

The Paradox of Critical Mineral Exploitation in Africa

The Paradox of Critical Mineral Exploitation in Africa Critical minerals are a necessary and inevitable component of modern technology and renewable energy, but are extracted at a great cost. Africa, a continent blessed with natural resources specifically with critical minerals but environmental degradation and socio-economic inequalities still very evident. The Democratic Republic of the Congo (DRC) alone produces more than 70% of the world's cobalt, a critical mineral for batteries for electric cars and smartphones. Zambia, South Africa, and Zimbabwe too have immense reserves of lithium, platinum, and rare earth elements. While these mineral resources have potential to develop the economy of Africa, their exploitation results in human rights violations, deforestation, and militias conflicts. The International Monetary Fund (IMF) estimates that critical minerals of Africa have the potential to increase 12% of Africa's GDP by 2050, but most of this wealth is captured by MNCs, militias, corrupt state actors with local communities remaining ignored. The demand for critical minerals is increasing now because they are essential for the transition towards green energy, defense technology, and high-end electronics. Further, the importance and need of these resources has sparked political debate and raised ethical questions regarding workers' working conditions and environmental degradation, globally. Africa is the epicenter of this challenge that while the planet requires its minerals to fight global warming, its extraction degrades the environment itself.

Critical minerals are natural resources that are a raw material for green development, transition towards green economy, and innovation but it faces supply chain failures. Examples of critical minerals are lithium, cobalt, nickel, graphite, rare earth metals, and platinum group metals. These minerals play significant roles in the production of semiconductors, batteries for electric vehicles, renewable energy equipment, and defense equipment. India has adopted a dual-criteria to decide critical minerals and this methodology is adopted from the European Union which consid-

ers economic importance and supply chain risk while deciding which minerals will be counted as critical. Generally, a mineral is considered critical if it is important in industrial and technological development, and if its availability is limited to a few countries or regions and is susceptible to geopolitical disturbances. India in its Union Budget of 2024 proposed Critical Mineral Mission, reflecting India's need and focus for these resources' strategic and economic value. Earlier, critical minerals were not a priority at the national level for even developed economies such as the U.S., but now as the world moves and relies more on clean or green energy, nations are now shifting their focus over these resources, strategically as well as politically. This increasing understanding over their importance has resulted in policies to solve issues in the supply chain and increase domestic mineral production.

Africa holds the largest share of the world's critical mineral reserves, DRC alone has more than 70% of cobalt, whereas Zambia, Zimbabwe, and South Africa have huge lithium and platinum reserves. Other significant mineral-rich countries are Mozambique, which has large graphite deposits, Madagascar, which contain rare earth minerals, and Namibia, which has large reserves of uranium. Even with all these abundant reserves, Africa lacks in terms of processing and refining these minerals, while extensive mining activities take place, the majority of raw materials are exported for value addition in other countries, resulting in lost economic opportunities and 'drain of wealth'. It further gives opportunities to external firms for dominating in the refining and manufacturing sector of critical minerals. It further hinders Africa's opportunity to gain maximum benefits from its own resources, and even traps it in a vicious circle where it supplies raw materials but does not get involved in the value-added stages of refining and manufacturing.

The mining of critical minerals in Africa is followed by exploitation, environmental degradation, and violations of human rights. Siddharth Kara's book, *Cobalt Red: How the Blood of the Congo Powers Our*

Lives, gives details of on ground challenges such as child labor, forced labor, and degrading working conditions within DRC's cobalt mines. Several workers, including minors, work in dangerous situations, excavating tunnels manually without or with minimal protective measures. Accidents, respiratory complications, and toxicity from chemicals are common in such conditions. Further, armed groups like the M23 rebels often clash to gain control of mineral territories in eastern DRC and such external-funded conflict has displaced people leading to tensions between Rwanda and DRC for mineral resources and now major powers in the world like the U.S. take an active interest by offering military help to DRC against M23 rebels. The second key issue is environmental degradation as mining of minerals like lithium and cobalt needs huge amounts of groundwater, which depletes water sources in the surrounding areas and pollutes nearby ecosystems. Moreover, women also experience disproportionate exploitation in the sector as they participate in mining activities but they are usually left out in decision-making, compensation, and consultation processes for mineral transactions. Further, the Mineral Security Partnership (MSP) is an international partnership that seeks to promote secure and ethical sourcing of critical minerals, uniting the world's leading economies to invest in stable supply chains but the major issue in this partnership is that no African country is an official member to it.

To overcome these challenges, many international initiatives and agreements were conducted. One among them is Lobito Corridor, which is a strategic transport network linking DRC, Zambia, and Angola allowing for the export of minerals via the Lobito Port and it is very crucial as DRC is a landlocked country, and mineral transportation from landlocked would be a logistical issue. Moreover, recently the memorandum of understanding between the U.S.-DRC-Zambia Agreement on Electric Batteries to set up battery manufacturing plants in Africa for electric vehicles which will reduce raw mineral exports and promote local processing. These steps resemble a shift in global policy which aims to secure critical minerals while managing its supply chain issues, but success of these initiatives depends on African countries as to how they will enforce rules, negotiate equitable sustainable deals, and maintain more control over their resources.

A multi-pronged strategy is required for ethical and sustainable extraction of minerals and for this Afri-

ca needs to establish processing and manufacturing plants for more economic value addition from its resources instead of raw mineral exports. Governments and companies should implement strict measures against child labor, forced labor, and environmental degradation, so that mining activities are conducted with adherence to ethical and legal conditions. Free and prior informed consent of local people must be a requirement prior to initiating mining ventures, so that the people who are impacted by resource extraction have a say in decision-making. Mining infrastructure investments should also contribute to wider economic growth, such as passenger transport and trade beyond minerals, so that potential of such infrastructure should not be undermined.

Critical minerals reserves in Africa have potential for huge economic and technological development but the prevailing model of extraction serves corporate interests and at the expense of local welfare which results in exploitation of workers, environment as well as of national interest. Hence, it calls for a sustainable approach to advance mining, reinforce regional industries, and ensure human rights. Though efforts such as the Lobito Corridor and MoU between US-Zambia-DRC had happened, actual reform can only happen once African nations are in more control of their resources and have made sure their benefits reach to the masses. Also, the world has a stark paradox to confront: it needs to mine to develop clean energy but will damage the environment and people it is seeking to safeguard. Its resolution will shape the future of Africa's minerals and Africa's contribution to international sustainability.

***Views are personal**

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