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The Window Is Open

Why the next few years favor ore-rich countries that build their own mining and processing capability

SUMMARY

- Demand for critical minerals is set to almost double by 2040, while refining remains concentrated in a single country that has begun to restrict exports.
- Buyers are responding with law and money. From January 1, 2027, the U.S. Department of Defense may not buy tungsten or tantalum products that were mined or refined in China, Russia, Iran or North Korea.
- Ore-rich countries are pushing in the same direction by restricting raw-ore exports and requiring processing at home. Uganda is among them.
- Supply relationships formed in the next few years will shape the market for decades. Countries and partners that can offer traceable, processed supply outside today's concentration have a rare opening, and it will not stay open indefinitely.

Demand for critical minerals is rising faster than supply can follow

Critical minerals are the raw materials that go into phones, power lines, batteries, electric motors, semiconductors and defense systems. Governments call them critical because modern economies cannot function without them and because their supply is vulnerable to disruption. The International Energy Agency expects demand for these minerals to almost double by 2040 under current policies.[1]

Supply is slow to respond. New mines take well over a decade to develop, and processing plants take years to design, permit and build. The minerals themselves are spread across many countries. Africa alone holds about 30 percent of the world's mineral reserves, according to the UN Economic Commission for Africa.[2] What is concentrated is the ability to turn those minerals into refined, usable materials.

~2×

Expected growth in critical-mineral demand by 2040[1]

72%

Average share of refining for key minerals held by the single largest refining country, 2025[1]

~$65bn

Public finance committed by advanced economies to diversify supply in 2025[1]

Refining is concentrated, and the concentration is now a policy tool

For the key energy minerals, the leading refining country held an average of about 72 percent of global refining in 2025, up from about 70 percent two years earlier.[1] That country is China, and over the past three years it has used that position deliberately. It placed export controls on gallium and germanium in 2023, then on graphite. In February 2025 it added export controls on tungsten, tellurium, bismuth, molybdenum and indium products.[3] Rare earth elements followed.

Export controls do not have to stop trade to change behavior. They introduce licensing delays, uncertainty and the risk that supply could be withheld in a dispute. For manufacturers and defense ministries, that risk is now a planning assumption.

Buyers are writing diversification into law

The response from consuming countries has moved from statements to binding rules and real money. Advanced economies committed about 65 billion dollars of public finance to critical-mineral supply chains in 2025, roughly four times the level of 2023.[1]

The clearest example for the minerals we focus on is a U.S. defense procurement rule. Under the Defense Federal Acquisition Regulation Supplement, the Department of Defense already may not acquire tungsten and tantalum products melted or produced in China, Russia, Iran or North Korea. From January 1, 2027, the restriction extends further up the supply chain, to material that was mined, refined or separated in those countries.[4] Defense suppliers that use these metals need sources that can be traced back to the mine.

Other lists point the same way. Tin, tungsten and tantalum are all on the U.S. Geological Survey's 2025 list of critical minerals.[5] Tungsten is one of the twelve defense-critical raw materials NATO named in December 2024.[6] The 2025 U.S. National Security Strategy names critical mineral development as an immediate area for U.S. investment in Africa.[7] For tin, the International Tin Association expects demand to rise about 20 percent by 2030 and the market to move into deficit from 2028.[8]

Producing countries want the processing, and the jobs, at home

Ore-rich countries have learned what it costs to export raw ore. A mine that ships unprocessed rock employs people and pays royalties, but the country sells its minerals for a fraction of what they are worth once refined. The World Economic Forum estimates that African countries collect only about 40

percent of their potential mineral revenue, and that each processing step adds 15 to 30 percent more value.[9]

Governments across the continent are acting on that. Zimbabwe banned exports of raw lithium ore in 2022, and Namibia followed in 2023. Uganda has restricted the export of unprocessed minerals for more than a decade, passed the Mining and Minerals Act in 2022 and created the Uganda National Mining Company to invest alongside private partners. When the country's first tin refinery opened in 2024, President Museveni put the logic plainly: if the minerals had been taken out unprocessed, those jobs would not be there.[10]

These policies raise the bar for foreign investors. A partner that only wants to dig and ship will find doors closing. A partner that arrives with a plan to process in the country will find governments ready to clear the way.

Traceability has become a competitive advantage

Tin, tantalum and tungsten, together with gold, are the minerals covered by conflict-minerals rules in the United States and the European Union. Companies that use them must trace where they came from and show that their purchases do not fund armed groups or abuse. For years that requirement made African supply harder to buy.

The same requirement now works in favor of formal, well-run operations. A mine with contracted workers, safety standards, documented production and a clear chain of custody to an in-country processor offers exactly what defense suppliers and manufacturers need to satisfy both conflict-minerals rules and the new origin restrictions. Formalization is the right thing to do for workers, and it is also what the market is starting to pay for.

Why the window will not stay open indefinitely

Supply chains are built on long contracts. When a manufacturer or a government agrees to buy a mineral from a new source, it typically commits for years, sometimes with a guaranteed minimum price. In 2025, for example, the U.S. Department of Defense agreed a price floor for rare-earth output from a domestic producer as part of a larger investment.[11] Agreements like that are being negotiated now. The sources that secure them early will set the reference prices, attract the follow-on capital and become the default suppliers.

The opportunity for an ore-rich country, then, is time-bound. It needs to show buyers credible, traceable, processed supply within the next several years, while those decisions are being made. That is hard to do with greenfield projects that take a decade or more. It is far more achievable by restarting decommissioned mines, formalizing existing workers and building processing capacity in stages, which is the approach described in our other papers.

What this means for our work

We see three implications. First, start with minerals where the policy pull is strongest and the processing step is within reach. For us in Uganda, that is tin, tungsten and tantalum. Second, build traceability and labor standards into every operation from the first day, because they are now part of the product. Third, move quickly but in stages: prove one operation, then the next, so that each new source reaches buyers while the window is still open.

About Horizon 35

Horizon 35 is a systems integrator for mining and mineral processing in developing countries. We bring strategy, government relations, technology, partners and capital together around proven operators to create formal, well-paid local jobs and to help ore-rich countries keep more of the value of what they mine. Our goal in Uganda is one million jobs in five to ten years. horizon35.com · mitch@horizon35.com

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Sources

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