



# Policy Brief

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## Strategic Minerals in Tanzania: Policy Options for Expanding Domestic Value Chains

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### Abstract

- As the climate crisis intensifies, global demand for the minerals required for green energy technologies is expected to double by 2030. This provides Tanzania with a unique opportunity to leverage its reserves of these minerals to drive the country’s sustainable development. Based on the findings of an examination of the value chains of six strategic minerals (SMs) in Tanzania—phosphate, copper, nickel, graphite, rare earth elements (REEs) and titanium—

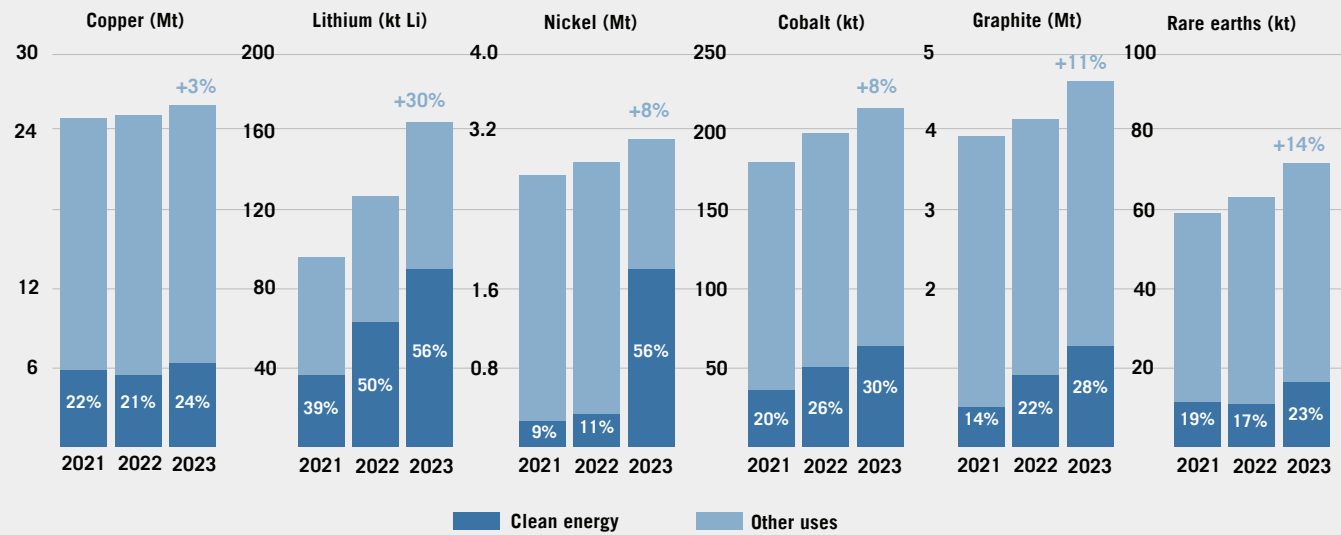
this policy brief recommends that the Government put in place an integrated strategy that identifies and prioritizes strategic minerals for domestic value addition, promotes investment in exploration to expand the country’s resource base, develops smelting and refining capabilities, and fosters regional cooperation.

# Introduction

The world is transitioning from fossil fuel-based economic systems towards cleaner and greener energy solutions. This transition is mineral and metal intensive. Minerals critical to green energy technologies include cobalt, graphite, lithium, nickel and rare earth elements (see Figure 1).

Despite being essential for technological applications, many of these minerals face critical supply risks. According to the International Energy Agency’s Global Critical Minerals Outlook 2024, the demand for these minerals is projected to double by 2030 with specific minerals like graphite, nickel and copper seeing even higher growth rates (IEA 2024).

FIGURE 1: GLOBAL MARKET DEMAND FOR STRATEGIC MINERALS, 2021-2023

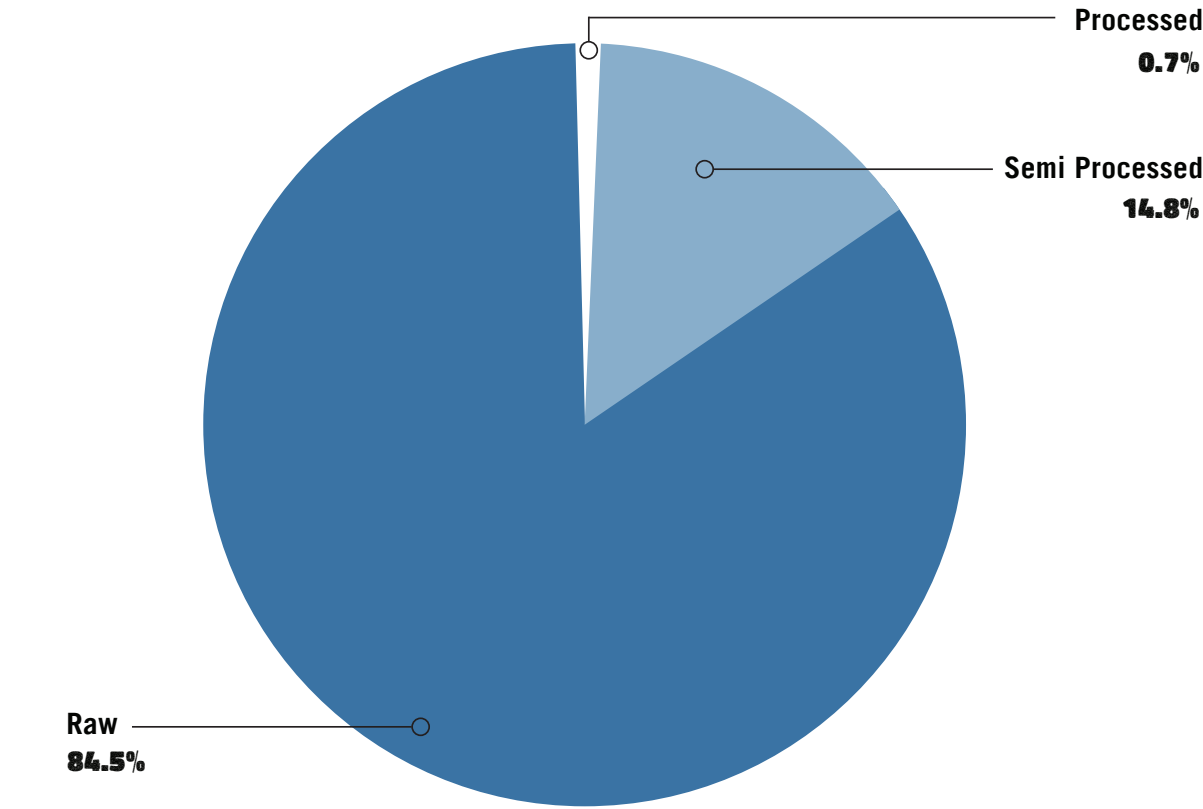


Source: International Energy Agency

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Tanzania has a relatively rich geological setting, including substantial reserves of critical minerals. However, at present, most of the minerals extracted in Tanzania are exported raw for to industrialized countries (see Figure 2). Even when processing is undertaken domestically, the minerals are not processed into high-value products. Therefore, the rising global demand for green technologies presents the country with a significant opportunity to leverage its mineral potential to spur sustainable and inclusive development. It holds the promise of higher mineral rents, jobs and spillover benefits for related industries through knowledge and technological transfer. However, the limited processing capacity within Tanzania and regionally undermines the country’s potential to produce intermediate or final products while stimulating domestic manufacturing industry, skills development and technology transfer.

FIGURE 2: TANZANIA MINERAL EXPORTS, BY FORM, 2019-2023



Source: Computed from Mining Commission data (Tanzania)

Overall, Tanzania has a reasonably strong policy foundation for domestic value addition for minerals as reflected in all key national development documents, including the Tanzania Development Vision 2025, the latest national Five Year Development Plan (FYDP III for 2021/22-2025/26), Mineral Policy 2009 and corresponding Mining Act (Chap. 123 R.E. 2023). Despite its mineral potential and policy foundation, Tanzania is yet to realize the benefits of global demand. Past mineral booms, for example the spike in gold prices between 2004 and 2014, left Tanzania and many other mineral-rich countries in Sub-Saharan Africa disappointed, largely due to the low levels of integration of these activities into the wider economy. Therefore, this study examined the current status and future potential of strategic minerals for Tanzania to provide policy and practical guidance on how the country can fully harness these resources.

## Methodology

This research utilized a qualitative approach that combined desk research with semi-structured interviews with representatives of key public institutions, including the Ministry of Minerals, Mining Commission, Ministry of Trade and Industries, Ministry of Energy, Vice President’s Office, Environment Division and the State Mining Corporation, as well as upstream mining operators in the private sector.



## Key Findings

Based on the evidence collected, the study identified a number of gaps in Government policy for strategic minerals that will need to be filled to ensure a coherent and coordinated approach in their implementation. Key findings are as follows:

### Develop a national vision for strategic minerals development

Most national policies pre-date the current momentum and recognition of the nexus between the global energy

transition and strategic minerals and, hence, do not explicitly identify or prioritize these minerals. Given their potential to drive sustainable development, the Government may wish to consider putting in place an exclusive policy and regulatory framework to define and classify strategic minerals. However, while this may ultimately be a positive move, the process should start with developing a national vision for strategic minerals based on the country’s long-term interests, including addressing the key strategic policy question:

“How can Tanzania utilize these minerals for its own clean energy transition?” Creation of this vision needs to be broadly consultative to incorporate the aspirations of Tanzania’s citizens and achieve cross-sectoral support and buy-in. It should also align with the goals of the Tanzania Development Vision 2050 (DIRA 2050) released in July 2025.

### Pursue a cluster-model for mineral processing

Currently, national legislation requires that each mining license holder undertakes processing in country, which is an essential measure to compel companies to add value domestically. However, in practice, this can only work for a few larger and more profitable projects but may not be feasible for projects/miners with smaller and more marginal fields of operations.

Therefore, the study recommends that Tanzania adopt a cluster approach for mineral processing to attract large and profitable processing plants, by utilizing and developing designated industrial parks, especially the country’s Export Processing Zones (EPZ) and Special Economic Zones (SEZ), in combination with offering incentive packages to attract investment. Such a cluster approach would encourage mining companies to form consortiums to establish shared facilities or attract independent investors focusing exclusively on mineral processing and others on component manufacturing. The planned Kabanga nickel processing plant sets the pace in this regard, while the Mtwara SEZ

which the Government has previously designated as the “minerals corridor” (URT 2011) should be developed to strategically serve as a processing cluster for graphite.

### Adopt a selective approach to downstream value addition

Achieving downstream value addition will require careful and strategic selection of desired intermediate or final products. The key consideration should be the potential for these products to feed local manufacturing. This approach would allow for targeted fiscal incentives commensurate with their strategic potential to grow domestic manufacturing and inter-sectoral linkages.

### Consider regional cooperation

Tanzania has the option to explore cross-border cooperation to leverage synergies with mineral-rich neighbouring countries. For example, by partnering to establish a joint graphite processing facility, Tanzania and Mozambique would boost their competitiveness based on the two countries’ combined recoverable reserves of graphite of over 50 million tonnes. Similarly, Tanzania could seek to join the Democratic Republic of Congo (DRC)-Zambia initiative to develop an electric vehicle (EV) battery precursor plant (Olan’g & Scurfield 2023) or offer to refine ores from both countries at the planned Kahama multi-metal refining plant if spare capacity exists or if capacity is expandable. However, all joint agreements must be based on the

principles of good governance, mutual and equitable benefit sharing and responsible mining practices. Otherwise, they may jeopardize the chances of Tanzania integrating into global value chains.

### Attract investment in mineral exploration

Countries with substantial/dominant reserves of strategic minerals within global supply have greater economic leverage. For example, with 42 percent of the world’s supply of nickel, Indonesia has succeeded in attracting downstream value addition by imposing a ban on the export of raw nickel (UNCTAD 2024). In contrast, in 2017, Tanzania attempted to impose a ban on copper concentrates with limited success because of it is a small (non-dominant) player position in the global supply chain. Therefore, to build its proven reserves, the Government should be aggressive in promoting investment in exploration for strategic minerals. These minerals are still under-explored and under-developed, presenting an attractive investment opportunity in mineral exploration and mining in Tanzania.

### Tap geopolitical opportunities

Current geopolitical dynamics in mineral supply represent both an enabler and an obstacle for mineral development in Tanzania. Presently, China’s dominance in global value chains for many strategic minerals present a barrier for nascent industrial countries such as Tanzania. For instance, over 90 percent of battery-grade graphite and 77 percent of refined rare earths in 2030 will originate in China (Wang

& Gao 2020). However, at the same time, it heightens supply risk concerns, especially for industrial states in the global north, creating a strong incentive for user countries to diversify their sources of supply of strategic minerals. Therefore, the Government should endeavour to leverage its long political and diplomatic relationship with China to invest in smelting and refining in Tanzania. Similarly, the government should take advantage of political Initiatives such as the Mineral Security Partnerships (MSP) of the United States and the European Union’s Critical Raw Materials Act (CRMA). These initiatives aim to accelerate the development of diverse and sustainable critical minerals’ supply chains through working with host governments and industry to facilitate targeted financial and diplomatic support for strategic projects along the value chain. This is an opportunity for Tanzania to negotiate better deals including adding value and diversifying export products of strategic minerals in high demand.

**Invest in national infrastructure and technology**

Significant investments are needed in advanced technologies and infrastructure to support efficient extraction and processing of minerals. For example, production at the Kabanga nickel plant could be delayed due to inadequate infrastructure for transporting heavy machinery. This lack of appropriate infrastructure and technology could become constraints for other strategic mineral projects.

**Develop a skilled workforce**

Similarly, the development of a skilled domestic workforce through targeted education and training programs is essential for the growth of strategic mineral industries.



Photo credit: iStock/statu-nascendi

Conclusion

This study examined Tanzania’s capacity to take advantage of the current surge in global demand for SM to enhance local value addition. It identified six key strategic minerals with proven reserves in Tanzania—phosphate, copper, graphite, nickel, REE and titanium—which have the potential to contribute to the country’s mineral processing and manufacturing sectors. Overall, Tanzania has a reasonably strong policy foundation for adding value to its minerals, however, the existing policies and plans were created prior to the surge in recognition and demand for minerals to support the global transition to clean renewable energy sources and products. Based on the evidence collected, it is an opportune time for the country to chart a new course towards mineral-based prosperity, inclusive growth and sustainable development by:

- 1 Developing and implementing a comprehensive policy and strategy that identifies, defines and categorizes strategic minerals, and determines the country’s vision, agenda and priorities for their use.
- 2 Expanding exploration to broaden the resource base of strategic minerals and leverage its strategic mineral potential for meaningful local transformation.

- 3 Pursuing joint investments and intra-regional trade with and across the region’s economic blocs, including the East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA), the Southern Africa Development Community (SADC) and Africa Continental Free Trade Area (AfCFTA) to create cross-border value chains and economies of scale for strategic minerals.
- 4 Investing in advanced technologies and infrastructure to enable efficient extraction, processing, smelting, refining and manufacturing to be undertaken in-country.
- 5 Developing a skilled workforce through targeted education and training programs to ensure that the local population is equipped to participate in and benefit from the strategic minerals industry.

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