic supply chains for clean energy materials. Japan, which is a resource poor country, developed its critical raw materials policy over a decade ago to diversify its supply chain by reducing its dependence on China for rare earths and investing in mining projects around the world and in its territorial waters.

Unfortunately, several decades after designating seven strategic minerals, Nigeria's approach to its strategic minerals still has several limitations. Very importantly, Nigeria does not yet have a policy, legal framework, or a strategy to define, designate, explore, mine, process and recycle strategic minerals and manage supply risks. It has still not updated the strategic mineral list developed almost two decades ago. The current list is only focused on the economic dimensions of its minerals but not national security dimensions. For instance, gold is increasingly being linked to the rise in insecurity in the country even though the government has launched several gold-based initiatives. In June 2020, the Government launched the Gold Purchase Scheme (under the Presidential Artisanal Gold Mining Development Initiative -PAGMI -2019), which enables the Central Bank of Nigeria to purchase artisanal mined gold that has been processed and refined according to the London Bullion Market Association standards. The Scheme provides access to markets to artisanal gold miners and will enhance the contribution of gold to the domestic economy. The Scheme is being piloted in Kebbi and Osun states. Despite these initiatives, there is a need to have a comprehensive strategy to develop the gold resources and its value chain and curb its national security associations. This issue also applies to tin, tantalum, and columbite, which criminals are also beginning to exploit.

Tin was an important commodity in Nigeria's economic and infrastructure development history, and yet it is not in the list. Furthermore, Nigeria currently

has a problem of security of supply of raw development mineral materials for its manufacturing, construction, and housing industry. It is also not yet maximising its future energy potentials domestically and globally. The 2016 Roadmap clearly recognises that the list of strategic minerals provided are not final but does not include any specific initiatives to make the designation of strategic minerals dynamic.

Several challenges, however, present themselves with designating strategic minerals in Nigeria. A major challenge that presents itself is the inadequacy and accessibility of reliable data about the quantity of deposits of the critical minerals in the country. The findings of the NIMEP report are not yet public and so it is not clear whether geoscientific and geophysical data about critical minerals are well covered in the report. This will be necessary to attract investments into the exploration of the minerals. A second challenge is that large capital investments are required for the development of the critical minerals.

Nigeria has a policy imperative to develop a comprehensive strategic/critical minerals and mineral resource protection policy and long-term strategy that addresses the challenges with the active participation of state governments, civil society, communities, and cross-sectoral ministries and agencies. Two key mineral groups that Nigeria should consider in developing the policy, strategy, and lists are the development minerals and future minerals. This chapter reviews both mineral groups in detail.

## Development Minerals: Prospects and Challenges

### Overview of Nigeria's Development Minerals Landscape

Globally, efforts to enhance the development of the mining sector have traditionally focused on (1) large-scale mining, which is export-led and dominated by multinational mining companies and (2) small-scale mining of export commodities like gold, gemstones, and the 3-T minerals: tin, tungsten, and tantalum (known as technology metals). However, in developing countries such as Nigeria, the lives of many depend on what are known as “development minerals” (or derogatorily called “low value minerals”), i.e., minerals that “minerals and materials that are mined, processed, manufactured and used domestically in industries such as construction, manufacturing, infrastructure and agriculture”.<sup>49</sup> The value of such minerals thus lies in their domestic use rather than export. Such minerals include:

- » Industrial minerals: a substance of economic value, exclusive of metal ores, mineral fuels, and gemstones (e.g., barite, bentonite, borates, calcium carbonate, clays, diatomite, feldspar, granite, gypsum, industrial sand, kaolin, silica, soda ash, talc, wollastonite and zeolite)
- » Construction materials (a sub-category of industrial minerals sometimes called ‘industrial rocks’): substances used in the construction of infrastructure, housing, and other built structures (e.g., gravel, limestone (cement), construction sand, aggregate, scoria, glass, ceramics, bricks).
- » Dimension stones (a sub-category of industrial minerals and construction materials): rock quarried for the purpose of obtaining blocks or slabs that meet specifications as to size (width, length, and thickness) and shape (e.g., granite, marble, slate, sandstone)
- » Enhance employment and income from development minerals, including those of women;
- » Improve the policy and regulatory environment for the harnessing of development minerals;
- » Minimise environmental impacts the exploitation of development minerals on communities;
- » Address individual and community rights and prevent conflict in the contest of development minerals;
- » Ensure decent working conditions for participants in the development mineral industry; and
- » Facilitate South-South cooperation and cross-country learning within participating countries in the Programme.

Of these strategic minerals, only limestone and barites are development minerals. Limestone is primarily used in the manufacturing of cement. Given the current high cost of cement, and cement’s importance in the building and construction industry, limestone is of strategic importance to Nigeria. On the other hand, barite is primarily used as drilling mud in the oil and gas industry.

Nigeria is a member of the ACP-EU Development Minerals Programme, a three-year, multi-country capacity building initiative of the African, Caribbean and Pacific (ACP) Group of States, coordinated by the ACP Secretariat, financed by the European Commission and the United Nations Development Programme (UNDP) and implemented by the UNDP. The programme aims to build the profile and improve the management of development minerals in Africa, the Caribbean, and the Pacific. Through capacity building of stakeholders in government, private sector and civil society, the Programme aims to:

The Programme has undertaken some baseline studies in some member countries to better understand the state of development

<sup>49</sup>(Franks, 2020). Reclaiming the neglected minerals of development. *Extractive Industries and Society*, 7(2), 453-460.

minerals in those countries. It reviewed the policy, legal and institutional framework; institutional operating context; and analysis of environmental, occupational, and social impacts; and market study and value chain analysis. These select countries have also received support to formalise their artisanal and small-scale mining enterprises. Although Nigeria has benefited from the capacity building programs, it has not yet been selected for such studies. It is plausible that Nigeria may not yet have participated in the selection process, which is highly competitive.

### Potentials and Challenges

Development minerals may not generate much revenue to the Government compared to high value minerals, but they are more likely to create linkages to the domestic economy than the so-called high value minerals. This is in part due to the cost-intensive nature of creating linkages with high value minerals such as gold, for instance, establishing a gold processing plant is expensive. Development minerals are also not vulnerable to the macroeconomic (e.g., currency inflation) and political challenges that accompany revenues from high value minerals (e.g., rentier effect). Since their use is mostly domestic, their demand is driven by local needs, and they are therefore not so vulnerable to fluctuations in international commodity prices. It has also been found that “they are not a significant driver of civil conflict; a major source of finance for illicit activities; or usually associated with the negative effects of rapid in-migration” (Franks, 2020). As such, development minerals offer an important corridor to the achievement of the SDGs.

Among the challenges to the growth of the development minerals sub-sector is the policy mindset of governments of developing countries, which tend to focus on globally traded “high value” minerals

as critical for national development. That mindset is outward-looking rather than inward-looking with the lure being export revenue. It also relies greatly on external assistance for its actualisation. Otherwise, development minerals would have formed a major component of the strategic minerals identified by the Government.

There are myriads of environmental, social, occupational health, and safety challenges associated with the mining of development minerals. These challenges are however associated with the historical neglect of the subsector in government policies and programmes.

### Policy and Reform Imperatives

Nigeria's Vision 20:2020 recognises the importance of development minerals as a source of economic growth and specifically identifies three long-term objectives that are linked with development minerals:

- » Linking the mineral sector to the real sector of the economy to encourage higher output and productivity and reduce factor input costs
- » Immediate revival of the steel industry, and
- » Greater use of locally produced industrial minerals.<sup>50</sup>

In June 2018, the Government developed a roadmap for Industrial Minerals. However, it is not clear if the roadmap was officially adopted as there is no publicly available copy of it.

The lack of a clear strategy for the growth of development minerals might mean that while the Government rakes in more revenues from high value minerals, local development needs of the manufacturing and construction sector may still not be met. This is an issue that is

<sup>50</sup> (National Planning Commission, 2009). Nigeria Vision 20:2020. [https://www.nigerianstat.gov.ng/pdf/uploads/Abridged\\_Version\\_of\\_Nigeria%20Vision%202020.pdf?msckid=4a695e47abb711ecbdda4ab9787e545b](https://www.nigerianstat.gov.ng/pdf/uploads/Abridged_Version_of_Nigeria%20Vision%202020.pdf?msckid=4a695e47abb711ecbdda4ab9787e545b).

worth looking into more closely, as support for the growth of the development minerals sub-sector can attract more domestic players, thereby increasing domestic competition. This in turn can help to bring down the prices of building and construction materials, which are mostly imported, thereby enabling many people to acquire their own homes. This may also help to conserve foreign currency.

There is a lot of informality around the mining or quarrying of development minerals in Nigeria. Government policy can encourage the actors to formalise, which in turn can increase Government's revenue from development minerals. Reform should therefore be geared towards, among other things, minimising, if not eliminating, informality in the subsector. This would also require the mobilisation of stakeholders in the development minerals subsector to brainstorm and develop strategies and programmes that would facilitate the growth of the subsector. They include state governments, development mining enterprises, downstream companies that import these minerals, civil society, and a cross section of government ministries and agencies. Thus, the Government needs to adopt a more balanced approach that prioritises not only minerals that can bring high export earnings, but also minerals whose demand is driven by local development needs.

## A. Case Study: Uganda

### 1. Overview

As part of its efforts to support the growth and development of the minerals industry within its member countries, the ACP-EU Development Minerals Programme has undertaken a number of baseline studies to understand the state of minerals development in member countries. In 2018, the Programme conducted a baseline assessment and value chain analysis of development minerals in Uganda (Hinton et al., 2018). The study had two major

components: (1) a baseline assessment of development minerals in Uganda, and (2) a market study and value chain analysis of development minerals in Uganda. The first component covered:

- » baseline profile of the sector;
- » policy, legal and institutional framework;
- » institutional operating context; and
- » analysis of environmental, occupational, and social impacts.

The second component covered:

- » a market study providing an overarching picture of the current market and key factors affecting demand, future market trends and the investment climate; and
- » value chain analyses of 4 focus minerals – clay, sand, stone aggregate and dimension stones.

Focusing on ASM operators and Micro and Small Enterprises (MSEs), the study sought to provide a comprehensive picture of the economic significance, scope and potential of the development mineral subsector while also promoting an understanding of the technical, legal, social, occupational and environmental constraints and opportunities in the subsector. The study provides valuable support for evidence-based decision-making on development minerals and their value chain that would enhance their contribution to inclusive development, sustainable wealth creation and the realisation of Uganda's sustainable development goals. The study provides policy learning opportunities for Nigeria.

### 2. Methodology

As in Nigeria, data on development minerals is largely undocumented in Uganda. Therefore, primary data for the study was collected from development minerals value chain stakeholders. The primary data collection included 42 site assessments in 22 districts,



focus group discussions and interviews with 434 participants from ASM sites, 73 Points of Sale and 10 district governments as well as consultative meetings with central public and private sector stakeholders, including construction companies and medium-to-large scale enterprises. Collected data provided a good picture of the state of the development minerals subsector and its value chains as well as key opportunities and constraints that are present. Eight development minerals (clay, stone aggregate, dimension stones, sand, limestone, salt, kaolin, and gypsum) were selected while four (clay, stone aggregate, dimension stones, sand) were prioritised for the value chain analysis.

### 3. Key Findings of the Study

- » Most development minerals are translated into a limited number of products or are produced in insufficient quantities.
- » ASM is responsible for production of about 83% (by value) of all development minerals in Uganda
- » ASM development minerals are a major source of rural and peri-urban employment in Uganda
- » About 98% of ASM production and 56% of MSM production of development minerals takes place outside of the formal sector.
- » The Ugandan Government has taken steps to address fundamental regulatory gaps with respect to development minerals. For instance, under the 1995 Constitution of Uganda, building minerals such as “clay, murrum, sand and any stone commonly used for building or similar purposes” were not regarded as minerals and therefore were constitutionally excluded from regulation by mining authorities. This was corrected through constitutional amendments that took place in 2006. The amendments also distinguished development mineral extraction intended to meet personal needs from development mineral extraction for commercial purposes.
- » Prevailing policy and legislation might present opportunities and constraints to the development minerals subsector. For example, Investment Constraints: Licences designated for ASM are confined to operations that do not expend roughly over \$3000 on activities. However, investments in development minerals can easily exceed this limit, as the \$3000 may not cover more than the cost of acquiring, for instance, a stone cutting machine to improve productivity and efficiency, or the cost of investing in more environmentally and occupationally responsible practices.
- » Most mining sector promotion opportunities, such as trade fairs, networking opportunities, business opportunities, training, and related SME support services, do not prioritise development minerals and this affects the growth of the subsector.
- » Most active private sector organisations promoting the interests of miners, such as workers’ rights advocacy groups and other NGOs, prioritise high profile commodities (such as artisanal gold mining) and/or work mainly with larger private sector actors, such as Chambers of Mines, ignoring miners of development minerals

- » Mining of development minerals generate a number of environmental impacts related mainly to land degradation, consumption of forest resources from clay brick and lime production, and degradation of wetlands from sand and clay mining.
- » Occupational health and safety risks in the development minerals sub-sector are severe, with the main sources of serious injury being the falling of rocks and collapse of pit walls.
- » Main social issues include conflicts between miners, between miners and traders often related to non- or under-payment and between miners and other land users, and child labour. Use of crude methods of mining and lack of technical capacity to improve performance have resulted in very low individual incomes of mineworkers.
- » Socio-economic contributions of development minerals are significant as more than 390 Ugandans derive their livelihood from development minerals. This suggests that development minerals are “high-value”, rather than “low-value”, minerals.
- » Climate change and the growing ASM workforce pose additional risks to ASM of development minerals value chains. Growing workforce may lead to over-production, which can force down the price of the commodities.
- » Realisation of the potentials of development minerals will depend also on the ability of women, youth and vulnerable groups to access the opportunities presented by the minerals.
- » Impressive statistics about the growth potential of the subsector might push the Government to focus on tax

collection from the miners, which might disproportionately affect upstream mineworkers. Support mechanisms will need to be institutionalised to cushion the effect.

## Future Minerals and Nigeria's Energy transition - Prospects and Challenges

### Overview of Nigeria's future minerals landscape

Globally, a new era of mining is being ushered in as part of the energy transition. As minerals and metals are needed to power clean energy technologies, mining has a leading role to play in driving the energy transition. World Bank's 2017 report, *The Growing Role of Minerals and Metals for a Low Carbon Future*, made the case that a low-carbon future would not be possible without minerals (World Bank, 2017). Its 2020 report, *Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition*, made the case even more strongly and with a new emphasis on how recycling and improvements in technology could impact demand for minerals such as graphite, lithium, and cobalt up to the year 2050 (World Bank, 2020).

The report noted that aluminium, copper, chromium, molybdenum, and nickel are high impact cross-cutting critical minerals because of their usage across a wide variety of energy generation and storage technologies. Changes in these technologies will not have a significant impact on the overall future demand for these minerals so it is important for producing nations to prioritise their development. It also reports that concentrated minerals such as lithium, graphite, and cobalt, which are also regarded as high-impact minerals, are needed in one or two specific energy technologies particularly energy storage. They possess higher demand uncertainty because technological disruption and deployment of energy storage could significantly affect their

demand. There is a high number of energy storage sub technologies currently at the research and development (R&D) and pilot stages, as well as different policy choices and market forces. With energy storage having the highest level of uncertainty, concentrated minerals, which have a high demand, have the highest level of demand risk, particularly for producers of these minerals.

The report also noted that demand for these minerals could rise by up to 500 percent by 2050 and that the renewable energy technology and energy storage needed to limit rise in global temperature to under two degrees Celsius will require over three billion tons of these minerals and metals. And even with expected future increases in the rates of recycling, the supply of these critical minerals will still be needed to power clean technologies. The above projections show that minerals needed to achieve the energy transition are the minerals of the future. Post-transition, those minerals will remain critical to sustaining clean energy technology. This calls for strategic investments in the exploration and exploitation of critical minerals.

The call for investments in critical minerals goes hand in glove with the call to address the climate impacts of mining as well as the impacts of climate change on mining, for climate change can also create or increase risks for mining operations and host mining communities, and the mining of future minerals is expected to be carried out in a climate-friendly way in order not to undermine the goals of the energy transition. Much of the mining industry already operates in unfriendly climate conditions. Impacts on water cycle cause floods and drought that disrupt mining operations, rising temperatures affect working conditions while environmental changes threaten community resilience, all of which

in turn increase competition for natural resources. Forecasts show that these changes will become increasingly intense in the future. The implication is that the mining sector in Nigeria must prepare for climate hazards. The mining sector must also prepare to lead by example by minimising its negative climate impacts through investments in climate-smart mining.

### Potentials and Challenges

Studies by NGSA shows that Nigeria has significant occurrences and a few deposits of some of the minerals critical for the energy transition. Among several mineral commodities, Nigeria has high occurrences of high impact cross-cutting critical minerals. These include copper found in Nassarawa State, Bauchi, Zamfara, Niger, Federal Capital Territory, and potential copper resources within the Middle Benue Valley (NGSA, 2022). NGSA also has found occurrences of molybdenum and nickel and bauxite that are relatively rich in aluminium in Plateau, Ondo, Ekiti, and Adamawa states (NGSA, 2022). Nigeria also has confirmed occurrences of concentrated minerals such as lithium and graphite. Through NIMEP, NGSA has identified high grade hard rock lithium in Nigeria (NGSA, 2022). It has also identified occurrences of elevated values for Rare-Earth Elements (REE) in Katsina Ala, Benue State, and graphite in Saulawa, Birnin Gwari Area, Kaduna. Other minerals that are also critical to energy transition include tin, with historically known deposits in Plateau state and used in production of electronics, which is being mined by ASM operators. Lead is another mineral that is critical to energy transition, with known occurrences in Ebonyi, Benue, Nasarawa, Zamfara, and Plateau states. As a result of datasets that NGSA has generated through NIMEP, NGSA has reported increased interest and enthusiasm of both local and international investors in Nigeria (NGSA, 2022).

There is currently a significant shortfall in global supply of these minerals, which in part has fuelled interests in the exploration of seabed mineral both within national jurisdictions and (through the International Seabed Authority) in areas beyond the national jurisdiction of any country under the 1982 UN Convention on the Law of the Sea.<sup>51</sup> Global demand for high-grade nickel is projected to outweigh demand by 2024.<sup>52</sup> This presents tremendous opportunities for Nigeria as its energy transition minerals remain largely untapped.

The National Renewable Energy Action Plan (NREAP) 2015 to 2030 with the objective to advance the development of renewable energies in Nigeria presents tremendous opportunities for Nigeria to develop and utilise its energy transition minerals locally. If planned properly, Nigeria can meet its domestic demand for these minerals and also contribute to international supply for these highly demanded minerals. The NREAP aligns with the target set by the National Renewable Energy and Energy Efficiency Policy 2015 for Nigeria to achieve 16% of its electricity consumption from renewable sources by 2030. The key renewable energy strands for development include onshore wind, solar (PV, Solar Thermal, & CSP), bioenergy and small hydro. These new generations of various renewable energy sources will play a key role in meeting Nigeria's 2020 and 2030 targets and add value to domestic low carbon industrial development. The drive to meet the targets set in the NREAP will provide opportunities for domestic investment in new industries and new technologies. An example of a potential renewable energy technology value chain that can be developed in Nigeria is the battery industry value chain. There are a few battery manufacturers in Nigeria, but they are competing with products from China and India, which are imported and assembled in Nigeria.

Nigeria's mining industry has the potential to provide some of the critical minerals required to develop and produce some of the renewable energy technologies. However, the industry needs to be linked to Nigeria's renewable energy and industrial sector for this opportunity to be tapped. This requires developing the appropriate policy, legal, and regulatory framework, strategy, and incentives. Such a framework should focus on increasing exploration for, and exploitation of, these critical minerals as well as in developing their supply and value chains locally to ensure that the socio-economic benefits are fully realised.

#### Policy and Reform Imperatives

As noted, there is presently no clear policy for integrating mining into the energy transition in Nigeria. One vital policy is to create opportunities for investments in minerals critical for the transitions. As stated earlier, NGSA has confirmed the existence of copper, bauxite that is rich in aluminium, molybdenum, nickel, tin, and even lead in Nigeria. A policy framework needs to be developed focusing on these minerals, and other future minerals discovered in the future, and their supply and value chains, and infrastructure requirements. The framework should address appropriate incentives to investors to accelerate growth in the exploration and exploitation of the minerals.

Furthermore, the Government should realise that in line with the goals of the energy transition, not only are future minerals to be mined in a climate-friendly manner, but climate change also itself is a threat to the mining of future minerals. Policy and regulatory efforts should therefore be geared towards minimising the climate footprints of mining. Otherwise, the mining of future minerals, while providing raw materials for producing clean technology, would leave significant climate footprints that would

<sup>51</sup>(Nwapi & Wilde, 2021). National seabed mineral legislation in Africa for areas beyond national jurisdiction. *Journal of Ocean Law and Governance in Africa*, 38–78.

<sup>52</sup>(Rystad Energy, 2021). Nickel demand to outstrip supply by 2024, causing headaches for EV manufacturers. Retrieved from <https://www.rystadenergy.com/newsevents/news/press-releases/nickel-demand-to-outstrip-supply-by-2024-causing-headaches-for-ev-manufacturers/>.

likely undermine its contribution to clean technology. Policy and regulatory efforts should also be geared towards addressing climate change more broadly in order to minimise climate-induced disruptions to the mining of future minerals. Nigeria's current National Policy on Climate Change (2012) recognises the link between climate change and mining only superficially, and most of the mining-related focus is on coal. Policies should aim towards ensuring that mining companies adopt decarbonisation

practices in their operations. Reasonable decarbonisation targets can be set for mining companies, coupled with emissions reporting requirements and appropriate incentives developed to encourage the right behaviour. Policy investments in climate-smart mining could also be used to meet international obligations under the Paris Agreement. The legal framework for environmental protection of the mining sector needs to be strengthened with climate-smart mining provisions.



Chapter Five

## Nigeria's Mining Sector Development Strategies and the Sustainable Development Goals (SDGs)

### Conceptual and Analytical Framework

The Sustainable Development Goals (SDGs) are a component of the wider 2030 Agenda for Sustainable Development agreed at the United Nations Sustainable Development Summit 2015. The agenda was a new framework for international cooperation to promote sustainable development between

2015 and 2030. It is composed of 17 SDGs and 169 Targets, which represent the global community's plan of action for environmental sustainability economic development, and social inclusion. The 17 SDGs replaced the eight Millennium Development Goals adopted in 2000. Unlike the MDGs, the SDGs were conceptualised and defined through a process led by Member States, with strong participation from major groups and civil society stakeholders. The 17 SDGs, which are listed below, are cross-cutting and achieving them requires mobilisation of resources across all sectors.

Figure 3: The Sustainable Development Goals (SDGs)

## 17 SUSTAINABLE DEVELOPMENT GOALS



While the SDGs were adopted at the international level, their achievement relies on cooperative actions at all levels: international, regional, national, and local levels. Achieving the 17 goals therefore requires a whole-of-society approach, mobilising all sectors and stakeholders, to integrate the SDGs into their policies, practices, and operations. Mining as a major economic sector, globally, has an opportunity to advance the achievement of the SDGs. If not properly managed, however, it can also hinder the achievement of the SDGs through its potential to degrade the environment, displace populations, increase conflicts, and create inequality, among other challenges.<sup>53</sup>

Studies show that the mining industry has the opportunity to mobilise both human and material resources to contribute to the achievement of all the 17 SDGs. For instance, the mining sector can contribute to the realisation of SDG 1 (Poverty Reduction) through revenues that the state can generate from it (via taxes and royalties) as well as through employment generation for the citizens. It can contribute to the realisation of SDG 5 (Gender Equality) by providing equitable employment opportunities as well as equal pay for women and men, and promoting and providing measures to prevent gender-based violence in the workplace as well as measures to address it if it occurs. It can also contribute to combat climate change through investments in climate-smart mining. However, the achievement of these goals requires mining companies to integrate the SDGs into core business policies and practices.

Mining itself is not sustainable but can make significant contributions to sustainable development. Revenues from it can be used to finance the energy transition, which is critical to the achievement of the SDGs. Moreover, certain minerals have a critical role to play in the achievement of the energy

transition. Such critical minerals include lithium, cobalt, nickel, copper, and rare earth metals neodymium and dysprosium. Some of these minerals are used in the production of batteries to power electric cars while others are used to make powerful magnets that are essential for wind turbines and also for electric cars. These stated minerals, however, are not among the strategic minerals identified by the Government, which are barite, gold, bitumen, iron ore, lead/zinc, coal, and limestone.

### Frameworks for the Achievement of the SDGs

Within Africa, there are a number of frameworks that provide guidance to African countries that would help them to achieve the SDGs. In the context of the mining sector, those frameworks include the Africa Mining Vision, ECOWAS Directive On the Harmonisation of Guiding Principles and Policies in the Mining Sector, and the African Union Agenda 2063. Nationally, Nigeria's Economic Recovery and Growth Plan 2017–2020 and the National Development Plan 2021–2025 are useful documents. The relevance of each of these documents is discussed below.

**i. Africa Mining Vision.** The Africa Mining Vision (AMV) was adopted by African Heads of State and Government in 2009 as a key continental framework to promote mineral resource-based development and structural transformation on the continent. Its central theory is that Africa's vast mineral resources can play a transformative role in Africa's development, but only if appropriate socio-economic development linkages that meet the national and regional developmental needs of African countries are put in place. The Vision calls for a "transparent, equitable and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socio-

<sup>53</sup>(Columbia Center on Sustainable Investments, 2016). UN Sustainable Development Solutions Network and WEF (2016). Mapping mining to the sustainable development goals: An atlas.



economic development". It believes that African countries need "more fiscal space" to better leverage benefits from mining to create socioeconomic linkages and value addition. Other potential benefits from mining highlighted in the Vision include employment generation, local procurement, entrepreneurial and skills development, technology transfer, and infrastructure expansion. However, it also identifies "critical constraints and success factors" for the realisation of the benefits, namely,

- » availability of resource data,
- » capacity to negotiate contracts,
- » governance capacity,
- » capacity to manage mineral wealth,
- » infrastructural constraints,
- » partnerships between the state, the private sector, civil society, local communities and other stakeholders, and
- » challenges associated with artisanal and small-scale mining.

The AMV's Action Plan for its implementation, agreed by the AU's Conference of Ministers responsible for mineral development, is built on several tenets, namely:

- » Optimizing knowledge and benefits of finite mineral resources at all levels of mining and for all minerals
- » Harnessing the potential of small-scale mining to improve livelihoods and integration into the rural and national economy
- » Fostering sustainable development principles based on environmentally and socially responsible mining, which is safe and includes communities and all other stakeholders
- » Building human and institutional capacities towards a knowledge economy that supports innovation, research and development

- » Developing a diversified and globally competitive African mineral industry which contributes to broad economic and social growth through the creation of economic linkages
- » Fostering a transparent and accountable mineral sector in which resource rents are optimised and utilised to promote broad economic and social development
- » Promoting good governance of the mineral sector in which communities and citizens participate in mineral assets and in which there is equity in the distribution of benefits (African Union et al, 2011).

These tenets were used to develop programme clusters, each of which has its main goal, expected outcomes, activities, and preliminary indicators for tracking the achievement of the goals and outcomes, that member states are expected to focus on, namely:

- » Mining Revenues and Mineral Rents Management
- » Geological and Mining Information Systems
- » Building Human and Institutional Capacities
- » Artisanal and Small-Scale Mining
- » Mineral Sector Governance
- » Research and Development
- » Environmental and Social Issues
- » Linkages and Diversification
- » Mobilising Mining and Infrastructure Investment.<sup>54</sup>

Realisation of the AMV depends in large part on actions undertaken at the national and sub-regional levels. For this reason, countries are urged to develop their individual Country Mining Visions (CMV) to domesticate and operationalise the tenets enshrined in the AMV. This requires the alignment of national policies and regulations to the AMV and may

<sup>54</sup>(African Union et al, 2011. Building a sustainable future for Africa's extractive industry. From vision to action – Action plan for implementing the AMV. Retrieved from [https://au.int/sites/default/files/documents/31003-doc-action\\_plan\\_final\\_version\\_jan\\_2012\\_2.pdf](https://au.int/sites/default/files/documents/31003-doc-action_plan_final_version_jan_2012_2.pdf))

entail a significant restructuring of existing policy and regulatory frameworks.

Currently, Nigeria does not have any document called the Nigeria CMV. Only a few countries have developed CMVs, which raises questions as to whether African countries are actively implementing the AMV. This is not to say that the development of a CMV is a prerequisite to the implementation of the AMV, but a CMV serves to give strategic direction to the country on how best the AMV can be implemented. A country may thus choose to use other tools other than a CMV, such as a revised policy, roadmap document or revised legislation. Nigeria's 2008 Minerals and Metals Policy was developed before the adoption of the AMV. However, the 2016 Roadmap was developed after the AMV and it makes explicit references to the AMV, indicating that the AMV informed its development. While the preparation of the roadmap benefited from the AMV as well as from the Country Mining Vision Guidebook for Domesticating the Africa Mining Vision prepared by the African Mineral Development Centre, the Roadmap does not purport to represent Nigeria's CMV. It broadly incorporates the principles enshrined in the AMV as outlined earlier but does not build on the principles to link mining with the rest of the economy so that Nigeria has less of a mining-centric policy and build a knowledge-based economy.

Also, the Roadmap's inclusiveness has rightly been called into question in a UNDP report, which notes an unclarity in the roadmap regarding the various roles of other stakeholders (such as the National Assembly, the private sector, NGOs, and local communities) in the operationalisation of

the roadmap.<sup>55</sup> In this regard the roadmap lags the AMV which emphasises the need for inclusiveness. Another issue that has been identified is that the roadmap was "not hinged on any legal instrument" and therefore requires the development of legal structures for its effective implementation. Since the Roadmap's development in 2016, changes in the relevant legal framework have been very limited. The NMMA has not yet been revised and the most significant legal change appears to be the adoption of new company legislation. This situation runs counter to the AMV, which recognises the importance of legal frameworks for its operationalisation at the domestic level. Furthermore, there is insufficient clarity regarding the framework to guide the prioritisation of the implementation of the various components of the roadmap. In particular, the funding processes and structures remain unclear and many stakeholders, especially ASM operators, have yet to see the funding they expected.

However, a full assessment of whether Nigeria has domesticated the AMV should go beyond an analysis of the roadmap and take into account the details of other frameworks the Government has developed. One of such frameworks is the Minerals and Metals Policy even though this was adopted before the AMV. Another is the ERGP 2017, which provides important policy direction for the growth of the mining sector, although it is not as elaborate as the roadmap. Finally, the National Development Plan 2022-2025. It should be noted that the AMV is currently under review. When completed, countries will have to re-assess their systems to align them with the revised document.

<sup>55</sup>See Nigeria and the Africa Mining Vision AMV. Lwanda, G, and Melby, M .pdf

**ii. ECOWAS Directive On the Harmonisation of Guiding Principles and Policies in the Mining Sector.**

Passed in 2009 by all the 15 Member States of the Economic Community of West African States to outline what should become the region's mineral sector development objectives. Its basic tenet is that "the exploitation of the region's mineral resources is key to the region's industrialisation".<sup>56</sup> Its objectives, as stated in its Article 2, include:

- » the harmonisation of guiding principles and policies in the mineral sector in West Africa to ensure high standards of accountability for mining companies and governments, the promotion of human rights, transparency and social equity and the protection of local communities and the environment; and
- » the provision of an environment for mining that is responsive to the sustainable development needs of West Africa through striking a balance between the need to attract investors using appropriate incentives and the need to protect the revenue base and resources of Member States.

The Directive canvasses for a number of issues, including:

- » State ownership of minerals
- » Environmental protection
- » Protection of national interests (through the negotiation of stability agreements with mining companies)
- » Protection of revenues accruing to the State
- » State participation in mineral activity
- » Localisation (or local content) Policy
- » Transparency and public access to information
- » Respect for human rights
- » Local community participation
- » Capacity building

- » Free, prior, and informed consent, and
- » Inter-State cooperation.

The Directive represents an important regional framework for achieving the SDGs in West Africa because the issues it addresses are at the heart of the SDGs in the mining sector. The Directive enjoys the status of Community Acts, signifying that it is immediately binding on ECOWAS member States.<sup>57</sup> However, the modalities for achieving the objectives of the Directive – as with other Community Acts – are left to individual member States to decide.

Of note is that the ECOWAS Commission has developed an ECOWAS Geo-Extractive Observatory Framework and Cadastre System to create a harmonised regional mining cadastre management system that would interface with national cadastral systems.<sup>58</sup> The ECOWAS Geo-Extractive Database and the Statistical Information Reporting Framework to provide ECOWAS member States with a diverse set of data to provide relevant periodic information for the purposes of a quantitative assessment of the sector's progress within the framework of the region's mineral resources development policy. In January 2021, these frameworks were adopted by the ECOWAS Parliament as Community Acts<sup>59</sup>, signifying their bindingness on member States. The frameworks are, however, currently not publicly available, which prevents a more detailed analysis of them.

**iii. The Africa Union Agenda 2063.** It was adopted in 2013 as a blueprint for transforming the nations of the African continent into the Africa We Want by 2063": a democratic, peaceful and innovative powerhouse that will aim to be global players in the next 50 years. It envisions Africa as "an integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the international arena".

<sup>56</sup> (Nwapi, 2018). Mineral resource policy harmonisation in west Africa. *Global Journal of Comparative Law*, 7, 134–168.

<sup>57</sup> (ECOWAS, 2016; Nwapi, 2018). Official Journal – Supplementary Acts/Protocols/Decisions. Retrieved from <https://www.ecowas.int/ecowas-law/find-legislation/>.

Mineral resource policy harmonisation in west Africa. *Global Journal of Comparative Law*, 7, 134–168.

<sup>58</sup> (ECOWAS Parliament, 2021). ECOWAS Parliament issues favorable opinion for the adoption of six Community acts. Retrieved from <https://parl.ecowas.int/ecowas-parliament-adopts-six-community-acts/>.

<sup>59</sup> Ibid

### The Agenda consists of seven aspirations:

- » A prosperous Africa based on inclusive growth and sustainable development
- » An integrated continent politically united and based on the ideals of Pan-Africanism and the vision of African Renaissance
- » An Africa of good governance, democracy, respect for human rights, justice and the rule of law
- » A peaceful and secure Africa
- » Africa with a strong cultural identity common heritage, values and ethics
- » An Africa whose development is people-driven, relying on the potential offered by the African people, especially its women and youth, and caring for children
- » An Africa as a strong, united, resilient and influential global player and partner

The Agenda considers that by 2063, Africa's collective GDP will be proportionate to Africa's share of global population and natural resource endowments and that Africa will continue to be dominant in the global markets on natural resources, including minerals, while capturing a greater share of returns from the exploitation of the resources and ensuring equitable redistribution thereof to Africa's rapidly growing population. The Agenda is thus aligned with the AMV, which envisages increased control of mining operations by African nations.

Continental-level performance reports on progress made in the implementation of the Agenda are published biannually, and the last report was published in February 2022, focusing on progress made in achieving targets set for 2021.<sup>60</sup> While general progress was made on all the seven aspirations, progress was low on Aspiration 1 (a prosperous Africa based on inclusive growth and sustainable development) as well as on Aspiration 3 (an Africa of good governance, democracy, respect for human rights, justice and the rule of law). These two aspirations are arguably the most directly relevant to mineral development. West Africa (which includes

Nigeria) was the third best performing region (recording 45 per cent performance) following Southern Africa and East Africa. The general low performance is however in part attributable to the impact of the COVID-19 pandemic.

### iv. The Africa Continental Free Trade Agreement.

The African Continental Free Trade Agreement (AfCFTA) was signed by 44 member states of the African Union in March 2018 to boost intra-African trade by establishing a single market across the continent, similar to the European Union. It came into force in May 2019. It is the AU's first major attempt to implement Agenda 2063.<sup>61</sup> The AfCFTA aspires to create a single market for goods and services by facilitating free movement of goods, services and investment within the African continent, with the goal of "deepening economic integration, and promoting agricultural development, food security, industrialization and structural economic transformation in Africa".<sup>62</sup>

Like many other African countries, Nigeria is desirous of pursuing a mineral-based industrialisation strategy through mineral value chain and supply chain development. The success of the strategy hinges substantially on coordination with other African countries on the exploitation of the resources, particularly in terms of trade and information sharing. While Nigeria did not join other 44 African countries during the signing of the AfCFTA, citing concerns regarding its likely impact on local manufacturers and entrepreneurs in Nigeria, it did later sign it on 11 November 2020<sup>63</sup>, signifying acceptance of its importance to Nigeria.

There are at least two key areas of cooperation relevant to the mining sector and the AMV. The first is mining infrastructure, which most African countries lack. Africa needs an integrated transportation infrastructure solution (rail and ports) to effectively and efficiently exploit its mineral resources.<sup>64</sup> Mining infrastructure is also

<sup>60</sup> (African Union & AUDA-NEPAD, 2022). Second continental report on the implementation of Agenda 2063. [https://au.int/sites/default/files/documents/41480-doc\\_2nd\\_Continental\\_Progress\\_Report\\_on\\_Agenda\\_2063\\_English.pdf](https://au.int/sites/default/files/documents/41480-doc_2nd_Continental_Progress_Report_on_Agenda_2063_English.pdf).

<sup>61</sup> (Hammond, 2018). Potential, possibilities and realities of AfCFTA to Nigeria: A critical narrative). Working Paper Series, No 3. Retrieved from [https://www.boi.ng/wp-content/uploads/2019/02/BOI-Working-Paper-Series-No3\\_Potentials-Possibilities-Realities-of-AfCFTA-to-Nigeria-A-Critical-Narrative.pdf](https://www.boi.ng/wp-content/uploads/2019/02/BOI-Working-Paper-Series-No3_Potentials-Possibilities-Realities-of-AfCFTA-to-Nigeria-A-Critical-Narrative.pdf).

<sup>62</sup> (African Union, 2018, p. 1). Agreement establishing the African continental free trade area. Retrieved from [https://au.int/sites/default/files/treaties/36437-treaty-consolidated\\_text\\_on\\_cfta\\_-\\_en.pdf](https://au.int/sites/default/files/treaties/36437-treaty-consolidated_text_on_cfta_-_en.pdf).

<sup>63</sup> (Enwukwe, 2021). Comment on the recently ratified AfCFTA by the federal government of Nigeria. *Journal of International Trade Law and Contemporary Issues*, 1(1), 37–48.

<sup>64</sup> (Ireland, 2013). Financing mining infrastructure: Unlocking Africa's resource potential. Letham & Watkins LLP. Retrieved from <https://www.lw.com/presentations/financing-mining-infrastructure>.

at the centre of linkage development and will be pivotal for the development of a regional or continental mineral value chain. Removal of trade barriers cannot be operationalised without adequate transportation and other logistics infrastructure. Also relevant is communication infrastructure, especially the provision of a functioning and safe internet broadband other communication technology to facilitate exchange of information and enhance payment systems for mineral exporters. However, to effectively participate in the establishment of regional mining infrastructure, individual countries must work on fixing their own intra-country infrastructure as well. The Ministry of Mines and Steel Development is currently developing a roadmap to develop an integrated mineral economic corridor that will revive the steel industry. This involves linking anchor iron ore mines with infrastructure.

The second area is in combating illicit financial flows in the mining sector. Reports show that mining and extractive companies in Africa account for 65% of tax frauds in Africa<sup>65</sup>, with Nigeria being among the top four emitters of illicit financial flows in Africa.<sup>66</sup> The mechanisms that the companies use is complex and include tax avoidance, tax evasion and transfer pricing. The frauds are perpetrated at various stages of the mineral value chain; exploration, mining, production, processing, assaying, exporting, and closure.<sup>67</sup> Each of these stages of the value chain entails specific activities that involve a risk of tax fraud and require not only appropriate national legislation and institutional capacity to combat, but also regional and international cooperation. For instance, determining the tax value of intra-company transactions is difficult. Information sharing between different agencies of Government would help but that would also require reviewing the

existing information sharing models to see whether they are agile enough. Coordination with other countries would help especially in terms of sharing tried and tested practices on tax fraud detection. The AfCFTA provides an opportunity for Nigeria to collaborate with other African countries to combat the scourge of illicit financial flows. Thus, the AfCFTA can contribute to the achievement of the SDGs in the mining sector through improved intra-Africa mineral trade (including trade in services relevant to the mining sector) and preventing illicit financial flows in the mining sector in the continent.

#### v. Economic Recovery and Growth Plan 2017–2020.

In April 2017, the Federal Government launched the Economic Recovery and Growth Plan 2017–2020 (ERGP), a medium-term plan that hinges on the strategies for economic recovery and growth on the diversification of the nation's economic base from oil to the non-oil sectors.<sup>68</sup> Its vision is to achieve “sustained inclusive growth”. Its aims include to increase “national productivity”, to achieve “sustainable diversification of production”, grow the economy, and to “achieve maximum welfare for the citizens, beginning with food and energy security”. It is underpinned by five principles:

- » Focus on addressing constraints to growth
- » Leverage the power of the private sector
- » Promote national cohesion and social inclusion
- » Allow markets to function
- » Uphold core values, namely, discipline, integrity, social justice, self-reliance, etc.

<sup>65</sup> (European Commission, 2015; Aranda, 2020). Collect more – spend better: Achieving development in an inclusive and sustainable way. Staff Working Document. Retrieved from <https://op.europa.eu/en/publication-detail/-/publication/7914c998-ecd6-11e5-8a81-01aa75ed71a1/language-en>.

Illicit Financial Flows in the Mining sector in Africa: risks and opportunities. Africa Europe Faith and Justice Network. <http://aefjn.org/en/illicit-financial-flows-in-the-mining-sector-in-africa-risks-and-opportunities/>.

<sup>66</sup> (Signé, L., Sow, M., & Madden, 2020). Illicit financial flows in Africa: Drivers, destinations, and policy options. Brookings Institution Africa Growth Initiative, Policy Brief. Retrieved from <https://www.brookings.edu/wp-content/uploads/2020/02/Illicit-financial-flows-in-Africa.pdf>.

<sup>67</sup> (Aranda, 2020). Illicit Financial Flows in the Mining sector in Africa: risks and opportunities. Africa Europe Faith and Justice Network. <http://aefjn.org/en/illicit-financial-flows-in-the-mining-sector-in-africa-risks-and-opportunities/>.

<sup>68</sup> See Federal Republic of Nigeria Economic Recovery & Growth Plan 2017 – 2020, p.62

The ERGP identifies the mining sector as “one of the nation’s most promising growth sectors” and notes that in its implementation, the Government will work closely with the private sector to increase their investments in key sectors such as the agriculture, power, manufacturing, mining, and services sectors. It identifies several constraints to investment in the sector as including lack of geoscientific data; funding to conduct the required level of technical work, enforce regulations or complete planned projects; poor mining infrastructure, including electricity supply, access roads, and mineral deposit sites; illegal mining, community unrest and low productivity; and the lack of skilled manpower. It establishes five policy objectives, namely:

- » Grow Mining GDP from N103 billion (2015) to N141 billion (2020) at an average annual growth rate of 8.54 per cent (2017-2020)
- » Facilitate the production of coal to fire power plants
- » Produce geological maps of the entire country by 2020
- » Integrate artisanal miners into the formal sector
- » Encourage and promote mineral processing and value addition industries that strengthen backward and forward linkages).

The ERGP also establishes two key strategies for achieving the policy objectives, namely:

- » Create an enabling environment to enhance private investment, targeting energy minerals, iron/steel and gold/ gemstones, and
- » Decrease value leaks/loss by formalising informal mining activities.

Activities required to create an enabling environment for private sector investment include:

- » Increasing access to information by improving the archiving of geo-data, harmonizing their format, and

- promoting their dissemination
- » Expanding electro-magnetic and gravity exploration to complete resource mapping
- » Strengthening the infrastructure network by updating and integrating mining transportation and power requirements in national implementation plans
- » Building local technical and managerial skills and capacity to ensure a steady supply of talent
- » Clarifying the tax and regulatory systems to improve the perception of Nigeria’s investment climate for mining activities, and work with National and State legislatures to address gaps and conflicts in governing legislation
- » Improving State engagement, particularly in financial participation, revenue-sharing, recognition of Federal oversight and social responsibilities to communities
- » Speeding up establishment of the Solid Minerals Development Fund with a seed fund of N200 billion
- » Ensuring that industrial and energy minerals strategies prioritize domestic utilisation of assets.

On the other hand, activities required to implement the second strategy (decrease value leaks) are:

- » Formalising ASM activities by automating mining cadastral office operations
- » Developing mine file inspection and policing operations to improve reporting of mine quantities, and target tax evaders to curtail smuggling (especially in gold and precious stones).

While these proposed activities align with the AMV, the ERGP remains a plan and is of little use without implementation. However, the

National Integrated Mineral Exploration Project (NIMEP) is an important tool that implements the first strategy in that it is aimed at increasing access to geoscientific information in the mining sector in Nigeria.

#### vi. National Development Plan 2021–2025.

The ERGP was developed to have a lifespan of three years and expired in 2020. In December 2021, however, the Government launched the National Development Plan 2021–2025 (NDP) to replace it. The NDP has nine policy priorities, namely:

- » building a thriving and sustainable economy,
- » enlarge agriculture output for food security,
- » attain energy efficiency in power and petroleum products,
- » expand transport and other infrastructure development,
- » expand business growth, entrepreneurship, and industrialisation,
- » improve access to quality education, affordable healthcare, and productivity,
- » enhance social inclusion and reduce poverty,
- » build systems to fight corruption,
- » improve governance and create national cohesion, and
- » improve security for all.

Among the Plan's strategic objectives is the establishment of a strong foundation for a diversified economy, with robust growth of the Micro, Small and Medium Enterprises (MSME) sector, and a more resilient business environment. This objective is closely tied to the 2016 Roadmap for the growth of the mining sector. Key strategies for achieving the objectives of the Plan include prudent fiscal management of the economy with strengthened focus on mobilising non-oil revenues to invest in social-protection programmes. Other strategies include accelerating economic diversification to enhance the competitiveness of all sectors

to meet domestic, regional, and international demands for goods and services, improving the business environment, and enhancing the capacity of the financial sector to provide credit facilities for MSMEs.

The Plan is an important policy tool for deepening the AMV's domestication in Nigeria and makes explicit reference to the AMV, SDGs, and the Africa Agenda 2050, decrying that Nigeria's minerals are exploited "with little or no value-addition". It highlights several constraints the country is facing in the pursuit of mineral beneficiation and value-addition and which have led to "poor sector performance, weak production capacity, low efficiency, revenue loss, weak linkages to the broader economy, and investors' perception of the mining business environment as hostile in Nigeria." Those constraints are:

- » Weak compliance and enforcement of the existing regulatory frameworks;
- » Low technology utilization owing to limited access to expensive machinery and equipment, especially among small mining operators;
- » Shortage of local technical expertise and low knowledge transfer;
- » Illicit trade, smuggling and prevalence of illegal mining activities;
- » Inadequate loan facilities and public and private partnerships restraining access to capital;
- » Non-existent minerals resource revenue management system;
- » Poor remuneration and working conditions compared to the oil and gas sector;
- » High susceptibility to commodity price fluctuations;
- » Limited resource mapping and inadequate exploration data;
- » Weak infrastructure in often remote mining areas, creating a burden on investors;
- » Gender inequalities and economic

- » marginalisation;
- » Unsafe mining sites vulnerable to security threats; and
- » Poor financing and low technological advancement in steel development.

Furthermore, the Plan recognises the introduction of parallel ministries of solid minerals and environment owing to the creation of parallel ministries in many states of Nigeria, which has come with the introduction of enforcement of additional fees, taxes, and levies on licensed mining companies and operators, and notes that these pose “high barriers to entry and growth for potential and

existing businesses in the sector.”

The goal of the NDP is that by 2025, the Government would have laid the groundwork for the strong institutional structure needed to drive the efficient implementation of at least 60 per cent of its targets. With regard to the mineral sector, by 2025 a solid foundation would have been laid for it to begin catalysing growth and industrialisation in an environmentally sustainable manner. The NDP establishes specific objectives and targets for the mineral sector, as is seen in the table below:

Table 8. NDP establishes specific objectives and targets for the mineral sector

Objectives	Key performance indicators	Baseline	Target (2025)
Increase the mineral sector’s contribution to economic growth	Share of the mineral sector in total GDP (%)	0.33%	3%
	Total solid minerals revenue	N5.48 billion	N20 billion
Attract foreign investment in the mineral sector	Share of West Africa global exploration investments flowing into Nigeria (%)	0.12%	1%
	Number of geological maps generated	Scale Maps (SM) 331 Sheets of 1:150,000	10 Bulletins i.e. 160,000 sheets of 1:50,000; 40 sheets of 1:100,000; 10 sheets of 1:250,000
Increase the production capacity of the mineral sector	Number of mining enterprises established	6,300	8,100

Source: FGN, 2021

Strategies and policies for achieving the objectives and targets are:

- » Improving the enabling environment by strengthening regulatory compliance and enacting new policies to fill existing gaps
- » Revitalising the Ajaokuta Steel Company and the Nigerian Iron Ore

and Mining Company by adopting best practice business arrangements to better position them to become productive

- » Adopting an inclusive strategy to improve socioeconomic and environmental sustainability of host communities. This strategy will



include developing an ASM policy into a broad rural development strategy that is linked with other national rural development strategies and aligned with development plans at all levels of government.

- » Increasing access to finance to develop value-added products through the establishment of seed funds and the attraction of foreign and local investments
- » Linkage development across the mineral sector and beyond to enhance value addition, local production, and job creation
- » Investments in research and development to improve local knowledge generation and sector competitiveness. This will include investing in capacity building initiatives to strengthen the workforce and upgrading existing geoscientific institutions to become more innovative and technology driven.
- » Developing a Nigerian circular economy and environmental protection programmes to reduce the footprints of mine waste and create new job opportunities.

The NDP recognises the need for the Government to develop strategies for reducing the greenhouse gas (GHG) of the mining sector. It declares that the Government will collaborate with states on a strategy to improve energy efficiency and reduce GHG emissions associated with mining. The environmental management capacity of state level institutions will be strengthened to better equip them to protect host communities from the environmental impacts of mining. There is a strong emphasis on the need to establish an independent and well-resourced regulator to oversee the orderly development of the mining industry. According to the Plan, the primary role of the regulator will be to attract private investors and ensure that they operate responsibly by complying

with applicable laws and regulations. Also, the independent regulator will ensure improved transparency in the award of mineral rights and ensure that investors have a level playing field to compete for the country's mineral assets. This is necessary to boost investor confidence.

There is also a strong emphasis on the implementation of the Plan at all levels of government and on the development of synergy and coordination mechanisms between federal, state and local government institutions. This is perhaps one of the most defining characteristics of the Plan and achieving the goal requires integrating the plan into state and local-level development policies, strategies, and plans. Broad-based stakeholder participation in the formulation of policies will be necessary for securing state and local level buy-in for national policies by helping to address many of the controversies associated with the distribution of the benefits of mineral development in Nigeria. The Plan also signifies the federal Government's willingness to increase state level participation in the regulation of the sector by committing to include states in national regulatory activities to ensure broad policy alignment at all levels. This whole-of-government approach is critical for the achievement of the objectives of the AMV.

The NDP also speaks about using local content regulations to require large mining corporations to integrate ASM subcontracting and mentoring programmes into their activities. While the NMMA recognises the importance of local content measures to enhance the local benefits of mining, local content has not received comparable policy attention as it has in the petroleum sector. However, this is understandable given the stronger dominance of foreign corporations in the petroleum sector. Notwithstanding, - there is also a strong need to strengthen the local content provisions of the NMMA to ensure that optimal benefits are derived from mining before the industry -more foreign corporations invest in the industry.



## Chapter Six

# Nigeria's Mineral Sector Reform Areas and Imperatives

### Introduction

Nigeria's mining industry reforms have helped to create a reasonably strong legal and policy context for mining. Through the reforms, which began in 2005, Nigeria has an investor-friendly minerals and mining act and regulations, an attractive fiscal regime, and a modern cadastre office with a transparent cadastre system. As a result, the government has been able to improve sector governance and lay the foundation for a modern commercial mining sector. An important outcome of the reforms has been the establishment of Nigeria's first industrial gold mine in Segilola, Osun State by Thor Explorations Limited, which is quoted on the Canadian and London stock exchanges. The expectation is that the trend will continue from this point exponentially if sector reforms are sustained.

Despite these achievements, there are significant implementation gaps between rules and practice that have affected and weakened overall mineral resource governance. Many of the gaps, which are listed in this report as well as in the roadmap, relate to how the law and regulations have been implemented and enforced. Weak implementation and enforcement have been keeping Nigeria from realising the dividends of its reforms. Many of the weaknesses result from the mineral resource federalism model used in Nigeria, the absence of an independent regulator, and human and financial resource constraints. Closing the implementation gap through reforms to strengthen governance will involve making the legal and regulatory framework more inclusive, stronger, and more comprehensive and creating competent and independent institutions to enforce them. It also requires

strong political will from the government. An urgent focus on closing the gaps will help to improve the investment climate for mining in Nigeria and the development outcomes of the mining industry.

Based on the findings from the diagnosis of the policy, legal, and regulatory, and institutional framework, this chapter recommended critical reforms that can help the government and stakeholders to close the governance gaps and convert Nigeria's mineral resources to achieve better and lasting socio-economic development outcomes. A whole-of-government approach that addresses governance and administrative bottlenecks in the conduct of the business of mining in the country is required to overcome the investment challenge in the exploration, development, and production of minerals.

### National Strategy and Policy Framework for Mining Development

For effective and sustainable mineral resource management, Nigeria needs an inclusive and comprehensive national strategy and guiding policies that is based on a long-term shared vision to transform the current landscape into a more revenue-generating, transparent, environmentally sensitive and gender-inclusive mining sector. As African member countries have been urged to develop their individual CMVs and there are gaps between the current roadmap and the AMV criteria for CMVs, this will be a good opportunity for Nigeria to transform the roadmap. The objective will be to domesticate and operationalise the tenets enshrined in the AMV in line with a nationally agreed vision and priorities into a national strategy, guiding national policies, and establish strong institutions. The major actors that should be involved in developing the strategy and policy include the Federal (key relevant ministers, departments, and agencies (MDAs) handling mining; finance, budget, planning, power, gas, communication, transport, environment; industry, trade, and investment;

education, gender, youth development etc.), State, and Local governments; legislators; communities and citizens directly impacted by mining activities, private companies in the mining industry including mineral supply and value chain companies; mining association; academia; women's groups; religious groups; media; civil society, traditional authorities etc.

A key step to take before convening stakeholders to formulate a comprehensive and national strategy and guiding policies that are fully consistent with the AMV, SDG, Africa Agenda 2050, and the NDP will require designing the dialogue framework based on the following elements:

- i. High-level ownership so that the importance of the exercise is underscored nationally.
- ii. Inclusive and participatory so that the views of the broad range of stakeholders are incorporated and debated through a national, open, and fully participatory dialogue process. Emphasis should be placed on ensuring that stakeholders have a common understanding of issues and that there is consensus through a well-designed communications strategy.
- iii. Gender inclusiveness and equality.
- iv. Comprehensive through focusing on linking the mining industry with the economy through upstream, downstream, spatial, fiscal, knowledge, and sidestream linkages environmental and social management, community development, fiscal regime, distribution and management of government revenues, mines-infrastructure development, strategic and critical minerals, mining sector development funding, investment promotion and competitiveness, ASM formalisation, development, and management, inter-governmental collaboration, inter-sectoral collaboration, citizen engagement and wider economic benefits.
- v. Inter-ministerial coordination of the MDAs of mining; finance, budget, planning, power, gas, communication, transport, environment; industry, trade, and investment; education, gender, youth development etc because of the intrinsically linked and overlapping views of different stakeholders. Strategic coordination can be handled by the Presidency or by an overarching body.
- vi. Feasible and practical to ensure that the guiding principles of the strategy can be translated into policies, legislation, regulations, and actions by competent institutions that have the capacity to design, administer, and enforce them.
- vii. Measurable by outlining priority implementable actions, responsible agencies, timelines, and milestones to enable monitoring and evaluation of the process.

## Legal and Regulatory Framework

### 1999 Constitutional Framework - Natural Resource Federalism Considerations for Nigeria

Sovereign ownership and control of natural resources is the norm in most resource rich countries around the world. However, many countries choose to share the power and responsibility to manage and manage natural resources between the national and subnational governments via the constitution, legislation, or delegation by the national government (Bauer et.al. 2018). Australia, Canada, and the United States, which the three older federal jurisdictions, practice pure federalism, in which the subnational governments have constitutional sovereignty (autonomy and responsibility) for legislation, implementation, and monitoring while the federal government has responsibility over a few federal territories. In some other countries, such as Nigeria, the national government appoints and stations officers at the subnational level to implement national policies. Even though subnational stakeholders are involved in decision making and implementation, which is brought closer to them, accountability remains with the national officers. Other countries decentralise and devolve certain responsibilities to subnational institutions. In practice though, many countries have a mixed system where the national level holds some responsibilities e.g., legislation, while the subnational level holds others such as implementation and monitoring.

Conferring greater responsibilities to subnational governments in response to their demand for decentralisation has both potential opportunities as well as risks. In Nigeria, mineral resource federalism can help to strengthen mineral resource governance and, as a result, the social license for mining companies to operate in states because there

is a greater feeling of local ownership. It can help to ease the historical tensions between the federal and state governments over the ownership and management of mineral resources within their domains. It can also stave off violent conflicts whose foundation is built on restrictions over mineral resource ownership and management. Furthermore, state governments can coordinate faster responses to issues that impact stakeholders because of their closeness to each other and their motivation to act because of their accountability to voters.

Certainly, there are risks and challenges that can ultimately undermine the investment climate for mining and scare existing and potential investors away from conferring greater responsibilities to subnational governments. All the NEITI solid mineral audit reports already point at gross governance, transparency, accountability, and institutional monitoring and enforcement weakness capabilities in the implementation of the mining legal and regulatory framework at the Ministry of Mines and Steel Development and its agencies. These weaknesses could snowball when the subnational institutions and their officials are in charge due to even weaker capacities and transparency and accountability mechanisms to manage highly technical functions. When the country's mineral licensing and tax regime is not homogenous, it can raise red flags and scare potential investors away. It can also drive inequalities between states that have more lucrative mineral resources, particularly metals, and other states, and even create macroeconomic challenges for states that are over reliant on mineral resource revenues.

Regardless of these known opportunities, benefits, risks, and challenges with resource federalism, like their counterparts in other countries, state governments in Nigeria are not satisfied with increased revenue sharing and derivation. They also continue to demand for greater control and involvement in

developing the sector, mitigating the negative impacts, and sharing from the non-fiscal benefits. According to Bauer et.al. 2018, there are several trends from the different models of resource federalism practiced in different jurisdictions:

- i. It is common that one level of government legislates or sets regulations while another level implements, monitors and enforces those laws or regulations. The federal government could pass national legislation and fully or partially decentralise implementation and monitoring to the subnational governments.
- ii. It is also common for many countries to share responsibilities in certain areas through cooperation or joint authorities. They cite the example of the Philippines where minerals licenses are granted by the national government but subject to approval by local authorities and, in some cases, indigenous communities.
- iii. It is also common to allocate certain responsibilities to subnational governments because of their proximity to the impacts of the extractive projects and enhanced access to information. These include environmental monitoring, occupational safety and health monitoring, and licensing of artisanal and small-scale activities
- iv. It is also common for certain responsibilities to be allocated to national governments due to their technicality and complexity. They include setting tax and royalty rates, collecting major revenue streams, and negotiating large- and medium-sized contracts with companies.

Nigeria's greatest motivation to review its resource federalism model and include subnational governments in the ownership and management of mineral resources should be to strengthen mineral governance and improve Nigeria's investment climate.

However, this decision should be based on careful consideration of country context and the potential benefits, costs, risks, and the opportunities for trade-offs. Experiences from other countries will provide useful insights for deciding how to recognise both federal and state interests in mineral resource ownership and development. This will also be useful for deciding which responsibilities to allocate to the federal government, which to allocate to the state governments. Responsibilities that should be managed jointly by both the federal and state governments, and in some cases, with the input of the local governments and host mining communities could also be identified and included. In taking these decisions, these key guiding principles have been recommended for attaining greater "natural resource federalism" in Myanmar will be useful:

1. Clearly define government roles and responsibilities no matter the level and allocated to.
2. Ensure that the different levels of government have the capacity and resources to adequately fulfill their responsibility.
3. Maintain minimum natural environment and social standards despite state level jurisdiction.
4. Create a platform for discussion and information exchange between levels of governments and across jurisdiction.
5. Promote transparency in decision making and outcomes at all levels of government.

Reviewing the mineral resource federalism model will require convening stakeholders to discuss the opportunities, benefits, risks, and challenges of mineral resource federalism in the same manner as stakeholders will be convened to formulate a comprehensive and national strategy and guiding policies.

### Legal and Regulatory Framework - Nigerian Minerals and Mining Act 2007 (NMMA), and Nigerian Minerals and Mining Regulations 2011 (NMMR)

Based on the diagnosis of the NMMA and NMMR, there are a few areas that could be strengthened to support institutional reform efforts to enhance enforcement.

**Mineral Licensing Process:** The government can get better value for the country from redesigning the method of allocating rights and awarding licenses through these reforms:

- » Prioritising the technical and financial competence of investors under the first-come-first-served and competitive bidding licensing processes to ensure that only technically and financially competent firms are awarded exploration licenses and mining leases.
- » Obligating companies to disclose their beneficial/ultimate owners during their license application.

**Mining Fiscal Regime:** The government can realise the full benefit of its mineral resources through these reforms:

- » Developing a Mineral Income Tax Act (MITA) largely based on the current mining fiscal regime will help to eliminate duplications and complexities and provide investors with firm guarantees of tax stability.
- » Digitising tax and royalty assessment and payment procedures and regulatory procedures related to mining operations would be a great step towards simplifying and removing red tape.
- » Building FIRS and MMSD staff understanding of the mineral value chain of every one of the various minerals being mined.

### Environmental and Social Management:

Minimising and managing the environmental and social impacts of mining operations is critical to optimising the contribution of the mining sector to sustainable development. Key aspects that could be strengthened through the following:

- » Developing and implementing an Environmental and Social Management framework with the following that will be integrated in the NMMA and NMMR:
  - i. International best practice on environmental and social management such as the International Finance Corporation Performance Standards, Equator Principles, and the World Bank's climate smart mining building blocks (climate mitigation, climate adaptation, reducing material impacts, and creating marketing opportunities) into the environmental and social management legal and regulatory framework.
  - ii. FPICs standards as well as socio-economic, human rights and gender assessments to improve the foundation for environmentally and socially sound mining projects.
  - iii. Obligatory for exploration licence holders to complete their EIAs or provide a preliminary EIA at the time of application for a mining lease and not after the mining leases have been granted.
  - iv. Obligatory for exploration licence holders to prepare and submit SIAs and RAPs to address social impacts along with their mining lease applications.
  - v. Specially designed environmental and social impact framework and simplified environmental and

- social permit for the ASM sector.
  - vi. Stronger systems for public (host mining communities, CSOs, NGOs, and CBOs) participation in mining decisions in host mining communities and making the process more transparent.
  - vii. Prioritising post-EIA monitoring.
- » Establishing and operationalising the EPRF based on good governance principles, such as the Santiago principles on transparency and accountability, for its effective and efficient management.

**Community Development:** Communities located near mining projects could benefit from mining through these reforms:

- » Developing and implementing a comprehensive community development and management framework for mining based on the International Finance Corporation Performance Standards, Equator Principles, and the World Bank's climate smart mining building blocks (climate mitigation, climate adaptation, reducing material impacts, and creating marketing opportunities) and integrating in the revised NMMA and NMMR. The following should also be included:
  - i. Making it a requirement for exploration licence holders to conclude their negotiations with the host mining communities at the time of application for a mining lease and not after the mining leases have been granted. Making it a requirement for exploration licence holders to complete their EIAs, SIAs, socio-economic, gender, and human rights assessments and using the results from these assessments to design their CDAs. The objective is

- to ensure that the CDAs are based on the specific needs and circumstances of the particular host mining community.
- ii. Including the use of funds, trusts, or foundations (FTF) within CDAs as vehicles and instruments for sharing the benefits of mining projects with the surrounding communities and linking them to the CDAs. Lessons from the petroleum industry through the Petroleum Industry Act provisions on community funds can be applied here. The requirement will differ based on the size of the company, commodity type, and lease category.
- iii. Including a local content policy in the CDAs thereby making it a requirement for companies to employ people and procure certain goods and services from the host communities to channel value into the local economy. The requirement will differ based on the size of the company, commodity type, and lease category.
- iv. Making it a requirement for companies to design and implement livelihood creating and poverty alleviating programs in the host communities with specialised NGOs. The requirement will differ based on the size of the company, commodity type, and lease category.
- v. Developing a simplified consent process and document for ASMs to obtain consents from host communities.
- vi. Developing a simplified CDA framework for ASMs to negotiate and sign CDAs with host communities..



**Financing Mining Sector Development:**

Developing the mining sector requires investing in catalytic activities and projects that will incentivise private sector investment. Key aspects that could be strengthened through these reforms:

- » Establishing the SMDF as an agency under law while the funds through which it will catalyse and mobilise funds and investments from third parties.
- » Establishing the funds under the SMDF with good governance principles, such as transparency and accountability, particularly those based on the Santiago principles, for their efficient management and operations.

**Boosting Exploration and Mining Investments:**

Addressing the barriers to investment is critical to improving Nigeria's global competitiveness through these reforms:

- » Developing exploration and mineral based, tax-based financing incentives with the objective being to attract global junior mining companies and competent to invest in grassroots exploration.
- » Developing a legal and regulatory framework for ensuring the sustainability of NIMEP by guaranteeing its funding and public accessibility to reports generated from the NIMEP
- » Developing a mechanism for improving public access to reports generated from the NIMEP in an efficient manner.
- » Building investor confidence by developing an internationally recognised Nigerian mining industry code for public reporting of exploration results, mineral resources, and mineral reserves. Two options to be considered or implemented simultaneously includes joining the (a) Committee for Mineral

Reserves International Reporting Standards (CRIRSCO); and (b) the UNFC based African Mineral and Energy Resources Classification and Management System (AMREC). This will result in promoting transparency, materiality, and competency in the industry by establishing best practices for sustainable mineral resource management. It will also help in strengthening mining engineering and geosciences professional practice in Nigeria by strengthening the Council for Mining Engineering and Geosciences (COMEG).

**Artisanal and Small Scale Mining Management and Development:**

Incentivising the ASM sub-sector by addressing the institutional barriers to formalisation is critical to improving the development outcomes of the sub-sector. Key aspects that could be strengthened through the following:

- » Developing and implementing a more tailored inclusive ASM formalisation and development framework with the following that will be integrated in the NMMA and NMMR:
  - i. Improving ASM access to areas with proven reserves for ASM and accompanying geo-data along with mineral ownership and property rights for ASM activities will provide them with bankable documents. With these documents, they will have better access to formal finance and be in a stronger position to partner with investors and value chain operators.
  - ii. Simplifying the licensing process for them and improving their access to affordable high levels of equipment and technology and affordable formal finance.
  - iii. Developing a model cooperation

agreement for peaceful ASM coexistence with larger mining operators, including mining, trading, mineral buy-back, technical assistance, formalisation etc.

- iv. Providing technical assistance focused on improving safer and environmentally friendly mineral production and processing techniques among the ASM as well as improving their business and operational skills.
- v. Integrating the ASM framework with national and subnational social protection and basic education and health measures.
- vi. Adopting a more business and entrepreneurial approach is required to enhance their economic contributions and reduce their environmental and social footprint.
- vii. Developing a simplified tax collection system for ASM.

**Conflict Minerals:** Building responsible supply chain management of minerals is critical to preventing the extraction and trade from becoming a source of conflict, human rights abuses, and insecurity. Key reforms include developing and implementing an inclusive conflict minerals prevention and mitigation framework that will be integrated in the NMMA and NMMR and through policies:

**Mining Linkages:** Creating linkages between the mining industry with the rest of the economy is critical to catalysing and contributing to broad-based development. Key reforms include developing and implementing a national strategy to integrate Nigeria's mineral sector to the economy through backward, forward, infrastructure, and sidestream linkages that will lead to the development of mineral industries supply and value chains based on local content policies. This will be integrated in the NMMA and NMMR and relevant policies.

**Strategic and Critical Minerals:** Having a strategic and critical minerals framework is important for boosting the supply of minerals that are strategic

and critical to grow the domestic value chains for Nigeria's industrial, green, and digital economy and also contribute to the global economy. Key aspects that could be strengthened through these reforms that will be integrated in the NMMA and NMMR and relevant policies:

- » Developing a strategic and critical minerals strategy to define, designate, explore, mine, process and recycle strategic and minerals and manage supply risks
  - i. Developing a strategic and minerals list focused on the economic and national security dimensions to replace the strategic mineral list developed almost two decades ago.
- » Developing a long-term strategy for Nigeria's development minerals potential and linking it to the nation's industrial, construction, and manufacturing sectors, based on an analysis of the policy, legal and institutional framework; institutional operating context; and analysis of environmental, occupational, and social impacts; and market study and value chain analysis for development minerals, which will be linked to the strategic and critical minerals strategy
  - i. Developing appropriate policies and legal and regulatory framework for development minerals.
  - ii. Developing a long-term strategy for Nigeria's future minerals potential. The focus should be on increasing exploration, development, and production using climate smart strategies as well as in developing their supply and value chains, and infrastructure requirements to ensure that the socio-economic benefits are fully realised, which will be linked to the strategic and critical minerals strategy.
  - iii. Developing appropriate policies and legal and regulatory framework for development minerals.

**Intergovernmental Cooperation:** Utilising mechanisms for federal-state coordination and collaboration is critical to strengthening governance and enhancing the investment climate for mining. Key aspects that could be strengthened through these reforms:

- » Developing and implementing a strategy for strengthening MIREMCO to have a sustainable impact and integrating it in the NMMA and NMMR:
  - i. Addressing its strategic, institutional, operational, and funding challenges
    - » Reconstituting MIREMCO and including the following additional stakeholders:
      - » Representatives of host mining communities in the state.
      - » Representatives of mining companies.
      - » Representatives of Non-governmental and civil society organisations.
      - » Mines police active in the state.
      - » Linking MIREMCO to the mining cadastre system, environmental and social information system, and technical regulatory system to ease their participation in the consent, ESIA, and CDA negotiation, signing, and monitoring process.
      - » Linking MIREMCO with the Federal-State Regulatory Dialogue on Compliance and Enforcement,

initiated by the National Environmental Standards Regulatory and Enforcement Agency (NESREA).

- » Institutionalising the National Council for Mining and Minerals Resources Development (NCMMRD) including establishing its structure and integrating it in the NMMA

### Review of the Institutional Framework

Independent Regulatory Commission for the Minerals and Mining Industry: Reorganising the institutional framework is critical to strengthening mineral governance and improving Nigeria's investment climate, Nigeria needs to reorganise its institutional design. Key aspects that could be strengthened through legal and regulatory reforms include:

- » Establishing an independent regulatory commission
- » Restructuring the Ministry of Mines and Steel Development to focus on policy and sector development of the mining industry

### Key Reform Areas and Imperatives

The reform areas and initiatives that have been proposed in this chapter were designed to address the gaps that were identified in the previous chapters. They provide important policy options for the government and stakeholders to consider in closing the governance gaps and developing the national strategy and policy. The objective is to ensure that Nigeria can use its mineral resources to achieve better and lasting socio-economic development outcomes.

Table 9. Prioritisation of Proposed Mining Sector Reform Initiatives

<b>Category</b>	Policy framework for mining
<b>Sub-Category</b>	Mining Sector Strategy and Policy
<b>Governance Gap</b>	The current roadmap is not adequately aligned to the African Mining Vision and so it remains a sectoral strategy rather than a national strategy that is owned and embraced by all stakeholders.
<b>Initiative</b>	Adopt the AMV guidelines for convening stakeholders to formulate a comprehensive and national strategy and policy that is fully consistent with the AMV, SDG, and Africa Agenda 2050, and Nigeria's National Development Plan, 2021-2025.
<b>0 – 6 Months (Immediate)</b>	Design and launch the broad-based coordination committee to oversee the develop an all-inclusive national strategy, policy, and constitution.
<b>6 – 1 year (Short-term)</b>	
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Constitutional framework for mining
<b>Governance Gap</b>	Agitations by state governments to have more ownership and management rights in the mining sector is affecting the investment climate for mining and creating uncertainty for mining investors.
<b>Initiative</b>	To strengthen mineral governance and improve Nigeria's investment climate, review Nigeria's mineral resource federalism model, and identify opportunities for including subnational governments in the ownership and management of mineral resources based on the guiding principles of clear role definition, capacity, resources, use of minimum standards, collaboration, information sharing, and transparency in decision making.
<b>0 – 6 Months (Immediate)</b>	Design and launch a broad-based coordination committee to develop an all- inclusive national strategy, policy, and constitution.
<b>6 – 1 year (Short-term)</b>	
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Legal and Regulatory reform
<b>Governance Gap</b>	The diagnostic report has identified several governance gaps in the current legal and regulatory framework. There is a strong need to strengthen the framework by amending the NMMA and NMMR, while ensuring that both align and do not contradict each other as is currently the case.
<b>Initiative</b>	To strengthen mineral governance and improve Nigeria's investment climate, Nigeria needs to strengthen the current legal and regulatory framework by amending the NMMA and NMMR,
<b>0 – 6 Months (Immediate)</b>	Constitute a committee to review all the recommendations in different reports on the governance gaps in the NMMA
<b>6 – 1 year (Short-term)</b>	Draft and submit a bill to amend the NMMA.
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Institutional reform
<b>Governance Gap</b>	The current legal and regulatory framework did not make provision for a regulatory body. Rather, regulatory functions were merged with policy functions in the Ministry of Mines and Steel Development. As a result, there is no clear enforcement of regulations, illegal mining and smuggling is thriving, leading to a fast decline of the enabling environment.
<b>Initiative</b>	To strengthen mineral governance and improve Nigeria's investment climate, Nigeria needs to reorganise its institutional design. This will involve unbundling regulatory functions from the Ministry and establishing an independent regulatory commission, and reorganising and strengthen the Ministry to focus on policy and sector development and promotion.
<b>0 – 6 Months (Immediate)</b>	Review the bill to establish the regulatory commission currently with the National Assembly
<b>6 – 1 year (Short-term)</b>	» Draft and submit a revised bill to establish the regulatory commission. » Commence the process of reorganising and strengthening the MMSD to prepare for a post-regulatory commission era
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Mineral Resources and Environmental Management Committee (MIREMCO)
<b>Governance Gap</b>	Despite the laudable intentions of establishing the Mineral Resources and Environmental Management Committee (MIREMCO) under the NMMA as a tool for intergovernmental cooperation and citizen engagement it has several limitations. They include the role of the committee members is mainly advisory to the Minister without operational powers to enforce and implement; access to funding is problematic; representatives of host communities and even non-state actors in the committee are not included in the committee.
<b>Initiative</b>	Review and strengthen the role and function of MIREMCO as a tool for intergovernmental cooperation in mineral resource development in states.
<b>0 – 6 Months (Immediate)</b>	Strengthen MIREMCO through administrative procedures pending passage of the bill to amend the NMMA.
<b>6 – 1 year (Short-term)</b>	
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Mineral Licensing
<b>Governance Gap</b>	Even though the first-come-first-served and competitive bidding licensing processes represent international best practice, they both leave room for incompetent companies to acquire mineral rights. Nigeria has made progress in implementing beneficial ownership disclosure in the mining (and oil and gas) industry, especially through NEITI and the enactment of a new company's law, most of the measures adopted to promote transparency are at the policy level as the NMMA has not yet been amended to statutorily operationalise those policies.
<b>Initiative</b>	There is a need to revise the NMMA and the NMMR to define in greater detail and with more specificity the criteria for assessing the technical competence of applicants for a licence to enhance the attraction of competent companies. There is need to incorporate beneficial ownership disclosure requirements directly into the NMMA and NMMR and make them a pre-condition for the issuance of a mining licence.
<b>0 – 6 Months (Immediate)</b>	Address transparency and accountability lapses beneficial ownership lapses in the mining licensing framework through administrative procedures pending passage of the bill to amend the NMMA.
<b>6 – 1 year (Short-term)</b>	
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	ASM Development and Management
<b>Governance Gap</b>	While tremendous efforts to formalise, the sector have been made and continue to be made, much informality still exists. A key area of concern is the capacity of the MMSD to effectively monitor ASM operations and the exclusion of critical stakeholders such as state and local governments, host mining communities that are closer to ASMs. Also, NGOs, CSOs, mining companies who can also play a role have been excluded from the ASM strategy.
<b>Initiative</b>	Nigeria needs to design and implement a comprehensive and inclusive national strategy through a multistakeholder approach to formalise and develop the ASM sub-sector.
<b>0 – 6 Months (Immediate)</b>	» Strengthen ASM management through temporary administrative procedures pending passage of the bill to amend the NMMA.
<b>6 – 1 year (Short-term)</b>	Design an all-inclusive ASM strategy
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Conflict Minerals
<b>Governance Gap</b>	There are strong links between informality with the growth in the mining of conflict minerals, which is driving Nigeria's increasingly high insecurity.
<b>Initiative</b>	Nigeria needs to design and implement a comprehensive and inclusive national strategy through a multistakeholder approach to address the rise in conflict mineral incidences driving insecurity in the country.
<b>0 – 6 Months (Immediate)</b>	Design conflict minerals strategy and policy.
<b>6 – 1 year (Short-term)</b>	
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Tax regime
<b>Governance Gap</b>	<p>One of the key issues in mining taxation in Nigeria is the accuracy of income and profits reporting by mining companies. Since much of the mining takes place in the informal sector, monitoring the companies' activities is difficult. The Government does not seem to have developed a reliable mechanism for ascertaining the accuracy of financial reports submitted by companies. It is not clear if it even has the human and technology driven capacity to develop such mechanisms.</p> <p>Except for royalties and a few other fees, the bulk of mining taxation is governed by the general Companies Income Tax Act, which can be changed at any moment and therefore does not provide investors with much needed fiscal stability. Nigeria has specialised mining legislation in the form of the Mineral and Mining Act, but it does not have a specialised mineral income tax unlike several other mining jurisdictions.</p> <p>Another key issue in mining taxation in Nigeria is whether existing tax incentives are working and whether additional tax incentives are needed to generate more investor interest to accelerate growth in the sector.</p>
<b>Initiative</b>	<p>The Government should fully implement the model of 'e-government' – digitalise all tax and regulatory procedures related to mining operations would be a great step towards simplifying and removing red tape as it will serve as a "one stop shop" system for mining taxation so that investors only deal with one government body for all mining fiscal issues.</p> <p>Nigeria should develop a Mineral Income Tax Act (MITA). The MITA will serve as a mining code that is outside of the general corporate fiscal system. The objective is to eliminate duplications and complexities and provide investors with firm guarantees of tax stability.</p> <p>Nigeria will need to carefully design exploration and mineral based tax-based financing incentives and provide an enabling environment for mineral exploration investment as Canada has done. The objective is to attract global junior mining companies and competent to invest in grassroots exploration.</p> <p>Nigeria will also need to build investor confidence by developing its own internationally accepted mineral reporting standards includes joining the (a) Committee for Mineral Reserves International Reporting Standards (CRIRSCO); and (b) the UNFC based African Mineral and Energy Resources Classification and Management System (AMREC).</p>
<b>0 – 6 Months (Immediate)</b>	» Digitise tax procedures
<b>6 – 1 year (Short-term)</b>	<ul style="list-style-type: none"> <li>» Design an incentives framework to attract exploration and mining investors.</li> <li>» Draft and submit the Mining Income Tax , which will include the incentives framework to the National Assembly.</li> <li>» Convene relevant industry stakeholders from the various mining industry associations such as the Council for Mining Engineering and Geosciences, NGSA, MMSD etc to drive the development and implementation of the Nigerian Mining Code.</li> </ul>
<b>1 – 2 years (Short-term)</b>	Integrate the incentives framework in the revised legislation and regulation.
<b>2-5 years (Medium Term)</b>	



<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Revenue Distribution and Management
<b>Governance Gap</b>	<p>One of the key issues in revenue management and distribution in Nigeria is transparency and accountability. A major issue connected with this is the remission of taxes by mining companies. The huge size of informal mining that goes on means that much revenue is lost, since it is difficult, if not impossible, to tax informal miners whose real identities are not even known.</p> <p>Another issue around revenue management is how revenues from mining could be managed for the benefit of present and future generations.</p>
<b>Initiative</b>	<p>Nigeria needs to urgently address informal mining and establish transparent processes for collection of mining taxes to enhance Government revenues.</p> <p>Nigeria needs to prepare for the future and avoid macroeconomic distortions by establishing a well governed Sovereign Wealth Fund or integrate mining revenues under the Nigeria Sovereign Investment Authority (NSIA) to save and invest mineral revenues before the revenues become substantial.</p>
<b>0 – 6 Months (Immediate)</b>	
<b>6 – 1 year (Short-term)</b>	
<b>1 – 2 years (Short-term)</b>	Amend the Nigeria Sovereign Investment Authority (NSIA) Act to include revenues generated from mining.
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Geoscience information is insufficient for investment decision making by the private sector
<b>Governance Gap</b>	Under the National Integrated Mineral Exploration Project (NIMEP), the Government has undertaken a major step to better understand the type and locations of minerals available in the country.
<b>Initiative</b>	<p>The Government needs to establish a mechanism for accessing reports from the NIMEP in an efficient manner. It needs to embark on a robust stakeholder sensitisation regarding the availability of such a report to ensure that those who need it are aware of its existence.</p> <p>For sustainability, there is need to incorporate the NIMEP in legislation to guarantee its funding and public accessibility.</p>
<b>0 – 6 Months (Immediate)</b>	Design a strategy and mechanism for funding, generating, storing, and disseminating geoscience information and data and institutionalising NIMEP.
<b>6 – 1 year (Short-term)</b>	Integrate the mechanism for funding, generating, storing, and disseminating geoscience information and data and institutionalizing the ongoing NIMEP in the revised NMMA and NMMR
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Funding for mining sector development
<b>Governance Gap</b>	Compared to agriculture and other sectors, there is no sustainable framework for funding mining sector development.
<b>Initiative</b>	Establish SMDF as an agency through legislation and establish and manage the funds through which it will catalyse and mobilise funds and investments from third parties in line with good governance principles, such as transparency and accountability, particularly those based on the Santiago principles.
<b>0 – 6 Months (Immediate)</b>	Review the bill to establish the SMDF as an agency to catalyse private sector funding and investments into mining sector development.
<b>6 – 1 year (Short-term)</b>	Draft and submit a bill to establish the SMDF as an agency to catalyse private sector funding and investments into mining sector development.
<b>1 – 2 years (Short-term)</b>	
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Environmental and Social Management Regime
<b>Governance Gap</b>	<p>Exploration licence holders are not required to demonstrate that they have met all its environmental obligations before they can be granted a mining lease. The NMMA requires that EIAs be submitted before commencement of operations – and this applies to both exploration and exploitation operations (as well as to quarrying operations and water use) (section 119). This requirement undermines the regulatory role that an EIA is supposed to play in the grant of a mineral right.</p> <p>The issues affecting the effective conduct of an EIA for mining projects include inadequacy of reliable baseline data, the extent of public participation involved in the EIA process (including the stage in the process at which public participation is allowed), lack of provisions for appeal of an EIA decision, issues relating to post-EIA monitoring, and multiplicity of institutions with environmental regulatory authority.</p> <p>Nigeria's mining safeguards regime does not give adequate attention to social impacts. Specifically, it does not include some other important decision-making tools to identify, mitigate, and address social impacts.</p>
<b>Initiative</b>	Nigeria should provide a priority right to the exploration licence holder to be considered for an exploitation licence rather than an automatic right to be granted the licence. Such a priority right would allow other companies to be considered for an exploitation licence in respect of the area in question assuming that the exploration licence holder fails to comply with established. regulatory requirements. Legal provisions should then be added to require the submission of an EIA along with a Social Impact Assessment (SIA) as well as demonstration by the exploration licence holder that it has complied with all the terms and conditions of its exploration licence (including those relating to environmental and social issues) before it can be granted an exploitation licence. Furthermore, the submission of at least a preliminary EIA should be required at the time of application.

<b>Initiative</b>	<p>Reform the EIA process for mining projects – address the challenge of unreliable baseline data, improve public participation involved in the EIA process, include provisions for appeal of an EIA decision, strengthen post-EIA monitoring, and multiplicity of institutions with environmental regulatory authority.</p> <p>The NMMA provides for the establishment of an Environmental Protection and Rehabilitation Fund (EPRF) .</p> <p>The legal framework for environmental protection of the mining sector needs to be strengthened with climate-smart mining provisions. Policies should aim towards ensuring that mining companies adopt decarbonisation practices in their operations. Reasonable decarbonisation targets can be set for mining companies, coupled with emissions reporting requirements and appropriate incentives developed to encourage the right behaviour. Policy investments in climate-smart mining could also be used to meet international obligations under the Paris Agreement.</p> <p>One approach could be to amend the NMMA and/or the EIA Act to provide modalities for the consideration of social impacts during EIAs, and a requirement that the applicant for a mineral right demonstrate how social impacts would be assessed and its qualifications to conduct such an assessment.</p>
<b>0 – 6 Months (Immediate)</b>	<ul style="list-style-type: none"> <li>» Strengthen Environment and Social management through temporary administrative procedures pending the passage of the revised NMMA.</li> <li>» Develop a comprehensive and inclusive environment and social management framework for mining in the revised legislation and regulation</li> </ul>
<b>6 – 1 year (Short-term)</b>	<ul style="list-style-type: none"> <li>» Integrate the comprehensive and inclusive environment and social management framework for mining in the revised legislation and regulation.</li> </ul>
<b>1 – 2 years (Short-term)</b>	<ul style="list-style-type: none"> <li>» Establish the Environmental Protection and Rehabilitation Fund (EPRF) in line with internationally accepted good governance, transparency, and accountability principles for natural resource funds</li> </ul>
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Mineral Industries Supply and Value Chain
<b>Governance Gap</b>	Nigeria's mineral industry supply and value chains are not fully developed.
<b>Initiative</b>	Develop a national strategy to integrate Nigeria's mineral sector to the economy through backward, forward, infrastructure, and sidestream linkages that will lead to mineral industries supply and value chains based on local content policies.
<b>0 – 6 Months (Immediate)</b>	<ul style="list-style-type: none"> <li>» Develop the Mining industry linkages policy and strategy.</li> <li>» Develop the Mining industry local content policy and strategy.</li> </ul>
<b>6 – 1 year (Short-term)</b>	<ul style="list-style-type: none"> <li>» Integrate the Mining industry linkages and local content policy and strategy in the revised NMMA and NMMR</li> </ul>
<b>1 – 2 years (Short-term)</b>	<ul style="list-style-type: none"> <li>» Integrate the Mining industry linkages policy and strategy in the revised legislation and regulation.</li> <li>» Integrate the mining industry local content policy and strategy in the revised legislation and regulation.</li> </ul>
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Strategic and Critical minerals
<b>Governance Gap</b>	<p>Nigeria does not yet have a policy, legal framework, or a strategy to define, designate, explore, mine, process and recycle strategic minerals and manage supply risks. It has also not updated the strategic mineral list developed almost two decades ago. The current list is only focused on the economic dimensions of its minerals but not national security dimensions.</p> <p>Nigeria is not maximising its development mineral potential and does not have a clear strategy for the growth of development minerals even though there is a roadmap. There is also a high level of informality in the development minerals sub-sector.</p> <p>Nigeria has not laid the policy, legal and regulatory framework foundation to maximise its future minerals potential.</p> <p>There is presently no clear policy for integrating mining into the energy transitions. Specifically, the Renewable Energy Master Plan (REMP) has not been integrated in mining industry policies and strategies.</p>
<b>Initiative</b>	<p>Nigeria needs to analyse the policy, legal and institutional framework; institutional operating context; and analysis of environmental, occupational, and social impacts; and market study and value chain analysis for development minerals and develop an appropriate long-term strategy, including development corridors for bulky development minerals such as barite.</p> <p>Nigeria needs to develop the appropriate policy, legal, and regulatory framework, and strategy for Nigeria's future minerals, particularly increasing exploration for, and exploitation of, these critical minerals using climate smart strategies as well as in developing their supply and value chains, and infrastructure requirements to ensure that the socio-economic benefits are fully realised. The framework should address appropriate incentives to investors to accelerate growth in the exploration and exploitation of the minerals and address climate.</p>

<b>0 – 6 Months (Immediate)</b>	<ul style="list-style-type: none"> <li>» Develop the Nigerian Strategic and Critical minerals policy and strategy.</li> <li>» Develop the Nigerian Development Minerals policy and strategy.</li> <li>» Develop the Nigerian Future/Battery Minerals policy and strategy.</li> </ul>
<b>6 – 1 year (Short-term)</b>	<ul style="list-style-type: none"> <li>» Integrate the Nigerian Strategic and Critical minerals policy and strategy for mining in the revised legislation and regulation.</li> </ul>
<b>1 – 2 years (Short-term)</b>	<ul style="list-style-type: none"> <li>» Integrate the Nigerian Strategic and Critical minerals policy and strategy for mining in the revised legislation and regulation.</li> <li>» Integrate the Nigerian Development Minerals policy and strategy in the revised legislation and regulation.</li> <li>» Integrate the Nigerian Future Minerals policy and strategy in the revised legislation and regulation.</li> </ul>
<b>2-5 years (Medium Term)</b>	

<b>Category</b>	Legal, regulatory, and Institutional framework
<b>Sub-Category</b>	Local Impacts
<b>Governance Gap</b>	<p>Artisanal miners are not required to negotiate CDAs with their host communities. This exclusion may have been informed by practical considerations, given the relatively short-term duration of artisanal mining projects.</p> <p>Where it is not easy to ascertain the host community of a mining project, the Minister, in consultation with various public entities, shall determine which community is the host community". There is a legitimate question as to why the Minister, rather the local government or the Governor, should be the authority to intervene when there is a controversy over which communities qualify as host communities.</p> <p>The NMMA requires CDAs to be concluded before the commencement of a "development activity within the leased area". However, reports show that CDAs are frequently negotiated years after the commencement of development activities. There are also issues around corruption and capture of the benefits of CDAs by local elites. Power imbalance between communities and companies may also affect the negotiation of CDAs.</p>
<b>Initiative</b>	<p>Establish a fund in which artisanal and small-scale miners can contribute to the growth of their host communities, given the long-lasting negative socio-economic impacts of their operations on their host communities.</p> <p>Amend the NMMA and NMMR to require a localised approach to resolving the controversy because the Minister is too far removed from the site of controversy to be in a position to appreciate the issues and sentiments at play.</p> <p>There is a strong need to make it mandatory in the NMMA for CDAs to be approved before the ML is approved. Serious consideration should be given to revising the NMMA and NMMR and including the use of funds, trusts, or foundations (FTF) within CDAs as vehicles and instruments for sharing the benefits of mining projects with the surrounding communities. Specifically, they can be used for delivering community investment programs, facilitating the use of government payments derived from mining for development, and managing compensation funds.</p>
<b>0 – 6 Months (Immediate)</b>	Develop a strategy and framework for enhancing the positive impacts of ASMs in local communities using funds and trusts.
<b>6 – 1 year (Short-term)</b>	Integrate the strategy and framework for enhancing the positive impacts of ASMs in local communities using funds and trusts in the revised NMMA and NMMR
<b>1 – 2 years (Short-term)</b>	Integrate the strategy and framework for enhancing the positive impacts of ASMs in local communities using funds and trusts in the revised legislation and regulation.
<b>2-5 years (Medium Term)</b>	



## Chapter Seven

# Scenario Analysis: Economic Implications of the Mining Sector Development on Poverty Reduction, Revenue Diversification and Accelerated Growth

### Background

Despite the popularity of theoretical and empirical literature that promotes the natural resource curse, recent sustained economic growth and considerable improvement in societal progress in some low and middle-income mineral-rich countries has rekindled interest in the mining sector as a source of growth. In countries like China, Brazil, Botswana, South Africa, etc., the mining sector helped propel and sustain high and robust economic growth by generating foreign exchange, increasing fiscal revenues, and improving social and human development.<sup>69</sup>

The mining industry is also critical to the industrialisation and the structural transformation of resource-rich countries. Advanced resource-rich countries such as Australia, Canada, the US, and the Scandinavian countries industrialised through the development of industrial activity around their natural resources and upstream, downstream, and lateral linkages to the rest of the economy.<sup>70</sup> With mineral resources, this was facilitated by a conducive legal and regulatory framework, investment in public geoscience knowledge and education in mining, minerals, metallurgy, engineering, training, and research and development. It was also facilitated by strong public-private partnerships (PPPs), effective tax and fiscal incentives regime, alignment of industrial and mineral policies, aligned public procurement policies, and backward integration into capital equipment development. Australia is an example of a mineral resource-based industrialised country.

As a result of massive investments, it is now a world leader in mining software systems, home to global mining exploration ventures, and an important supplier of high-tech services and equipment.

Through multiple linkages with other productive activities in the economy, the mining sector serves as a strategic driver of growth in the manufacturing, technology, and services sector. Therefore, an increase in the mining sector's activity and output is projected to aid revenue diversification and economic growth acceleration. This will support inclusiveness and sustainable economic growth which will help to reduce the poverty rate in mineral-rich countries. Other potential positive impacts of improving the performance of the mining sector, especially through upstream and downstream activities include;

- » A driver of local economic development
- » Improvement of land-use planning and development
- » Improvement of income generation for households and artisanal miners
- » Improved revenue generation and foreign exchange earnings for the government, and
- » An alternative source of energy

There are several linkages between the mining sector, economic growth, government revenue, job creation, and poverty reduction. These linkages can be described as fiscal, forward, backward, spatial, and knowledge spillover (see Figure 4 and Table 10). These linkages, which can be direct or indirect help in explaining how the different sectors of the economy can complement each other to generate revenue and sustainable growth outcomes. The following are the critical linkages that enable the mining sector to impact key economic activities in a country and generate favourable socio-economic outcomes.

1. **Backward Linkages:** In this type of linkage,

<sup>69</sup> World Bank. (2020). Mines and Minds: Leveraging Natural Wealth to Invest in People and Institutions.

<sup>70</sup> Fessehaie, J., & Rustomjee, Z. (2018). Resource-based industrialisation in Southern Africa: Domestic policies, corporate strategies and regional dynamics. *Development Southern Africa*, 35(3), 404-418.

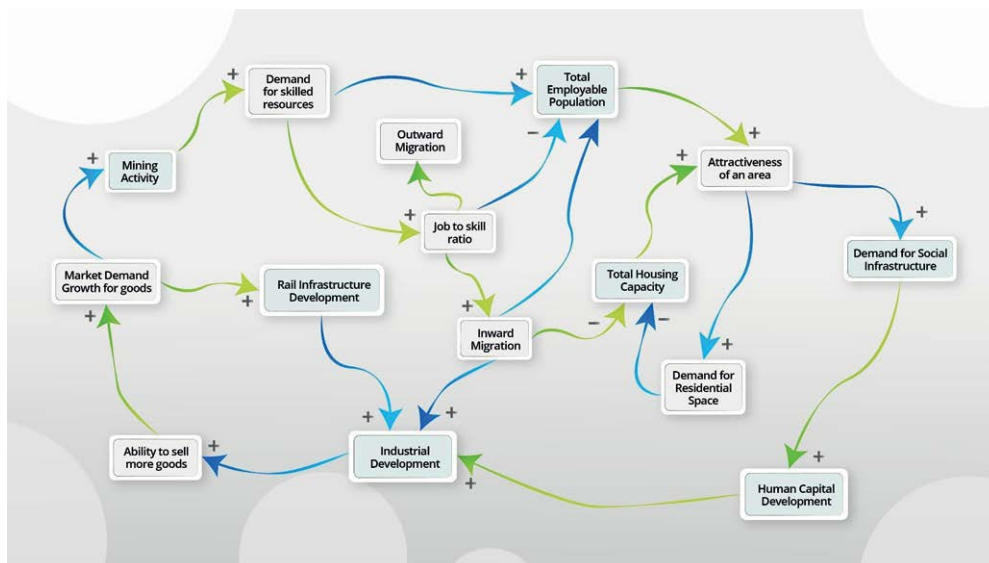
mining companies hire locals and buy goods and services from local businesses. These activities have the potential to generate significant social and economic benefits, with a multiplier effect on job creation, wages and revenues of the locals. Thus, boosting local economic development.

2. **Forward Linkages:** This entails boosting the overall economy by processing natural resources to produce intermediate or finished goods rather than exporting them in their raw form. For instance, limestone is an important input in cement production and copper is used in steel production. This means adding value to economic activities. This will allow the country to keep more of its natural resource wealth while also encouraging job creation, industrialisation, and economic diversification.
3. **Spatial Linkages:** This involves the provision of essential infrastructure for resource extraction, which in turn creates locational benefit; in the host community. Typically, mining companies invest in infrastructures such as pipelines, power plants, roads, and ports. The availability of these infrastructural facilities improves and maximises other economic sectors in local villages surrounding mining extraction sites. Resulting from this also,

the local markets in the community will function better.

4. **Fiscal Linkages:** The optimisation of accruable resource rents, taxes from employees engaged by mining firms and other mining revenue are channelled to the government. In this case, the effectiveness of the government in striking a balance between its desire to maximise revenue and investors' desire to be assured of a worthwhile return on investment is critical.
5. **Knowledge interconnections:** This involves skill development, innovation and technology transfer that accompany FDI into the host country as well as sector. Local workers and businesses usually benefit from technology imported by mining companies which are frequently accessible to local firms and workers. The benefits of investing in knowledge linkages are not always immediately visible from a political standpoint, but they can be significant in the long run. Foreign mining companies' new technology, innovation, and R&D can become critical inputs into a country's industrial growth agenda if mechanisms are implemented to transfer the technology and related skills to host countries.

Figure 4: Mining Sector and Economic Performance & Welfare Linkages



Source: NESG Research



Table 10. Mining Sector, Economic Performance, Job Creation &amp; Welfare

Type of linkage	Channel with investments	Impact on the economy	Impacted Sectors	Socio-economic impacts
Backward Linkages	Growth in investments will increase the value add in the sector through joint ventures with private sectors	<ul style="list-style-type: none"> <li>» Increase outputs of key services sub-sector such as supply capital goods (equipment leasing companies)</li> <li>» Increase in construction &amp; sales of construction materials</li> <li>Increase in supply of consumable &amp; non-core goods</li> </ul>	<ul style="list-style-type: none"> <li>» Construction</li> <li>» Transport &amp; logistics</li> <li>» Trade (wholesale &amp; retail)</li> </ul>	<ul style="list-style-type: none"> <li>» Job creation, especially semi and unskilled labour</li> <li>» Higher productivity and income for artisanal miners in Nigeria</li> </ul>
Forward Linkages	Growth in sector's output would increase availability of inputs or intermediate goods for other producing sectors.	<ul style="list-style-type: none"> <li>» Growth in downstream mining activities</li> <li>» Increase in upstream activities to include refining etc.</li> <li>» Production of other items and value addition</li> <li>» Production of raw materials for local industries, especially light manufacturing.</li> </ul>	<ul style="list-style-type: none"> <li>» Export</li> <li>» Refining</li> </ul>	<ul style="list-style-type: none"> <li>» Job creation</li> <li>» FX earnings from export</li> <li>» High industrial productivity</li> </ul>
Spatial Linkages	Growth in infrastructure facilities such as roads, energy (power), water reticulation, waste management, among others	<ul style="list-style-type: none"> <li>» Enabling local economic developmen</li> </ul>	<ul style="list-style-type: none"> <li>» Construction</li> <li>» Utility sectors</li> <li>» Transport &amp; logistics</li> <li>» Professional &amp; technical services</li> <li>» Trade (wholesale &amp; retail)</li> </ul>	<ul style="list-style-type: none"> <li>» Job creation</li> <li>» Improved welfare, reduction in poverty &amp; lower income inequalities</li> </ul>
Fiscal Improvement	<ul style="list-style-type: none"> <li>» Product sharing agreements (PSAs)</li> <li>» High government revenue through increased collection of rent and other taxes</li> </ul>	<ul style="list-style-type: none"> <li>» Capture scarce rents and promote efficient allocation of resources to achieve better infrastructure,</li> <li>» Research &amp; development (R&amp;D), education, health etc.</li> </ul>	<ul style="list-style-type: none"> <li>» Infrastructure (construction etc.)</li> <li>» Social sector (education, health, WASH industry)</li> <li>» Professional, technical services</li> </ul>	<ul style="list-style-type: none"> <li>» Improved welfare, reduction in poverty &amp; lower income inequalities</li> </ul>
Knowledge Spillover	<ul style="list-style-type: none"> <li>» Increase in technology transfer to the local mining community.</li> </ul>	<ul style="list-style-type: none"> <li>» PPPs, especially with foreign companies, will enhance the domestication of new technologies and improvement in local R&amp;D capacity</li> </ul>	<ul style="list-style-type: none"> <li>» Technology and services sector</li> <li>» Labour</li> </ul>	<ul style="list-style-type: none"> <li>» Job creation, especially semi and unskilled labour</li> <li>» Higher productivity and income for artisanal miners in Nigeria</li> </ul>

### Scenario Building for Impacts of Improved Mining Sector on Economic and Development Outcomes in Nigeria

A productivity link socio-economic framework<sup>71</sup> was developed to assess the economic impacts of improved investments and institutional governance in the Nigerian mining sector. In building this model, the mining sector is categorised into two – oil crude and solid mineral exploration. The crude oil segment accounts for about 95% of all mining activities in Nigeria's mining sector.<sup>72</sup> This, therefore, explains the relatively low-capacity utilisation in other mining activities despite the extensive endowments of various natural resources such as gold, silver, copper, ore etc., in the country. The sectoral input-output technical coefficients from NESG's Macroeconomic Model were also used to examine the inter-sectoral relationships – backward and forward linkages among mining and other sectors in the Nigerian economy.

#### Methodology

This study presents five different scenarios (see Table 11 below) to illustrate how an improved policy, institutional and legal framework in the mining sector, interacting with increased investment, will support growth, job creation and poverty reduction in Nigeria. Specifically,

the assumptions underlying the scenarios are built from whether the government implement the suite of reforms/interventions prescribed in the earlier chapters – improvements in existing policy, legal, regulatory and institutional frameworks for mining. Other prescribed reform imperatives include – efficiency in managing players in the ASM sector, better management of environmental and social risks, minerals industries supply and value-chain improvement (prioritizing strategic and critical minerals) and introduction of more efficient policies to improve beneficial ownership in the mining sector. The forecasts from the five scenarios differ depending on the extent to which investment inflow increases through the effective implementation of the identified reform imperatives, which are deemed to impact key outcome variables - growth rate (output), institutional quality, revenue diversification and ultimately, the overall welfare of the citizens. The scenarios provide opportunities to compare anticipated impacts of either maintaining or improving the current levels of legal, regulatory, institutional & sectoral governance framework on improvement in total output (GDP), government revenue and poverty reduction through job creation in Nigeria.

<sup>71</sup> The productivity link socio-economic framework is adapted from the NESG's macroeconomic model.  
<sup>72</sup> (NBS, 2021). Unemployment and underemployment report.



Table 11: Classical Scenarios for the Mining Sector

Implementation of Governance & Institutional Framework and increase in investments	Scenario A	Robust implementation of the full suite of improved legal, regulatory, governance & institutional frameworks, the deployment and use of effective monitoring, evaluation and learning framework for communicating progress and better involvement of stakeholders in the sector, and a significant increase in private investment.
	Scenario B	Fairly robust implementation of the full suite of improved legal, regulatory, governance & institutional frameworks, ineffective deployment and use of effective monitoring, evaluation and learning frameworks for communicating progress and better involvement of stakeholders in the sector, and a considerable increase in private investment
	Scenario C	Patchy commencement & delayed implementation of improved legal, regulatory, governance & institutional frameworks, and considerable increase private Investments (FDI & Domestic).
	Scenario D	Maintaining the current governance, legal, institutional and policy framework & marginal increase in private investments (FDI and Domestic)
Marginal increase in investments resulting to existing potentials of Solid Minerals Sector	Baseline	Sustaining the sectors current governance framework & very marginal improvement in private investments (FDI and private) in the sector.

Source: NESG

Given the aims and objectives of this section, the scenario setting was approached using two dimensions of improvement in the sector. The first captures a situation of marginal improvement in investments against to the existing potential of the mining sector. The Baseline and Scenario D were created using this assumption. The Baseline Scenario depicts the current performance and development trend of the mining sector in Nigeria. This scenario presents the current situation of the sector after taking into account recent development in the sector. This is the foundation for development of other scenarios premised on the implementation or strengthening of institutional governance and improved investments in the Mining industry in Nigeria.

The last segment under this category is Scenario D which sees a mild improvement in private investments in the sector. In these two scenarios, the institutional and governance

framework of the sector remained unchanged, leading to marginal increase in inflow of private investments into the sector – investment in this model is used as an intermediating variable.

The second set of scenarios (A-C) examines a situation in which the Nigerian government attempts to implement an improved regime of institutional, legal, policy and governance framework in the Solid mineral sector. Under this class, the scenarios are developed in anticipation of the quality of implementation of this new ostensibly institutional and governance framework that positively impacts inflows of FDI, as well as, local investments in the sector. The first, Scenario C, pictured a situation in which the Nigerian government began implementing new governance and institutional framework, but the process was slow. Thus, resulting in weak investment inflow in terms of FDI and local investments.

Scenario B depicts a fairly robust implementation of the proposed governance and institutional framework, resulting in a considerable but below the optimal increase (as in scenario A) in investment inflow. It is assumed that the country is still able to achieve high levels of investment from both FDI and domestic sources. Finally, Scenario A depicts the desired level of institutional governance and the traction of new investments targeted at the Mining sector. In this situation, the government has revolutionised the sector by vigorously implementing the improved governance, legal, policy and institutional framework. As a result, there will be a

significant increase in FDI and locally sourced investments.

**Implications of Improved Institutional, Legal and Regulatory Frameworks on Macroeconomic Performance in Nigeria.** The economic and social consequences of the scenarios discussed above are presented in the subsections below. The economic effects are divided into two categories: accelerated economic growth and revenue diversification and growth for the government. The social impacts of each scenario are examined using job creation potentials and other social indicators.

Table 12: Impact Points - Multiplier Analysis (Economic)

		IMPACT POINTS - MULTIPLIER ANALYSIS (ECONOMIC)								
		Solid Mineral Outputs	Inter-Sectoral Dynamics			Contribution to GDP	Exports - Mining	Government Revenue	Employment -Mining (per NGN Billion of GDP Output)	Employment - in other Sectors (per NGN Billion of GDP Output)
			Primary	Industry	Services					
Implementation of Governance & Institutional Framework and increase in investments	Scenario A	0.649	0.106	0.664	0.479	0.312	0.555	0.143	1158.1	386
	Scenario B	0.599	0.085	0.531	0.383	0.25	0.405	0.128	579.1	193
	Scenario C	0.549	0.064	0.399	0.287	0.187	0.255	0.113	289.5	96.5
Increase in investments due to existing potentials of Mining Sector	Scenario D	0.499	0.042	0.266	0.192	0.125	0.105	0.098	144.8	48.3
	Baseline	0.449	0.021	0.133	0.096	0.062	0.005	0.083	72.4	24.1

Source: NESG

### Scenario for Poverty Reduction through Job Creation

Rising demand for solid mineral exports and output will increase demand for labour and other capital goods. As a result, direct and indirect job creation in the solid mineral sector and other closely linked productive activities in the Nigerian economy will occur.

According to Figure 5, the Baseline scenario should add approximately 7,000 direct and indirect jobs to the Nigerian labour market. Other scenarios resulted in rapid and exponential job creation. Around 15,000 new jobs will be created under Scenario D, while 30,000, 58,000, and 116,000 new jobs will be created under Scenarios C, B, and A, respectively.

<sup>73</sup> Datt, G., & Walker, T. (2019). Does mining sector growth matter for poverty reduction in Papua New Guinea?

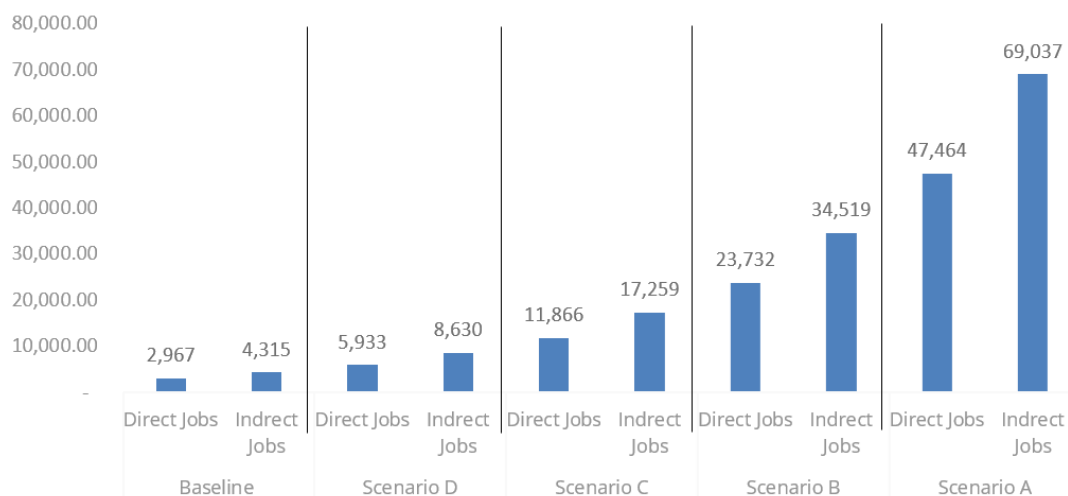
<sup>74</sup> Abuya, W.O., 2016. Mining conflicts and corporate social responsibility: titanium mining in Kwale, Kenya. *Extr. Ind. Soc.* 3 (2), 485-493. <http://www.sciencedirect.com/science/article/pii/S2214790X15300174>

<sup>75</sup> Mensah, S.O., Okyere, S.A., 2014. mining, environment and community conflicts: a study of company-community conflicts over gold mining in the Obuasi municipality of Ghana. *J. Sustain. Dev. Stud.* 5 (1). <http://infinitypress.info/index.php/jsds/article/view/537>.

Table 13: Impacts of Job Creation (Unit)

Number of Job Created (Unit)	Baseline		Scenario D		Scenario C		Scenario B		Scenario A	
	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect
Crop Production	0	0	0	0	0	0	0	0	0	0
Livestock	0	2	0	4	0	8	0	17	0	33
Forestry	0	0	0	0	0	0	0	0	0	0
Fishery	0	0	0	0	0	0	0	0	0	0
Mining Industry	1236	412	2472	824	4945	1648	9889	3296	19778	6593
Oil Refining	0	7	0	15	0	30	0	59	0	118
Food, Beverage and Tobacco	0	41	0	82	0	164	0	329	0	657
Textile, Apparel and Footwear	0	362	0	724	0	1449	0	2897	0	5795
Wood and Wood Products	0	41	0	82	0	164	0	328	0	655
Chemical, Chemical Products & electrical	0	2	0	4	0	9	0	17	0	34
Basic metal & Motor vehicles	0	2	0	5	0	10	0	19	0	39
Other Industry	0	17	0	35	0	69	0	139	0	278
Electricity	0	109	0	218	0	436	0	872	0	1745
Other Utilities- water & waste management	0	0	0	1	0	2	0	4	0	8
Cement & Construction	1730	0	3461	0	6922	0	13843	0	27686	0
Trade	0	1496	0	2992	0	5984	0	11969	0	23938
Transport	0	155	0	309	0	619	0	1237	0	2475
Telecommunications	0	926	0	1852	0	3705	0	7410	0	14820
Arts, Entertainment and Recreation	0	2	0	3	0	6	0	12	0	25
Financial & Insurance	0	183	0	365	0	731	0	1461	0	2922
Real estate, Professional & Admin	0	341	0	683	0	1365	0	2730	0	5461
Education	0	30	0	61	0	122	0	244	0	487
Health	0	30	0	59	0	118	0	236	0	472
Other Services	0	155	0	311	0	621	0	1243	0	2485
Public Admin	0	0	0	0	0	0	0	0	0	0
	<b>2967</b>	<b>4315</b>	<b>5933</b>	<b>8630</b>	<b>11866</b>	<b>17259</b>	<b>23732</b>	<b>34519</b>	<b>47464</b>	<b>69037</b>

Figure 5: Impacts of Job creation (Unit)



Source: NESG

According to the sectoral analysis, improved productivity in the mining sector will significantly impact job creation in the mining industry, cement and construction, finance and insurance, trade, telecommunications, and real estate & professional services sectors. (See Table 12 for details.) Only the livestock sub-sector of the agriculture sector will benefit significantly from high outputs in the mining sector on a broad sectoral level. This is due to direct use of some outputs of solid minerals sector in the sub-sector. Additionally, productive-supporting services such as trade, financial and insurance, telecommunications, real estate, and professional services will record significant improvement in new job creation, either directly or indirectly.

According to theory, a significant reduction in poverty level cannot be justified solely by a quantitative increase in job creation. As a result, we conducted a qualitative assessment of other social factors that could reduce the expected welfare impact of employment and rated their performances across all five scenarios developed for this study. Taking a cue from Datt & Walker<sup>73</sup> (2019), Abuya<sup>74</sup> (2016), and Mensah & Okyere<sup>75</sup> (2014), key social indicators are highlighted as enhancing factors for the Mining sector's job creation impact on the poverty level. The social indicators considered for this study include bribery, thefts and accidents, child/forced labour, improved working conditions, expropriation/displacement, environmental pollution, discrimination, indigenous group rights, and stakeholder inclusion.

Table 14: Social Impact points - Multiplier Analysis

	Bribery	Thefts and accidents	Social tensions	Child/forced labour	Working condition Improvement	Expropriation/displacement	Environmental pollution	Discrimination	Indigenous rights	Stakeholder inclusion
Scenario A	Very Low				Low	Moderate			High	Very High
Scenario B	Very Low				Low	Moderate			High	Very High
Scenario C	Very Low				Low	Moderate			High	Very High
Scenario D	Very Low				Low	Moderate			High	Very High
Scenario E	Very Low				Low	Moderate			High	Very High

Heatmap Indicators: Very Low, Low, Moderate, High, Very High

Continuing with the status quo, the incidence of all social indicators was rated poorly in the Baseline scenario. Scenario D is expected to provide a similar but slightly improved experience. With these conditions, the job-welfare link will result in less than expected improvement in people's living conditions. The introduction of a new framework, on the other hand, will encourage an improvement in the conditions of the highlighted social indicators and support people's standard of living. As a result, as the level of welfare rises, poverty decreases. Scenario A is identified as the most poverty-reducing scenario in the case of Nigeria's mining industry.

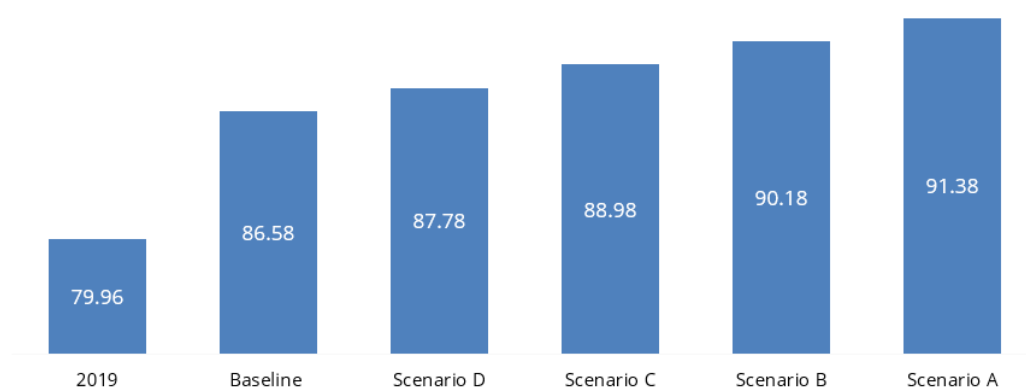
### Scenario for Revenue Diversification and Growth

This section examines the advantages of the proposed improvement in the Mining sector's performance and aid revenue diversification and growth of the Nigerian government.

Because the productivity will induce employment or job creation, the analysis also includes improvements in the Pay-As-You-Earn (PAYE) and other revenue components intended for the country's sub-national governments. McMahon & Moreira<sup>76</sup> (2014) and Jourdan<sup>77</sup> (2008) supported the argument of government revenue growth by improving mining sector output in West Africa.

Under the Baseline scenario, the accruable revenue to the Federal Government is expected to rise from N79.96 billion in 2019 to N86.58 billion in 2020. Scenarios D (N87.78 billion), C (N88.98 billion), B (N90.18 billion), and A (N91.38 billion) are expected to generate more revenue than the Baseline. The disaggregated revenue analysis revealed a significant increase in company income tax, royalty and permit payments, VAT, and other taxes paid to the Federal Government of Nigeria (See Table 14).

Figure 6: Impacts on Government Revenue (NGN Billion)



Source: NEITI, NESG Estimates

<sup>76</sup> Ibid 5.

<sup>77</sup> Jourdan, Paul. 2008. "Integrated Mineral-Based Growth and Development," presentation prepared for West African Regional Mining Forum, African Development Bank. February. 2008

Table 15: Government Revenue Attributable to Minings (NGN Billion)

	2019	Baseline	Scenario D	Scenario C	Scenario B	Scenario A
<b>Category of taxes</b>						
FIRS - Company Income Tax	4.56	4.93	5.00	5.07	5.14	5.21
Royalty and permits	2.55	2.76	2.80	2.84	2.88	2.91
Annual services charges & others	3.45	3.73	3.78	3.83	3.89	3.94
FIRS- VAT	41.91	45.38	46.01	46.64	47.27	47.90
FIRS – EDT	5.21	5.65	5.72	5.80	5.88	5.96
FIRS – WHT	17.19	18.61	18.87	19.13	19.39	19.64
PAYE (States Governments)	5.09	5.51	5.59	5.66	5.74	5.82
<b>FGN Collected Revenue</b>	<b>10215.05</b>					
Sector Mineral Revenue	79.96	86.58	87.78	88.98	90.18	91.38
Share of FGN Retained Revenue	0.78%	0.85%	0.86%	0.87%	0.88%	0.89%

In addition, the accruable taxes to the states governments also increased from N5.09 billion in 2019 to N5.52 billion under the Baseline Scenario and N5.82 billion with scenario A. Also, the solid mineral share of FG revenue is also anticipated to increase from 0.78 percent to about 0.89 percent with Scenario A and 0.85 percent with the Baseline scenario. The share of FG revenue under scenarios D, C, and B are 0.86 percent, 0.87 percent and 0.88 percent, respectively. Kepstein et al.<sup>78</sup> (2010) also provide a supporting case how mining investments or projects in Ghana yielded improved government revenue and other social-economic benefits for the mining sites, surrounding community and fiscal environment of the country.

### Scenario for Accelerated Growth

The productivity (output) impact results of the productivity link socio-economic model developed for this study are shown in this section. In addition, the impact on the following core economic activities will be captured.

1. Mining output level (GDP) and growth;
2. Contribution to the output of other sectors and aggregate output (GDP); and
3. Mining export.

As shown in Figure 7, one of the critical benefits of improved investment and institutional and governance framework is the increase in productive activities in the mining sector. This increased productivity will be measured as output, i.e., GDP. According to the economic model, the sector's output will increase by N400 billion to N3 trillion in GDP terms. Maintaining the current status quo in the sector – the baseline scenario is expected to add about N494.2 billion to the GDP of the sector in the short to medium term. Under these conditions, the sector will grow by 44.87 percent within the period considered. Scenario D, which assumes a high level of FDI in the sector under the current institutional framework, is expected to boost the sector's GDP by N549.3 billion. From the scenario, a high volume of FDI is achieved, but the existing institutional and governance

<sup>78</sup> Kapstein, Ethan, René Kim, Willem Ruster, and Hedda Eggeling. 2010. "The Socio-Economic Impact of Newmont Ghana Gold Limited." Haarlem, the Netherlands: Stewart Redqueen Consulting.

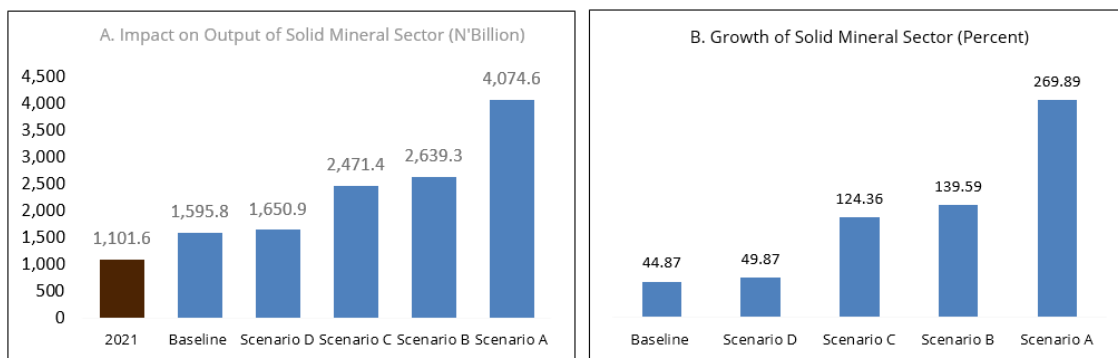


framework is noted to slow down productivity and growth. As a result, when compared with 2021, the sector would grow by 49.87 percent. As previously stated, both scenarios indicated that setting up a viable institutional and governance framework is critical to unlocking the productivity potential of the mining sector in Nigeria.

Scenarios C-A envision a situation where the Nigerian government establishes a new institution and governance framework. In scenario C, the sector's output will double

and increase by N1.37 trillion. Based on this performance level, the sector will grow by 124.4 percent. Instructively, this is a situation in which it is assumed that the implementation of the new framework will be delayed. The anticipated pioneering investments in the sector, on the other hand, will stimulate new locally induced investments and FDI inflows, resulting in increased productivity. Under Scenario B, the sector's output is expected to increase to N2.64 trillion, representing a surge of N1.54 trillion compared with its performance in 2021. This translates to a 139.6 percent

Figure 7: Sizing Economic Impact: Sectoral Performance



Source: NESG

increase in output. As illustrated in Scenario A, the sector's production is estimated to peak at N4.07 trillion following the successful implementation. This performance will result in 269.9 percent output growth following the robust implementation of the new institutional and governance framework for the sector. Key findings from McKinsey<sup>79</sup> (2020) and Etter-Phoya & Malunga<sup>80</sup> (2019) supported the productivity pattern in the mining sector within these scenarios.

The improved sectoral performance is expected to generate inter-sectoral dynamics, as one would expect from a modern economy. The contribution of the mining sector to output in other sectors of the Nigerian economy is shown in Table 15. The Baseline scenario will add N250.6 billion to the Nigerian economy on an aggregate basis. On the other hand, Scenario A would add N345.0 billion over the period of improved investments and institutional and governance framework.

<sup>79</sup> McKinsey (2020). The mine-to-market value chain: A hidden gem. Global Energy & Materials Practice

<sup>80</sup> Etter-Phoya, R., & Malunga, G. W. (2019). Exploring the Past to Extract Better Development Outcomes from Malawi's Mineral Sector. The Society of Malawi Journal, 72(1), 1-28.

Table 16: Contribution to performance of other sectors in the Nigerian Economy (N'Billion)

	2021	Baseline	Scenario D	Scenario C	Scenario B	Scenario A
Crop Production	-	-	-	-	-	-
Livestock	0.08	0.09	0.09	0.09	0.09	0.09
Forestry	-	-	-	-	-	-
Fishery	-	-	-	-	-	-
Mining Industry	16.72	17.08	17.43	17.79	18.14	18.49
Oil Refining	0.27	0.31	0.34	0.38	0.41	0.45
Food, Beverage and Tobacco	1.5	1.7	1.9	2.1	2.3	2.5
Textile, Apparel and Footwear	13.25	15.01	16.77	18.53	20.29	22.05
Wood and Wood Products	1.5	1.7	1.9	2.09	2.29	2.49
Chemical, Chemical Products & electrical	0.08	0.09	0.1	0.11	0.12	0.13
Basic metal & Motor vehicles	0.09	0.1	0.11	0.12	0.13	0.15
Other Industry	0.64	0.72	0.8	0.89	0.97	1.06
Electricity	3.99	4.52	5.05	5.58	6.11	6.64
Other Utilities- water & waste management	0.02	0.02	0.02	0.02	0.03	0.03
Cement & Construction	63.31	71.72	80.13	88.54	96.94	105.35
Trade	56.59	62.01	67.43	72.84	78.26	83.68
Transport	5.85	6.41	6.97	7.53	8.09	8.65
Telecommunications	35.03	38.39	41.74	45.1	48.45	51.81
Arts, Entertainment and Recreation	0.06	0.06	0.07	0.07	0.08	0.09
Financial & Insurance	6.91	7.57	8.23	8.89	9.55	10.21
Real estate, Professional & Admin	12.91	14.15	15.38	16.62	17.85	19.09
Education	1.15	1.26	1.37	1.48	1.59	1.7
Health	1.12	1.22	1.33	1.44	1.54	1.65
Other Services	5.87	6.44	7	7.56	8.12	8.69
Public Admin	-	-	-	-	-	-
Nigerian GDP	226.94	250.55	274.16	297.78	321.39	345

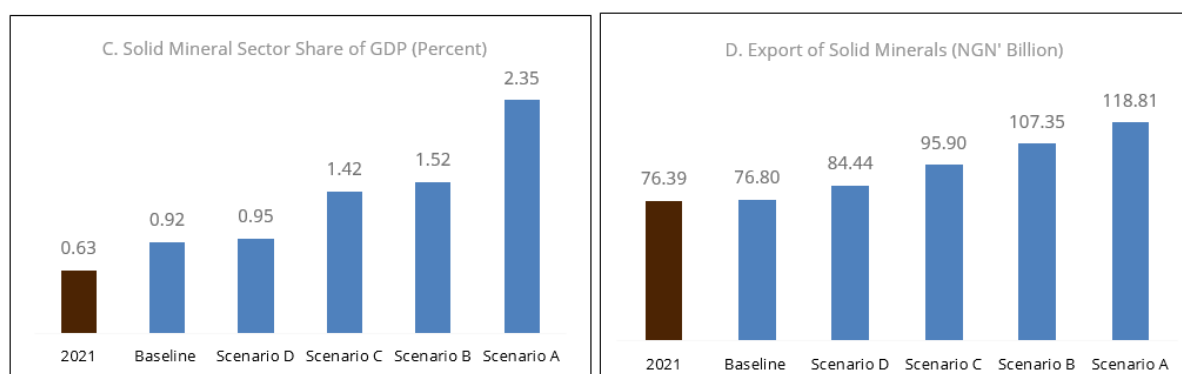
Source: NESG

According to sectoral analysis, the cement and construction, trade, telecommunications, mining industry, textile, apparel and footwear, real estate, professional and administrative, and financial and insurance sectors will benefit the most from increased productivity in the mining sector. Across the board, all productive activities will increase output, either directly or indirectly. Instructively, most of the previously mentioned sectors are highly labour intensive in their production model. As a result, job creation and stable domestic economic conditions are enhanced (See McMahon &

Moreira<sup>81</sup> (2014).

In addition to increasing the sector's contribution to the economy, the sector's share of the Nigerian economy is expected to rise significantly, from 0.63 percent to 0.92 percent in the baseline scenario and 2.35 percent if scenario A is satisfied (See Figure xxxx). Within this range, activities that result in Scenario D would increase its share of the Nigerian economy to 0.95 percent. Scenarios C and B would increase to 1.42 percent and 1.52 percent, respectively.

Figure 8: Sizing Economic Impact: Export & Share of GDP



Source: NBS, NESG

Finally, the export potential of the mining sector was investigated in this section. Nigeria exported minings worth N76.39 billion in 2021 (NBS, 2021). This situation is expected to drastically change because most of the mining sector's output is for external trade. Based on this, the country's foreign exchange earnings

are expected to increase as the mining sector becomes a major source of export other than oil and gas. On a baseline basis, the country's mining exports are expected to increase to N76.8 billion. Scenario A is the most optimistic, with Nigeria's mining exports expected to increase to N118.8 billion.

<sup>81</sup> McMahon, G., & Moreira, S. (2014). The contribution of the mining sector to socioeconomic and human development.



# Gender Assessment of the Mining Sector



## Introduction

Although the government and gender-focused agencies have made efforts towards promoting gender equality across sectors, wide gender gaps still persist – including in the mining sector<sup>82,83</sup>. Women make up an estimated 8 to 17 percent of the global mining human resource.<sup>84</sup> Additionally, the low labour force participation and the drop-off from entry-level to executive for females within the mining industry is one of the highest across all industries<sup>85</sup>. This has been linked to existing norms of operations from which gender stereotypes operate. Gender stereotypes are expectations on the traditional roles to be possessed by, or performed by women and men within a group<sup>86</sup>. Gender stereotypes determines gender expectations and they differ from society to society, as norms shape the expected behaviours and roles connected with being male or female within a group. Through gender expectations, a society navigates the relationship between sexes.<sup>87</sup>

Gender stereotypes introduces hierarchy into group dynamics and intersects with other existing inequalities such as socioeconomic status, age, disability, ethnicity, geographical location, and religion, thereby giving rise to wider discrimination or disadvantage.<sup>88</sup> Gender in this context can be explained as “social attributes and opportunities associated with being male and female and the relationships between women and men and girls and boys, as well as the relations between women and those between men”.<sup>89</sup> Gender is socially constructed and passed down from one generation to another through socialization; therefore, man-made and able to evolve.<sup>90,91</sup> However, like any other, norms around gender have been proposed to evolve through a series of shifts instead of a singular shift based on the

recognised losses incurred if such norms are left static<sup>92</sup>.

Data show that on a per capita basis, gender inequality in earnings could lead to a wealth loss of \$23,620 per person globally, with an estimated global loss of about \$160.2 trillion in human capital wealth<sup>93</sup>; of which \$26 billion of this could be recovered if Nigeria is able to close her existing gender inequality gap. Statistics such as this are particularly relevant because, according to the World Economic Forum for 2021, Nigeria ranks 139 of 156 countries on the global gender index rank pointing to the need for joint efforts toward abating gender-inequality-related losses.<sup>94</sup>

We believe that efforts towards closing Nigeria’s gender gap will not be successful without addressing the gender inequity that exists in the mining sector. A recent report from NEITI indicated that about N624. 45billion had been accrued in revenue over the last fifteen years from the industry.<sup>82</sup> However, we consider this revenue a possible shortfall because the sector has not fully utilised its human resources within those years. The Nigerian mining sector is traditionally male-dominated, with women making up less than twenty-five percent of the total labour force.<sup>95,96</sup> Even though women are becoming more involved as engineers, geologists, artisanal miners, executives, and board members, it still poses a challenge to get women’s meaningful engagement, due to the power in-balance between men and women in the industry.<sup>96</sup> This is showcased by the under-representativeness of women in the extractive industry, the saturation of women in the less-paying seasonal roles, and the low proportion of women who hold power in top management.<sup>95,97</sup>

<sup>83</sup> NEITI. 2019 Solid Minerals Audit (SMA) Industry Report. 1–130 (2019).

<sup>84</sup> Hipwell, B., C J D, K. P. & Armstrong LLP, W. Wardell Armstrong LLP Nationwide Baseline Study on the Development of Artisanal & Small Scale Mining in Nigeria Ministry of Mines and Steel Development Sustainable Management of Mineral Resources Project PREPARED BY. (2008).

<sup>85</sup> Fernandez-Stark, K., Couto, V. & Bamber, P. Industry 4.0 in Developing Countries: The Mine of the Future and the Role of Women. (2019).

<sup>86</sup> DuBois, C. The impact of ‘soft’ affirmative action policies on minority hiring in executive leadership: The case of the NFL’s Rooney rule. *Am. Law Econ. Rev.* 18, 208–233 (2016).

<sup>87</sup> Goebel, R. in *Mining*. (2012).

<sup>88</sup> Editorial Intersectionality. (2006) doi:10.1177/1350506806065751.

<sup>89</sup> OSAGI Gender Mainstreaming - Concepts and definitions. <https://www.un.org/womenwatch/osagi/conceptsanddefinitions.htm>.

<sup>90</sup> Winter, G. F. Determining gender: a social construct? *Community Pract.* 88, 15–18 (2015).

<sup>91</sup> Whiten, A., Hinde, R. A., Laland, K. N. & Stringer, C. B. Culture evolves. *Philos. Trans. R. Soc. B Biol. Sci.* 366, 938–948 (2011).

<sup>92</sup> Williams, L. K. How culture evolves: An institutional analysis. *Int. J. Soc. Econ.* 34, 249–267 (2007).

<sup>93</sup> The Gender Equality and Social Inclusion (GESI) Working Group. A common framework for Gender Equality & Social Inclusion. GESI Work. Gr. (2017).

<sup>94</sup> WEF. 2021 The global gender gap report. World Economic Forum (2021).

<sup>95</sup> Rights, H. & JanuaryReport. Promoting Gender Diversity and Inclusion in the Oil, Gas and Mining Extractive Industries Promoting Gender Diversity and Inclusion in the Oil, Gas and Mining Extractive Industries About The Advocates for Human Rights. (2019).

<sup>96</sup> Policy-makers, O. F. O. R. Gender in Mining Governance : 1–8 (2018).

<sup>97</sup> Pimpa, N. How mining companies promote gender equality through sustainable development? *Cogent Bus. Manag.* 6, (2019).

Also, the absence of fully defined maternity rights by law has contributed to the low number of women engaged within the sector.

Some have posited that the major cause of such power in-balance in the mining industry is founded on stereotypes around gender norms which propel the “male breadwinner model” and restrict women through laws, such as Section 56 (1) of the 2004 Labour Act which stipulates that women are not to engage in any underground work in any mine.<sup>98</sup> However, these laws have given room for women’s exploitation because many women engage in unpaid labour in the mines, but their efforts are not rewarded because the law does not make clear provisions for such. Furthermore, these stereotypes have also contributed to women being side-lined in the decision-making process in communities where mining activities occur. According to several explorations, greater workplace gender equality brings greater benefits to organisations. In the United Kingdom, mining companies with greater gender equality were 49% more cost-efficient and 83% more innovative than their all-male counterparts. Bearing in mind that gender equality in the United Kingdom stands at around 73%.<sup>99,100</sup> Drawing from the stated discussion, this review posits that Nigeria could accrue more financial and innovative gains if gender equality is fully embraced at different levels of the mining sector.

### Purpose

This desk review aims to document the challenges and opportunities faced by women in the mining sector and contribute to strategies for advancing gender equality within the sector. Specific objectives include:

- » To review and document challenges and opportunities faced by women in the mining sector.
- » To better understand the gender dimensions of the mining sector to promote gender equality, contributing to social development.
- » To review labour laws and sectors policy with recommendations for improvement
- » To provide recommendations to address challenges faced by women in the mining sector
- » To provide recommendations to improve gender equality and mainstreaming in the mining sector

### Methodology

The desk review covered a wide range of the most recent reports and studies on challenges and opportunities for women in the mining industry. To better understand the gender dimensions of the challenges and opportunities faced by women in the mining industry, the Capacities and Vulnerabilities Framework was adapted.

### Conceptual Framework

The Capacities and Vulnerabilities Approach (CVA) is a gender analysis tool that provides a way to characterize gendered roles and responsibilities and power dynamics. Originally developed as a gender analysis tool to be applied to humanitarian disaster contexts to help with planning aid in emergencies and to prepare for possible subsequent disasters (whether environmental or related to conflict), the CVA also helps to identify specific strengths and weaknesses of a particular community that may help or hinder individuals in that community to address social, political, environmental, resource and developmental concerns. The CVA tool supports the identification of the unique social needs of a particular community by encouraging a critical examination of gender-related roles, gender-based responsibilities, and power dynamics.

The CVA defines capacities as existing strengths of individuals and social groups and encompasses people’s material and physical resources, their social resources, and their beliefs and attitudes. This definition of capacities fits well in the context of the adaptation of

<sup>99</sup> Menard, A. & Moses, E. Gender and Extractive Governance: Lessons from Existing Legal and Policy Frameworks. (2021).

<sup>100</sup> European Institute for Gender Equality. Gender equality index 2020 : United Kingdom.

the tool, thus remaining unchanged. The CVA defines vulnerabilities as long-term factors that weaken people's ability to cope with the sudden onset of disaster, or with drawn-out emergencies. However, for the purpose of adapting the CVA, vulnerabilities were identified as long-term factors that hind

The CVA framework organises capacities and vulnerabilities according to three distinct categories of factors that were relevant to our context. This is shown below:

- » Physical/Material
- » Motivational/Attitudinal
- » Social/Organizational

## Legal and Legislative Framework

### Description of International Instruments

Many countries have provisions/laws that prohibit women from working underground, at night, or in the extractive sector as a whole, however, a number of these countries recently repealed or amended these restrictive laws/policies but the effect of the prohibition still lingers on women's participation in the extractive sector, and ultimately on the wage gap. In Canada for example, only 5% of mine-site workers are women and most women are employed in lower-paid functions. Centuries of women's absence from mine sites have led to cultures and norms that still perpetuate unequal participation. Many of these provisions are rooted in the British Mines and Collieries Act of 1842, which removed women from the coalface in British underground mines, due to genuine concern about the hazardous nature of the work and moral panic about men and women working together in dimly lit underground area.<sup>98</sup> However, international instruments have been adopted by many countries with the United Nations championing many of these courses. The fundamentals of these laws, resolutions, and conventions are usually that of non-discrimination and opposition to violence on a global scale.<sup>101</sup> See Table 1 in appendices.

### Description of Regional Instruments

Different governments have increasingly acted to advance inclusiveness in the mining industry. In 2009, the African Union created the Africa Mining Vision, which is a policy framework to ensure that Africa utilizes its mineral resources strategically for broad-based, and inclusive development. The framework includes progress towards gender equity and women's empowerment in the mining industry.<sup>102</sup> In Ghana, The Galiano women in mining charter was developed to raise awareness on the benefit of gender diversity across its business, from the boardroom to the front line, the broader mining sector and within our local communities.<sup>103</sup> See Table 2 in appendices.

### Nigerian Context

The Nigerian policy and legislative frameworks stem from a plural legal system. These consist of the statutory and sharia law in the northern zones, which coexist with customary law in rural areas. This system requires both the federal and state legislatures to pass laws which then create varying degrees of protection for the rights of people across states. However, laws have to be domesticated by States to be legally binding even when the federal government has passed such a law.<sup>104</sup> Succinctly put, the constitution, legislation, English law, customary law, Islamic law (Sharia), and judicial precedents are the sources of law in Nigeria with the constitution supreme.<sup>105</sup>

Nigeria has three documents directly related to the extractive sector which mention gender, women or sex: The 2004 Labour Act, the 2016 Mining and Metal Sector Investment Promotion Brochure and the 2017 National Gas Policy. These laws and policy documents govern employment and contain the general provision for wage protection, employment contracts, and terms of conditions of employment and recruitment. It also defines special classes of workers. However, it prohibits women from being employed for night work (from 10 pm to 5 am) in a public or private industrial undertaking. It stipulates that women cannot



work underground in any mine. These laws and policies exclude women from mining opportunities open to men, thereby contributing to the sector's widening gender gap.<sup>98</sup>

However, the Nigerian Government has adopted several conventions, instruments, international, regional, and local laws to address the issue of human rights violations, some of which include the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) adopted in 1979, The Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (Maputo Protocol) adopted in 2003, and the Violence Against Persons Prohibition Act passed in 2015.<sup>106</sup>

According to the Constitution of the Federal Republic of Nigeria 1999 (as amended) in section 17, subsection 3, it declares that the State shall direct its policy towards ensuring that all citizens, without discrimination against any group whatsoever, have the opportunity to secure adequate means of livelihood as well as seek out opportunity for suitable employment. It further states that the health, safety, and welfare of all persons in employment are safeguarded and not endangered or abused. In addition, it stipulates equal pay for equal work without discrimination on account of sex.<sup>107</sup> Furthermore, the Nigerian Mineral and Mining Act 2007 allows a citizen of Nigeria who has not been convicted of a criminal offence, the legal capacity to obtain a mineral title for any mining activity.<sup>108</sup>

Other laws and policies, such as the National Gender Policy 2014, which speaks

to employment and labour issues, and the Violence Against Persons (Prohibition) VAPP Act 2015, aim to achieve equality and equity in employment opportunities. They also aim to eliminate all discriminatory and abusive practices against women's employment in the public and private sectors, including all forms of violence.<sup>109</sup> However, twenty-three (23) out of the 36 states in Nigeria have yet to domesticate the Violence Against Person's Prohibition (VAPP) Act<sup>11</sup>, while 15 states have yet to domesticate the Child's Right Act.<sup>110</sup> Furthermore, the Gender and Equal Opportunity bill seeks to protect the right of individuals, especially women, and to guarantee their rights to equal opportunity in employment, equal rights of inheritance for male and female children; equal rights for women in marriage and divorce, equal access to education, property ownership. However, the bill was rejected.<sup>111</sup>

The Nigerian Government approved a federal executive memorandum directing all government ministries, departments, and agencies to appoint gender focal persons within their directorate cadres to mainstream gender equality in various sectoral policies and programming.<sup>112</sup> The table below shows the description for mdas to incorporate gender mainstreaming in their various sectors as proposed by the federal government.<sup>112</sup> See Table 3 and 4 in appendices.

### Situation of Women in Mining

As shown by findings from NEITI's gender assessment of sixty-three mining industries reported in figure 9, men dominate the mining industry, with only 6.8% of the employees as female, of which, no female was employed

<sup>98</sup> Menard, A. & Moses, E. Gender and Extractive Governance: Lessons from Existing Legal and Policy Frameworks. (2021).

<sup>99</sup> European Institute for Gender Equality. Gender equality index 2020 : United Kingdom.

<sup>100</sup> ILO. Women in mining Towards gender equality. (2021).

<sup>101</sup> The Initiative for Equal Rights (TIERS). 2019 Human Right Violations Report based on Real or Perceived Sexual Orientation and Gender Identity in Nigeria. (2019).

<sup>102</sup> African Union. Africa Mining Vision. (2009).

<sup>103</sup> Galiano Gold. The galiano women in mining charter. (2020).

<sup>104</sup> Al-Kyari, F. M. Institutional Assessment for the Nigeria For Women Project. World Bank Group, Washington, DC (2018).

<sup>105</sup> Immigration and Refugee Board of Canada. The Situation of Sexual and Gender Minorities in Nigeria (2014-2018). (2019).

<sup>106</sup> World Bank. Gender-Based Violence: An Analysis of the Implications for the Nigeria for Women Project. (2019).

<sup>107</sup> Federal Republic of Nigeria. Constitution of the Federal Republic of Nigeria 1999. (1999).

<sup>108</sup> Adefulu, A. Review Of The Nigerian Minerals And Mining Act 2007.

<sup>109</sup> The Federal Ministry of Women Affairs and Social Development Abuja. Federal Republic of Nigeria. NATIONAL GENDER POLICY Situation Analysis / Framework.

<sup>110</sup> Congress, L. of. Library of Congress.

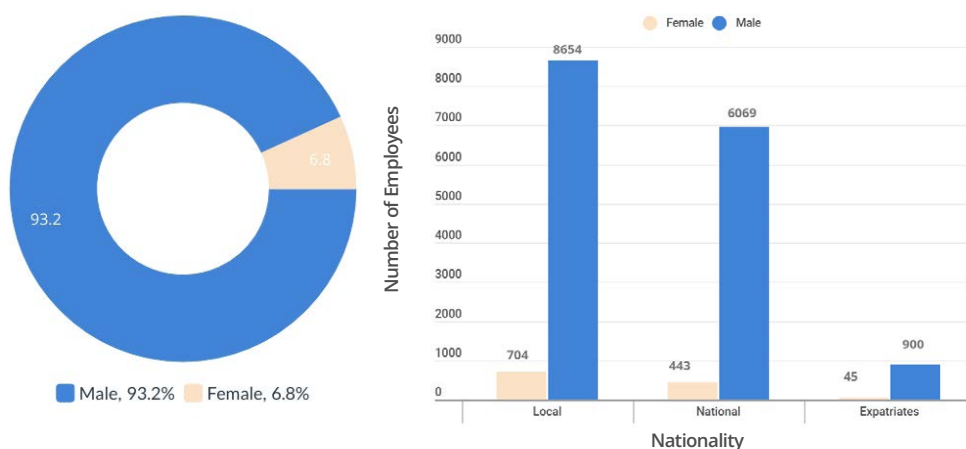
<sup>111</sup> Premium Times. Again, Gender Equality bill suffers setback at Senate. (2021).

<sup>112</sup> FGN. FGN, 2015, Public Service Reforms in Nigeria 1999-2014: A Comprehensive Review Office of the Secretary to the Government of the Federation the Presidency April 2015. (2015).

in 11 of the 63 companies assessed. Despite men’s dominance of the mining industry, women’s significant contribution to the sector’s value chain is gradually gaining recognition. This contribution ranges from engagement as workers in large-scale mining (LSM) and artisanal and small-scale mining (ASM) to supporting with the delivery of refined products to end-users.<sup>113</sup> Notwithstanding, a substantial proportion of women are restricted from entry into the mining workforce. As stated by a respondent in

Phola, a South African community where mining takes place, “Women (are) less likely to get hired because of pregnancy”<sup>114</sup>, and sometimes have to exchange sexual favors for employment<sup>114</sup>. Studies also point to constraining factors that limit women’s access and ability to control resources, resulting in more women occupying lower-paid positions and taking up more hazardous tasks within the mining value chain<sup>34</sup>.

Figure 9: Proportion of Females Employed in the Mining Sector in Nigeria (2019)



Curled from NEITI (2019) Solid Minerals Audit (SMA) Industry Report

Data suggests that women with disabilities even have it worse. Table 16 shows that despite Nigeria signing the Discrimination Against Persons with Disabilities (Prohibition) Act in 2019, people with disability (PWD) were still less likely to be employed in the mining

industry; men with disability still stood a higher chance of employment than women with disability. Indicative that women with disability in the industry were exposed to double levels of marginalization based on their status as women and PWD.

Table 17: Proportion of People With Disability in the Mining Sector in Nigeria (2019)

Description	Male	Female	Total
Persons lining with disabilities	15	0	15 (0.1%)
Other employees	17,266	1,264	18,530 (99.9%)
<b>Total</b>	<b>17,281</b>	<b>1,264</b>	<b>18,545 (100%)</b>

Curled from NEITI's assessment of 63 mining companies in Nigeria in 2019

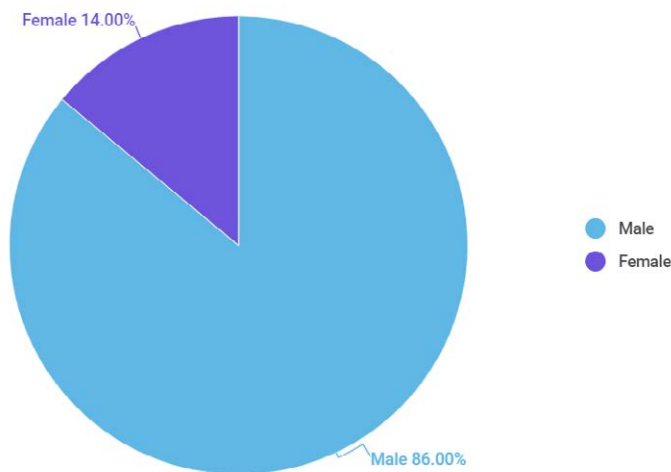
<sup>113</sup> Gender in Mining Governance: An annotated bibliography for large-scale mining. (2021).

<sup>114</sup> Action Aid. Mining in South Africa - Social Audit Baseline Report. (2018).

The existence of gender stereotypes backed by regulations that restrict women's entry into mining as a protective measure against harm in some countries, particularly as underground workers; however, although well-intentioned, has further contributed to women's exploitation since children (girls inclusive) and women also contribute to the production and extraction of minerals, but all the direct economic benefits as players within the ASM goes to the man in the family in many rural communities.<sup>86,116</sup> Another reason for women's past exclusion in mining work was related to cultural beliefs held within communities; where the presence of women in minefields was seen as a distraction to miners and instrumental to the occurrence of accidents<sup>86</sup>. However, in recent years, more women have taken up mining and are involved in core operations

such as drilling, blasting, and material handling<sup>116</sup>; however, "most women...still feel excluded from the industry"<sup>117</sup>and are still underrepresented at all levels. In addition to being poorly represented in core mining operations and other managerial positions, research also shows the disproportionate representation of women in most extractive industries, across all levels, particularly for top-level positions.<sup>97</sup> A recent assessment carried out by McKinsey showed that about 44% of female respondents in the mining sector felt they had not received an equal opportunity for promotion compared to their male colleagues.<sup>118</sup> Similar trends are seen in Nigeria, as shown in figure 10, with only 14% of women positioned as leaders in mineral exporting companies with a FOB Value of \$50 million and Over.

Figure 10: Proportion of Leaders in Mineral Exporting Companies (with FOB Value of \$50 million and Over) in Nigeria by Gender (2019)



Curled from NEITI REPORT (2019); Page 60: Table 22: Export of Minerals by Companies \*Mining Cadastre Office

<sup>86</sup> Goebel, R. in Mining. (2012).

<sup>97</sup> Pimpa, N. How mining companies promote gender equality through sustainable development? Cogent Bus. Manag. 6, (2019).

<sup>116</sup> Kansake, B. A., Sakyi-Addo, G. B. & Dumakor-Dupey, N. K. Creating a gender-inclusive mining industry: Uncovering the challenges of female mining stakeholders. Resour. Policy 70, 101962 (2021).

<sup>117</sup> Study shows that several challenges remain for women in mining. <https://www.miningweekly.com/article/study-shows-that-several-challenges-remain-for-women-in-mining-2014-01-17>.

<sup>118</sup> Why women are leaving the mining industry and what mining companies can do about it | McKinsey. <https://www.mckinsey.com/industries/metals-and-mining/our-insights/why-women-are-leaving-the-mining-industry-and-what-mining-companies-can-do-about-it>.

Globally, the mining industry has the lowest number of female board members when compared with other industries.<sup>116</sup> According to a global report by Catalyst, a non-profit organization that focuses on gender diversity in the workplace, women constituted only 7.9% of board positions in the top 500 mining companies as of 2016.<sup>97,116</sup> Similar trends were also found in Nigeria. Apart from Lafarge Africa Plc, which had a gender-balanced board of six men and six women, other top highest-grossing mining-producing companies like Dangote Cement and Julius Berger still had male-dominated boards. Also, the 5th National Stakeholders Working Group (NSWG), which is the governing board of the Nigeria Extractive

Industries Transparency Initiative (NEITI), comprises fifteen members, of which only one person is female.<sup>119,120</sup> This reflects a scarcity of female sponsors to mentor younger female miners and supports their career progression if they choose to progress with a career in mining. Additionally, the shortage of women in decision-making positions in the mining industries means that issues regarding women, like maternity leave policies and other related female concerns, will scarcely be addressed. Resulting in women leaving the industry and a potential loss of key human resources that would have contributed to inclusiveness essential for greater innovation and strategic resilience.<sup>121</sup>

Figure 11: The Gender Distribution of NEITI'S National Stakeholders Working Group (2021)

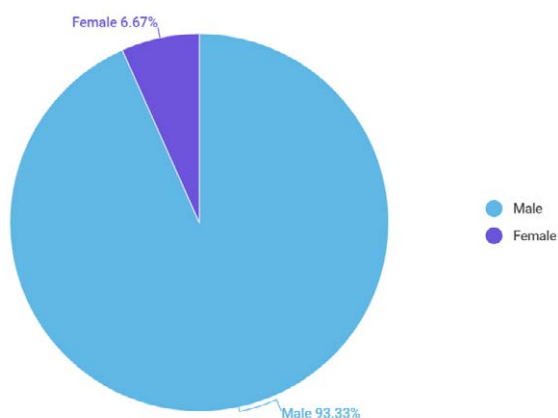
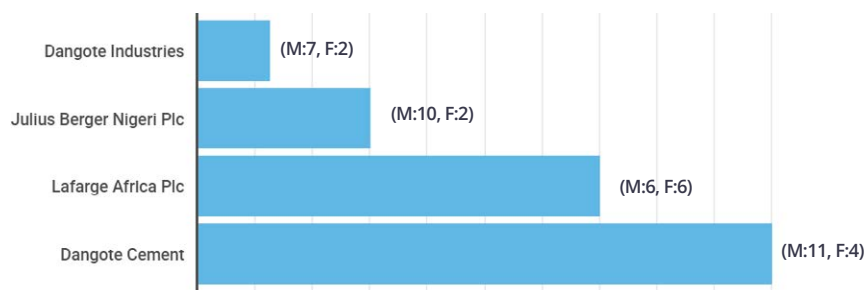


Figure 12: Gender Ratio on the Board of Directors of the Highest Grossing Mineral Producing Companies in Nigeria (2019)



<sup>97</sup> Pimpa, N. How mining companies promote gender equality through sustainable development? *Cogent Bus. Manag.* 6, (2019).

<sup>116</sup> Kansake, B. A., Salyi-Addo, G. B. & Dumakor-Dupey, N. K. Creating a gender-inclusive mining industry: Uncovering the challenges of female mining stakeholders. *Resour. Policy* 70, 101962 (2021).

<sup>119</sup> About | NEITI. <https://neiti.gov.ng/about/governing-structure>.

<sup>120</sup> FG inaugurates 15-member NEITI governing board - *Nairametrics*. <https://nairametrics.com/2021/07/22/fg-inaugurates-15-member-neiti-governing-board/>.

<sup>121</sup> Buschgens, T., Bausch, A. & Balkin, D. B. Organizational Culture and Innovation: A Meta-Analytic Review. *J. Prod. Innov. Manag.* 30, 763-781 (2013).

Even at the level of mine ownership, women are significantly marginalised. A report from NEITI indicated that out of the sixteen transferors carried out in 2019, none of the holders of the mine title transferees was an organization owned by a woman, which

showcases a possible drawback because one of the transferors was a woman.<sup>82</sup> A transferor is any group or person who relinquishes title or custody, while the receiver of the title or custody would be considered a transferee.<sup>122</sup> See figure 13.

Figure 13: The Proportion of Transferred Titles by Gender (2019)

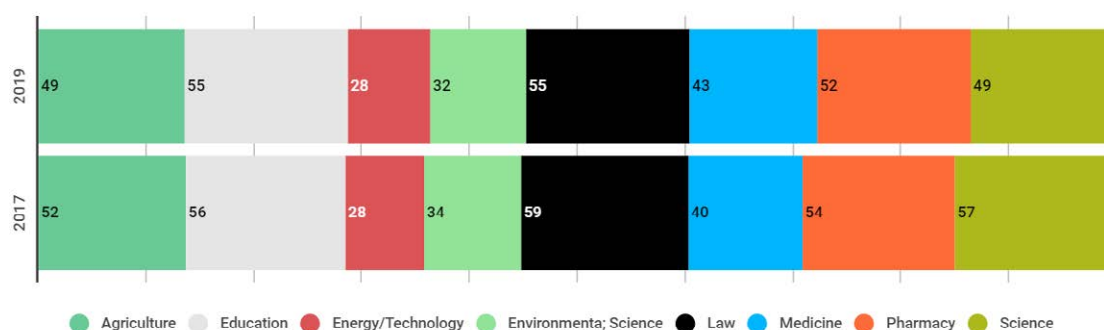


Curled from NEITI REPORT (2019); Page 32: Table 12: Transferred Titles in 2019\*Mining Cadastre Office

Even at the level of production, compared to men, women are underrepresented in science, technology, engineering, and mathematics (STEM), which are important courses for good career positioning within the mining industry.<sup>123</sup> Engineering and environmental sciences are considered good predictors for an easier transition into the mining sector. However, we find that these two rank the lowest of the STEM courses pursued by female graduates in Nigeria.<sup>124</sup> Going by the educational dimension

of the United Nations Gender Guideline for Mine Action Programmes, a framework used to obtain insight into local gender norms when designing inclusive and effective mine action programs, it can be deduced that future projections for women in the mining sector are unlikely to change without more focused educational interventions that positions women in STEM, Engineering and Environmental science particularly.<sup>125</sup>

Figure 14: Distribution of Female National Youth Service Corp (NYSC) from STEM Related Courses (2019)



Curled from National Bureau of Statistic 2020: Statistical Report on Women and Men in Nigeria

<sup>82</sup> PNEITI. 2019 Solid Minerals Audit (SMA) Industry Report. 1–130 (2019).

<sup>122</sup> Total-cost-of-ownership. Dictionary, Encyclopedia and Thesaurus - The Free Dictionary. TheFreeDictionary.com <http://encyclopedia.thefreedictionary.com/Total+Cost+of+Operations> (2012).

<sup>123</sup> Careers | Metals & Mining | McKinsey & Company. <https://www.mckinsey.com/industries/metals-and-mining/how-we-help-clients/careers>.

<sup>124</sup> NATIONAL BUREAU OF STATISTICS. <https://nigerianstat.gov.ng/elibrary>.

<sup>125</sup> United Nations (2019). United Nations Gender Guidelines for Mine Action Programmes.

### Gendered Roles in the Mining Sector

A report by the Intergovernmental Forums on Mining, Minerals, Metals, and Sustainable Development (IGF) speaks to women’s immersion in all value chains of ASM, however, states that “Women are also active in the provision of goods (e.g., food and drink vending, sales of artisanal equipment such as sieves, and credit for mobile phones) and services (e.g., transporting dirt, ores, ore particles and water; cleaning; laundry; sex; nightclub entertainment; and trading).”<sup>126</sup> Women have also been majorly involved in crashing, sluicing, washing, panning, sieving, sorting, mercury-gold amalgamation, amalgam decomposition, and, on rare occasions, actual mining. The justification for male dominance in more productive roles within the mining sector is largely founded on their biological makeup, which gives them the inherent agility needed in mining.<sup>86</sup> However,

we see from Hajiya Hauwa’s feedback, a mine owner in Nigeria, that if women are allowed to occupy bigger spaces within the mining field, they can leverage value-bearing positions to yield more outputs for the sector. “In Argy, which is in between Benue and Taraba States, I stayed there from January 2011 till September 2013 to learn the Chinese technology being introduced into the mineral sector...I stayed to learn what I didn’t know.”<sup>127</sup>

However, women take up roles as engineers, geologists, and other mining-related specializations within the sector. Howbeit, a higher proportion of women are manual labourers (99%), particularly in the ASM sector. Although, the ASM sector has not fully documented women’s contribution, challenges, and a roadmap towards improved participation.<sup>128</sup>

Figure 15: Gendered Roles in the Mining Sector



Sadly, children are also engaged in the mining value chain, especially boys under the age of fifteen, even though the mines are very dangerous for children. They often work in the hot sun, tunnelling, diving into muddy wells, digging or hand-picking ore, slabs, rock or sand; crushing and amalgamating; sieving, washing and sorting; removing waste or water from mines; transporting materials via carts or carrying; cooking and cleaning for adults; selling

goods and services to miners, and mining and quarrying in general.<sup>129,130</sup>

### Implication of Inequalities in the Mining Sector

Gender inequity runs deep within the mining sector with dire implications on the industry’s wealth returns and its workforce. However, the scope of discussion will be limited to the direct

impact of inequality on vulnerable groups.

**Economic Exploitation:** The 2004 Labour Act set forth that women should not engage in underground work in mine.<sup>98</sup> However, women still work in mines. Problems such as poverty, social demands and obligations, and an unavailable spouse generally force women into engaging in mining activities. For example, "Mrs Adam had no prior experience of mining until her husband's death. She was pushed into it by her circumstance and the need to take care of her children."<sup>131</sup> Other times, women support their husbands in the mines as part of their reproductive role, without remuneration, increasing their workload and burden of unpaid employment. Sadly, many women work as ASM with their families but do not get the direct financial benefit of such engagement.<sup>132</sup>

**Environmental Hazard:** All of society is affected environmentally by mining. This is so because some communities are informal settlements and are thus prone to flooding, extreme weather, heat waves, or hail. It is important to note that ASM's poor environmental, health,

and safety practices affect workers' health directly, degrade crops and farmlands, and pollute rivers.<sup>133</sup> Also, because these women are usually poor and unemployed, they lack the resources to respond to some of these challenges.<sup>132</sup> Women are increasingly being seen as more vulnerable than men to the impacts of climate change, primarily because they represent a substantial proportion of the world's poor and significantly depend more on natural resources for survival.<sup>134</sup>

**Health and Safety Hazard:** Although miners account for a small proportion of the global workforce, they explain about eight percent of lethal accidents at work.<sup>135</sup> In a country like Nigeria, many miners work as ASM and in precarious working conditions, as many of these mines do not conform to international and national labour standards. A report from ILO on working conditions in the mines indicates that accident rates in ASMs are about six or seven times higher than in larger-scale mines.<sup>135</sup> Mrs Janet Ahiaba's response on her motivation for empowering female ASMs within her community corroborates this "...until 2015 when I saw some women who



were into feldspar, and who died as a result of an accident. That was what motivated me to start the women's cooperative."<sup>127</sup> Additionally, increased exposure to silica dust and asbestos pollution are risk factors for lung diseases, fetal abnormalities, cancers, childhood disorders, skin diseases, and chemical exposure.<sup>136</sup> Many mines are exposed to these because of the inhumane working conditions miners are perpetually exposed to.<sup>135</sup>

**Gender-Based Violence (GBV):** GBV is sustained by unequal power relations, coupled with unfavorable gender norms that fail in "promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion."<sup>137</sup> As such, one of the biggest challenges encountered by women in the mines is GBV and harassment. Stories of GBV survivors in Kafi-Abu, a mine in Plateau State, Nigeria, sadly showcases this: "Mrs Adams had gone to a corner of the bush to ease herself when she was raped. Her story is one of many female artisanal miners' in Nigeria who are raped at mining sites. But the stories are never told, and the victims never get justice."<sup>131</sup> Also, because of the

restriction placed on women's ability to gain employment in mines, many traded sexual favours in exchange for jobs in mines.<sup>34</sup> Generally, the influx of men into mining communities for jobs in the mines resulted in increased violence, sexual abuse, rape, and unwanted pregnancies.<sup>115,138</sup>

**Child Labour:** Most cases of child labour are found in ASM. Working in mines exposes children's overall well-being. In the mines, children are exposed to the risk of death from explosions, tunnel collapsing and rocks falling on them. They are also exposed to different types of pollution.<sup>129,138</sup>

**Drug Abuse:** Work in the mines can be physically exerting, with employees, mostly on long work shifts. For example, many mine employees are often placed on a two-week shift. Also, many mine workers come from neighbouring communities in search of employment, as such, are secluded from close families and friends. From NEITI showed that socio-economic dislocations through illegal mining led to drug use, and alcoholism in mining communities.<sup>138</sup>

<sup>85</sup> Goebel, R. in Mining. (2012).

<sup>86</sup> Menard, A. & Moses, E. Gender and Extractive Governance: Lessons from Existing Legal and Policy Frameworks. (2021).

<sup>126</sup> IGF. Women in Artisanal and Small-Scale Mining: Challenges and opportunities for greater participation. (2014).

<sup>127</sup> PTCJ. Women in Mining Nigeria and the Region A Monograph. (2020).

<sup>128</sup> Melodi, M. & Opafunso, Z. An assessment of gender mix of manpower in granite artisanal and small-scale mining, Southwest Nigeria. J. Environ. Earth Sci. 3, 191–198 (2013).

<sup>129</sup> CHILD LABOUR IN MINING AND GLOBAL SUPPLY CHAINS.

<sup>130</sup> ILO. Learn more about child labour in mining (IPEC).

<sup>131</sup> How absence of regulatory structures fosters gender-based violence at Plateau mining sites. <https://www.premiumtimesng.com/gender/515761-how-absence-of-regulatory-structures-fosters-gender-based-violence-at-plateau-mining-sites.html>.

<sup>132</sup> Alahira, H. A. Berom women and colonial tin mining enterprise: Jos plateau, Northern Nigeria. Int. J. Res. Humanit. Arts Lit. 2 87–96 (2014).

<sup>133</sup> Heffernan, V. Women in mining. CIM Mag. 6, (2011).

<sup>134</sup> Nations, U. Women...In The Shadow of Climate Change | United Nations.

<sup>135</sup> Mining: a hazardous work.

<sup>136</sup> Hadzi, G. Y., Essumang, D. K. & Ayoko, G. A. Assessment of contamination and health risk of heavy metals in selected water bodies around gold mining areas in Ghana. Environ. Monit. Assess. 2018 1907 190, 1–17 (2018).

<sup>137</sup> Nations, U. United Nations Charter (full text) | United Nations.

<sup>138</sup> NEITI. Impact of Mining on Women, Youth and Others in Selected Communities in Nigeria. (2020).



## Conclusion & Recommendation

### Conclusion

This assessment was carried out to identify the existing gender gap within the mining sector and the implication so that recommendations could be proffered on strategies for closing the identified gender gaps. Based on an extensive desk review, the gendered role within the mining sector was pinpointed, and the direct implication of such gap on its human capital and, indirectly, profit margin. The result indicated significant gender inequality existing within the sector, with more women occupying unfavourable roles than men. The result also suggested that this limited the industry's opportunity to utilise its human resources for innovation and strategic purposes maximally.

This research clearly illustrates the existence of gender inequality in the mining industry despite existing policy instruments and laws to safeguard against this, with such inequality only able to be changed through gradual but consistent efforts rather than one major shift as fundamental to this inequality are gender norms which have shaped gender stereotypes and expectations of a male or female role within the sector.

### Recommendations

#### Governance and Policy

- » The first step to ensuring that women have equal opportunities in extractive industries is to ensure that discriminatory laws and sex-based protective legislation are modified to favour women.
- » The need to develop strategies and policies by the government that shift traditional gender norms and eradicate harmful cultural practices that interfere with a woman's right to work.
- » The need for intersectional groups of stakeholders when developing

instruments and policies to enable inclusiveness. For example, we recommend a gendered balance NEITI multi-stakeholder group and the secretariat.

- » The need to develop a company-wide gender equality policy that covers gender issues related to company governance and leadership, workforce and working conditions, and community-level impacts and initiatives.
- » Also important is the need to establish a zero-tolerance policy for harassment and gender based violence within the workforce and take firm measures to protect women workers from these risks, including gender-sensitive training.

#### Gender Mainstreaming and Social Protection

- » A more gender-sensitive approach to mining is needed to eliminate legal constraints faced by women, such as sections 55 and 56 of Nigeria's 2004 Labour Act, which prohibits women from working in mines at certain hours and from undertaking manual labour underground.
- » The government should strengthen policies and laws for the economic empowerment of women, and ensure that necessary policies are adopted: such as the National Gender Policy 2014 and the Violence against Persons Prohibition (VAPP) Act 2015, while also pushing for bills like the Gender and Equal Opportunity Bill to be passed.

#### Enforcement and Regulation

- » The need to put strict measures in place that ensure that organizations follow laid down policies.
- » The need for government MDAs and agencies to lead by example, by ensuring that all parastatals are inclusive and

implement programmes through a gendered-focused lens.

### Mining Communities

- » Structured processes are to be put in place to address violations against women in artisanal and small-scale mining, target literacy and/or vocational training, establish village savings banks, and start small businesses for them.

### Process, Monitoring & Evaluation

- » It is essential that human capital audits be carried out annually across the mining value chain as a way of measuring programmes and policy effectiveness.
- » Companies should recruit from a diverse pool of candidates for all positions (including senior management and board appointments), and reviewing succession plans to ensure an appropriate focus on diversity.
- » Companies should consider creating a remuneration and nomination committee on the boards to develop and implement measurable objectives and strategies to execute the diversity policy, as well as monitor and report on progress.

- » Ensure gender-appropriate PPE and health and sanitation facilities for women workers.

- » We propose that a structured mentorship programme be adopted by organizations, so that women within the sector can have sponsors and the right support system essential for career growth.

- » Track and report gender-disaggregated data on, for example, recruitment, retention and representation in the workforce; local employment and local procurement; health and safety of workers and local communities; and workers' wages. On the basis of this data, develop the necessary strategies to reduce and eliminate gender inequalities.

### Sensitisation & Training

- » The need to develop the capacity of technical staff working across mines and mining-related projects on gender issues to engender gender equity and inclusiveness.

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## Appendix

Table 1: Description of International Instruments

S/N	Title	Year Adopted	Description
1.	United Nations Charter <sup>3</sup>	1945	All men are born equal and free; actionable steps should be taken to enforce this.
2.	Universal declaration of human rights <sup>4</sup>	1948	This upholds the equality of men and women as foundational; as such, men and women should be entitled to equal opportunities.
3.	Equal Remuneration Convention <sup>5</sup>	1951	There should be equal remuneration for men and women workers for work of equal value.
4.	International covenant on economic, social and cultural rights <sup>6, 7</sup>	1966	Individuals have a right to self-determination: some of these cover rights to work under just and favourable conditions, right to social security, right to family life, right to an adequate standard of living, right to health, and right to education.
5.	Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy <sup>8</sup>	1977	The declaration encourages the elimination of forced labour and discourages inequality by sex impacting treatment in employment and equal remuneration for men and women workers.
6.	Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) <sup>9</sup>	1979	It recognizes GBV as a form of discrimination and recommends that states prevent and respond to violence against women. It also affirms women's rights to acquire, change or retain their nationality and the nationality of their children.
7.	ILO Indigenous and Tribal Peoples Convention, 1989 <sup>10</sup>	1989	It stipulates that indigenous workers enjoy equal opportunities and equal treatment in employment for males and females while ensuring that they are protected against sexual exploitation.
8.	Convention on the Rights of the Child (Entry in force) <sup>11</sup>	1990	It states that children are to be protected from all forms of harm and exploitation.
9.	ILO Declaration on Fundamental Principles and Rights at Work <sup>12</sup>	1998	The declaration commits member states to respect and promote principles and rights in four categories; freedom of association and the effective recognition of the right to collective bargaining, the elimination of forced or compulsory labour, the abolition of child labour, and the elimination of discrimination in respect of employment and occupation.

Table 2: Description of Regional Instruments

S/N	Title	Year Adopted	Description
1.	African Charter on Human and Peoples' Rights <sup>15</sup>	1981	» Calls for the protection of the rights of women and children. It also prohibits all forms of exploitation, particularly slavery.
2.	Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (Maputo Protocol) <sup>15,16</sup>	2003	» Calls on states to protect the rights of women and girls, such as property rights, inheritance rights, and protection against all forms of violence. » Article 13 protects women in the workplace; women should have equal opportunities and should be able to advance their careers, and have equal access to employment and equal pay.
3.	Africa Mining Vision <sup>13</sup>	2009	» It calls for a sustainable and well-governed mining sector that effectively garners and deploys resources to enable a safe environment. » Initiate empowerment of women by integrating gender equity in mining policies, laws, regulations, standards and codes. » To implement sub-regional and continental gender charters for the mining sector.
4.	The Galiano Women in Mining Charter <sup>14</sup>	2020	» An Asanko Women in Mining Chapter has been established which championed women in mining by acting as an advocate for women working in the gold mine, promoting policies on gender diversity and the sustainable mining process, and offering mentoring and career guidance to girls from Junior High school to Senior High level within the host community.

Table 3: Description of National Laws and Policies

S/N	Title	Year Adopted	Description
1.	Child Right Act <sup>24</sup>	2003	<ul style="list-style-type: none"> <li>» The law guarantees the rights of all children in Nigeria.</li> <li>» Children are defined as any person under the age of 18.</li> <li>» The law admits and investigates matters around the inhuman and degrading treatment of a mother upon whose ripple effect hamper the survival and development rights of the child.</li> </ul>
2.	The Labour Act <sup>1</sup>	2004	<ul style="list-style-type: none"> <li>» This legislation contains the general provisions of wage protection, employment, contracts and terms, and conditions of employment and recruiting.</li> <li>» It prohibits women from being employed for night work (from 10 pm to 5 am) in a public or private industrial undertaking. It stipulates that women cannot work underground in any mine.</li> </ul>
3.	Gender and Equal Opportunity Policy Bill <sup>23</sup>	2010	<ul style="list-style-type: none"> <li>» The bill seeks to guarantee women's rights to equal opportunities in employment, equal rights to inheritance for both male and female children, equal rights for women in marriage and divorce, and equal access to education, property/land ownership and inheritance.</li> <li>» It also seeks to protect the rights of widows, guarantee appropriate measures against gender discrimination in political and public life, and prohibit violence against women.</li> </ul>
4.	National Gender Policy 2014 (Employment and Labour issues) <sup>21</sup>	2014	<ul style="list-style-type: none"> <li>» The policy aims to achieve equality and equity in employment opportunities and eliminate all discriminatory and abusive practices (on the grounds of sex, race, ethnicity, class, religion, age, disability, or marital status) against the employment of women in public and private sectors of the economy through: <ul style="list-style-type: none"> <li>» Building women's human capital to allow them equal opportunity in the modern labour market.</li> <li>» Eliminate discriminatory practices against women's employment and create a family-friendly work environment.</li> </ul> </li> </ul>
5.	The Violence Against Persons (Prohibition) Act <sup>25</sup>	2015	<ul style="list-style-type: none"> <li>» The law's main thrust is to eliminate violence in private and public life and prohibit all forms of violence against persons to provide maximum protection and effective remedies for victims and punishment of offenders and other related matters.</li> </ul>
6.	Mining and Metal Sector Investment Promotion Brochure <sup>1</sup>	2016	<ul style="list-style-type: none"> <li>» This document states that social equity in the labour force will be ensured by addressing issues of exploitation of women and children; however, it reinforces a stereotype of women as a vulnerable group.</li> </ul>
7.	National Gas Policy <sup>1</sup>	2017	<ul style="list-style-type: none"> <li>» The policy identifies low- and medium-income women who currently use kerosene and firewood for fuel as community influencers who should be engaged to market the transition to liquefied petroleum gas; however, this policy does not contain measures to protect the rights of women for their engagement in this value chain.</li> </ul>

Table 4: Responsibility on Gender Equality (Government Institution)

Institution	Current Mandate	Strengthened Mandate
Federal Executive Council	<ul style="list-style-type: none"> <li>» Gender equality policy formulation.</li> <li>» Capacity building for gender mainstreaming.</li> <li>» Coordinate national technical team of experts.</li> <li>» Monitoring and evaluating gender equality.</li> </ul>	<ul style="list-style-type: none"> <li>» Coordinate the development of sectoral indicators and gender action plans.</li> <li>» Coordinate and monitor implementation of the national gender policy.</li> <li>» Support gender education policies and programmes at all levels.</li> <li>» Support capacity building on gender-budgeting nationwide.</li> </ul>
Federal Ministry of Women Affairs	<ul style="list-style-type: none"> <li>» Support with decisions/policies on issues that improve women empowerment.</li> </ul>	<ul style="list-style-type: none"> <li>» Facilitate policies and programmes on gender equality.</li> <li>» Facilitate policy making and programme development on gender equality.</li> </ul>
National Council on Women Affairs	<ul style="list-style-type: none"> <li>» Coordinate all efforts on gender mainstreaming across MDAs.</li> </ul>	<ul style="list-style-type: none"> <li>» Facilitate sector-wide development of gender indicators and gender action plans.</li> <li>» Facilitate the implementation of gender equality policies and programmes, including those that pertain to women's empowerment.</li> <li>» Facilitate the Implementation and Monitor of The National Gender Policy in all sectors</li> </ul>
National Consultative and Coordinating Committee on Gender Equality	<ul style="list-style-type: none"> <li>» Coordinating gender mainstreaming at sector level</li> </ul>	<ul style="list-style-type: none"> <li>» Think tank on gender issues.</li> <li>» Reviewing gender action plans at their sectors.</li> <li>» Perfecting gender indicators at their sectors.</li> <li>» Monitoring gender benchmarking at sectoral level.</li> <li>» Relate with MWASD on gender policy implementation.</li> </ul>
National Technical team of Gender Experts (NTTGE) (expanded to include independent gender consultants)	<ul style="list-style-type: none"> <li>» Mainstream gender in ministries mandate</li> </ul>	<ul style="list-style-type: none"> <li>» Gender Critical Mass/Core Team/Gender Unit: Review Sector Policy</li> <li>» Prescribe sector specific policy changes</li> <li>» Develop sector specific gender equality indicators.</li> <li>» Monitor sector gender status.</li> <li>» In-house capacity building on gender mainstreaming and gender education.</li> <li>» Relate with MWASD on gender policy implementation.</li> </ul>
Judiciary	<ul style="list-style-type: none"> <li>» Non-specific</li> </ul>	<ul style="list-style-type: none"> <li>» Gender critical mass/core team (as above)</li> </ul>
Legislature	<ul style="list-style-type: none"> <li>» Women's Caucus Committee on Women Affairs</li> </ul>	<ul style="list-style-type: none"> <li>» Gender critical mass/core team (as above)</li> </ul>
National Centre for Women Development	<ul style="list-style-type: none"> <li>» Developing gender indicators</li> <li>» Research on Status of Women</li> <li>» Develop and Implement Women Empowerment Programmes</li> </ul>	<ul style="list-style-type: none"> <li>» Execute special programmes to promote gender equality</li> <li>» Developing and implementing Women Empowerment Indicators , 2</li> <li>» Research on Status of Women</li> <li>» Promote gender budgeting for women empowerment programme</li> <li>» Gender education within vocational/skills training schemes</li> </ul>

Institution	Current Mandate	Strengthened Mandate
Other Parastatals	» Non-specific gender desk for mainstreaming	» Gender critical mass/core team
Parastatals/Commissions with Special Mandate	» Non-Specific on Gender Equality	» Special Mandates
National Bureau of Statistics	» Gender desk	» Gender statistics unit » Gender data bank management » National gender status reporting » In-house gender education » Relate with MWASD on gender policy implementation
National Planning Commission	» Gender Desk	» Gender Unit to Mainstream Gender in Macro-Policy Formulation (NEEDS) » Benchmark for Gender equality » Prioritise gender issues into national planning concerns
National Orientation Agency		» Promote Gender Responsive Culture
Federal Character Commission		» Incorporate all Equal Opportunity Concerns
Independent National Electoral Commission		» Promote Gender Aware Party Principles » Promote Gender-inclusive democratic values
Human Rights Commission		» Promote Gender Aware Legislation in Legislature and Judiciary
Public Service Commission		» Promote Gender Equality principles in recruitment, training, and promotion criteria governing the public service employment
Legal Aid Council		» Promote access to gender equality laws
Education Commissions (NUC, NERDC, NAPTIP, UBE, Mass Literacy Agency etc)		» Institute Gender Education at all levels » Collaborate with NTCGE for gender curriculum development
Nigeria Labour Congress		» Promote Gender Equality principles in labour issues (both for public and the private sectors) » Mainstream gender issues into Labour/Trade Unions » Recruitment, training, and promotion criteria governing the public service employment
Women's Organisations and Civil Society Coalition Groups		» Close and effective relationship with government structures on GEWE » Capacity building of members on GEWE » Awareness and enlightenment Campaigns on GEWE » Advocacy and mobilisation of traditional structures on GEWE » Feedback reports to MWASD and its organs for policy response on GEWE issues and concerns from the grassroots
Local Government Council		» Coordinate all structures at the Local Government level targeting GEWE » Strengthen the Gender Equality Unit of the Local Government » Create critical mass for GEWE in each LGA » LGA critical mass to mainstream gender into LGA departments » LGAs to imbibe gender equality principles in its policies, programmes and activities » Advocacy, Sensitisation, and Awareness on GEWE at the Ward and Community level » Network with Community/Ward level framework targeting GEWE issues and concerns
Community-Based Gender Equality Structures		» Organise around common gender concerns at local level » Promote cultural and religious harmony on gender values » Mobilise grassroots vanguards of gender culture » Relate with MWASD on gender policy implementation



## ABOUT THE NESG

The NESG is an independent, non-partisan, non-sectarian organisation, committed to fostering open and continuous dialogue on Nigeria's economic development. The NESG strives to forge a mutual understanding between leaders of thought so as to explore, discover and support initiatives directed at improving Nigeria's economic policies, institutions, and management.

Our views and positions on issues are disseminated through electronic and print media, seminars, public lectures, policy dialogue, workshops, specific high-level interactive public-private sessions and special presentation to the executive and legislative arms of government.

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