

## China's Critical Mineral Strategy and the Structure of Strategic Competition

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China's dominance of the rare-earth mineral supply chain gives Beijing a powerful tool of economic coercion against rival states. Vital rare-earth minerals like cobalt, copper, lithium, and graphite are crucial [inputs for products](#) used in daily life and in national defense. These include electric vehicles, solar panels, military aircraft, and semiconductors. Ensuring control over the supply chains of these critical minerals is becoming a key aspect of geopolitical rivalry.

Much of this competition is focused on Africa, which holds about [30 percent](#) of the world's mineral reserves. China has already secured dominant positions in essential parts of these supply chains, recognizing the strategic importance of controlling access to these critical resources.

China produces nearly [70 percent of the world's rare earth minerals](#), and has reinforced this position through deliberate efforts to [control every stage](#) of the critical mineral supply chain. This process begins long before extraction, with Chinese banks and engineering firms securing involvement. Beijing then extends that control to the project's end, pairing ownership of mines with ownership of the railways, roads, and ports through which these materials move. The result is a supply system in which China extracts, refines, and exports minerals from Africa which ensures that, in many cases, raw materials move on Chinese terms.

China's dominance in the rare earth mineral trade stems from its strategic approach to mineral supply chains, not just profit. This allows Beijing to maintain long-term control of mines during economic downturns. This is a luxury that profit-driven Western competitors do not have. Chinese firms enter the market fully prepared and offers financing, workforce, equipment, and logistics that often gain significant control over project execution from the start. This strategy has helped Beijing achieve "[processing dominance](#)," meaning control over the refining system to the point that winning a mining contract in Africa does not ensure independence from Chinese supply chains. Although [China produces only about 10 percent of the world's lithium, cobalt, and copper, it controls roughly 40-90 percent](#) of the refining capacity for these materials. Therefore, a Western company extracting ore in sub-Saharan Africa has not truly succeeded if the ore must be processed through a Chinese refinery. For the United States, this distinction has far-reaching consequences beyond market competition.

The U.S. is highly exposed to supply chain disruption risks because critical minerals have uses that extend far beyond consumer products. They are key components of systems essential to national defense, including [F-35 fighter jets, Virginia- and Columbia-class submarines, Tomahawk missiles, radar systems, Predator unmanned aerial vehicles, and more](#). The U.S.

maintains [only one domestic rare earth mine](#), [possesses minimal refining infrastructure](#), and [relies on China for 70% of rare earth imports](#). Expanding domestic mining and refining capacity [requires significant capital investment and highly specialized expertise](#), limiting the speed at which domestic production can realistically offset exposure risks. The result is a situation in which the U.S. defense industrial base is significantly dependent on a strategic adversary for materials it cannot easily replace, and which are essential to the production and sustainment of advanced military capabilities.

The risks of relying on a strategic adversary like China for materials vital to American national security are clearly shown by the China–Japan Rare Earths [dispute of 2010](#). In September 2010, a Chinese fishing boat collided with two Japanese Coast Guard ships in the East China Sea, leading to the arrest and detention of the boat’s captain. In reaction, the Chinese government stopped exporting critical minerals to Japan. Tokyo, which depended on Beijing for nearly 90 percent of its rare earth mineral imports, saw prices for these goods rise nearly 10-fold in the year after the incident. Although the United States and Japan are in different positions within global supply chains, Japan's experience demonstrates the broader strategic dangers that arise when a country becomes heavily dependent on a geopolitical rival for key resources.

The coercive value of rare earth dominance lies not only in China's ability to deny access but also in the threat of disruption. Even the possibility of export restrictions can drive price volatility, delay industrial production, complicate defense procurement, and undermine long-term investment planning. Japan’s response to the 2010 dispute reveals that dependency on rare earth elements is not unavoidable. Japan’s proactive approach included investing in recycling technologies, developing alternative materials, diversifying supply chains through overseas mining projects in Australia and other countries, and building stockpiles to secure reserves. As a result, Tokyo reduced its reliance on Chinese rare earths by [about 30 percent](#), demonstrating that policy actions can yield tangible results. More broadly, Japan’s experience underscores a key truth of modern strategic competition: dependence on an adversary for vital materials can create vulnerabilities that go beyond economics. Washington and its partners should take notice.

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