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POINT OF VIEW

# Critical minerals and rare earths: ASEAN's new moment?

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Amid growing momentum for the energy transition and AI technologies, critical minerals have come under renewed interest.

A broad category of raw materials, critical minerals are used across a range of modern technologies, from wind turbines and EV motors to the semiconductors undergirding the global network of data centres. Aluminium and copper, for example, are critical to the development of electricity networks, while lithium, nickel, cobalt, manganese and graphite are central to EV batteries.[1] Also included are rare earth elements (REE), a set of 17 chemically-similar metals such as scandium and yttrium, that has its uses from smartphones and televisions to lasers and sonar systems.[2]

## The critical mineral demand surge

These use cases have driven demand for critical minerals, especially in clean energy technologies, a market projected to exceed US$770 billion by 2040.[3] There are also specific elements for which demand is particularly high, such as lithium, whose market in 2024 grew at three times the annual growth rates of the 2010s.[4] The demand for nickel, cobalt, graphite and REE grew at 6-8% in the same period.

At the same time, the market is also grappling with supply chain pressures as critical minerals and REE mining and production tends to be highly concentrated. In 2023, roughly half of global nickel reserves and production

[1] IEA. "A new frontier for global energy security." https://www.iea.org/topics/critical-minerals

[2] American Geosciences Institute. "What are rare earth elements, and why are they important?" https://profession.americangeosciences.org/society/intersections/faq/what-are-rare-earth-elements-and-why-are-they-important/

[3] The Jakarta Post. "Cooperate, not compete: ASEAN's critical mineral strategy for energy transition." https://www.thejakartapost.com/opinion/2025/01/14/cooperate-not-compete-aseans-critical-mineral-strategy-for-energy-transition.html

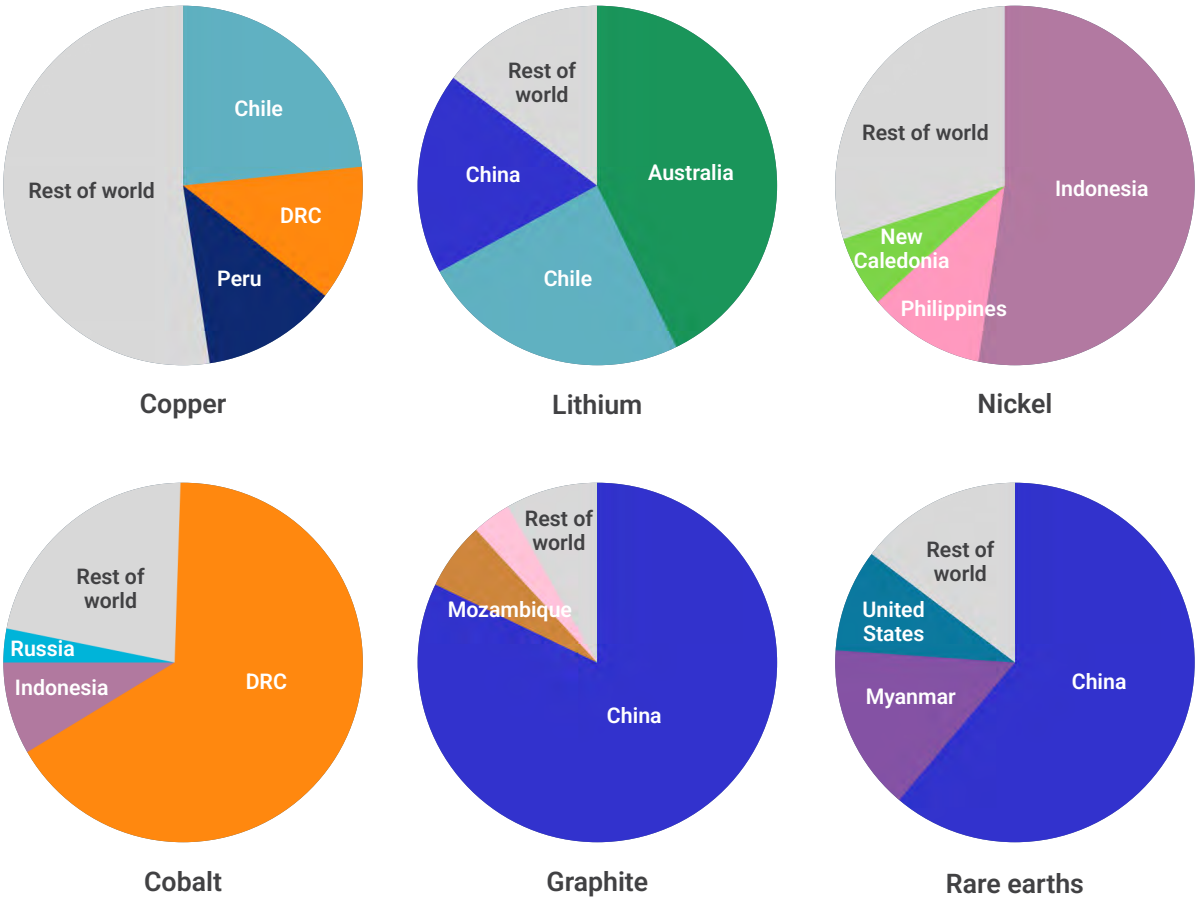
[4] IEA. "Global Critical Minerals Outlook 2025: Executive summary." https://www.iea.org/reports/global-critical-minerals-outlook-2025/executive-summary

Cover image by Marco Vockner

was located in Indonesia, while the Democratic Republic of Congo holds the lion's share of worldwide cobalt. Australia, meanwhile, dominates lithium mining.[5,6,7] Another challenge in addition to the concentration of these materials is that investments to expand mining and processing currently falls short of the capacity needed to meet future demand.[8]

## Critical minerals production is highly concentrated across a handful of countries

*Share of mined minerals (2023)*




Source: World Resources Institute[9]

Yet, the undisputed king of the critical minerals sector is China, where the majority of mined minerals are shipped to for processing and refinement. China is responsible for processing more than half of the world's lithium; two-third of its cobalt; a third of its nickel; and nearly all of its REEs.[10,11]

[5] Fastmarkets. "Key global nickel talking points ahead of the International Critical Minerals & Metals Summit." https://www.fastmarkets.com/insights/key-global-nickel-talking-points-international-critical-minerals-summit/

[6] Visual Capitalist. "Visualizing Cobalt Production by Country in 2023." https://elements.visualcapitalist.com/visualizing-cobalt-production-by-country-in-2023/

[7] Our World in Data. "The world's lithium is mined in just a handful of countries." https://ourworldindata.org/data-insights/the-worlds-lithium-is-mined-in-just-a-handful-of-countries

[8] ERIA. "Cooperate, Not Compete: ASEAN's Critical Mineral Strategy for Energy Transition." https://www.eria.org/news-and-views/cooperate--not-compete--asean-s-critical-mineral-strategy-for-energy-transition

[9] World Resources Institute. "The Critical Minerals Conundrum: What You Should Know." https://www.wri.org/insights/critical-minerals-explained

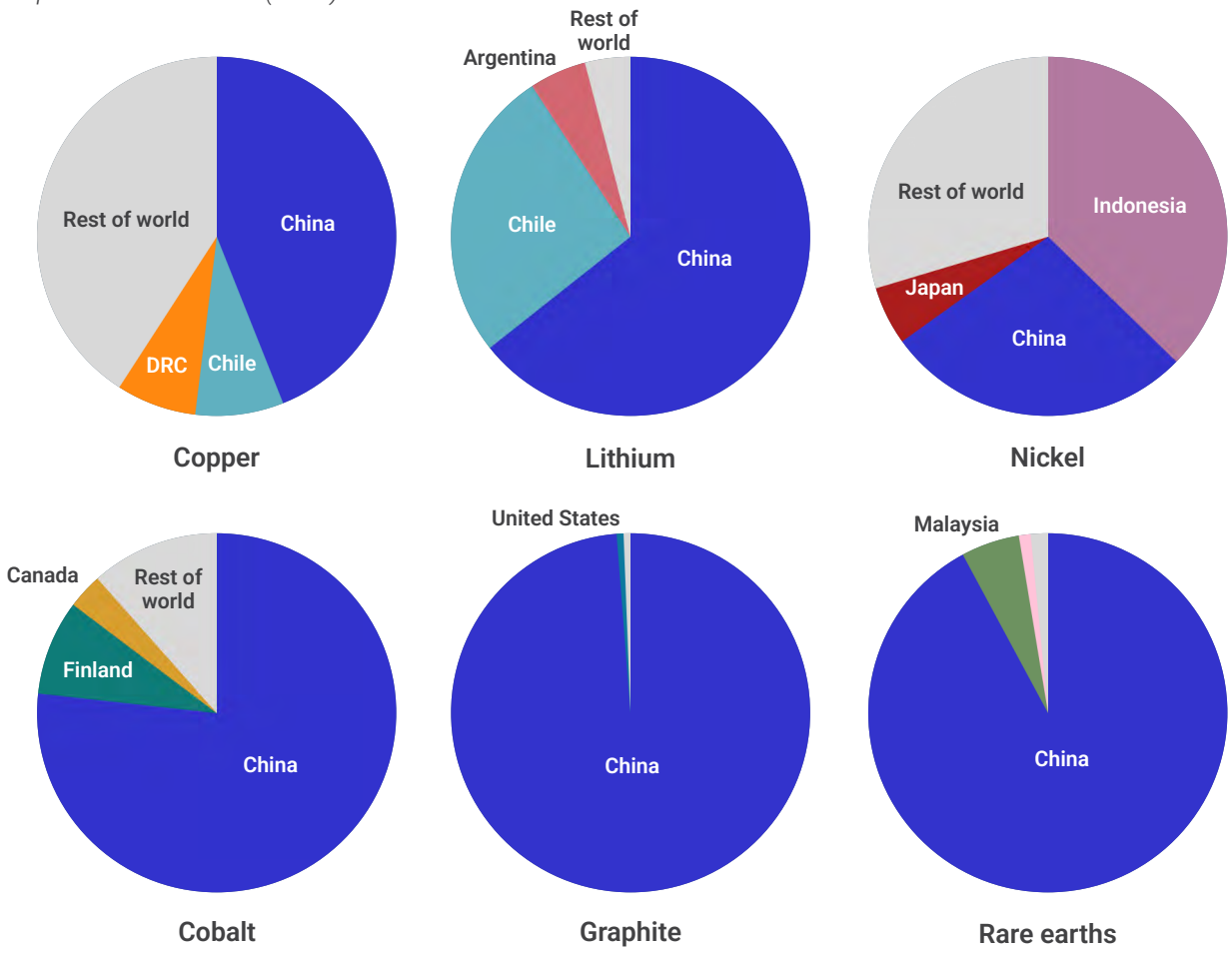
[10] IEA. "A new frontier for global energy security." https://www.iea.org/topics/critical-minerals

[11] American Geosciences Institute. "What are rare earth elements, and why are they important?" https://profession.americangeosciences.org/society/intersections/faq/what-are-rare-earth-elements-and-why-are-they-important/

In particular, China has significantly strengthened its position in the manufacturing of REE permanent magnets, commanding roughly 94% of the sector. Its current dominance was built off early strategic investments in global mining and efforts to consolidate ownership over deposits in various jurisdictions. These have paid off, as evidenced by its leadership in manufacturing energy transition technologies.

## China dominates global processing of critical minerals

*Share of processed minerals (2023)*




Source: World Resources Institute[12]

As these demand and supply pressures intensify and converge, the high degree of market concentration leaves the world vulnerable to potential disruptions and countries are now moving to protect their critical minerals supply chains. The United States and European Union have both moved to pass legislation on mineral security, while the US also came to an agreement to cooperate with Australia on securing its supplies.[13,14,15]

[12] World Resources Institute. "The Critical Minerals Conundrum: What You Should Know." https://www.wri.org/insights/critical-minerals-explained

[13] World Economic Forum. "From rare earths to antimony: A strategic approach to critical mineral supply." https://www.weforum.org/stories/2025/11/rare-earth-antimony-critical-mineral-supply/

[14] The White House. "Immediate Measures to Increase American Mineral Production." https://www.whitehouse.gov/presidential-actions/2025/03/immediate-measures-to-increase-american-mineral-production/

[15] European Commission. "Critical Raw Materials Act." https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials/critical-raw-materials-act_en

Most significant is China, which has levied some of the strictest export controls on critical minerals and REE in response to mounting trade tensions with the US. First announced in October 2025, the export controls would require foreign companies to secure government approval to export goods containing 0.1% or more by value of certain Chinese-sourced REEs, or products made using China's REE-related technologies.[16] As of 20 November 2025, some of these curbs have been suspended temporarily following talks with the US.[17]

## ASEAN takes centre stage

Recent developments have brought ASEAN into the limelight. Export restrictions by China pose a major hurdle for economies such as the US that are dependent on China-sourced critical minerals processing. Many economies are now looking to circumvent these restrictions by looking for potential alternatives for critical minerals supply. ASEAN is one such—the region is rich with critical minerals: Indonesia is a nickel leader, while the Philippines is home to vast, untapped reserves. Malaysia, on the other hand, is seen as a mature market for REE processing, while Thailand has emerged as a significant source for tin and tungsten.[18] And although China still dominates the processing and downstreaming of these resources, there is growing processing capacity in ASEAN for critical minerals needed for clean energy technologies, such as solar PV, batteries and EVs.

"Several member economies possess notable reserves and are actively exploring ways to integrate more deeply into the fast-growing clean-technology and advanced-manufacturing ecosystems," said Yasuto Watanabe, director of AMRO, after the 47th ASEAN Summit.[19]

As the trade rift between the US and China continues to roil with uncertainty, ASEAN has "transformative opportunity" to position itself as a critical minerals hub, though a decade of work will be needed to step up its processing and manufacturing capacities if it is to truly become a viable alternative. Achieving this will reduce ASEAN's dependence on China and also lend it the geopolitical heft and influence that it has long sought.

Image by Quang Nguyen Vinh

[16] Asia Pacific Foundation of Canada. "China's New Rare-Earth Controls Send Shockwaves Through Global Supply Chains." https://www.asiapacific.ca/publication/chinas-new-rare-earth-controls-send-shockwaves-through

[17] CNBC. "China suspends some critical mineral export curbs to the U.S. as trade truce takes hold." https://www.cnbc.com/2025/11/10/china-suspends-some-critical-mineral-export-curbs-to-the-us-as-trade-truce-takes-hold.html

[18] Discovery Alert. "ASEAN Critical Minerals Opportunity Reshaping Global Supply Chains." https://discoveryalert.com.au/asean-critical-minerals-opportunity-2025-supply-chains/

[19] SCMP. "Asean, China, Japan and South Korea hold 'transformative' critical minerals opportunity." https://www.scmp.com/economy/china-economy/article/3332830/us-china-tensions-offer-asean-transformative-critical-minerals-opportunity-economist?module=perpetual_scroll_0&pgtype=article

Image by Thuận Tiện Nguyễn

## Developments at the 2025 ASEAN Summit

Critical minerals were centre-stage at the 47th ASEAN Summit in Kuala Lumpur, Malaysia, where leaders jointly declared their intentions to adopt the "ASEAN Minerals Development Vision", a roadmap that will establish the region as a hub for minerals production and trade.[20]

Through the Vision, critical minerals will become a key economic pillar for the region and a platform for cross-sectoral collaboration, and also be the basis for collective bargaining power, a longstanding ASEAN objective.

The key development, however, was four separate bilateral deals signed between the US and ASEAN members – Thailand, Malaysia, Cambodia and Vietnam – that will pave the way towards "diversifying critical minerals supply chains."[21] In exchange for some tariff relief, Malaysia agreed to refrain from banning or imposing quotas on critical minerals and REE exports to the US.[22]

Beyond critical minerals, the trade agreements also further entrench US-ASEAN relationships in areas such as technology, automotives, pharmaceuticals, aerospace technologies and other commodities. For example, Thailand agreed to not only eliminate tariff barriers on US imports but also commit to purchasing US$18.8 billion of US aircrafts and around US$5.4 billion of energy goods per year.[23]

And though the US has maintained its 19% tariffs on goods coming in from Southeast Asia, the Administration has made encouraging sounds that it might consider zero tariffs for some goods, though given the current US administration's track record, nothing is truly set in stone.[24]

What these deals undoubtedly signal are the deepening ties between the US and ASEAN, a tricky dance to navigate considering the region's competing priorities with China. Despite its promises to the US, Malaysia is already embroiled in talks for a REE refinery project with China—a marked development given China's ban on processing technology exports.[25]

However, it is also worth noting that China was not left out of the conversation at the Summit, during which the bloc affirmed its ties to its largest external trading partner.

[20] ASEAN. "Declaration on the ASEAN minerals development vision." https://asean.org/wp-content/uploads/2025/10/13.-Declaration-on-the-ASEAN-Minerals-Development-Vision-AMDV.pdf

[21] The White House. "Memorandum of Understanding between the Government of the United States of America and the Government of Malaysia concerning cooperation to diversify global critical minerals supply chains and promote investments." https://www.whitehouse.gov/briefings-statements/2025/10/memorandum-of-understanding-between-the-government-of-the-united-states-of-america-and-the-government-of-malaysia-concerning-cooperation-to-diversify-global-critical-minerals-supply-chains-and-promote/

[22] Reuters. "Trump strikes deals on trade, critical minerals in Southeast Asia." https://www.reuters.com/world/china/us-sign-trade-deals-with-cambodia-malaysia-trump-says-2025-10-26/

[23] Ibid.

[24] Energy Tracker Asia. "47th ASEAN Summit 2025 Ends With Trump Promising Support to Southeast Asia." https://energytracker.asia/47th-asean-summit-2025-ends-with-trump-promising-support-to-southeast-asia/

[25] Reuters. "Exclusive: China, Malaysia in talks for rare earths refinery project, sources say." https://www.reuters.com/world/china/china-malaysia-talks-rare-earths-refinery-project-sources-say-2025-10-01/

The 2025 ASEAN Summit revealed the growing prominence of ASEAN on the global stage, as both China and US jostle for ever greater slices of influence in the region. There is immense opportunity here for ASEAN to leverage its mineral riches into outsized geopolitical and economic weight, but regional leaders will have to be careful to protect their countries' long-term futures against the aspirations of its much-larger allies. Moreover, bilateral deals between the US and individual ASEAN members raise question marks about ASEAN unity and centrality.

Separately, following the Summit, criticism has already emerged about just how beneficial these US trade deals will be for ASEAN countries, with some suggesting that the deals may infringe on countries' sovereign interests.[26] These dovetail with declining confidence in US among ASEAN-6 economies—a downward trend that started in 2021—though goodwill does remain and anxieties about China's economic and geographical dominance persist.[27]

The question lingering in the background is what kind of status quo will these trade alignments ultimately result in: ASEAN as an emerging powerbroker or a modern vassal state to great powers? A geopolitical heavyweight? Or yet more fragmentation in a bloc still barely held together? Only time will tell.

Image by Aryan Sur

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StoneBench is a strategic editorial advisory and thought leadership studio specialising in topics at the intersection of economics, geopolitics, trade, finance, sustainability and policy. Our rigorous approach and deep understanding of key global trends have earned the trust of leading institutions, including banks, technology companies, multinationals, consulting firms, industry associations and policy advisory firms, for whom we shape thought leadership strategy and deliver end-to-end research and editorial programmes.

[26] CNA. "Commentary: Critics and supporters of US-Malaysia trade deal only get it half right." https://www.channelnewsasia.com/commentary/us-malaysia-trade-deal-trump-tariffs-anwar-cabinet-reshuffle-5464916

[27] ISEAS. "2023/42 "Southeast Asian Views on the United States: Perceptions Versus Objective Reality" by Lee Sue-Ann." https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2023-42-southeast-asian-views-on-the-united-states-perceptions-versus-objective-reality-by-lee-sue-ann/