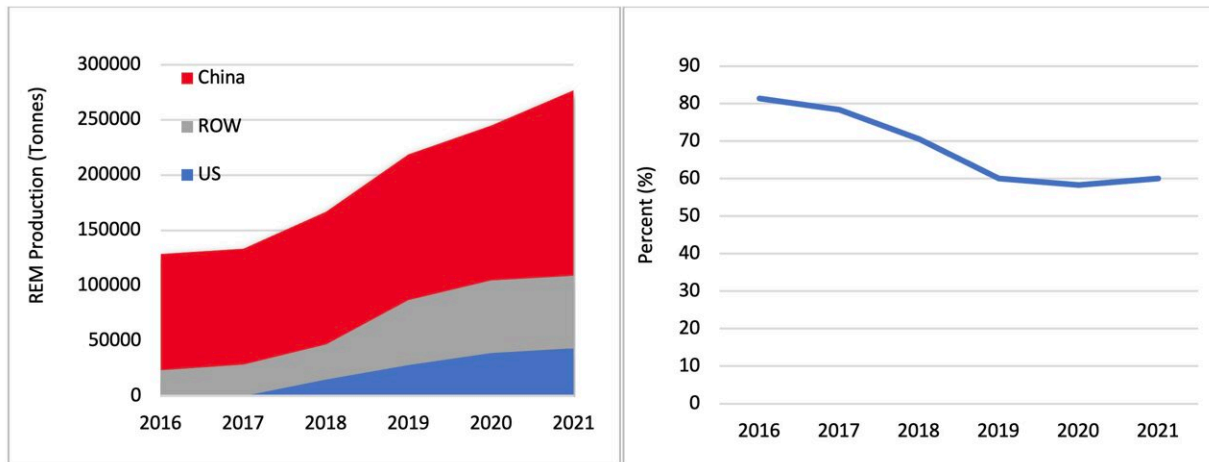


US must disconnect strategic supply chains from China, say experts

December 20 2022, by Avery Ruxer Franklin



World Mine Production of REO (left) and China’s Share (right). Note: ROW means rest of world. Prepared by authors using publicly available data from the United States Geological Survey’s Mineral Commodity Summaries. Credit: Baker Institute for Public Policy/Rice University; Of Chinese Behemoths: What China’s Rare Earths Dominance Means for the US. <https://www.bakerinstitute.org/research/chinese-behemoths-what-chinas-rare-earths-dominance-means-us>

China's dominance over the supply of rare-earth minerals and materials—which are critical for energy transition and defense technologies—should spur U.S. policymakers to bolster raw materials supply chains, according to a new report from Rice University's Baker Institute for Public Policy.

The China Rare Earth Group, a merger of three of China's state-owned enterprises into one mega-conglomerate, controls of up to a quarter of global mineral-bearing rare-earth elements (REE). Combined with China's overall dominance in rare-earth minerals and materials—roughly 60% of world production—the merger grants Chinese central planners significant pricing power and influence over world supply, explain co-authors Michelle Michot Foss and Jacob Koelsch.

The authors argue that the U.S. and its allies must divorce strategic industries from Chinese REE.

"Whether China would weaponize their leverage over rare-earth supply chains in direct conflicts with the U.S. and/or its allies is a matter of speculation and debate," they wrote. "However, one thing is for sure: In such an event, the U.S. must minimize China's ability to limit sanctions and other collective global responses against potential coercive action."

REE are critical in a wide variety of high-tech items, including common goods such as digital cameras, computers and smartphones. They also affect defense—different REE are combined into various components for end uses ranging from [permanent magnets](#) for [electric motors](#) and guidance and [control systems](#) to displays and catalysts for [petroleum refining](#), as well as other industrial processes and electronics.

The COVID-19 pandemic and Russia's invasion of Ukraine have highlighted fragilities in global commodity supply chains and trade flows—as well as tensions among competing world powers, Michot Foss and Koelsch argue.

"They serve as sobering reminders that relying on dominant suppliers and revisionist actors for vital commodities can create significant pitfalls," they wrote. "In particular, rising trade and geopolitical security tensions with China could threaten REE supply, potentially influencing

up to \$1 trillion of goods."

However, convincing American voters to support more assertive [raw materials](#) supply chain policies will be a challenge for government and industry decision-makers, Michot Foss and Koelsch argue.

"It is not certain that voters will accept the burden of 'de-risking' a broad swath of raw [materials](#) and technology-oriented industrial policies," they wrote. "Defense planners, in particular, must be ready to deal with those outcomes."

More information: Of Chinese Behemoths: What China's Rare Earths Dominance Means for the US. [www.bakerinstitute.org/research...s-dominance-means-us](http://www.bakerinstitute.org/research/2022/12/08/of-chinese-behemoths-what-china-s-rare-earth-dominance-means-us)

Provided by Rice University

Citation: US must disconnect strategic supply chains from China, say experts (2022, December 20) retrieved 11 May 2024 from <https://phys.org/news/2022-12-disconnect-strategic-chains-china-experts.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.