The Trump 2.0 Administration's Rare Earth Policy Trajectory under the US-China Strategic Competition

MA, Chun Wei*

Abstract

This paper examines the trajectory of the Trump2.0 administration's rare earth policy within the broader US-China strategic competition. It analyzes Trump's escalation of economic and technological decoupling, military posturing, and ideological confrontation, particularly through tariffs and export controls. China, dominating 70% of rare earth production and nearly 90% of processing, has used rare earths as a geopolitical tool, notably restricting exports to pressure the US and Japan. In response, the US is pursuing domestic supply chain revitalization, supported by the Department of Defense and legislation like the Bipartisan Infrastructure Law and Inflation Reduction Act. Externally, the US has invested in Australia, Canada, and Africa, while forming alliances such as the Minerals Security Partnership with the EU, Japan, and Australia. The US International Development Finance Corporation finances mining projects in Africa and South America. This intensifying competition is reshaping global enhancing the strategic importance of rare geopolitics,

^{*} Assistant Professor, Graduate Institute of International Affairs and Strategic Studies, Tamkang University

earth-producing nations. Yet, challenges remain, including environmental concerns, high costs, and entrenched Chinese dominance. Without coordinated international efforts, supply vulnerabilities and geopolitical risks will persist.

Keywords: Trump 2.0, US-China Competition, Trade War, China's Rare Earth Foreign Policy, US Response for Chinese Rare Earth Policy

I. Introduction

In 2018, the Trump government (2017–2021) initiated a trade war against China, implementing import duties, investment restrictions, and sanctions aimed at Chinese companies. These measures, which the Biden administration (2021–2025) chose to maintain, primarily targeted China's vibrant high-tech industry. US-China relations under the second term of Donald Trump's presidency, with a specific focus on the "China Containment Strategy." During his first term, Trump's administration reoriented US foreign policy toward a confrontational stance against China, characterized by economic decoupling, technological restrictions, military posturing in the Indo-Pacific, and an ideological contest between democratic and authoritarian governance models. This paper analyses the continuity and potential evolution of these policies in light of shifting geopolitical realities, domestic political priorities, and emergent global challenges.

While exploring US' implications for the Indo-Pacific region and the broader global order. Key findings indicate that while foundational aspects of Trump's first-term policies, such as tariffs, supply chain diversification, and Indo-Pacific defense initiatives, are likely to persist, strategic recalibrations may emerge. These include targeted decoupling in critical industries, redefined alliance management to bolster multilateral coalitions, expanded

soft power campaigns to counter China's Belt and Road Initiative, and a more assertive approach toward Taiwan.¹

Starting in February 2025, the Trump administration launched a new wave of tariffs on copper, steel, aluminum, and anti-dumping measures while removing duty-free thresholds on imports, low-priced extending these to electronics telecom-related products. Additionally, the US Department of Commerce has initiated national security investigations into Chinese drones and critical materials used in chips and solar panels. More high-tech components may soon be added to the restricted list. Although Trump's policy aims to curb China's high-tech capabilities, the Financial Times pointed out that it may backfire, accelerating China's self-reliance and investment in quantum technologies, AI, semiconductors, and aerospace industries, potentially leading to long-term structural risks.²

China produces around 60-90% of the world's rare earths, a group of 17 elements used across the defense, electric vehicle, energy and electronics industries. The United States has only one rare earths mine and most of its supply comes from China.

https://www.globalpanorama.org/en/2025/03/trump-2-0-and-the-china-contain ment-strategy-continuity-or-change-samim-aktar/.

Samim Aktar. "Trump 2.0 and the China Containment Strategy: Continuity or Change?," Globalpanorama, March 4, (2025).

² Keyu Jin. "If Trump Is Trying to Suppress China, He's Going about It All Wrong," Financial Times. April 10, (2025).

https://www.ft.com/content/258326fb-39c1-4ae5-a79c-270cdbef4a23?utm_sou rce=chatgpt.com.

Beijing announced the controls late on Friday as part of a broader package of tariffs and company restrictions in retaliation for Trump's decision to hike tariffs against most Chinese products to 54%. The export curbs include not only mined minerals but permanent magnets and other finished products that will be difficult to replace, analysts said. The move, which affects exports to all countries, not just the US, is the latest demonstration of China's ability to weaponize its dominance over the mining and processing of the critical minerals.³

In the era of globalization, the US and China have developed a complementary division of labor: China supplies raw materials, while the US processes them into high-tech products. During Trump's first term, he launched the US-China trade war and identified China as the only rival capable of shaping the international order. In a hypothetical second term, Trump may escalate tactics to "choke" China—such as pressuring China into a rare-earths export embargo—thereby strengthening the US

³ Lewis Jackson. Amy Lv, Eric Onstad and Ernest Scheyder. "China Hits Back at US Tariffs with Export Controls on Key Rare Earths," Reuters, April 5, (2025).

https://www.reuters.com/world/china-hits-back-us-tariffs-with-rare-earth-export-controls-2025-04-04/?utm_source=chatgpt.com.

⁴ Keith Bradsher. "How Rare Earths Factor in the US-China Trade War," *The New York Times*, November 22, (2019).

https://www.nytimes.com/2019/11/22/business/china-rare-earth-trade-war.html. ⁵ The White House. National Security Strategy of the United States of America. Washington, DC: The White House, December, (2017).

https://trumpwhitehouse.archives.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf.

bargaining position in tariff negotiations.⁶ On one hand, China's rare-earth ban could force US concessions, exemplified by Trump personally calling Xi Jinping to ease tensions.⁷ On the other hand, it forces the US to reassess supply chain security, especially concerning reliable access to rare-earth elements.⁸

II. China's Monopoly on Rare Earth Production

A. Mining Originated from the Reform and Opening-Up Period, Giving China an Early Start

Rare earth mining in China has long been associated with severe environmental pollution. During the Reform and Opening-Up era, China prioritized rapid industrial growth and foreign exchange earnings, even at the expense of environmental sustainability. This led to the aggressive extraction of rare earth elements, essential for high-tech products such as smartphones,

_

⁶ Lewis Jackson, Amy Lv, Eric Onstad and Ernest Scheyder. "China Hits Back at US Tariffs with Export Controls on Key Rare Earths," https://www.reuters.com/world/china-hits-back-us-tariffs-with-rare-earth-expor t-controls-2025-04-04/?utm_source=chatgpt.com.

⁷ Time Magazine. "Trump and Xi Hold First Call in Months, Setting Stage for More Trade Talks." *Time*, June 5, (2025). https://time.com/7291416/trump-and-xi-have-first-call-in-months/

Nandita Bose and David Lawder. "US Says Deal With Beijing Will Expedite Rare Earth Exports from China," Reuters, June 27, (2025). https://www.reuters.com/world/china/trump-says-deal-related-trade-was-signed

https://www.reuters.com/world/china/trump-says-deal-related-trade-was-signed-with-china-wednesday-2025-06-26/; Christian Shepherd & Lyric Li. "Even After Trump-Xi Call, China's Rare-Earth Controls Aren'T Going Away," The Washington Post, June 6, (2025).

https://www.washingtonpost.com/world/2025/06/06/china-rare-earths-trump-xi-call/.

electric vehicles, and military equipment. ⁹ The industry's environmental toll includes toxic waste, soil degradation, and water contamination, particularly in regions like Inner Mongolia and Jiangxi province. According to the Chinese Ministry of Industry and Information Technology, illegal mining and lax environmental standards have exacerbated these issues. 10 Although China remains the dominant global supplier, accounting for about 60-90% of global production, the government has since imposed stricter regulations to mitigate ecological damage. However, the legacy of pollution persists, and the global reliance on China's rare earths continues to raise concerns about environmental and supply chain vulnerabilities. 11

China leads the world in rare earth mining patents, holding over 25,000 patents related to extraction technologies, while the United States holds approximately 9.810.¹² This significant gap

⁹ Java Navar. "Not So 'Green' Technology: The Complicated Legacy of Rare Earth Mining," Harvard International Review, August 12, (2021). https://hir.harvard.edu/not-so-green-technology-the-complicated-legacy-of-rare -earth-mining/.

¹⁰ Kristin Vala Rydze. "China's Rare-Earth Mining Boom Leaves Toxic Legacy in Water and Soil." Environmental Health News, June (2025). https://www.ehn.org/chinas-rare-earth-mining-boom-leaves-toxic-legacy-in-wa ter-and-soil?utm source=chatgpt.com.

Wei Chen, Peng Wang, Fanran Meng, Alexandra Pehlken, Qiao-Chu Wang ,and Wei-Qiang Chen. "Reshaping Heavy Rare Earth Supply Chains Amidst China's Stringent Environmental Regulations," Fundam Res, 5 no.2, January 26, (2024): 505-513.

¹² Gregory Wischer & Morgan Bazilian. "Circumventing the Chokepoint: Can the US Produce More Rare Earths?," Newsecuritybeat, October 30, (2023).

reflects China's longstanding focus on controlling the rare earth value chain, from mining to refining. By investing heavily in research and development, China has not only optimized extraction efficiency but also advanced environmentally friendlier techniques, though challenges remain. In contrast, the US lags in both patent holdings and domestic production capacity, contributing to its dependency on Chinese rare earth supplies. This technological advantage allows China to maintain a strategic edge in global supply chains, especially in critical industries such as electronics, renewable energy, and defense systems. ¹³ As geopolitical competition intensifies, particularly in the tech and defense sectors, the US is seeking to revitalize its rare earth industry through innovation and alliances, but catching up with China's patent leadership remains a major hurdle. ¹⁴

B. China Becomes the Monopoly of the Global Supply Chain

China has become the dominant force in global supply chains, particularly in critical sectors such as rare earth minerals, electronics manufacturing, and solar energy components. This

 $https://www.newsecuritybeat.org/2023/10/circumventing-chokepoint-produce-rare-earths/?utm_source=chatgpt.com.\\$

¹³ US Geological Survey. "Mineral Commodity Summaries 2024: Rare Earths," *Geological Survey*, 144, (2024). https://doi.org/10.3133/mcs2024.

¹⁴ Jian Zhou and Yu Wang. "China's Rare Earth Patent Dominance: Implications for Global Supply Chains," *Journal of Industrial Policy*, 12, no.1,(2023): 45–67.

monopoly is the result of decades of strategic industrial policy, infrastructure investment, and the accumulation of patents. For instance, China holds over 25,000 patents related to rare earth extraction, while the US possesses merely around 10.000. 15 Such technological and production advantages allow China to exert significant leverage over industries worldwide. The COVID-19 pandemic and US-China tensions have exposed vulnerabilities of this concentrated supply chain, prompting countries like the United States, Japan, and the EU to seek diversification and supply chain resilience. 16 Yet, replacing China's centrality remains a formidable challenge due to its entrenched manufacturing ecosystem and cost advantages.

III. China Gradually Uses Rare Earths as a Bargaining Chip in Negotiations

A. China Tried to Use Rare Earth Exports Putting Pressure on Japan

China has strategically used rare earth exports as a means to pressure Japan, particularly evident during the 2010 diplomatic dispute over the Senkaku/Diaoyu Islands. Following Japan's detention of a Chinese fishing boat captain near the contested

¹⁶ The White House. Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth, 100-Day Reviews under Executive Order 14017. Washington, DC: The White House, (2021): 3.

¹⁵ David Sandalow. *Guide to Chinese Climate Policy 2019*. New York: Columbia University School of International and Public Affairs, (2019).

islands, China unofficially restricted rare earth exports to Japan, disrupting its high-tech manufacturing sector, which heavily relies on these critical materials for products like semiconductors, batteries, and precision equipment.¹⁷ This move exposed Japan's vulnerability due to its dependency on Chinese rare earths, which accounted for over 90% of its supply at the time.

The incident prompted Japan to diversify its rare earth sources by investing in mining projects in Australia, Vietnam, and other countries, as well as developing recycling technologies. It also heightened global awareness of China's leverage over rare earth markets, spurring similar diversification efforts by the US and EU.¹⁸

China's rare earth strategy demonstrates how control over critical resources can translate into geopolitical influence. However, it also risks encouraging international efforts to bypass Chinese dominance, potentially reducing China's long-term market control.¹⁹

_

¹⁷ Jost Wübbeke. "Rare Earth Elements in China: Policies and Narratives of Reinventing an Industry," *Resources Policy*, 38, no. 3 (2013): 384–394.

¹⁸ Ryan David Kiggins. *The Political Economy of Rare Earth Elements: Rising Powers and Technological Change*, New York: Palgrave Macmillan, (2015): 128–131.

¹⁹ Marc Humphries. *Rare Earth Elements: The Global Supply Chain*, Washington, DC: Congressional Research Service, (2013): 12–14.

B. Currently, China Uses Rare Earth Exports to Pressure the US

Since April 2025, China has implemented new export controls on medium- and heavy-rare-earth elements such as dysprosium, terbium, and samarium—minerals essential for US high-tech and defense industries—requiring exporters to obtain special licenses.²⁰ These restrictions were introduced in response to US tariffs, positioning rare earths as geopolitical bargaining chips.²¹

Within weeks of the export control order, shipments of rare-earth magnets—vital to electric vehicles, jet fighters, and wind turbines—plummeted by around 74 percent year-over-year in May, causing significant disruptions in US supply chains.²² The US automotive and defense industries reported factory

https://www.csis.org/analysis/consequences-chinas-new-rare-earths-export-rest rictions.

²⁰ Gracelin Baskaran & Meredith Schwartz, "The Consequences of China's New Rare Earths Export Restrictions," CSIS, April 14, (2025).

²¹ Joseph Sopcisak. "China Imposes Export Controls on Medium and Heavy Rare Earth Materials," *Holland & Knight Alert*, April (2025).

https://www.hklaw.com/en/insights/publications/2025/04/china-imposes-export-controls-on-medium-and-heavy-rare-earth-materials.

²² Amy Lv and Ryan Woo. "China's Rare Earth Magnet Shipments Halve in May due to Export Curbs," *Reuters*, June 20, (2025).

https://www.reuters.com/business/autos-transportation/chinas-rare-earth-magne t-shipments-halve-may-due-export-curbs-2025-06-20/.

slowdowns and shortages, underscoring their vulnerability to reliance on Chinese rare earths.²³

The strategic move highlights China's geopolitical influence. By implementing a flexible "license wall" instead of an outright ban, Beijing retains the ability to selectively restrict exports without violating World Trade Organization rules.²⁴ This enables China to apply pressure precisely while maintaining plausible deniability.

In response, the US government and private sector have accelerated efforts to build domestic rare earth capacity. Initiatives include Pentagon-backed expansion of MP Materials' mine-to-magnet chain, Alaska and Wyoming mining projects, and partnerships like Apple's investment in recycling facilities. 25

²³ Christina Amann. "Nick Carey, And Kalea Hall, "Auto Companies 'in Full Panic' Over Rare-Earths Bottleneck," Reuters, June 9, (2025). https://www.reuters.com/business/autos-transportation/auto-companies-in-full-

panic-over-rare-earths-bottleneck-2025-06-09/.

Tye Graham and Peter W. Singer. "How China's New Rare-Earth Export Controls Target the Pentagon—and the World." *Ahead of the Herd*, July (2025). https://aheadoftheherd.com/how-chinas-new-rare-earth-export-controls-target-t he-pentagon-and-the-world/.

²⁵ Financial Times. "Pentagon Strikes Investment Deal with US Critical Minerals Producer," Financial Times, July 9, (2025). https://www.ft.com/content/6693da6f-7cb7-4c74-8c4f-45b1bf533cbe.

However, heavy rare earth processing remains nearly exclusive to China, with the US still far from self-sufficiency.²⁶

In short, China's use of rare earth export controls to pressure the US is a powerful example of resource-based economic statecraft. It underscores the strategic importance of securing critical mineral supply chains before they become tools in global diplomacy.

IV. US Policy Response to China's Pressure on Rare Earths

A. Attempting to Build an Internal Rare Earth Supply Chain

In response to China's increasing use of rare earth export controls as geopolitical leverage, the United States has initiated a multi-pronged domestic policy approach to reduce its dependence on Chinese rare earths and strengthen critical mineral supply chains. These efforts have intensified following China's 2025 export restrictions on heavy rare earths such as dysprosium and

https://www.wsj.com/business/us-rare-earth-producer-texas-58796240.

²⁶ Jon Emont. "America's Biggest Rare-Earth Producer Makes a Play to End China's Dominance," *The Wall Street Journal*, July 15, (2025).

terbium, which are essential for US defense systems, electric vehicles, and renewable energy technologies.²⁷

One of the most significant US policy moves is the expansion of domestic mining and processing capabilities. The Department of Defense (DoD) has provided financial support to companies like MP Materials to reestablish a fully integrated mine-to-magnet supply chain within the United States. ²⁸ MP Materials operates the Mountain Pass mine in California, the only operational rare earth mine in the US, and is investing in on-site processing facilities to eliminate the need for Chinese intermediaries.

Furthermore, the US government passed the Bipartisan Infrastructure Law in 2021.²⁹ and the Inflation Reduction Act in

_

²⁷ Sean Craig. "Pentagon Takes \$400 Million Stake in Rare-Earth Miner Outside Vegas," *The Washington Post*, July 10, (2025).

https://www.washingtonpost.com/business/2025/07/10/pentagon-rare-earths/.

²⁸ Katha Kalia, Eric Onstad and Ernest Scheyder. "MP Materials Seals Mega Rare-Earths Deal With US To Break China's Grip," Reuters, July 11, (2025). https://www.reuters.com/business/mp-materials-partners-with-department-defe nse-boost-us-rare-earth-magnet-supply-2025-07-10/.

²⁹ US Department of Energy, Office of Fossil Energy and Carbon Management. "Funding Notice: Bipartisan Infrastructure Law: Advanced Processing of Critical Minerals and Materials for Industrial and Manufacturing Applications." US Department of Energy, Office of Fossil Energy and Carbon Management, July 16, (2024).

https://www.energy.gov/fecm/funding-notice-bipartisan-infrastructure-law-adv anced-processing-critical-minerals-and-materials-for-industrial-and-manufactur ing-applications.

2022, ³⁰ which allocate billions of dollars to support the development of domestic critical mineral supply chains, including rare earths. ³¹ These laws incentivize mining, recycling, and the development of alternative materials to mitigate risks associated with supply disruptions.

Recycling of rare earths has also gained prominence. Companies like Apple have invested in closed-loop recycling systems, recovering rare earth materials from used devices to reduce reliance on primary mining (Axios, 2025). ³² The Department of Energy (DOE) is similarly funding research into recycling technologies and alternative materials that can replace rare earths in key applications.

Moreover, the US has increased its focus on public-private partnerships to advance research and development. The DOE's Critical Materials Institute leads research on improving extraction processes, diversifying supply sources, and creating rare earth

³⁰ US Congress. Inflation Reduction Act of 2022 (P.L. 117-169), US Congress, August 16, (2022).

https://www.congress.gov/117/plaws/publ169/PLAW-117publ169.pdf.

³¹ Environmental and Energy Study Institute. "Issue Brief: Critical Minerals and the US Clean Energy Transition," Environmental and Energy Study Institute, July (2025).

³² Ernest Scheyder. "Apple in \$500 million rare earth magnet deal with MP to expand US supply chain," *Reuters*, July 16, (2025).

https://www.reuters.com/business/apple-invest-500-million-rare-earths-mine-operator-mp-materials-fox-business-2025-07-15/.

substitutes.³³ Simultaneously, new environmental regulations are being reviewed to streamline permits for rare earth mining, while balancing environmental protection and local community concerns.

Collectively, these domestic strategies demonstrate the US commitment to mitigating China's rare earth leverage by reshoring supply chains, fostering innovation, and securing sustainable access to critical materials. Nevertheless, experts acknowledge that fully decoupling from Chinese rare earths will take years, if not decades, due to China's entrenched processing capabilities and cost advantages.

In response to China's strategic use of rare earth exports as a form of economic coercion, the United States is actively pursuing the development of an internal rare earth supply chain. This policy shift aims to reduce America's dependence on Chinese rare earth materials, which are critical for manufacturing advanced technologies, including defense systems, electric vehicles, and renewable energy infrastructure.³⁴

_

³³ US Department of Energy. "Critical Materials and Materials Program." *US Department of Energy*, June 25, (2025).

https://www.energy.gov/cmm/critical-minerals-and-materials-program.

³⁴ Eric Onstad. " US Rare Earth Pricing System Is Poised to Challenge China's Dominance," Reuters, July 15, (2025).

https://www.reuters.com/sustainability/climate-energy/us-rare-earth-pricing-sys tem-is-poised-challenge-chinas-dominance-2025-07-14/?utm_source=chatgpt.c om.

The cornerstone of the US response is the revitalization of domestic mining and processing. MP Materials, which operates the only active rare earth mine in Mountain Pass, California, is expanding its operations to include refining and magnet production within the United States. This initiative is supported by the Department of Defense (DoD) through grants designed to establish a complete mine-to-magnet supply chain domestically. The DoD's involvement reflects national security concerns, given the essential role of rare earths in advanced weapons systems such as F-35 fighter jets and precision-guided munitions.

Additionally, the US government has implemented legislative measures to bolster critical mineral capabilities. The Bipartisan Infrastructure Law in 2021 and the Inflation Reduction Act in 2022 have allocated substantial funding to promote domestic mining, material processing, and recycling initiatives.³⁶ These policies provide financial incentives and research support to companies engaging in rare earth extraction and processing on US soil.

July 11, (2025).

³⁵ Katha Kalia, Eric Onstad and Ernest Scheyder. "MP Materials Partners With Department of Defense to Boost US Rare-Earth Magnet Supply," Reuters,

https://www.reuters.com/business/mp-materials-partners-with-department-defe nse-boost-us-rare-earth-magnet-supply-2025-07-10/.

³⁶ Energy.gov. "Issue Brief: Critical Minerals and the US Clean Energy Transition," *Energy.gov*, July (2025).

https://www.eesi.org/papers/view/issue-brief-critical-minerals-and-the-u-s-clea n-energy-transition.

Recycling has emerged as a complementary strategy. Companies like Apple are investing in recycling rare earth materials from electronic waste, contributing to a circular economy approach that decreases reliance on mined resources.³⁷ Furthermore, the Department of Energy's Critical Materials Institute is conducting research to develop more efficient recycling technologies and potential alternatives to rare earths.³⁸

Public-private partnerships are essential to this effort. Collaboration between government agencies, private companies, and academic institutions is facilitating innovation in extraction, processing, and substitution technologies. Concurrently, regulatory reforms are under consideration to expedite mining permits while ensuring environmental protections and community engagement.

Despite these efforts, experts warn that rebuilding a fully self-sufficient rare earth supply chain will take years. China's dominance in rare earth refining and magnet production, along

²

³⁷ Emanuela Hawker. "Apple, MP Materials to Build Rare Earths Recycling Facility Under New \$500 Million Supply Deal," *ESGtoday*, July 17, (2025). https://www.esgtoday.com/apple-mp-materials-to-build-rare-earths-recycling-facility-under-new-500-million-supply-deal/.

³⁸ Center for Strategic and International Studies. "Analyzing the Escalating US-China Trade Conflict and Rare Earth Export Restrictions." *Center for Strategic and International Studies*, July 1, (2025).

https://www.csis.org/analysis/analyzing-escalating-us-china-trade-conflict-rare-earth-export-restrictions.

with its cost advantages, remains a formidable obstacle. ³⁹ Nevertheless, the US policy trajectory is clear: constructing a secure, diversified, and resilient rare earth supply chain is now a strategic imperative to safeguard economic and national security interests ⁴⁰

B. Expanding Overseas Rare Earth Operations

In response to China's dominance in rare earth elements (REEs), the United States is not only reshoring production but also pursuing an aggressive external strategy to diversify global supply chains. Recognizing that domestic capacity alone is insufficient to meet industrial and security needs, Washington is expanding rare earth mining and investment in allied countries such as Australia, Canada, and several African nations.⁴¹

Australia has emerged as a key partner in this strategy. The US Department of Defense (DoD) has provided funding support to Lynas Rare Earths, the world's largest rare earth producer

³⁹ Karen Kwok and George Hay. "China's Tightest Rare-Earths Headlock Is Financial," *Reuters*, July 17, (2025).

https://www.reuters.com/commentary/breakingviews/chinas-tightest-rare-earth s-headlock-is-financial-2025-07-17/.

⁴⁰ Financial Times. "The Small Mining Company That Won Backing from the Pentagon—and Apple," *Financial Times*, July 15, (2025).

https://www.ft.com/content/79b1693a-0788-4dc6-b431-027695534c62

⁴¹ The Africa Report. "US Looks to Africa to Diversify Supply Chain for Critical Minerals," *The Africa Report*, September 23, (2022).

https://www.theafricareport.com/243847/us-looks-to-africa-to-diversify-supply-chain-for-critical-minerals/.

outside China, to build a processing facility in Texas and enhance production capabilities in Western Australia. ⁴² This bilateral cooperation not only boosts supply but also integrates allied supply chains to reduce vulnerabilities.

Canada is another focus of US investment. The US and Canadian governments signed a Joint Action Plan on Critical Minerals Collaboration, which facilitates cross-border investments in mining projects, processing technologies, and environmental sustainability standards. ⁴³ Canada's vast mineral resources and stable political environment make it an attractive partner for securing reliable rare earth supplies.

Beyond traditional allies, the US is exploring investment opportunities in Africa, particularly in countries like Malawi, Tanzania, and Madagascar, which possess untapped rare earth reserves. The US International Development Finance Corporation (DFC) has been tasked with financing mining projects in these

-

⁴² Matt Blois, "US Invests in Rare Earth Firm MP Materials," Chemical & Engineering News, July 11, (2025).

https://cen.acs.org/business/investment/US-invests-in-rare-earth-firm-MP-Materials/103/web/2025/07.

⁴³ Riya Sharma & Ernest Scheyder, "Lynas Rare Earths Signs Updated Contract with US Govt for Texas Facility, Shares Rise," *Reuters*, August 1, (2023).

https://www.reuters.com/world/china/australian-rare-earth-stocks-soar-mp-mat erials-multi-billion-us-deal-2025-07-11/.

regions, aiming to foster sustainable development while counterbalancing China's influence on the continent.⁴⁴

Additionally, Washington is collaborating with the European Union, Japan, and South Korea to establish a "Critical Minerals Club," an alliance designed to coordinate investments, establish shared standards, and enhance transparency in the rare earth supply chain. This multilateral approach is intended to create a more balanced global market that is less susceptible to Chinese export restrictions.

These external investments are complemented by technological partnerships aimed at improving extraction methods, refining techniques, and environmental safeguards. Public-private initiatives, often involving universities and research institutes, play a crucial role in advancing sustainable mining practices abroad.

Despite these efforts, challenges remain. Political instability in resource-rich regions, environmental concerns, and the capital-intensive nature of mining projects can slow progress. However, by building diversified supply chains with reliable

⁴⁴ US International Development Finance Corporation. "Supporting Development of a Rare Earth Processing Facility in Angola," *DFC*, (2025). https://www.dfc.gov/investment-story/supporting-development-rare-earth-processing-facility-angola.

⁴⁵ Financial Times. "Western Nations Join Forces to Break China's Grip on Critical Minerals," *Financial Times*, September 23, (2024). https://www.ft.com/content/2984ae03-df15-420b-89cc-9ad8337014a9.

partners, the US aims to mitigate strategic risks and ensure a stable supply of rare earths critical to its economic and national security. 46

To reduce dependence on China for rare earth elements (REEs), the United States has increasingly focused on overseas investments in mining and processing projects. These investments are part of a broader strategy to secure diversified and reliable sources of critical minerals essential for defense technologies, electric vehicles, and renewable energy infrastructure.⁴⁷

One of the most significant US investments abroad is in Australia. The US Department of Defense has partnered with Lynas Rare Earths, providing funding to enhance its production capabilities in Western Australia and to construct a rare earth separation facility in Texas. ⁴⁸ This collaboration strengthens the supply chain by linking allied production with US processing.

⁻

⁴⁶ Forrest Crellin. "Low diversity in critical mineral markets could hurt industry, IEA says," Reuters, May 21, (2025).

https://www.reuters.com/sustainability/climate-energy/low-diversity-critical-mineral-markets-could-hurt-industry-iea-says-2025-05-21/.

⁴⁷ Center for Strategic and International Studies. "Analyzing the Escalating US-China Trade Conflict and Rare Earth Export Restrictions," *Center for Strategic and International Studies*, April 15, (2025).

https://www.csis.org/analysis/analyzing-escalating-us-china-trade-conflict-and-rare-earth-export-restrictions.

⁴⁸ Matt Blois. "US Invests in Rare Earth Firm MP Materials," *Chemical & Engineering News*, July 11, (2025).

https://cen.acs.org/business/investment/US-invests-in-rare-earth-firm-MP-Materials/103/web/2025/07.

Canada is another important destination for US investment. Under the Joint Action Plan on Critical Minerals Collaboration, both countries are coordinating efforts to develop mining projects and processing capacity, leveraging Canada's vast mineral resources and stable regulatory environment. 49

In addition to traditional allies, the US is also investing in Africa. The US International Development Finance Corporation (DFC) has supported rare earth exploration projects in Malawi and Tanzania, aiming to foster sustainable mining and reduce the global supply chain's vulnerability to Chinese control.⁵⁰

Furthermore, Washington collaborates with the European Union, Japan, and South Korea to establish multilateral frameworks like the "Critical Minerals Club," designed to

https://www.reuters.com/markets/commodities/canada-ready-become-critical-minerals-provider-minister-says-2023-04-14/; Natural Resources Canada.

⁴⁹ Steve Scherer & Katya Golubkova. "Canada to Accelerate Critical Mineral Mining – Energy Minister," *Reuters*, April 14, (2023).

[&]quot;Canada and US Finalize Joint Action Plan on Critical Minerals Collaboration," *Government of Canada*, January 9, (2020).

https://www.canada.ca/en/natural-resources-canada/news/2020/01/canada-and-us-finalize-joint-action-plan-on-critical-minerals-collaboration.html.

⁵⁰ Andy Home. "After Ukraine Deal, US Turns Its Critical Minerals Gaze to Africa." *Reuters*, May 6, (2025).

https://www.reuters.com/markets/commodities/after-ukraine-deal-us-turns-its-critical-minerals-gaze-africa-andy-home-2025-05-06/.

coordinate international investments and ensure transparent, ethical sourcing of rare earths.⁵¹

These overseas investments reflect a strategic imperative to build resilient supply chains, mitigating geopolitical risks while supporting global economic security.

V. Conclusion

Geopolitical competition between major powers is increasingly shaped by the race to secure access to critical minerals, especially rare earth elements (REEs). As the demand for rare earths grows due to their essential role in defense technologies, renewable energy, and advanced electronics, the United States and China have intensified their competition in rare earth-producing countries worldwide.⁵²

China, which currently dominates rare earth processing, has expanded its investments and partnerships across Africa, Southeast Asia, and Latin America. Chinese state-owned enterprises have secured mining rights in countries like the Democratic Republic of Congo, Myanmar, and Madagascar,

https://www.whitecase.com/insight-our-thinking/critical-minerals-supply-chains-minerals-security-partnership-and-trade

⁵¹ White & Case. "Critical Minerals Supply Chains: The Minerals Security Partnership and Trade." *White & Case*, (2024).

⁵² International Gem Society. "The Geopolitical Battleground of Rare Earth Minerals," *International Gem Society*, May 12, (2025). https://www.gemsociety.org/article/rare-earth-minerals-in-geopolitics/.

ensuring a steady supply of strategic resources. 53 This global footprint not only consolidates China's control over the rare earth market but also extends its geopolitical influence in resource-rich regions.⁵⁴

In response, the United States has launched initiatives to counter China's mineral dominance. The Minerals Security Partnership (MSP), formed with allies such as the European Union, Japan, and Australia, aims to invest in sustainable mining projects and build transparent, resilient supply chains. 55 Additionally, the US International Development Finance Corporation (DFC) is financing mining ventures in Africa and South America to diversify sourcing away from Chinese control.⁵⁶

⁵³ The Annapurna Express. "China-backed militia secures control of new rare earth mines in Myanmar" The Annapurna Express, June 12, (2025). https://theannapurnaexpress.com/story/55110/; Reuters. "Why China's ultimatum to Myanmar rebels threatens global supply of heavy rare earths." July 8, 2025.

https://www.reuters.com/world/china/china-risks-global-heavy-rare-earth-suppl y-stop-myanmar-rebel-victory-2025-07-08/
US Department of State. "Minerals Security Partnership," US Department of

State, January 20, (2025).

https://2021-2025.state.gov/minerals-security-partnership/.

US International Development Finance Corporation. Strengthening Critical Mineral Supply Chains by Countering China's Dominance, DFC, (2025). https://www.dfc.gov/investment-story/strengthening-critical-mineral-supply-ch ains-countering-chinas-dominance.

⁵⁶ Lowy Institute. "China's Rare Earth Advantage Isn't Just About Control." The Interpreter, May 26, (2025).

https://www.lowvinstitute.org/the-interpreter/china-s-rare-earth-advantage-isn-t -just-about-control.

This competition is reshaping global geopolitics, as rare earth-producing nations gain strategic importance. Their resources have become not just economic assets but also bargaining chips in the broader US-China rivalry. Without coordinated international efforts, this scramble risks creating new dependencies and environmental challenges in vulnerable regions.

Donald Trump is enhancing its policy responses to reduce dependence on Chinese rare earths, but these measures require time to yield tangible results. In the short term, the US remains constrained by China's leverage over rare earth exports, which continue to serve as a strategic bargaining chip. In the long term, the US may succeed in developing alternative sources through domestic production, allied partnerships, and recycling. However, these alternatives come with higher costs, inevitably raising supply chain expenses. Despite this, the trade-off is an improvement in supply chain security and national resilience. This strategic shift reflects Washington's recognition that supply chain reliability and geopolitical stability may justify higher economic costs in critical sectors like defense and high technology.

VI. Bibliography

- Aktar, Samim. "Trump 2.0 and the China Containment Strategy: Continuity or Change?," Globalpanorama, March 4, (2025). https://www.globalpanorama.org/en/2025/03/trump-2-0-and-the-china-containment-strategy-continuity-or-change-samimaktar/.
- Amann, Christina. "Nick Carey, And Kalea Hall, "Auto Companies 'in Full Panic' Over Rare-Earths Bottleneck," Reuters, June 9, (2025).

 https://www.reuters.com/business/autos-transportation/auto-companies-in-full-panic-over-rare-earths-bottleneck-2025-06-09/.
- Apple and MP Materials. "Apple and MP Materials Announce \$500 Million Partnership to Produce Recycled Rare Earth Magnets in the United States," Business Wire, July 15, (2025). https://www.businesswire.com/news/home/20250715067846 /en/MP-Materials-and-Apple-Announce-%24500-Million-Partnership-to-Produce-Recycled-Rare-Earth-Magnets-in-the-United-States.
- Axios. "Apple, MP Materials Invest in Rare Earth Recycling," Axios, May 10, (2025). https://www.axios.com/2025/05/10/apple-mp-materials-rare-

earth-recycling.

- Baskaran, Gracelin & Meredith Schwartz. "The Consequences of China's New Rare Earths Export Restrictions," CSIS, April 14, (2025).
 - https://www.csis.org/analysis/consequences-chinas-new-rare-earths-export-restrictions.
- Blois, Matt. "US Invests in Rare Earth Firm MP Materials," Chemical & Engineering News, July 11, (2025). https://cen.acs.org/business/investment/US-invests-in-rare-earth-firm-MP-Materials/103/web/2025/07.
- Bose, Nandita & David Lawder. "US Says Deal With Beijing Will Expedite Rare Earth Exports From China," Reuters, June 27, (2025).

https://www.reuters.com/world/china/trump-says-deal-relate d-trade-was-signed-with-china-wednesday-2025-06-26/; Christian Shepherd & Lyric Li. "Even After Trump-Xi Call, China's Rare-Earth Controls Aren'T Going Away," The Washington Post, June 6, (2025).

https://www.washingtonpost.com/world/2025/06/06/china-ra re-earths-trump-xi-call/.

Bradsher, Keith. "How Rare Earths Factor in the US-China Trade War," The New York Times, November 22, (2019). https://www.nytimes.com/2019/11/22/business/china-rare-earth-trade-war.html.

- Center for Strategic and International Studies. "Analyzing the Escalating US-China Trade Conflict and Rare Earth Export Restrictions." Center for Strategic and International Studies, July 1, (2025).

 https://www.csis.org/analysis/analyzing-escalating-us-china-trade-conflict-rare-earth-export-restrictions.
- Chen, Wei, Peng Wang, Fanran Meng, Alexandra Pehlken, Qiao-Chu Wang, and Wei-Qiang Chen. "Reshaping Heavy Rare Earth Supply Chains Amidst China's Stringent Environmental Regulations," Fundam Res, 5 no.2, January 26, (2024): 505–513.
- Craig, Sean. "Pentagon Takes \$400 Million Stake in Rare-Earth Miner Outside Vegas," The Washington Post, July 10, (2025). https://www.washingtonpost.com/business/2025/07/10/pentagon-rare-earths/.
- Crellin, Forrest. "Low diversity in critical mineral markets could hurt industry, IEA Says," Reuters, May 21, (2025). https://www.reuters.com/sustainability/climate-energy/low-diversity-critical-mineral-markets-could-hurt-industry-iea-says -2025-05-21/.
- Defense One. "How China's New Rare-Earth Export Controls Target the Pentagon—and the World." Defense One, July (2025).

- https://aheadoftheherd.com/how-chinas-new-rare-earth-export-controls-target-the-pentagon-and-the-world/.
- Emont, Jon. "America's Biggest Rare-Earth Producer Makes a Play to End China's Dominance," The Wall Street Journal, July 15, (2025). https://www.wsj.com/business/us-rare-earth-producer-texas-58796240.
- Energy.gov. "Issue Brief: Critical Minerals and the US Clean Energy Transition," Energy.gov, July (2025). https://www.eesi.org/papers/view/issue-brief-critical-mineral s-and-the-u-s-clean-energy-transition.
- Environmental and Energy Study Institute. "Issue Brief: Critical Minerals and the US Clean Energy Transition," Environmental and Energy Study Institute, July (2025). https://www.eesi.org/papers/view/issue-brief-critical-mineral s-and-the-u-s-clean-energy-transition.
- Financial Times. "Pentagon Strikes Investment Deal with US Critical Minerals Producer." Financial Times, July 9, (2025). https://www.ft.com/content/6693da6f-7cb7-4c74-8c4f-45b1b f533cbe.
- Financial Times. "The Small Mining Company That Won Backing from the Pentagon—and Apple." Financial Times, July 15, (2025).

https://www.ft.com/content/79b1693a-0788-4dc6-b431-0276 95534c62

Financial Times. "Western Nations Join Forces to Break China's Grip on Critical Minerals," Financial Times, September 23, (2024).

https://www.ft.com/content/2984ae03-df15-420b-89cc-9ad8 337014a9.

- Graham, Tye & Peter W. Singer. "How China's New Rare-Earth Export Controls Target the Pentagon—and the World."

 Ahead of the Herd, July (2025).
 - https://aheadoftheherd.com/how-chinas-new-rare-earth-export-controls-target-the-pentagon-and-the-world/.
- Hawker, Emanuela. "Apple, MP Materials to Build Rare Earths Recycling Facility Under New \$500 Million Supply Deal," ESGtoday, July 17, (2025).

https://www.esgtoday.com/apple-mp-materials-to-build-rare-earths-recycling-facility-under-new-500-million-supply-deal/supply-supply-deal/supply-supply-deal/supply-supply-deal/supply-supply-deal/supply-supply-

Home, Andy. "After Ukraine Deal, US Turns Its Critical Minerals Gaze to Africa." Reuters, May 6, (2025).

https://www.reuters.com/markets/commodities/after-ukraine-deal-us-turns-its-critical-minerals-gaze-africa-andy-home-20 25-05-06/.

- Humphries, Marc. Rare Earth Elements: The Global Supply Chain, Washington, DC: Congressional Research Service, (2013): 12–14.
- International Gem Society. "The Geopolitical Battleground of Rare Earth Minerals," International Gem Society, May 12, (2025). https://www.gemsociety.org/article/rare-earth-minerals-in-ge opolitics/.
- Jackson, Lewis. Amy Lv, Eric Onstad and Ernest Scheyder.

 "China Hits Back at US Tariffs with Export Controls on Key
 Rare Earths," Reuters, April 5, (2025).

 https://www.reuters.com/world/china-hits-back-us-tariffs-wit
 h-rare-earth-export-controls-2025-04-04/?utm_source=chatg
 pt.com.
- Jin, Keyu. "If Trump Is Trying to Suppress China, He's Going about It All Wrong," Financial Times. April 10, (2025). https://www.ft.com/content/258326fb-39c1-4ae5-a79c-270cd bef4a23?utm_source=chatgpt.com.
- Kalia, Katha, Eric Onstad and Ernest Scheyder. "MP Materials Partners With Department of Defense to Boost US Rare-Earth Magnet Supply," Reuters, July 11, (2025). https://www.reuters.com/business/mp-materials-partners-wit h-department-defense-boost-us-rare-earth-magnet-supply-20 25-07-10/.

- Kalia, Katha, Eric Onstad and Ernest Scheyder. "MP Materials Seals Mega Rare-Earths Deal With US To Break China's Grip," Reuters, July 11, (2025). https://www.reuters.com/business/mp-materials-partners-wit h-department-defense-boost-us-rare-earth-magnet-supply-20 25-07-10/.
- Kiggins, Ryan David. The Political Economy of Rare Earth Elements: Rising Powers and Technological Change, New York: Palgrave Macmillan, (2015): 128–131.
- Kwok, Karen & George Hay. "China's Tightest Rare-Earths Headlock Is Financial," Reuters, July 17, (2025). https://www.reuters.com/commentary/breakingviews/chinastightest-rare-earths-headlock-is-financial-2025-07-17/.
- Lowy Institute. "China's Rare Earth Advantage Isn't Just About Control." The Interpreter, May 26, (2025). https://www.lowyinstitute.org/the-interpreter/china-s-rare-ear th-advantage-isn-t-just-about-control.
- Lv, Amy & Ryan Woo. "China's Rare Earth Magnet Shipments Halve in May due to Export Curbs," Reuters, June 20, (2025). https://www.reuters.com/business/autos-transportation/china s-rare-earth-magnet-shipments-halve-may-due-export-curbs-2025-06-20/.

- Natural Resources Canada. "Canada and US Finalize Joint Action Plan on Critical Minerals Collaboration," Government of Canada, January 9, (2020). https://www.canada.ca/en/natural-resources-canada/news/20 20/01/canada-and-us-finalize-joint-action-plan-on-critical-mi nerals-collaboration.html.
- Nayar, Jaya. "Not So 'Green' Technology: The Complicated Legacy of Rare Earth Mining," Harvard International Review, August 12, (2021) https://hir.harvard.edu/not-so-green-technology-the-complica ted-legacy-of-rare-earth-mining/.
- Onstad, Eric. "US Rare Earth Pricing System Is Poised to Challenge China's Dominance," Reuters, July 15, (2025). https://www.reuters.com/sustainability/climate-energy/us-rar e-earth-pricing-system-is-poised-challenge-chinas-dominanc e-2025-07-14/?utm_source=chatgpt.com.
- Rydze, Kristin Vala. "China's Rare-Earth Mining Boom Leaves
 Toxic Legacy in Water and Soil." Environmental Health
 News, June (2025).
 https://www.ehn.org/chinas-rare-earth-mining-boom-leaves-t
 oxic-legacy-in-water-and-soil?utm_source=chatgpt.com.
- Sandalow, David. Guide to Chinese Climate Policy 2019. New York: Columbia University School of International and Public Affairs, (2019).

Scherer, Steve & Katya Golubkova. "Canada to Accelerate Critical Mineral Mining – Energy Minister," Reuters, April 14, (2023).

https://www.reuters.com/markets/commodities/canada-ready -become-critical-minerals-provider-minister-says-2023-04-1 4/.

Scheyder, Ernest. "Apple in \$500 million rare earth magnet deal with MP to expand US supply chain," Reuters, July 16, (2025).

https://www.reuters.com/business/apple-invest-500-million-r are-earths-mine-operator-mp-materials-fox-business-2025-0 7-15/.

- Sharma, Riya & Ernest Scheyder, "Lynas Rare Earths Signs Updated Contract with US Govt for Texas Facility, Shares Rise," Reuters, August 1, (2023).
 - https://www.reuters.com/world/china/australian-rare-earth-st ocks-soar-mp-materials-multi-billion-us-deal-2025-07-11/.
- Sopcisak, Joseph. "China Imposes Export Controls on Medium and Heavy Rare Earth Materials," Holland & Knight Alert, April (2025).

https://www.hklaw.com/en/insights/publications/2025/04/chi na-imposes-export-controls-on-medium-and-heavy-rare-eart h-materials.

- The Africa Report. "US Looks to Africa to Diversify Supply Chain for Critical Minerals," The Africa Report, September 23, (2022).
 - https://www.theafricareport.com/243847/us-looks-to-africa-to-diversify-supply-chain-for-critical-minerals/.
- The Annapurna Express. "China-backed militia secures control of new rare earth mines in Myanmar" The Annapurna Express, June 12, (2025).
 - https://theannapurnaexpress.com/story/55110/; Reuters.
 - "Why China's ultimatum to Myanmar rebels threatens global supply of heavy rare earths." July 8, 2025.
 - https://www.reuters.com/world/china/china-risks-global-hea vy-rare-earth-supply-stop-myanmar-rebel-victory-2025-07-0 8/
- The White House. Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth, 100-Day Reviews under Executive Order 14017. Washington, DC: The White House, (2021): 3.
- The White House. National Security Strategy of the United States of America. Washington, DC: The White House, December, (2017).
 - https://trumpwhitehouse.archives.gov/wp-content/uploads/20 17/12/NSS-Final-12-18-2017-0905.pdf.

- Time Magazine. "Trump and Xi Hold First Call in Months, Setting Stage for More Trade Talks." Time, June 5, (2025). https://time.com/7291416/trump-and-xi-have-first-call-in-months/
- US Congress. Inflation Reduction Act of 2022 (P.L. 117-169), US Congress, August 16, (2022). https://www.congress.gov/117/plaws/publ169/PLAW-117pub 1169.pdf.
- US Department of Energy, Office of Fossil Energy and Carbon Management. "Funding Notice: Bipartisan Infrastructure Law: Advanced Processing of Critical Minerals and Materials for Industrial and Manufacturing Applications."

 US Department of Energy, Office of Fossil Energy and Carbon Management, July 16, (2024).

 https://www.energy.gov/fecm/funding-notice-bipartisan-infra structure-law-advanced-processing-critical-minerals-and-mat erials-for-industrial-and-manufacturing-applications.
- US Department of Energy. "Critical Materials and Materials Program." US Department of Energy, June 25, (2025). https://www.energy.gov/cmm/critical-minerals-and-materials-program.
- US Department of State. "Minerals Security Partnership," US Department of State, January 20, (2025). https://2021-2025.state.gov/minerals-security-partnership/.

- US Geological Survey. "Mineral Commodity Summaries 2024: Rare Earths," Geological Survey, 144, (2024). https://doi.org/10.3133/mcs2024.
- US International Development Finance Corporation.

 "Strengthening Critical Mineral Supply Chains by
 Countering China's Dominance," DFC, (2025).

 https://www.dfc.gov/investment-story/strengthening-critical-mineral-supply-chains-countering-chinas-dominance.
- US International Development Finance Corporation. "Supporting Development of a Rare Earth Processing Facility in Angola," DFC, (2025).

 https://www.dfc.gov/investment-story/supporting-developme nt-rare-earth-processing-facility-angola.
- White & Case. "Critical Minerals Supply Chains: The Minerals Security Partnership and Trade." White & Case, (2024). https://www.whitecase.com/insight-our-thinking/critical-min erals-supply-chains-minerals-security-partnership-and-trade
- Wischer, Gregory & Morgan Bazilian. "Circumventing the Chokepoint: Can the US Produce More Rare Earths?," Newsecuritybeat, October 30, 2023. https://www.newsecuritybeat.org/2023/10/circumventing-chokepoint-produce-rare-earths/?utm_source=chatgpt.com.

- Wübbeke, Jost. "Rare Earth Elements in China: Policies and Narratives of Reinventing an Industry," Resources Policy, 38, no. 3 (2013): 384–394.
- Zhou, Jian & Yu Wang. "China's Rare Earth Patent Dominance: Implications for Global Supply Chains," Journal of Industrial Policy, 12, no.1,(2023): 45–67.