



SECURING AFRICA'S ENERGY FUTURE: LEVERAGING THE MATTEI PLAN FOR SUSTAINABLE GROWTH

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Key messages

- Managing geopolitical risks is essential for a secure and resilient energy future in Africa.
- Developing local value chains and renewable technologies allows African countries to move beyond raw material exports and create sustainable jobs.
- Europe can benefit from emerging African markets by supporting renewable energy development and securing clean energy imports.
- The Mattei Plan provides a framework to guide Africa's transition to a reliable, high-value, and sustainable energy system.

Context

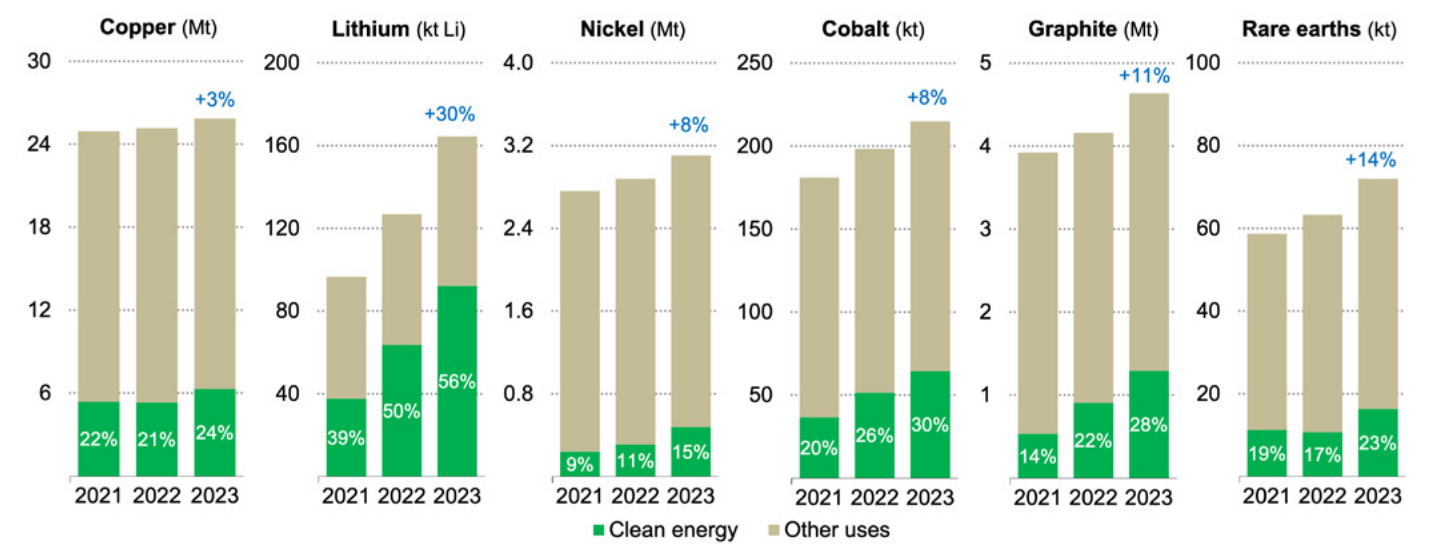
Africa stands at a crucial point in the global energy transition. Although the continent has abundant critical minerals, it continues to export raw materials instead of developing local processing and manufacturing. This keeps African economies dependent on foreign markets and exposed to external shocks. At the Africa Growth and Opportunity: Research in Action

(AGORA) Conference, experts emphasized that Africa must shift from being a supplier of resources to becoming a co-creator of energy solutions ([World Bank, 2025a](#)). Italy's Mattei Plan offers an opportunity to advance this shift.

Launched by the Italian government, the Mattei Plan seeks to redefine Italy-Africa relations by moving from traditional aid toward co-investment and partnership ([MEF, 2023](#)). It targets on key sectors such as energy, agriculture, health, education, water, and infrastructure, with the aim of fostering shared growth, addressing the structural drivers of migration, and strengthening Italy's economic and geopolitical role. Backed by an initial €5.5 billion commitment, the Plan relies on Italian state-owned enterprises to implement projects and seeks partnerships to support sustainable development and regional stability while aligning Italian interests with African priorities. For African countries, it provides a path to attract long-term financing, strengthen institutions, and build a more reliable and inclusive energy system.

This brief outlines how the Mattei Plan can support African countries in advancing their

Figure 1: Demand for global energy transition minerals from 2021 to 2023.



Source: IEA (2024)

energy transition. It offers practical guidance on mitigating geopolitical risks linked to critical minerals to support Africa’s move up the clean-energy value chain and reduce long-term vulnerabilities.

Methodology

This analysis builds on a review of recent policy and research literature on the global energy system, critical minerals, and Africa’s energy transition. It is complemented by evidence drawn from established datasets and analytical outputs from International Energy Agency (IEA), World Bank, and Africa Mineral Strategy Group. These sources provide an up-to-date foundation to inform policy direction and investment considerations.

Key challenges

LEARNING FROM THE FOSSIL-FUEL ERA

Energy crises, from the oil shocks of the 1970s to post-pandemic price surges, have repeatedly exposed vulnerabilities in global energy systems (IEA, 2022). African economies, especially oil importers, suffered from higher prices, fiscal strain, and reduced industrial productivity. Even energy exporters faced volatility, highlighting structural risks and the continent’s limited energy

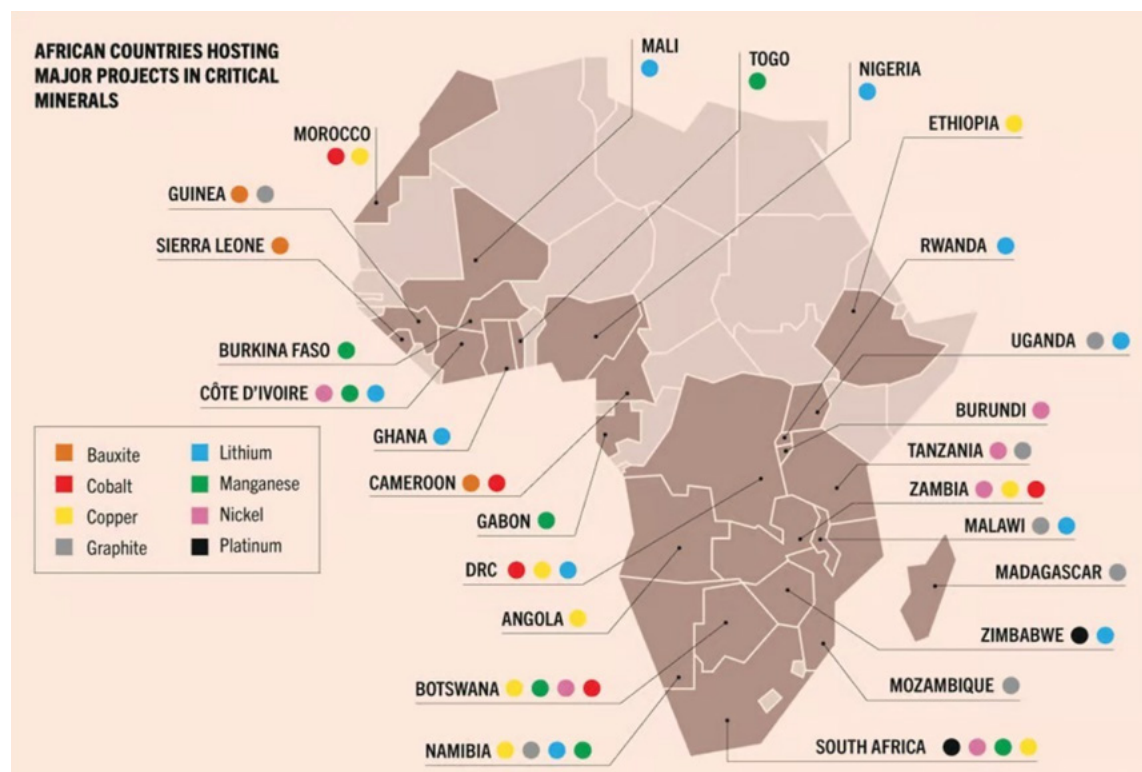
infrastructure (Azomahou et al., 2021; Berahab, 2022; Mo Ibrahim Foundation, 2022).

Across all these energy crises, the common thread is the concentration of supply. When a small number of countries control the production or export of essential energy inputs, the world becomes vulnerable to geopolitical tensions, economic shocks, and disruptions in supply chains. This structural vulnerability will not disappear with the shift to clean energy. The energy transition introduces new forms of concentration, this time in critical minerals and renewable technologies.

THE CONCENTRATION CHALLENGE IN CRITICAL MINERALS AND RENEWABLE TECHNOLOGIES

As countries push toward an energy transition, green technologies are key to economic competitiveness. These technologies depend heavily on minerals such as cobalt, lithium, nickel, manganese, graphite, copper, and rare earth elements. Global demand for critical minerals has risen steadily between 2021 and 2023, driven primarily by the rapid expansion of clean energy technologies as electric vehicles, batteries, and renewable energy systems become central to global energy transitions (Figure 1). In many cases, clean energy applications now account for an increasing share of total demand, especially

Figure 2: Africa's critical minerals endowment



Source: Africa Mineral Strategy Group

for lithium and graphite, highlighting how the shift toward electrification is reshaping global commodity markets. This trend underscores both the growing strategic importance of mineral supply chains.

Africa is one of the most resource-rich regions in the world, and many countries on the continent are set to play a central role in the global clean-energy supply chains (Figure 2). However, despite this abundance, Africa continues to export most minerals in raw form. The critical steps that generate higher value, such as processing, manufacturing, and technological innovation, still take place outside the continent. This situation has implications that go far beyond an economic imbalance. It involves geopolitical vulnerabilities, limited capacity to handle disruptions, and exposure to Environment, Social, and Governance (ESG).

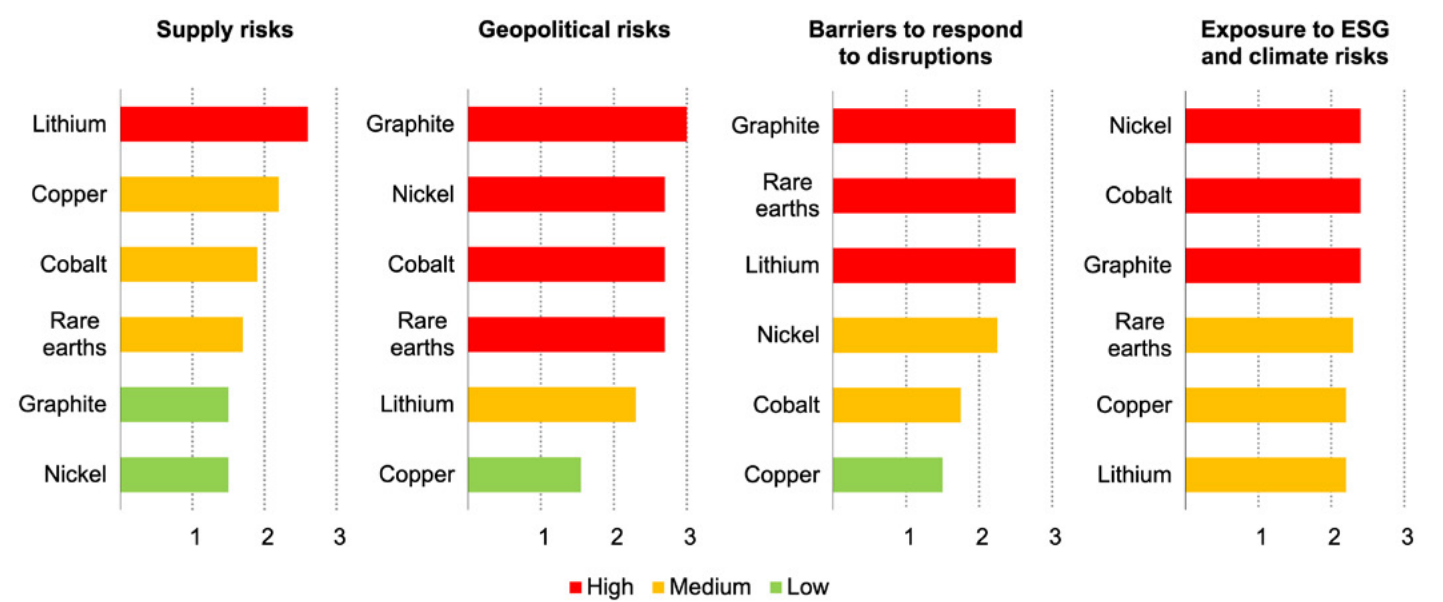
Despite Africa's focus on mining, geopolitical risk remains particularly high due to the extreme concentration of global critical mineral supply, especially at the refining and processing stages (Figure 3). While mined supply shows high

concentration for key African-sourced minerals like Cobalt, the risk is generally exacerbated by the control over the subsequent refining process being held by a few non-African countries. This dynamic creates a significant structural vulnerability for the global energy transition, as disruptions in just one or two countries could impact the entire supply chain (Makridis, 2025).

Beyond minerals, Africa also suffers from a lack of domestic renewable energy technologies (SEALL, 2025). Most solar panels, wind turbines, batteries, and other clean energy equipment are imported, creating dependency on foreign suppliers and limiting local value creation. This gap reduces Africa's ability to scale renewable energy deployment quickly, adapt technologies to local conditions, and capture the economic benefits of the energy transition.

Africa's energy transition requires more than technical solutions and financing. Strong governance and institutional capacity are also essential to manage geopolitical risks. Weak regulatory frameworks, political interference, and financially troubled utilities

Figure 3: Clean energy transition risk assessment by mineral.



Source: IEA (2024)

limit investment (World Bank, 2025b). This prevents the continent from developing local clean-energy industries, making it reliant on imported renewable technologies and raw-material exports. In addition, unreliable electricity discourages investors (Kher, 2024), especially for building local critical-minerals value chains and renewable-technology innovation hubs.

Recommendations for a successful energy transition under the Mattei Plan

This brief addresses key geopolitical risks, from concentrated global supply chains for critical minerals to reliance on imported renewable technologies. It promotes local value addition, regional integration, and strategic investments in clean-energy infrastructure. Effective implementation requires proper sequencing to make the transition realistic and impactful.

KEY STEPS TO UNLOCK THE ENERGY TRANSITION

As highlighted at the AGORA Conference, Africa’s energy transition depends on strong governance and institutional capacity (World Bank, 2025b). The following recommendations

provide practical steps for implementation, based on African experiences and country-specific contexts.

a. Prioritize institutional reform

Reform must address chronic financial distress in many African utilities, including revenue losses, low collection rates, and political interference in tariff decisions. Countries should adopt performance contracts similar to those tested in Namibia, Seychelles, and Uganda (World Bank, 2021). Regulatory agencies need autonomy and transparent mandates to attract investors.

b. Adopt a dual-track approach

African economies need household access and reliable power for industrial use at the same time. Industrial zones, agro-processing, and digital hubs, such as those in Chad (Zone Industrielle du Logone), Democratic Republic of Congo (Congo Industrial Platforms), Nigeria (Industrial Platform Remo Free Zone), and Togo (Plateform Industrial Adetikope), require dependable electricity to attract investors and create jobs (AFI, 2024). Countries should track reliability indicators such as adequacy, security, socio-economic indicators (Heylen et al., 2018) and monitor impacts on firm productivity to guide investment decisions (Maruta, 2025).

c. Design financing mechanisms aligned with reform and impact

Financing tools should de-risk investment in countries with high political and currency risk ([Ly. 2025](#)). Blended finance, partial risk guarantees, and insurance instruments from the African Development Bank and national development banks can lower borrowing costs. Funds should be tied to governance milestones to ensure reforms stay on track.

PARTNERSHIPS, CAPACITY BUILDING, AND OPERATIONAL RECOMMENDATIONS

Once the foundational policies are in place, African countries can reduce geopolitical risks in its energy transition by strengthening local industries, regional cooperation, and human capital.

a. Develop national and regional value chains for renewable technologies and critical minerals

Countries should move beyond exporting raw cobalt, manganese, graphite, and bauxite. Investments are needed in renewable technologies ([SE4ALL, 2025](#)) and mineral processing and refining zones in countries like Democratic Republic of Congo, Guinea, Mozambique, and Zambia. Regional cooperation through African Continental Free Trade Area can support cross-border value chains. Countries like Egypt, Ethiopia, Morocco, and Nigeria have emerged as leaders in leveraging Special Economic Zones to drive industrialization ([AEZO, 2021](#)). Partnerships under the Mattei Plan should include technology transfer and benefit-sharing.

b. Strengthen regional integration of clean power markets

Africa is home to five major power pools, the West African Power Pool, Eastern Africa Power Pool, Southern African Power Pool, Central

African Power Pool, and North African Power Pool, but are currently operating below their full potential ([ACF, 2022](#)). The Mattei Plan can play a role in supporting regional initiatives such as the African Clean Energy Corridor, which aims to promote cross-border trade of clean power within the Eastern Africa Power Pool and Southern African Power Pool ([AFREC, 2024](#)).

c. Invest in skills, research, and innovation ecosystems

Universities, institutions, and research centers need support to produce the engineers, technicians, and entrepreneurs required for clean-energy development. In addition, innovation hubs in Ghana, Kenya, Senegal and South Africa ([Cherunya and Ahlborg, 2020](#); [UNIDO, 2025](#)) show how local solutions can scale. Mattei Plan partnerships should fund research programs, local manufacturing training, and entrepreneurship support.

Mitigating geopolitical risks in Africa's energy transition is not only essential for regional stability but also creates opportunities for both African countries and Italy. By investing in local value chains, renewable technologies, and institutional capacity, Africa can move beyond exporting raw materials to co-develop high-value energy solutions, fostering economic growth, industrialization, and job creation. Italian enterprises can gain first-mover advantages in emerging African markets for renewable technologies and infrastructure. At the same time, Italy and Europe can strengthen energy security and diversify imports by sourcing clean energy from Africa, which has immense renewable potential. Effectively managing geopolitical risks ensures that this approach benefits both Africa and Italy while advancing the objectives of the Mattei Plan. ●

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