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ANALYSIS

THE SEARCH FOR RAW MATERIALS IN THE NEW TECHNO-GEOPOLITICAL ERA AND CHINA

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The global power hierarchy, shaped around coal in the 19th century and oil in the 20th century, is gradually being replaced by "critical minerals," which have become strategic instruments alongside the technological developments of the 21st century. Today, elements such as lithium, cobalt, nickel, and rare earth metals form the fundamental building blocks not only for civilian innovations like electric vehicles and renewable energy but also for defense industry applications, including artificial intelligence, UAV systems, and missile technologies. The supply security of these minerals acts as a lifeline that directly determines the technological competence and international security capacities of modern states.

As the global transition in energy and technology becomes increasingly dependent on raw materials, supply chains are rapidly being securitized. Consequently, economic investments in the extraction and processing of raw materials are now viewed as a crucial instrument of foreign policy. In a multipolar world order, this process creates tension between the great powers' pursuit of strategic autonomy and the economic counter-moves they develop against their rivals. Therefore, this study aims to analyze how the intense competition over critical minerals is restructuring the distribution of power in the international system and how economic dependencies are being integrated into national security strategies.

China's monopolization strategy in the critical minerals supply chain goes beyond a mere search for economic raw materials, transforming into a geoeconomic foreign policy tool that shapes global power balances. The Beijing administration pursues a commercial diplomacy that significantly differs from Western actors, particularly in resource-rich regions like Africa; it secures long-term operating rights in strategic mining sites in exchange for large-scale loans and rapid infrastructure investments. Through this model, China does not merely extract minerals from the ground. By constructing ports, railways, and power plants, it also establishes fully integrated control over the logistics networks that ensure the direct flow of raw materials into its own industry (Bardakçı, 2025). Consequently, this resource diplomacy implemented by China not only provides a strategic advantage and deterrence against the West during the transition to multipolarity in the international system, but it also directly translates mining investments into the construction of geopolitical influence.

On the other hand, the Western bloc's most prominent counter-move against China's overwhelming superiority in the extraction and, especially, refining of critical minerals is the "friend-shoring" strategy, which involves shifting supply chains to reliable allied nations. The most concrete institutional outcome of this strategy is the Minerals Security Partnership (MSP), established in 2022 under the leadership of the US and the European Union to ensure the secure and sustainable supply of critical minerals like rare earth elements, lithium, nickel, and cobalt. Unlike traditional and cumbersome international organizations, the MSP is designed as a flexible and "transgovernmental" cooperation network capable of rapidly adapting to changing geopolitical conditions. Indeed, due to its structure and goals, this formation—often described in public discourse as a "NATO for metals"—aims to prevent rivals like China from disrupting Western economies

by turning their strategic market advantages into diplomatic leverage (Dursun & Erhan Bulut, 2025). The MSP, which Türkiye joined in 2024 and which had over 30 members, was restructured under the umbrella of FORGE (Forum on Resource Geostrategic Engagement) in February 2026, increasing its membership to 54 countries plus the EU.

In light of all these geoeconomic moves and counter-strategies, the competition shaped around critical minerals is expected to result in raw material monopolies being used as a foreign policy weapon in the international system in the future. Furthermore, this rivalry creates a new spiral of insecurity that threatens international peace through asymmetrical dependencies. Consequently, critical minerals, which continue to be a 'securitized' object, will be one of the most fundamental geostrategic fault lines determining countries' deterrence capacities, conflict risks, and global stability over the next decade. This analysis aims to present an evaluation in light of all these circumstances.

China's Vertical Integration Strategy and Its Concrete Manifestations on the Ground

The dominance of the People's Republic of China over critical minerals relies on its state-supported "vertical integration" strategy, which has been implemented for over two decades, rather than a mere geographical advantage. Through this strategy, China builds a geoeconomic hegemony over its rivals by establishing a vertical monopoly not only in the raw material extraction phase but also in refining and global logistics networks. By conducting commercial diplomacy integrated with the Belt and Road Initiative (BRI), China ties mining sites, particularly in the Global South, to itself through infrastructure investments. The most concrete example of this can be seen in the Democratic Republic of the Congo, which accounts for approximately 70% of the global cobalt supply. In exchange for commitments to build roads, hospitals, and energy infrastructure (such as the Sicamines agreement), Chinese companies largely acquire the operating rights to the largest cobalt and copper mines in the Democratic Republic of the Congo. A similar strategy is evident in the case of nickel, which is of critical importance for electric vehicle batteries. Following Indonesia's ban on raw nickel exports, major Chinese companies like Tsingshan have achieved a monopoly position in the country's nickel processing facilities through multi-billion dollar investments. Furthermore, even if China is not the country extracting the raw materials from the ground, it currently holds 60% to 80% of the global refining capacity for lithium, cobalt, and rare earth elements on its own. Kalantzakos (2020) states that this structural dominance creates a serious vulnerability for Western actors; even if access to raw materials is secured, this concentration in processing capacity makes global supply security dependent on China's decisions. This structure can create an asymmetrical bottleneck in which Western companies remain dependent on China for processing, even if they extract minerals from Africa or Latin America.

Export Controls

China's monopoly in mineral extraction and refining processes concretizes the "weaponization of asymmetrical dependencies," as mentioned in the introduction. The Beijing administration uses this dominance over raw materials as

an instrument of diplomatic deterrence and retaliation. Indeed, China's suspension of rare earth element exports to Japan during the Senkaku/Diaoyu Islands crisis in 2010 served as one of the first trials of this strategy. Today, these moves function as a retaliatory tool against the semiconductor export restrictions imposed on China by the US. For example, China's decision in 2023 to require export licenses for gallium and germanium, which are vital for chip manufacturing, and its imposition of restrictions on graphite used in battery production, clearly demonstrate that the raw material monopoly has transformed into a foreign policy weapon in international politics.

The Reaction of the Western Bloc: An Institutional Alliance from MSP to FORGE

China's transformation of critical minerals into foreign policy leverage has driven the Western bloc toward a "friend-shoring" strategy, prompting it to accelerate its economic security measures. In this regard, the Minerals Security Partnership (MSP), established in 2022, represents an important step aimed at diversifying supply chains and institutionalizing the securitization process of minerals (Erkan, 2024). However, faced with changing geopolitical conditions and escalating risks, this structure has proven insufficient and is currently undergoing a strategic transformation. As of February 2026, the MSP has been restructured within the framework of the US "America First" strategy, making way for a more competitive alliance, the Forum for Geostrategic Cooperation for Resources (FORGE). Evolving into a "Critical Minerals Preferential Trade Group" with the participation of the European Union and 54 countries, FORGE goes beyond being merely a dialogue platform; it is transforming into a security initiative aimed at excluding China from global supply chains (de-China). Vivoda (2023) argues that while such "friend-shoring" moves increase economic costs, national security considerations now take precedence over free-market efficiency. This new era represents a significant deviation from traditional free-market principles. For instance, the "Project Vault" initiative launched in February 2026 aims to establish 60-day emergency critical mineral reserves, similar to strategic petroleum reserves. Additionally, to counter the market advantage of Chinese products, there are plans to establish a non-market price floor mechanism and impose tariffs or carbon border taxes in the 15-20% range on rare earth elements imported from China. Furthermore, the US is pressuring its allies to sign new supply agreements that exclude China by July 2026, warning that it will otherwise impose quotas and additional tariffs.

Logistics Conflict Dynamics

China's efforts to maintain its current raw material monopoly and the protectionist policies implemented by the US-led FORGE alliance are dividing the global critical mineral market into two separate camps, revealing a new geopolitical fault line. This process, which has become more evident since 2025, is described as a "green technologies war" that is permanently fragmenting the global trade system (Akın, 2026). This bloc formation is not limited solely to mining sites; it can also transform into an increasingly distinct area of competition along logistics corridors. Prominent examples of this situation include the US financing the Lobito Corridor to direct copper and cobalt from Africa to the Atlantic Ocean, exerting pressure on the China-backed Chancay

Port in Peru, and seeking new alternatives through rare earth elements in Greenland and deep-sea mining. On the other hand, this bloc-building strategy is confronted by the increasing sovereignty demands of resource-rich Global South countries. Yasal Özdemir and Furkan Doğan (2025) emphasize that the phenomenon of "resource nationalism" has returned, noting that countries like Indonesia and Chile want to control the flow of raw materials in line with their own industrialization goals. The lithium nationalization policies of Chile and Mexico, Indonesia's nickel export bans, and the objectives of African countries (as particularly highlighted at the Cape Town Mining Conference) to develop local refining capacities rather than merely exporting raw materials complicate the supply chain structure planned by the West. In addition, the implementation of political pricing (a dual-track price system) to counter China's cost advantage creates the risk of increasing costs in global industrial chains by 30% to 50%. As a result, this techno-geopolitical competition shaped around critical minerals has the potential to create a new Cold War dynamic that forces countries to choose sides, increases global trade costs, and leaves the international system in a perpetual security dilemma.

Conclusion

As examined throughout this analysis, resources such as lithium, cobalt, and rare earth elements now go beyond being mere commercial commodities. While fossil fuels maintain their strategic importance, these new-generation minerals are also becoming fundamental instruments of sovereignty that deeply affect states' technological autonomy, defense industry capacities, and national security architectures.

In this evolving equation, China's occasional use of the vertical integration it has sought to build—from mining sites to global processing networks—as a foreign policy tool demonstrates how asymmetrical dependence can turn into a deterrent element in international relations. In response, the Western bloc's shift from the Minerals Security Partnership to more rule-setting and restrictive institutional alliances like FORGE indicates that protectionist reflexes are increasingly gaining ground alongside free-market approaches in global trade. The establishment of strategic reserves—such as Project Vault, a reserve and economic defense program initiated by the US to break its dependence on China in the critical minerals supply chain and secure itself against potential crises—along with the introduction of quotas and the discussion of political pricing mechanisms, reflect the rapid securitization of the economic sphere.

This increasingly fierce competition among great powers carries the potential to polarize the international order by accelerating decoupling trends in global supply chains. However, this process should not be read solely through the US-China axis. Resource-rich Global South countries, which do not want to remain mere raw material providers, put forward their own local industrialization goals, and emphasize "resource nationalism," also emerge as an important dynamic influencing the rules of the game in this balance. The current and concrete reflections of this trend can be observed in the rising wave of resource nationalism across the African continent. The suspension of raw mineral exports by

Zimbabwe, Africa's largest lithium producer, or the quota systems applied to cobalt exports by the Democratic Republic of the Congo demonstrate these countries' capacity to directly intervene in global prices and supply chains. These raw export restrictions, joined by countries such as Namibia, Tanzania, and Ghana, force monopolistic actors in the sector like China to make local value-added investments, such as building multi-billion dollar lithium sulfate plants in Africa. Consequently, rather than remaining passive raw material depositories in the face of great power strategies, these countries are rising to the position of active policymakers dictating their industrialization conditions to the global market.

As a result, this strategic struggle waged over critical minerals is likely to further deepen the existing security dilemmas of states. Looking at future projections, this techno-geopolitical competition is expected to be one of the fundamental geopolitical fault lines shaping global peace and stability in the coming decades. In the upcoming period, it is predicted that the actors gaining an advantage in global power balances will not merely be the states hosting rich mineral reserves within their own borders; rather, they will be the ones capable of designing the logistics, refining, and advanced technology transformation processes of these minerals in the most flexible, independent, and resilient manner against external shocks. Therefore, it is highly probable that the political and economic architecture of the 21st century will be directed by the countries that can best adapt their technological supply chains to this new security reality.

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