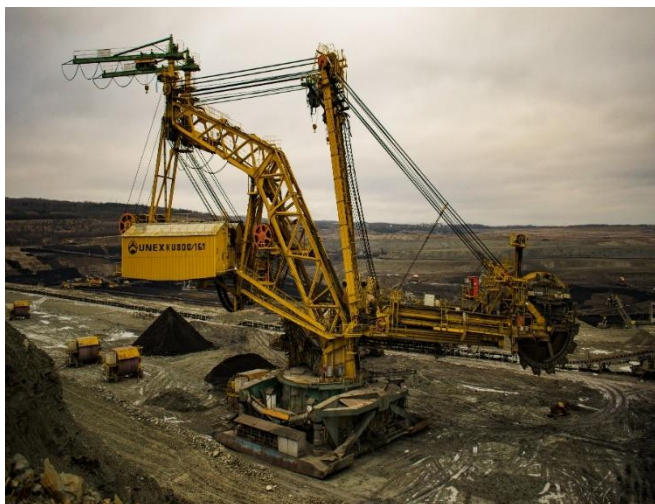


Legal Risks and Opportunities in Nigeria's Lithium Economy: A Vital Mineral in Focus

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Introduction

The global shift towards renewable energy has given rise to the demand for lithium, often referred to as “white gold.”¹ It is a core component in batteries used for electric vehicles, renewable energy systems, and, by extension, energy storage in general. Nasarawa State, located in Northern Nigeria, has emerged as a significant hub for lithium mining and processing due to its rich deposits of lithium-bearing ores.² The State has attracted substantial foreign investment, particularly from Chinese companies, positioning it as a key player in Nigeria’s growing lithium industry. This led to the commissioning of the first lithium processing plant in Endo Community, Nasarawa State, by Avatar New Energy Materials Co Ltd.³ Other

States, including Oyo, Zamfara, Kwara, and Ekiti, have made lithium ore discoveries, attracting further investors such as Canmax Technologies and Thor Explorations Ltd⁴ to explore investments in lithium mining within these States.

Nigeria's lithium reserves represent a transformative economic opportunity amid global demand for clean energy minerals, yet they also introduce complex legal challenges which this article seeks to analyse.

Legal Framework and Regulatory Agencies

The excitement over vast mineral wealth must be matched with a clear understanding of the rules that govern this vital sector, as well as the respective agencies charged with the responsibilities of enforcing the rules.

It is essential to understand how Nigeria, through its laws and regulatory agencies, safeguards its mineral wealth, balances the interests of investors and local communities, and creates an enabling environment to explore the economic opportunities.

Legal Framework

Mining activities in Nigeria are principally regulated by:

- a. **The 1999 Constitution (as amended)**, which vests ownership and control of all mineral resources in the Federal Government.⁵

¹Gero Ruete, “Lithium: How Sustainable is White Gold” (DW, 13 March 2023) < <https://www.dw.com/en/Lithium: How sustainable is 'white gold'? – DW – 03/13/2023> > accessed 20 July 2025.

² Independent Newspaper, “Investments In Lithium Processing In Nasarawa Hit \$850m, Says Ex-NASENI Boss, Haruna” (Independent Newspaper, 26 October 2025) < [https://independent.ng/ Investments In Lithium Processing In Nasarawa Hit \\$850m, Says Ex-NASENI Boss, Haruna | Independent Newspaper Nigeria](https://independent.ng/ Investments In Lithium Processing In Nasarawa Hit $850m, Says Ex-NASENI Boss, Haruna | Independent Newspaper Nigeria) > accessed 28 October 2025.

³ Williams Anuku, “Nigeria’s Largest Lithium Processing

Plant Unveiled in Nasarawa” (Dailypost, 10 May 2024) < https://dailypost.ng/2024/05/10/Nigeria's_largest_lithium_processing_plant_unveiled_in_Nasarawa - Daily Post Nigeria > accessed 28 October 2025.

⁴ Aisha K. Mohammed, “Nigeria’s \$2Billion Lithium Reserves to Drive Renewable Energy and Jobs” < [https://nigerianmining.com/Nigeria's \\$2Billion Lithium Reserves to Drive Renewable Energy and Jobs - Nigerian Mining](https://nigerianmining.com/Nigeria's $2Billion Lithium Reserves to Drive Renewable Energy and Jobs - Nigerian Mining) > accessed 20 July 2025.

⁵ Constitution of the Federal Republic of Nigeria 1999 (as amended), s 44(3).

- b. **Nigerian Minerals and Mining Act, 2007 (Mining Act)**, the principal legislation governing mineral exploration, exploitation, licensing, environmental compliance, and community obligations in the mining sector activities in Nigeria.
- c. **Nigerian Tax Act, 2025 (“NTA”)**, which governs the taxation of mining companies and provides fiscal incentives for sustainable mining practices.
- d. **The Nigerian Minerals and Mining Regulations, 2011**, which provide detailed procedures for the administration of mineral titles and mining operations.

The Regulatory Agencies

The agencies with regulatory powers over mining in Nigeria are:

- a. **Federal Ministry of Mines and Steel Development (The Ministry)**: The ministry has the regulatory authority to make policies, issue mining permits, licences, leases and ensure compliance with the Mining Act.
- b. **Nigeria Mining Cadastre Office (“NMCO”)**: The NMCO administers processes and grants mineral titles, including licenses and leases. It operates on a “first-come, first-served” basis, maintains a register of title holders, and ensures transparency in the allocation of mining rights.
- c. **Nigerian Geological Survey Agency (“NGSA”)**: The NGSA is tasked with

geological mapping, mineral exploration and evaluation, providing technical data and identifying areas with mineral potential.

- d. **Mines Inspectorate Department (“MID”)**: The MID supervises mining operations and ensures compliance with technical and safety requirements.
- e. **National Environmental Standards and Regulations Enforcement Agency (“NESREA”)**: The NESREA enforces environmental laws and regulations applicable to mining activities.

Legal Challenges facing Nigeria’s Lithium Economy

Nigeria’s lithium sector, though promising, faces significant legal challenges that threaten sustainable development and investor confidence.

- a. **Environmental concerns and social non-compliance**: Mining operations are frequently carried out in disregard of environmental regulations, largely due to weak enforcement mechanisms. This poor enforcement of environmental laws allows companies to dispose of waste indiscriminately, causing harm to communities and their livelihoods. Lithium extraction activities often result in environmental degradation, mainly as mining companies have been known to contaminate local waters while processing lithium.⁶

⁶ CAPPA Africa, “Lithium Mining: Be Mindful of Environment, Local Livelihoods, CAPPA Cautions FG” (CAPPA, 16 May 2024) <[https://cappaafrica.org/2024/05/16/Lithium Mining: Be](https://cappaafrica.org/2024/05/16/Lithium-Mining-Be-Mindful-of-Environment-Local-Livelihoods-CAPPA-Cautions-FG)

[Mindful of Environment, Local Livelihoods, CAPPA Cautions FG - CAPPA - Corporate Accountability and Public Participation Africa](#)> accessed 24 June 2025.

- b. **State Government Interference in Federal Regulated Mining:** The Constitution and the Mining Act vests mining in the Federal Government, under the supervision of the ministry. The States have attempted to address environmental degradation and community impacts associated with mining activities by imposing mining bans or introducing additional regulatory requirements. The dual regulatory landscape creates uncertainty and regulatory risk, both of which serve as disincentives to investment for mining companies.
- c. **Neglect of Local Communities:** Section 116 of the Mining Act mandates mineral title holders to enter into a Community Development Agreement (CDA) with the host communities before the commencement of any development in the community. The CDA is an agreement that obligates a mineral title holder to compensate host communities for any disturbance of their surface rights, such as damage to crops, buildings, economic trees, or other improvements, resulting from exploration or mining operations. The primary purpose of a CDA is to enhance social and economic development, mitigate negative impacts, and ensure that communities benefit from the projects fairly and transparently. Although the Mining Act provides for a CDA, communities suffer from non-compliance by mining companies.⁷ The ministry reported that 2416 mineral titles have been issued from 2023

to 2024, and only 342 CDAs have been signed.⁸

- d. **Technological Challenges:** As with every other sector, Nigeria's lithium industry must embrace technological innovation to improve efficiency, productivity, safety, and environmental sustainability. Technologies such as satellite imagery and Geographic Information Systems (GIS) can aid mineral exploration and environmental monitoring, while Artificial Intelligence (AI) and the Internet of Things (IoT) can improve operational efficiency through predictive maintenance, real-time monitoring, and remote operation of mining equipment. However, the adoption of these technologies presents legal and practical challenges, including the high cost of initial investment, shortage of technical expertise, data protection concerns, and exposure to cybersecurity risks.

What Legal Reforms are Required to Address these Challenges in Nigeria's Lithium Sector?

We have pointed out the challenges faced by Nigeria's lithium sector; addressing these challenges requires targeted legal reforms and institutional strengthening. Below are key reforms that can be implemented:

- a. **Mandatory Environmental Performance Bond:** There have been persistent environmental violations in Nigeria's mining sector, resulting in water contamination, land degradation, and widespread ecosystem

⁷ Samuel Anyanwu, 'FG Gives Mining Companies Until December 31 to Conclude Community Development Agreements' (*Federal Ministry of Information and National Orientation*, 18 September 2025) <<https://fmoino.gov.ng/FG-Gives-Mining-Companies-Until-December-31-to-Conclude-Community-Development-Agreements-Federal-Ministry-of-Information-and-National-Orientation>> accessed 24 June 2025.

⁸ Hauwa Gidado, 'Nigerian Government Gives Mining Firms Year-End Deadline' (*Voice of Nigeria*, 18 September 2025) <<https://von.gov.ng/Nigerian-Government-Gives-Mining-Firms-Year-End-Deadline-Voice-of-Nigeria>>

destruction with little accountability.⁹ One way to address this challenge is by introducing a strict, front-loaded environmental accountability regime that requires mining operators, particularly lithium miners, to post an upfront environmental performance bond, ensuring that sufficient funds are available to remedy and mitigate environmental harm.

b. The Federal-State Tension in Mining Regulation:

Although the measures adopted by the States are driven by legitimate environmental concerns and underpinned by the powers of States to legislate on environmental protection, such measures have sometimes blurred the constitutional distinction between regulation of environmental protection and regulation of mineral resources. This challenge highlights the need for a harmonised regulatory framework between the Federal and State environmental agencies. This tension could be resolved if the Federal and State governments adopt a harmonised process that ensures that the Federal and State governments do not clash in asserting their respective constitutional rights.

c. Strengthening CDA Implementation:

Canada has found a way to make sure mining companies keep their promises to local communities, and Nigeria can learn from this. In Canada, a special body called the Centre of Expertise on Impact and Benefit Agreements

(CEIBA) was created through the collaboration of the First Nations of Quebec and Labrador Sustainable Development Institute and Indigenous Services Canada, specifically to help communities understand their agreements, negotiate properly, and monitor whether mining companies are doing what they promised.¹⁰ This means communities will have a better understanding of the agreement; better terms in the agreement; a watchdog to monitor and a body that will help report to the appropriate authority upon the default of the mining companies. To replicate this in Nigeria, State governments should encourage communities to form an association within the communities, that would collaborate with relevant experts and Non-governmental Organisations to help the communities understand their agreements, negotiate properly, and monitor whether mining companies follow through with their obligations under the CDA.

d. Leveraging Technology for Sustainable Mining Development:

Nigeria must prioritise investment in research and development in mining technologies to drive innovation and build local technical capacity, complemented by the promotion of public-private partnerships (PPPs) to accelerate the adoption of modern technologies within the mining sector. Although mineral resources are vested in the Federal Government under the Constitution and the Federal Government is the

⁹ CAPP Africa “Lithium Mining: BE Mindful of Environmental, Local livelihoods, CAPP Cautions FG” (16 May 2024) <<https://cappaafrica.org/2024/05/16-Lithium-Mining-Be-Mindful-of-Environment-Local-Livelihoods-CAPP-Cautions-FG-CAPP-Corporate-Accountability-and-Public-Participation-Africa>> accessed 24 June 2025.

¹⁰ Centre of Expertise on Impact and Benefit Agreements, ‘Centre of Expertise on Impact and Benefit Agreements: An Important Ally’ (Government of Canada, 28 February 2022) <https://sac-isc.gc.ca/eng/1645561183367/1645561204248/Centre_of_Expertise_on_Impact_and_Benefit_Agreements_an_important_ally> accessed 28 June 2026.

principal regulator of the mining sector, participation in mining projects may involve government-owned entities, State-owned special purpose vehicles (SPVs), and private investors through collaborative arrangements. Such PPPs may take the form of joint venture projects, technology-transfer agreements, government-backed research grants, concessional financing deployment of new technologies, and other investment promotion measures designed to de-risk private sector investment and encourage innovation. Equally important is sustained investment in education and skills development programmes to equip the workforce with the expertise required to operate, manage, and maintain advanced mining systems.

Opportunities In Nigeria's Lithium Economy

- a. **Sustainability and Environmental, Social, Governance (ESG) Compliance:** As global demand for responsibly sourced minerals rises, sustainability and ESG compliance are no longer regulatory box-ticking exercises; they are strategic levers for attracting investment, securing international partnerships, and differentiating Nigeria in the global lithium supply chain.

In the wake of environmental controversies and human rights concerns linked to artisanal mining in Africa, international buyers and funders now insist on traceability, ethical labour practices, and low-carbon processing methods. Nigeria has taken concrete steps to

regulate its lithium sector, including the deployment of over 2,500 Mining Marshals to combat illegal mining, that is being carried out without regard to ESG, health or safety standards.¹¹ These measures will enhance investor confidence by demonstrating verifiable ESG integration.

- b. **Job Creation:** The development of Nigeria's lithium economy presents an opportunity to create thousands of jobs, especially in host communities. In August 2022, Nigeria's Minister of Mines and Steel Development, Olamilekan Adegbite, rejected Tesla's proposal to mine and export raw lithium from the country, insisting that Tesla establish factories in Nigeria for local processing into batteries rather than raw exports, to create more jobs and contribute to the economy.¹² Also, by formalising the sector and encouraging the participation of local workers and cooperatives, the government can support sustainable employment across exploration, processing, logistics, and support services. Training programs, safety standards, and technical upskilling can also improve long-term career prospects for people employed from the mining communities.
- c. **Economic Growth:** Nigeria's lithium reserves are among the most promising in Africa, with significant deposits identified in States such as Nasarawa, Kwara, Ogun, Kogi, Ekiti, and Plateau.¹³ As international demand for lithium,

¹¹Damilola Aina, "FG deploys additional 350 mining marshals, adopt remote technology" (*Punch newspaper*, 15 June 2024) <https://punchng.com/FG_deploys_additional_350_mining_marshals_adopts_remote_technology> accessed 1 July 2025.

¹² The Nation "Why Nigeria rejected Tesla's bid to mine

raw lithium" (*The Nation newspaper*, 22 August 2022) <https://thenationonline.ng.net/Why_Nigeria_rejected_Telsa's_bid_to_mine_raw_lithium_-_The_Nation_Newspaper> accessed 5 March 2026.

¹³ Anoushka Manidhar "Unlocking Nigeria's Lithium Potential for Sustainable Economic Growth" (2 July 2024)

driven by electric vehicle (EV) batteries and renewable energy storage, continues to surge, Nigeria's exports are projected to rise sharply. The price of lithium has risen from \$6,000 per tonne in 2020 to \$78,000 per tonne in 2022, and it is expected to be the most valuable mineral on earth by 2040. Additionally, Nigeria's lithium is high-grade.¹⁴ Projections suggest that, with increased investment and infrastructure, Nigeria could secure up to 7% of the global lithium market by 2035.¹⁵ This development has the potential to significantly increase foreign exchange earnings, stimulate industrial growth, create employment opportunities across the mining value chain, and enhance the contribution of the solid minerals sector to Nigeria's Gross Domestic Product (GDP), thereby supporting economic diversification away from oil dependence.

- d. **Industrialisation and Value Addition:** A pivotal shift is underway from raw mineral exports to domestic processing. Nigeria is set to launch multiple lithium processing plants, including a \$600 million facility near the Kaduna-Niger border and a \$200 million

lithium processing plant on the outskirts of Abuja, which is close to completion, both funded primarily by Chinese investors.¹⁶ These plants will enable Nigeria to move up the value chain, producing lithium carbonate and battery-grade materials domestically rather than exporting raw ore. This transition is expected to create thousands of jobs, foster technology transfer, and stimulate local manufacturing.¹⁷

- e. **Attracting Foreign Direct Investment (FDI):** The lithium business has attracted substantial FDI, responsible for \$1.3 billion in investment led by the African Finance Corporation and Solid Minerals Development Fund.¹⁸ This influx of capital is not only boosting mining and processing capacity but also catalysing infrastructure improvements, such as roads and power supply, which benefit the broader economy.

Conclusion

The legal frameworks, risks, and opportunities discussed above are not mere checklists; they are the foundation for building a lithium economy that

<[https://energyutilities.com/Unlocking Nigeria's Lithium Potential for Sustainable Economic Growth | Energy & Utilities](https://energyutilities.com/Unlocking_Nigeria's_Lithium_Potential_for_Sustainable_Economic_Growth_|_Energy_&_Utilities)> accessed on 26 June 2025.

¹⁴ Ibukun Konu, Adaobi Amechi and Somachi Orji, "Newly discovered high-grade lithium deposits have potential to boost Nigerian economy" (*Streamsowers & Köhn*, 15 May 2023) <[https://sskohn.com/wp-content/uploads/2023/06/Newly discovered high-grade lithium deposits have potential to boost Nigeria n economy.pdf](https://sskohn.com/wp-content/uploads/2023/06/Newly_discovered_high-grade_lithium_deposits_have_potential_to_boost_Nigeria_n_economy.pdf)> accessed 5 March 2026.

¹⁵ John Zadeh "Nigeria's \$1.3 Billion Lithium Deal: Transforming Mining Sector by 2025" (*Discovery Alert*, 18 April 2025) <<https://discoveryalert.com.au/news/nigeria-lithium-investment-2025-mining-sector/>> accessed 26 June 2025.

¹⁶ Adekunle Agbatiloye "Nigeria to open \$800m Chinese-funded lithium processing factories this year" (*Business Insider*, 26 May 2025)

<[https://africa.businessinsider.com/local/markets/Nigeria to open \\$800m Chinese-funded lithium processing factories this year | Business Insider Africa](https://africa.businessinsider.com/local/markets/Nigeria_to_open_$800m_Chinese-funded_lithium_processing_factories_this_year_|_Business_Insider_Africa)> accessed 26 June 2025.

¹⁷ Adekunle Agbatiloye "Nigeria to open \$800m Chinese-funded lithium processing factories this year" (*Business Insider Africa*, 26 May 2025) <[https://africa.businessinsider.com/local/markets/Nigeria to open \\$800m Chinese-funded lithium processing factories this year | Business Insider Africa](https://africa.businessinsider.com/local/markets/Nigeria_to_open_$800m_Chinese-funded_lithium_processing_factories_this_year_|_Business_Insider_Africa)> accessed 26 June 2025.

¹⁸ John Zadeh "Nigeria's \$1.3 Billion Lithium Deal: Transforming Mining Sector by 2025" (*DiscoveryAlert*, 18 April 2025) <<https://discoveryalert.com.au/news/nigeria-lithium-investment-2025-mining-sector/>> accessed 26 June 2025.

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benefits the Nigerian economy. If Nigeria can harness its legal tools, empower its institutions, and foster genuine partnerships with investors and communities, it will not only power up the world's batteries but also illuminate a path to sustainable prosperity at home.

The lithium story is still being written, and Nigeria has the chance to author a chapter defined by innovation, inclusivity, and integrity. With bold leadership and unwavering commitment to good governance, Nigeria's lithium economy can become a beacon for Africa and a vital force in the global transition to a cleaner, greener future.

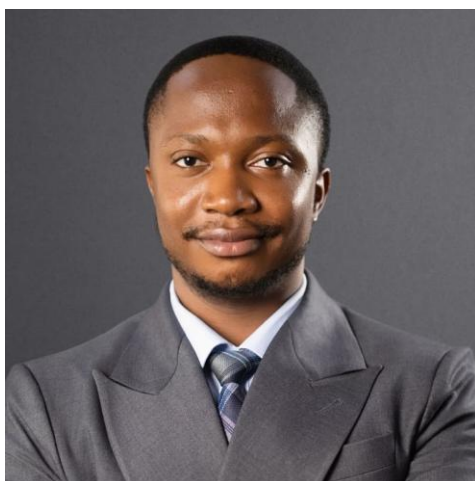
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