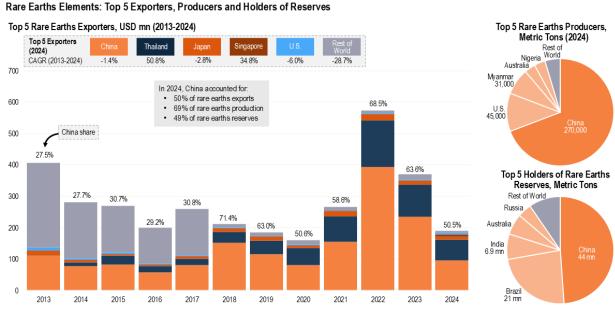


Rare Earths: The Global Implications of China's Leading Role

China's concentration of rare earths production, processing and exports has created structural dependencies with wide-ranging effects on critical industries worldwide.



Source: UN Comtrade, U.S. Geological Survey, ANDAMAN PARTNERS Analysis. Note: Singapore's and Thailand's export surges reflect their roles as processing and re-export hubs rather than as primary producers. Production data is estimated; China production denotes production quota

On 9 October 2025, China's Ministry of Commerce announced expanded export controls on rare earth elements, magnets and related technologies, set to take effect in December. The new rules broaden licensing requirements to include additional rare earths and extend to foreign-made goods—from magnets to components used in electric vehicles (EVs), smartphones and wind turbines—that contain Chinese materials and technologies.

These measures highlight China's central role in the supply chain of rare earths, a group of 17 soft and heavy metals crucial for modern technologies due to their unique magnetic, optical and conductive properties. China accounts for roughly 70% of global mine production, 49% of exports and more than 90% of processing and refining.

China also holds around half of global reserves. While large deposits exist in countries such as Brazil, India, Australia and Russia, only China has the integrated processing capacity at scale to bring rare earths to market.

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Global Implications

The implications of China's dominance of rare earths exports and production are far-reaching, even more so now with expanded export controls set to take effect in December.

The global economy is heavily exposed to disruptions in Chinese supply. Because most advanced manufacturing sectors—from clean energy to electronics and defense—depend on Chinese-produced or processed rare earths, any tightening of export rules or supply interruptions will have immediate downstream effects.

Even if countries increase their own mining, ores often still need to be sent to China for refining. Building alternative supply chains requires major investment, long lead times and technical expertise that China has developed over decades.

The concentration of rare earths production, exports and processing in China created a structural dependency for critical industries worldwide. Rare earths supply constraints in China can quickly lead to price spikes, production delays and higher costs across multiple industries, from wind turbines and EVs to semiconductors and medical devices.



Also by ANDAMAN PARTNERS:

- China's Entrenched Role as the World's Leading Supplier of Mining Equipment and Consumables
- Led by China, Asia Commands Global Industrial Commodity Imports
- Nexus of the Mining World: China's Share of Global Processing and Exports of Strategic Minerals and Metals

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