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Mining in Africa: Investments and Threats 2025

EABA – Studies & Research Department

Abstract

Mining is a critical component of many African economies, generating export revenue, jobs, and fiscal receipts but also creating governance, environmental, and development concerns. This report covers the mining sector in 53 African countries, including Egypt, from an economic standpoint. It briefly surveys each country's mining profile, examines institutional and regulatory frameworks, analyses investment and financing patterns, evaluates technical capacity and scientific institutions, identifies global stakeholders and critical mineral opportunities, and outlines risks and policy recommendations. The analysis is based on the Africa Mining Vision, World Bank and AfDB research, USGS and UNCTAD papers, Fraser Institute survey results, and EITI transparency initiatives.

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Introduction: Mining's economic significance in Africa

Mining is seen as an important factor that directly contributes to GDP, export earnings, and government income in many African countries, and it has historically drawn foreign direct investments (FDI). Mineral exports fund infrastructure, public services, and imports; when managed properly, mining employment and ties to local supply chains can be development accelerators (World Bank, 2016). However, gains are inconsistent: many countries confront inadequate governance, minimal local benefit, environmental damage, and cluster effects with insufficient backward linkages. The Africa Mining Vision, founded in 2009, specifies a plan for translating extractive wealth into sustainable, inclusive growth, with a focus on beneficiation, connections, transparency, and human capital development. (The World Bank)

Methodology and scope

This study presents an economic overview and nation summaries by synthesizing peer-reviewed literature, institutional reports, and industry surveys. Key sources include the World Bank's "Mining in Africa" project, African Development Bank sector reports, USGS mineral updates, the Fraser Institute Annual Survey of Mining Companies, EITI progress reports, UNCTAD analysis, and country-specific documents when available. For each country, I present a brief overview: major minerals, economic importance, notable projects, institutional governance, investment trends, and primary hazards. Where up-to-date country-level data is not readily available, I rely on regional and country snapshot sources and designate institutional custodianship for mining.

The macro-economics of African mining

Contribution to GDP and trade

In resource-rich countries, mining frequently accounts for a considerable portion of GDP and dominates exports. Copper in the Democratic Republic of the Congo (DRC) and Zambia, gold in Ghana and Tanzania, and oil/minerals in Angola and Nigeria all contribute to export revenues. At the same time, many resource income go to a small portion of the economy unless policies promote local linkages and enrichment. The AMV and subsequent African Mineral Governance Framework emphasise translating mineral rents into broader industrialisation. (The African Union).

Mining creates both direct and indirect employment opportunities. In South Africa, mining jobs contribute for approximately 4.5% of total formal employment, whereas in Botswana, mining accounts for 4%. These jobs are often higher-paying than national averages (apofeed, 2025; Mining's Contribution to National GDP, 2025).

One of the main sources of export income is frequently mining. For instance, around 70% of Zambia's export revenue and 45% of South Africa's merchandise exports come from mining. Internationally, minerals like gold, diamonds, copper, and rare earth elements are strategically significant, and in many nations, mining goods account for a sizable amount of exports and foreign exchange profits.

Fiscal impacts and volatility

they are correlated with the price of commodities, mining income (royals, taxes, and dividends) are frequently unstable. When prices decline, nations without stabilisation systems or a variety of revenue streams are vulnerable to fiscal shocks. For windfalls, a number of African governments have established stabilisation or sovereign wealth funds, although governance and coverage differ greatly. Fiscal transparency is emphasised by the Fraser Institute and EITI as being essential to establishing public legitimacy and investor trust. (Institute Fraser)

Regulatory frameworks, institutions and the Africa Mining Vision

The majority of African nations have a mining code or minerals law that regulates local content, royalties, licensing, and environmental regulations. A cadastre or licensing agency, a geological survey or mineral resources authority, and a mining ministry or ministry of mines are examples of institutional arrangements. Many national policies now make reference to the African Union's AMV (2009), which offers a strategy at the continent level that promotes value addition, transparency, and local industry linkages. By promoting governance changes and de-risking techniques, the Extractive Industries Transparency Initiative (EITI) and IFIs (World Bank, AfDB, and IFC) complement each other. (AU)

Financing the mining sector

Africa's mining industry is becoming more and more active in terms of financing, with financial flows that represent both conventional minerals and the demand for vital resources around the world. Investor preference for well-established commodities is demonstrated by the fact that

gold continues to get the highest proportion, accounting for about 50% of mining finance, followed by copper, which accounts for around 25% of investments. Accelerated deal activity is another sign of rising investor confidence; in 2023, the total value of mining mergers and acquisitions in Sub-Saharan Africa increased by 140% year over year to over US$5 billion. Development finance organisations continue to play a crucial role. For example, the U.S. International Development Finance Corporation committed over US$750 million to strategic projects like the Lobito Corridor and copper ventures in Zambia, while the Africa Finance Corporation has invested over US$1 billion in mining in Africa over the last ten years.

Spending on essential mineral exploration has increased concurrently. In Malawi, exploration investment increased from US$2.2 million to US$19.4 million, with more than half going towards rare earths, and in Uganda, it increased from just US$1.1 million in 2017 to US$9.5 million in 2024, with over 80% of that amount going towards rare earths. China is also a major player; in 2022, it invested over US$23 billion in mining and construction in Africa, accounting for approximately 60% of all FDI. With DFIs and Chinese capital continuing to influence the finance environment, these patterns imply that future financing will increasingly shift towards essential minerals for the energy transition, even while gold and copper will still be investment anchors.

Technical manpower, research and scientific capacity

Skills gaps are widespread. Geologists, mining engineers, metallurgists and environmental specialists are in short supply region-wide. Leading academic and training centers — such as the University of the Witwatersrand (Wits) School of Mining (South Africa), University of Zambia mining programs, Moroccan mining institutes, and specialized units within universities in Ghana, Tunisia and Egypt — supply graduates but cannot fully meet industry demand. The AMV and AfDB emphasize investment in human capital, R\&D and vocational training to localize mining value chains. National geological surveys and research institutes (e.g., Council for Geoscience in South Africa, Ghana Geological Survey) play critical roles in mapping resources and reducing exploration risk. ([African Union][1])

Global stakeholders and demand drivers

Global mining in Africa involves multinational miners (e.g., Anglo American, Glencore, Rio Tinto, Barrick/AngloGold, Vale), state-owned enterprises, and growing activity from Chinese,

Australian, Canadian and UAE firms. The energy transition drives demand for critical minerals (copper, cobalt, lithium, nickel, graphite, manganese, rare earths), and Africa hosts significant reserves of many of these. UNCTAD and USGS documents note Africa's comparative advantage in these minerals and the potential to integrate them into higher value added manufacturing if policy and investment conditions permit. ([UN Trade and Development (UNCTAD)

Opportunities: where the growth areas are

- Critical minerals for batteries and renewables (DRC cobalt, Zimbabwe lithium and platinum, Madagascar graphite, South Africa manganese).
- Mineral beneficiation and downstream processing(smelting, refining) to capture local value.
- Infrastructure linkages (rail, power, ports) that reduce costs and enable regional trade corridors.
- Artisanal and Small-Scale Mining (ASM) formalization — which can raise livelihoods and fiscal returns if formalization and support programs succeed (EITI notes ASM's significance in places like Ghana).
- Green mining and renewable-powered operations, reducing emissions and operating costs over time. ([U.S. Geological Survey][6])

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Risks and challenges

Although Africa's mining industry has many opportunities, it is also fraught with sophisticated hazards that affect investors' choices and nations' ability to optimise economic gains. These issues cover a wide range of topics, including macroeconomic instability, social dynamics, infrastructure, governance, and environmental sustainability.

Type of risks	Risks
Governance and Policy Risks	The unpredictable nature of regulations is a recurring problem in many African nations. Investor confidence is weakened by resource nationalism policies, sudden rises in royalties or taxes, and frequent changes to mining legislation. For example, some long-term investors have been discouraged by changes in Tanzania's mining laws and ad hoc contract renegotiations in the DRC. These risks are increased by corruption and weak institutional capability, which results in unequal contract enforcement and transparency. The Fraser Institute claims that one of the main factors discouraging mining investment on the continent is this kind of policy uncertainty.
Infrastructure and Energy Constraints	Mining projects are capital-intensive and require reliable infrastructure. In much of Africa, poor road and rail networks, limited port facilities, and unreliable electricity supplies substantially raise operating costs. South Africa's chronic power shortages and rail bottlenecks have reduced output in its platinum and coal sectors, while landlocked countries like Zambia and Mali face high logistics costs to reach global markets. Without coordinated infrastructure development, even resource-rich nations struggle to attract downstream processing industries.
Financial and Investment Barriers	Critical minerals continue to attract the attention of global capital, but African mining still has limited access to reasonably priced funding. The perception of elevated sovereign risk by many banks and investors drives up the cost of funding. This dependence on foreign funding makes the company susceptible to changes in commodity cycles, investor sentiment, and interest rates globally. Securing funding for exploratory and mid-tier projects is particularly challenging for smaller nations with less developed mining frameworks.

Skills Gaps and Labor Mismatches	One significant issue that the continent is now lacking is skill mismatch. Companies are forced to import foreign labour due to a lack of mining engineers, geologists, and metallurgists, which drives up costs and reduces the benefits of local employment. In addition to causing unemployment, many African colleges produce graduates in fields that do not align with industry need. This discrepancy inhibits efforts at industrialization and beneficiation and hinders the development of local content.
Environmental and Social Risks	Significant environmental problems brought on by mining operations include deforestation, soil erosion, water pollution, and biodiversity loss. Ecological degradation is made worse by poorly managed mining in delicate habitats like Madagascar and Gabon. Social disputes over land rights, eviction, or insufficient compensation frequently occur between mining firms and nearby communities. Despite being essential for livelihoods, artisanal and small-scale mining (ASM) frequently operates informally, resulting in hazardous practices, child labour, and environmental harm, which poses problems for governance and reputation.
Security and Political Instability	In countries like Burkina Faso, Mali, and the Central African Republic, insurgency and political instability directly threaten mining operations. Companies must often invest heavily in private security, which increases costs and exposes workers to risks. Political instability also disrupts policymaking, further discouraging long-term investment.
ESG Pressures and Global Standards	Environmental, social, and governance (ESG) requirements are becoming more and more important to foreign investors. Access to international finance and premium markets may be restricted if these standards are not met. Although many African nations lack the institutional capacity to regularly implement ESG rules, this trend has the potential to promote sustainability. As a result, there are compliance gaps and risks of reputational injury for both states and businesses.

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Country-by-country profiles (53 countries)

North Africa & Sahel

country	Country performance
Algeria	Hydrocarbons dominate; mining includes iron, phosphate, zinc and barite. Mining contributes moderately to exports; regulatory reforms aim to diversify beyond oil & gas. Institutional oversight: Ministry of Energy and Mines. Investment focus: phosphate and industrial minerals. (World Bank)
Egypt	A diverse economy is enhanced by Egypt's mineral industry, which includes industrial minerals, phosphates, and gold. It also has the advantages of comparatively well-developed institutional capacity and infrastructure especially the new roads developed throughout Egypt. Egypt's logistics located in Suez is advantageous for export routing, while reforms to encourage exploration and downstream processing provide up potential for job development and domestic value addition. In order to draw in junior and big miners from throughout the world, the mining industry must scale through open licensing, exploratory funding, and favorable financial terms. (World Bank; Trade.gov).
Libya	Hydrocarbons dominate; mineral sector limited (limestone, gypsum). Political instability constrains mining investment; governance reforms needed for expansion. (World Bank)
Morocco	established an integrated fertilizer value chain through a powerful state actor (OCP) and has a significant portion of the world's phosphate reserves. Phosphate is a strategic export that promotes industrial employment, export diversification, and rural/agribusiness connections. Price cyclicality and the requirement to continue growing higher-value downstream products are the constraints on Morocco's comparative advantage, which also comes from investments in beneficiation and closeness to European markets. (Fraser Institute; African Union).
Tunisia	Phosphate, petroleum and metallic minerals in small volumes; government aims to diversify but scale is limited. Institutional framework includes Ministry of Industry and Mines. (World Bank)
Mauritania	Iron ore is considered as the number one exporter, gold and copper projects. Large-scale iron mining drives export revenues; ongoing exploration for copper and gold attracts foreign capital. (African Development Bank)

Sudan	Gold is significant (formal and artisanal); political instability and sanctions history have complicated investment. Recent interest in formalizing ASM and rebuilding infrastructure.

West Africa

country	**Economic** Performance
Mauritius	Limited mining; economic dependence on services and sugar. Mining is negligible. (World Bank)
Senegal	Senegal serves as a hub for some industrial minerals in West Africa due to its iron, phosphates, and growing processing operations. Senegal is able to leverage mining ventures into larger industrial policy goals (such as fertilizers and steel) thanks to stable administration, port access (Dakar), and focused public investments. Careful spatial planning is necessary to prevent social and environmental tradeoffs due to limited land area and competition for water and resources. (AfDB; World Bank).
The Gambia	Mining activity minimal; focus on sand, clay and construction minerals. Limited commercial mining potential at scale.
Guinea	Guinea is strategically significant for aluminium supply chains since it has some of the richest bauxite reserves in the world. Large-scale bauxite mining brings in large amounts of foreign investment and provides substantial export earnings; Guinea might extract far more value locally with rail and port transportation investments and local alumina capability. The primary obstacles to converting resource rents into more extensive industrialisation are ongoing infrastructure impediments and governance/transparency issues. (World Bank; UNCTAD).
Sierra Leone	Diamonds, rutile (titanium mineral), bauxite and iron; post-conflict recovery has attracted investment but governance and infrastructure are constraints. (World Bank)
Liberia	Iron ore and gold; re-engagement of foreign investors since post-conflict stabilization; concession and regulatory environment evolving. (African Development Bank)
Côte d'Ivoire	Gold, manganese and industrial minerals; growing gold output and investor interest in West Africa's belt; EITI activity improving transparency in ASM.
Ghana	One of Africa's leading producers of gold, Ghana's exports serve as a major source of foreign exchange earnings and government funding. An established official mining industry, vibrant ASM communities, and more openness through EITI procedures are among the nation's advantages. Formalizing ASM, enhancing environmental control, and

	boosting domestic beneficiation (such as jewelry and refining) to capture more value locally are all crucial policy demands. (World Bank; EITI).
Burkina Faso	Gold (major export), manganese and zinc potential; security challenges (insurgency) have affected operations and investment sentiment despite vast gold resources. (World Bank)
Mali	Gold is leading export; Mali has extensive gold belts but faces security and governance risks that influence investor decisions. (World Bank)
Phosphate	limestone and small-scale exploitation; investment limited but strategic for regional cement and agricultural inputs. (World Bank)
Togo	Phosphate and limestone; government targets beneficiation and port logistics to add value. (World Bank)

Central Africa

Country	Economic Performance
Cameroon	Bauxite, iron ore, nickel and diamonds; potential for development hampered by infrastructure; government weighs concessions for value addition. (African Development Bank)
Central African Republic	Bauxite, iron ore, nickel and diamonds; potential for development hampered by infrastructure; government weighs concessions for value addition. (African Development Bank)
Chad	Limited large-scale mining historically (oil dominates); recent government plans signal intent to expand mining as part of development plans to diversify away from oil. (Reuters)
Congo Brazzaville	Oil and some mining (iron ore, potash); investment constrained by commodity focus on hydrocarbons. (World Bank)
Democratic Republic of Congo	The DRC is at the center of the global battery and electricity supply chain because it has some of the greatest reserves of copper and cobalt in the world. Exports of copper and cobalt account for a sizable portion of export earnings and draw significant upstream foreign direct investment (FDI) from Chinese companies and multinational miners; if governance and revenue management are improved, these flows can fund public spending and infrastructure. However, artisanal mining, inadequate infrastructure, and governance issues (security, licensing, smuggling) restrict local value addition and cause downstream investors to worry about supply-risk and environmental issues. (USGS; World Bank).
Equatorial Guinea	Oil and gas dominate; mining is limited but there is exploration potential for industrial minerals. (World Bank)

Gabon	Manganese, iron ore and some gold; state plays a strong role in mineral development; manganese exports important to revenue. (African Development Bank)
Sao Tome & Principe	Minimal mining; economy reliant on services and agriculture. (World Bank)

East Africa &horn

Country	Economic Performance
Ethiopia	Ethiopia has a competitive development path and this is due to the government's aggressive support of mining as part of diversification and export-led growth. Ethiopia's mineral strengths include gold, potash, and industrial minerals. Large mapping and exploration initiatives supported by IFIs lower the risk of discovery and draw in investors looking for greenfield prospects. The main obstacles to increasing production in rural areas are land-use conflicts and the requirement for social licence. (AfDB; World Bank)
Eritrea	Gold, copper and zinc resources; state-driven contracts and partnerships; geopolitical risks affect investment flows. (World Bank)
Djibouti	Minimal mining but strategic logistics hub with potential link to neighboring mineral projects. (World Bank)
Somalia	Largely unexploited mineral potential (rare earths, gemstones) but instability makes formal investment limited. (World Bank)
Kenya	Kenya has an advantage for midstream processing and trading activities because to its expanding portfolio (titanium, soda ash, gold, and emerging rare-earth interest), robust services sector, and logistical hub (Mombasa, Nairobi). Formalising ASM can improve livelihoods and financial returns, while its improved cadastre systems and relative institutional stability aid in luring investment in exploration and mining services. (World Bank; AfDB).
Uganda	Gold and some base metals; nascent exploration sector and government seeking to expand mining beyond oil prospects. (World Bank)
Rwanda	Tin, tantalum and tungsten with efforts to formalize ASM and develop value chains; Rwanda's governance model encourages beneficiation and export of processed minerals. (World Bank)
Burundi	Nickel, gold and potential for other metals; small sector due to scale and governance constraints. (World Bank)

Tanzania	Tanzania's robust gold industry and exports of gemstones have provided a consistent flow of foreign exchange and employment. Tanzania's strategic advantage is its wealth of deposits and ability to draw in large miners. Tanzania might increase its domestic value shares by implementing tailored policies that support the country's cutting and polishing and refining businesses. Recent changes in politics and regulations have made investors more cautious; long-term gains would be increased by transparency and steady taxation. (World Bank).

Southern Africa

country	Economic Performance
Angola	Diamonds and other minerals alongside dominant oil sector; diamond mining historically important for export revenues but requires governance improvements to maximize benefits. (World Bank)
Namibia	Uranium, diamonds, rare earths (some deposits), and base metals; stable regulatory environment and developed port & logistics (Walvis Bay) attract investment; uranium for global energy and rare earths interest rising. (Fraser Institute)
Botswana	Gem diamonds produced under a successful public-private model (Debswana JV) account for a substantial portion of Botswana's economic advantages. Strong institutions and royalty governance have more successfully converted mining rents into infrastructure and service delivery than many of its counterparts. Diamonds give the government steady fiscal revenues, which allow for significant public investment and macroeconomic stability. Diversification away from diamonds and up the value chain into cutting, polishing, and jewellery production is the primary long-term challenge. (AfDB; Fraser Institute).
South Africa	The most diverse and technologically sophisticated mining industry on the continent is found in South Africa, where export revenues are supported by platinum-group metals (PGMs), gold, coal, manganese, and chrome, as well as a whole network of downstream metallurgy, research facilities, and service providers. Beneficiation and technology transfer are made possible by the nation's robust tertiary institutions and well-established refineries, which support manufacturing connections and jobs. If left unchecked, power outages, labour disputes, and regulatory ambiguity are major threats that could undermine these comparative advantages. (The Fraser Institute; World Bank).

Zimbabwe	Significant PGM resources and other critical minerals, such as lithium and chromium, can be found in Zimbabwe. Although PGMs and future battery-metal projects provide Zimbabwe with an economic lever for export earnings and industrial employment, the investment required to scale production and downstream processing has been constrained by macroeconomic volatility, regulatory uncertainty, and property-rights concerns. Significant wealth from these resources might be unlocked by better macroeconomic management and legal certainty. (UNCTAD; Reuters).
Zambia	Copper is Zambia's economic backbone. As a major copper producer, Zambia benefits from export receipts, job creation, and investment inflows for mining infrastructure. The country's development challenge — and opportunity — is to build midstream/refining capacity (electrolytic copper, wire production) and to stabilize policy to attract sustained investment, since copper price swings heavily affect fiscal balance and investment appetite. (World Bank; UNCTAD).
Malawi	Uranium potential historically, currently limited mining (coal, limestone, some gemstones); small sector with development aspirations. (World Bank)
Mozambique	Coal, some heavy mineral sands and natural gas dominate; mineral sector overshadowed by LNG projects, but rare earths, graphite and other minerals attract exploration. Security (Cabo Delgado) previously affected projects; improvements attract renewed investor interest. (U.S. Geological Survey)
Swaziland	Coal and small-scale mining; limited sector scale. (World Bank)
Lesotho	Diamond output via Letseng is significant locally; geology also supports other minerals; hydro projects and community impacts are policy areas. Recent AfDB-backed water project issues show the intersection of mining, water and social impacts in the region. (The Guardian)
Cape Verde	Minimal mining activity; economy dominated by services and tourism. (World Bank)
São Tomé and Príncipe	Very limited mining; focus on cocoa and tourism. (World Bank)
Sudan / South Sudan	South Sudan hasnascent oil and potential mineral deposits but conflict constrains development. Sudan has significant gold production. (World Bank)

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Rules of mining, company structures, and institutional players

Mining codes & policy instruments

Most African mining regimes combine:

- licensing and concession frameworks (exploration, mining, and small-scale permits)
- fiscal regimes (royalties, corporate tax, windfall taxes)
- environmental and social safeguards
- local content and beneficiation requirements. Codes are periodically updated; investor-friendly jurisdictions typically offer transparency, predictable taxation and streamlined cadastre systems. (Fraser Institute)

Company types and foundations

Mining companies in Africa fall into several classes: Multinational majors (Anglo American, Barrick, Newmont, Rio Tinto, Glencore) that operate large mines and integrated value chains; Mid-tier and junior explorers focused on discovery and early-stage development; State-owned enterprises or national miners (e.g., SNIM in Mauritania, OCP in Morocco is state-owned but globally active), and Artisanal & small-scale miners who provide livelihoods but often operate informally. Joint ventures with national companies and stake sales to sovereign funds are common. (African Development Bank)

Governmental institutions responsible for mining

Typical institutional players: ministries of mines/energy, national geological surveys, mineral resources authorities (licensing/cadastre), environmental protection agencies, revenue/finance ministries (taxation and royalties), and state mining companies. Regional bodies (African Union) and intergovernmental mechanisms (EITI, IGF, AfDB) support governance, transparency and technical assistance. The AMV encourages national mineral governance frameworks aligned with industrial policy. (African Union)

Finance resources and investment vehicles

Public budgets & sovereign finance: governments invest in geoscience, roads and power to reduce mining development costs.

Private capital: majors' corporate balance sheets, project finance from commercial banks (often syndicated), private equity and strategic investors. Securitization and commodity pre-payments occasionally used.

Blended finance & impact funds: target ASM formalization, community projects, and ESG-compliant investments, especially for minerals linked to the energy transition. (U.S. Geological Survey

Technical manpower, training institutions and scientific research

Key institutions providing training and research include: The Wits School of Mining in South Africa, University of Cape Town and Stellenbosch (mining/metallurgy research), University of Zambia (mining engineering), Mohammed V University & Moroccan mining schools, and specialized institutes at national geological surveys. Capacity building programs (AfDB/World Bank/IFC funded) focus on geoscience mapping, vocational training for mine operations, and environmental management to raise the pool of skilled workers. However, the pace of private sector expansion often outstrips national training outputs, creating persistent labor shortages in technical roles. (African Development Bank)

Conclusion

Mining remains an economic lever for many African countries capable of driving exports, providing fiscal space for development and spurring industrialization if managed with transparent policies, investments in infrastructure and human capital, and a forward-looking focus on value addition. The rise in demand for critical minerals provides new opportunities but also requires stronger governance, environmental safeguards and skills development. Implementing AMV principles and aligning national strategies with global market opportunities (and DFIs' support) will be essential for translating Africa's mineral wealth into broad-based growth. (African Union)