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Kaira Rakheja || Energy Analyst, South Asia

Saloni Sachdeva Michael || Lead Energy Specialist, India Clean Energy Transition

India's critical mineral imports in 2025 and a shift towards supply diversification

- *Chile is India's largest critical minerals supplier, primarily for copper ore, accounting for 2,800,000 tonnes of imports between financial year (FY) 2019 and FY2025. China, alongside countries like Belgium, Germany and Japan, supplies a wider range of mineral compounds across cobalt, copper, graphite, lithium, and nickel value chains.*
- *Protectionist and industrial policies adopted by major producing and processing countries, such as China, Indonesia, the US, the European Union and Japan are increasingly impacting India's imports. Export controls, domestic value-addition requirements, and strategic supply management are reshaping trade flows and revealing India's vulnerability to concentration risks and supply disruptions.*
- *India's import data reflects a clear intent to diversify supply sources and build more resilient supply chains through international cooperation. At the same time, there is a need to strengthen collaboration in skills development, joint exploration and mining, technology transfer and scaled research and development.*

Introduction

India's clean energy transition depends heavily on access to critical minerals. Visualising the scale and distribution of the country's import dependence highlights not only where supply vulnerabilities exist, but also why securing reliable and diversified trade linkages is becoming a strategic priority.

India has set ambitious targets — installation of 500 gigawatts (GW) of non-fossil fuel electricity capacity and meeting 50% of its energy capacity from renewables by 2030. Achieving them will require massive expansion of solar, wind, batteries, and electric vehicles (EVs), all reliant on critical minerals, making secure supply essential. As a result, access to critical minerals is no longer just a supply chain concern, but central to energy security, industrial competitiveness, and the pace of the clean energy transition.

In this context, international trade plays a pivotal role. Given the long gestation periods associated with domestic mining, often exceeding a decade, and the time required to develop processing



and refining ecosystems, imports will remain an important means of meeting near-to medium-term demand. Securing stable, affordable, and diversified sources of critical minerals through trade partnerships is therefore essential to avoid supply bottlenecks that could delay project deployment or increase costs.

However, the global landscape for critical minerals is becoming increasingly complex. Demand is expected to more than double by 2030, intensifying competition, even as geopolitical dynamics reshape supply chains. Concentration of mineral reserves and processing capacity in a few countries has heightened supply risks. At the same time, recent trends such as export restrictions, resource nationalism, and policies aimed at onshoring or friend-shoring supply chains, are fragmenting global markets. These developments could lead to price volatility, supply disruptions, and reduced availability for import-dependent countries like India.

Chile is India's largest critical minerals supplier by a wide margin, primarily for copper ore, accounting for 2,800,000 tonnes of imports, from financial year (FY) 2019 to FY2025. China and other countries like Belgium, Germany and Japan also emerge as systemically important suppliers, supplying a wider range of mineral compounds across cobalt, copper, graphite, lithium, and nickel value chains.

Of the 30 minerals deemed critical by the Government of India due to their economic importance and supply risk, this briefing note focuses on five minerals and their compounds for their relevance in renewable energy applications and technologies. These are **cobalt**, **copper**, **graphite**, **lithium**, and **nickel**. India is currently 100% import dependent for lithium, cobalt and nickel.

The note builds on a 2024 report by the Institute for Energy Economics and Financial Analysis (IEEFA) '[India's hunt for critical minerals](#)', and expands the timeline to FY2025 to assess the developments and shifts that have taken place over the past year. Data on imports was collected from the [United Nations Comtrade Database](#) portal for the period of FY2019 to FY2025. The charts illustrate total import value and volume for each year, while highlighting only the top three contributing source countries for each year.

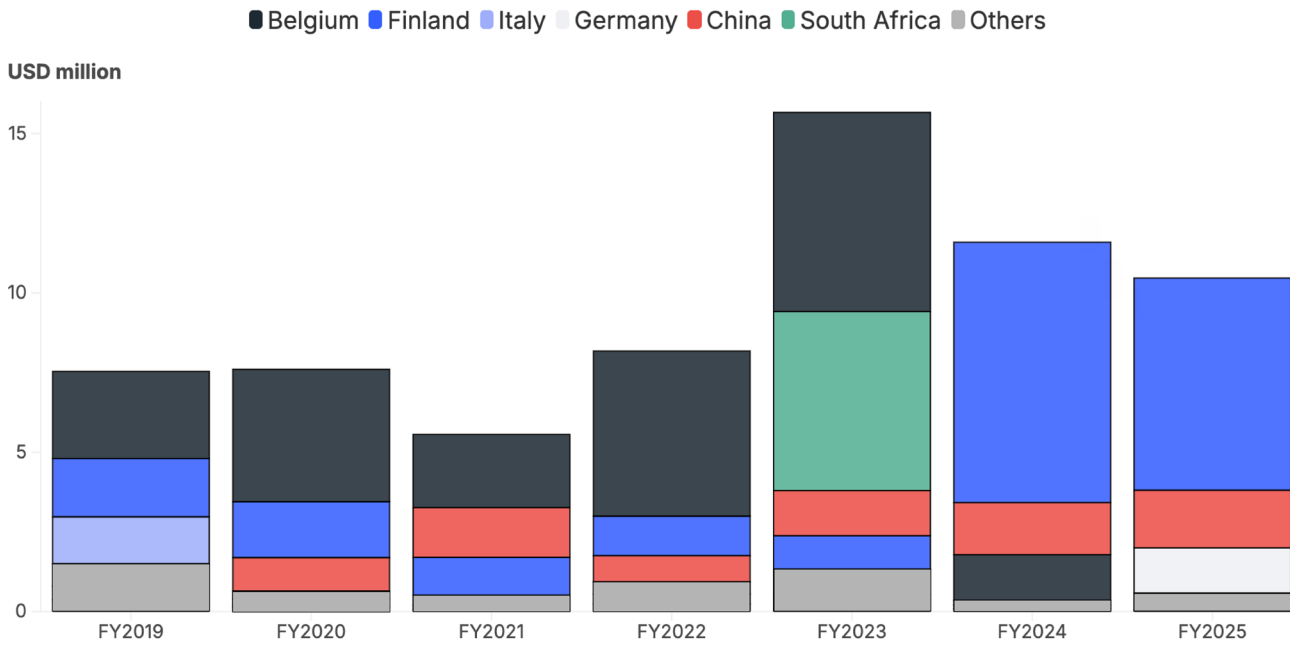
It also provides a perspective on trade dynamics, price fluctuations and market conditions that influence India's critical mineral supply chain.



1. Cobalt imports

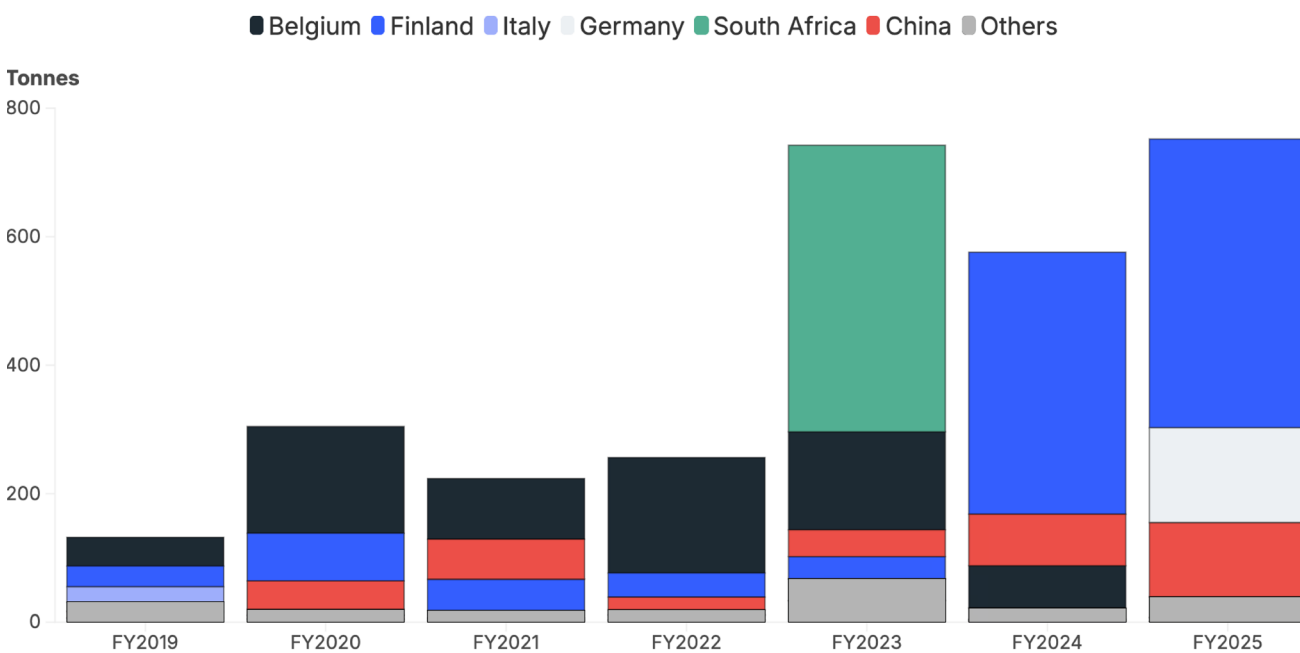
Cobalt is used in lithium-ion battery cathodes for electric vehicles (EVs) and renewable energy storage systems. Trade and supply-chain analysis, therefore, focuses on cobalt oxides and hydroxides, as these are used as catalysts and conductive material in battery production rather than raw cobalt metal.

Figure 1: Value of cobalt oxide and hydroxide imports — top countries



Source: UN Comtrade

Figure 2: Quantity of cobalt oxide and hydroxide imports — top countries



Source: UN Comtrade



Cobalt oxide and hydroxide trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> Finland (59.77%), Germany (19.61%), and China (15.36%). Others: Belgium (4.29%), Morocco (0.13%), and rest of the world (0.83%).
India's imports (FY2025)	<ul style="list-style-type: none"> Total import value: USD10 million (INR904 million). Total volume: 751 tonnes of cobalt oxides and hydroxides. Year-on-year change in volume from FY2024 to FY2025: 30.63%
Variations from FY2024	<ul style="list-style-type: none"> Imports from Germany increased in FY2025. In the future this import might increase because in January 2026, the two countries signed a Joint Declaration of Intent for cooperation in opportunities in the areas of exploration, research and development (R&D), processing and recycling of critical minerals. Currently, cobalt oxides and hydroxides are used in lithium-ion battery cathodes (EVs and energy storage), as well as in ceramic and glass pigments, and chemical catalysts. The spike in cobalt hydroxide imports from South Africa in FY2023 can possibly be attributed to severe flooding in Durban, a key export hub for cobalt from the Democratic Republic of the Congo (DRC). The disruption affected logistics chains including those linked to Glencore (the world's largest cobalt producer), leading to force majeure declarations and temporary reallocation of cargoes. This resulted in short-term trade diversion and inventory movements being recorded as exports from South Africa. The subsequent decline to negligible levels reflects a reversion to established supply chains, indicating that the spike was likely logistical rather than structural in nature.
Role of top supplying country	<ul style="list-style-type: none"> Finland holds 7.2% share of global refined cobalt production (2024). The EU has announced two strategic extraction projects in Finland under the Critical Raw Materials Act (CRMA). Companies like Umicore (Belgian-French) have expanded their refining and recycling facilities to Finland. This includes their processing facility at Kokkola's Industrial Park, the largest cobalt refining plant outside China.
Global supply chain structure	<ul style="list-style-type: none"> ~70% of cobalt is mined in Congo. ~78.6% of cobalt processing and refining takes place in China.
Price trends	<ul style="list-style-type: none"> European cobalt metal prices have remained consistently lower than Chinese prices since late 2020 due to slower demand recovery. In FY2025, cobalt hydroxide prices remained under pressure because of oversupply from Congo (CMOC Group Ltd) and Indonesia.
Current scenario and outlook	<ul style="list-style-type: none"> Global cobalt demand exceeded 200,000 tonnes for the first time in 2024. 76% of demand driven by battery applications. EVs account for 61% of total market growth indicating strong future demand, with some vulnerabilities to EV adoption and technology shifts. Congo banned cobalt exports in early 2025, later replacing the ban with export quotas in October 2025, which will impact global supply chains and prices. Geopolitics will continue to shape market stability as the US, China and the EU pursue supply security.

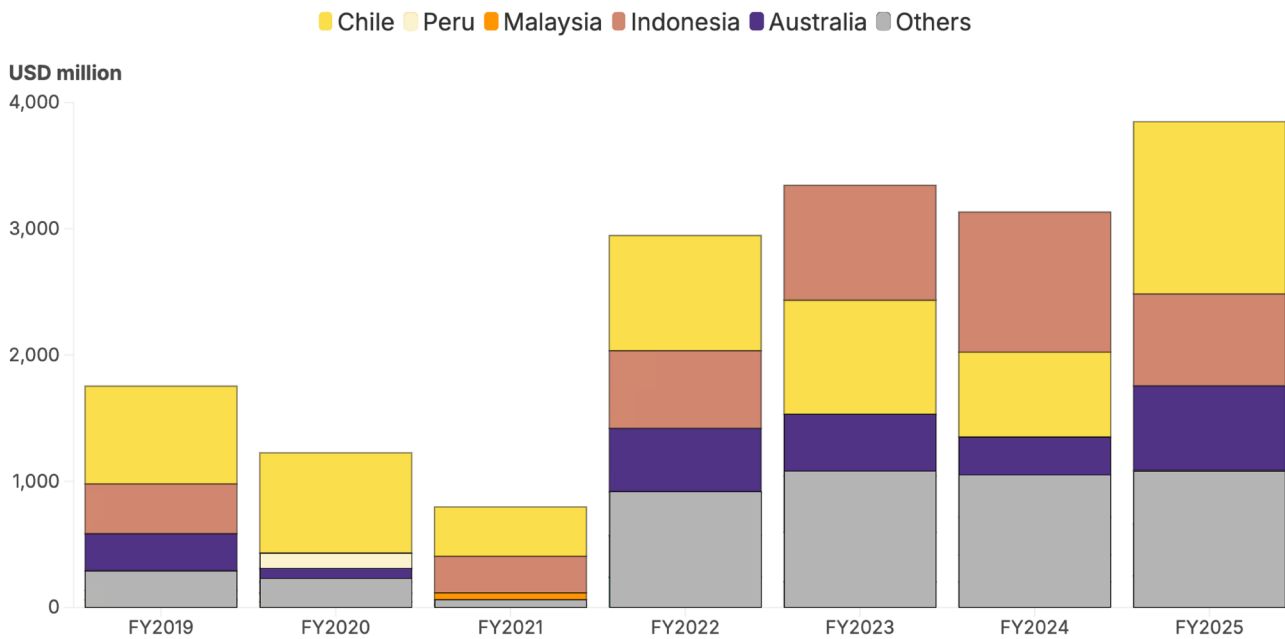


2. Copper imports

Copper is critical to the energy transition because of its role in power generation, transmission, and electrification. India imports **copper ores and concentrates** since it has domestic capacity for smelting and refining; **copper oxides and hydroxides** for emerging uses in solar cells semiconductors, and battery technologies; and **copper cathodes** for wiring and equipment in solar and wind systems.

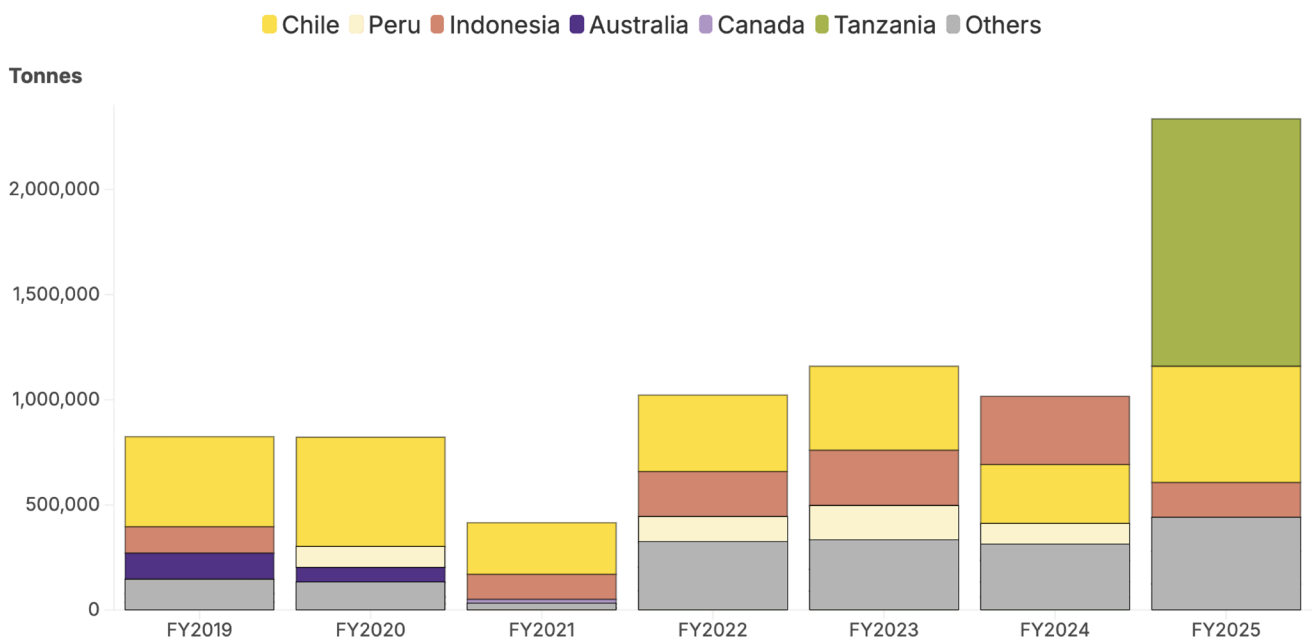
2.1 Copper ore and concentrates

Figure 3: Value of copper ores and concentrates imports — top countries



Source: UN Comtrade

Figure 4: Quantity of copper ores and concentrates imports — top countries



Source: UN Comtrade



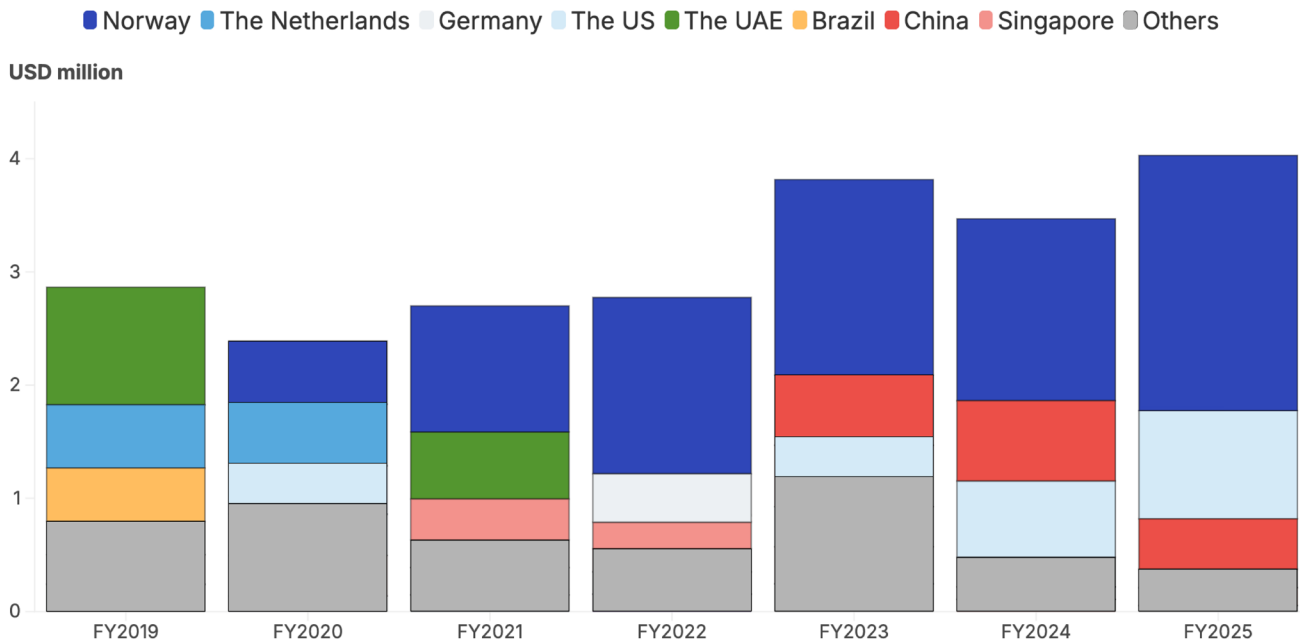
Copper ore and concentrates trade dynamics

Major partners in FY2025	<ul style="list-style-type: none"> Tanzania (50.34%), Chile (23.72%), and Indonesia (7.11%). Others: Peru (6.83%), Australia (6.68%), and rest of the world (5.31%).
India's imports (FY2025)	<ul style="list-style-type: none"> Total import value: USD3.8 billion (INR344 billion). Total volume: 2,300,000 tonnes of copper ores and concentrates. Year-on-year change in volume from FY2024 to FY2025: 129.80%
Variations from FY2024	<ul style="list-style-type: none"> The presence of Tanzania as a major import partner is an unprecedented change. The country is endowed with minerals such as copper, nickel, cobalt, and graphite, and is positioning itself as a key supplier in the critical minerals sector. While no agreement has been formalised between the countries, the Indian government has expressed interest in conducting exploration and mining in the country.
Role of top supplying country	<ul style="list-style-type: none"> Chile is home to 19% of global copper reserves, the largest share globally. The mining industry in Chile contributes ~14% of the country's gross domestic product (GDP) where copper makes up a large part of the total volume of national export. It also dominates in global copper mining with a 23% share in total output.
Global supply chain structure	<ul style="list-style-type: none"> Top import origins are also among the leaders in copper mine production globally. After Chile, Peru and Australia have 12% and 10% of global copper reserves, respectively. Peru (12%) and China (8%) also lead in global copper mining. In total, Latin America accounts for about 39% of global copper mine production.
Price trends	<ul style="list-style-type: none"> For India, increase in demand and insufficient reserves is a point of concern when it comes to pricing. Copper miners pay treatment and refining charges to smelters. These prices are currently low due to upstream supply tightness, meaning that smelters will likely charge higher prices for refined material to make up the cost. Mining accounts for 50-60% of production costs for copper, while processing accounts for 30-50%. For the next two years, raw material shortages will keep smelter fees low, but once new and expanded mines come online, supply will increase and market tightness will ease. Currently, LME (London Metal Exchange) copper prices are about USD8,500–10,500/t (INR768,000–INR950,000/t) and expected to rise.
Current scenario and outlook	<ul style="list-style-type: none"> Global copper demand is projected to double, rising from ~2,80,00,000 tonnes today to ~4,20,00,000 tonnes by 2040. This demand is driven by electrification, power grids, EVs, renewables, and core economic activity. India has emerged as a demand center and is projected to be one of the largest sources of refined copper by 2035. There is a need to balance domestic production and import of copper as demand scales up. India's domestic demand is projected to reach 88,00,000–98,00,000 tonnes by 2047 building on an already significant import dependence reflected in copper imports of USD14.45 billion (INR1.3 trillion) in FY2025. Without commensurate expansion in domestic production, higher demand will translate into larger import bills, underscoring the need for functional reserves, alongside strong price and quality control mechanisms. With some capacity for copper refining, Indian industry is also expanding towards international exploration. Indian Adani group, for example, announced an agreement to explore copper projects with Chilean miner Codelco in late 2025.



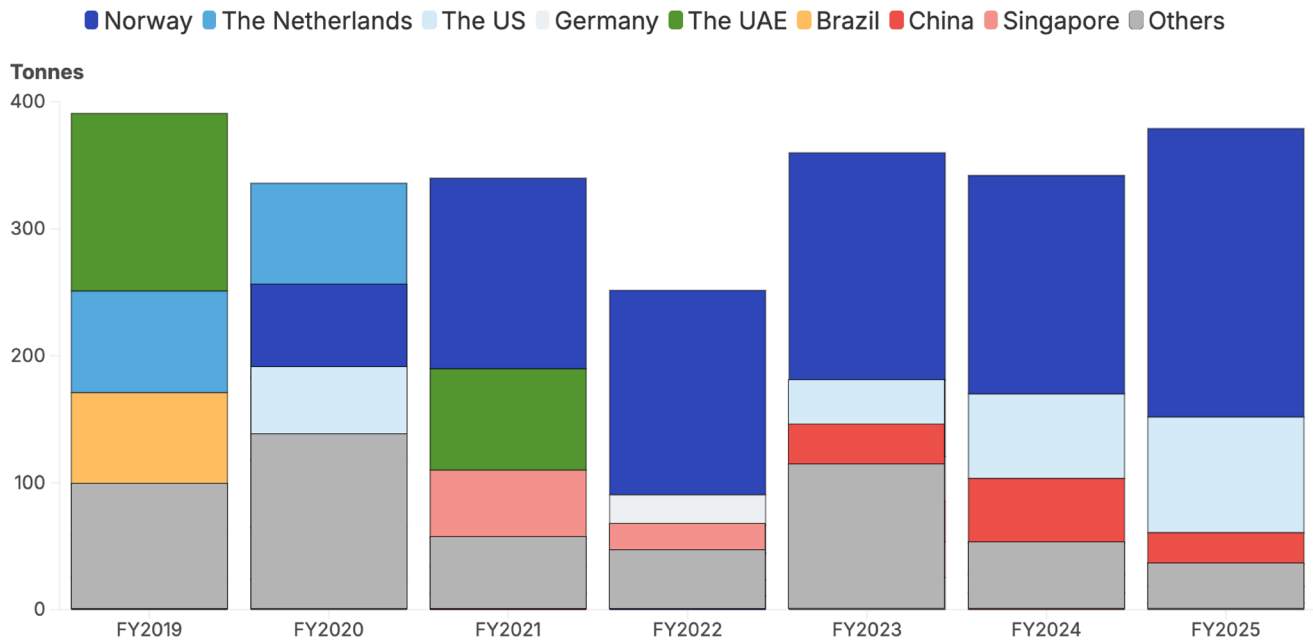
2.2 Copper oxides and hydroxides

Figure 5: Value of copper oxides and hydroxides imports — top countries



Source: UN Comtrade

Figure 6: Quantity of copper oxides and hydroxides imports — top countries



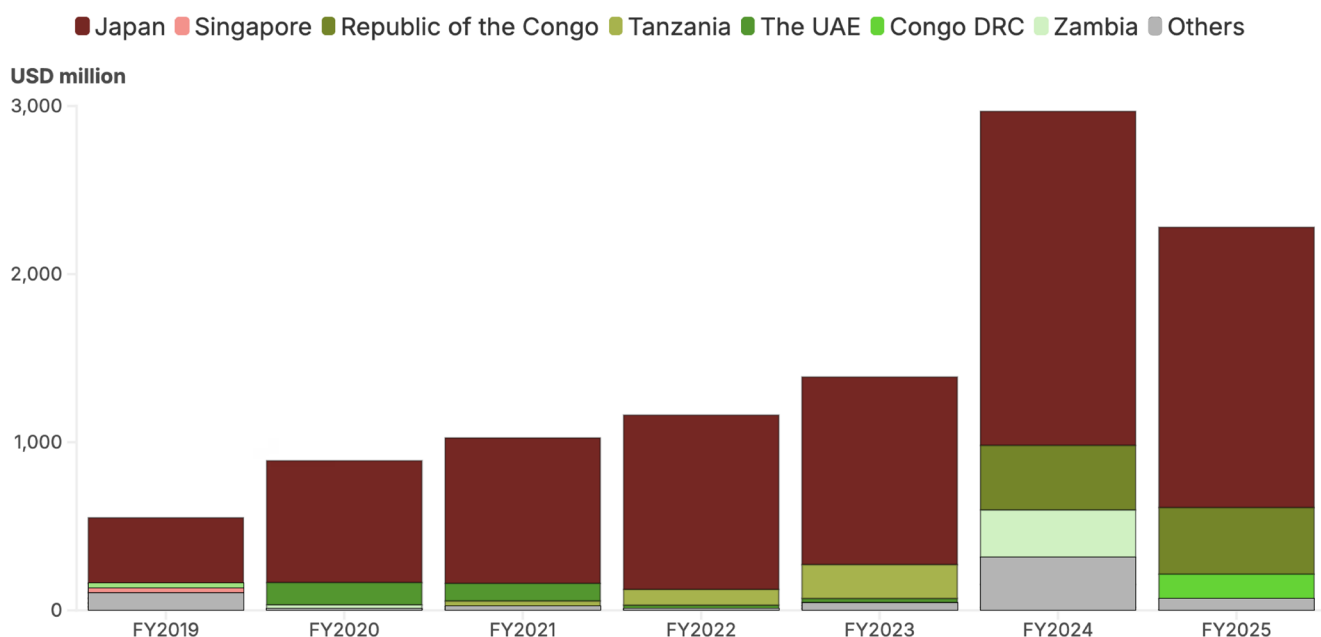
Source: UN Comtrade



Copper oxides and hydroxides trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> Norway (59.91%), the US (24.07%), and China (6.41%). Others: Singapore (4.75%), Germany (1.38%), and rest of the world (3.47%).
India's imports (FY2025)	<ul style="list-style-type: none"> Total import value: USD4 million (INR361 million) Total volume: 378 tonnes of copper oxides and hydroxides. Year-on-year change in volume from FY2024 to FY2025: 10.80%
Variations from FY2024	<ul style="list-style-type: none"> India has seen a steady increase of imports from the US, especially since it joined the Mineral Security Partnership in 2023.
Role of top supplying country	<ul style="list-style-type: none"> With Norway being a key import partner, companies like NORDOX are significant players as producers and exporters of copper oxides.
Global supply chain structure	<ul style="list-style-type: none"> The EU, which owns 20% of global refined copper production through firms like Aurubis and Glencore; and the US, which owns over 10% of refined copper production.
Current scenario and outlook	<ul style="list-style-type: none"> Rising concerns for India include the falling grade of copper and zero duty copper imports eroding India's domestic smelters and downstream manufacturing sector. Though the country has 12,85,000 tonnes of smelting and refining capacity, with further expansion expected, this might not be sufficient to meet India's growing needs. Further, it remains to be seen how tariffs imposed by the US will impact copper trade between the countries.

2.3 Copper cathodes

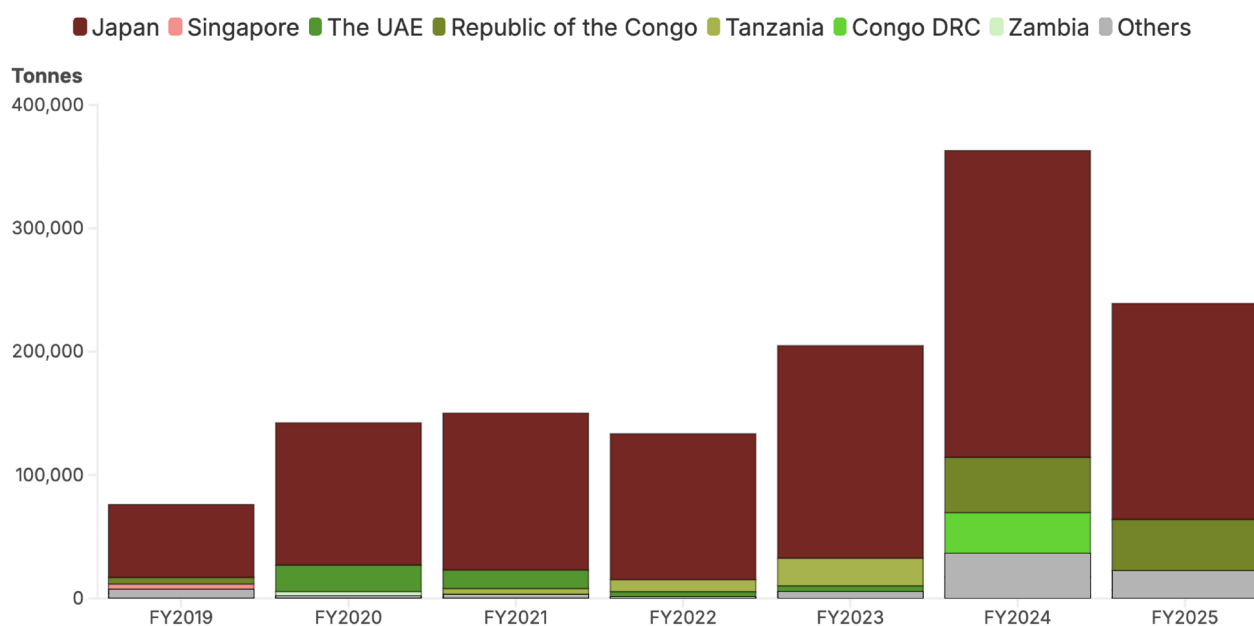
Figure 7: Value of copper cathodes imports — top countries



Source: UN Comtrade



Figure 8: Quantity of copper cathodes imports — top countries



Source: UN Comtrade

Copper cathodes trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> Japan (73.29%), Republic of Congo (17.32%), and Congo DRC (6.43%). Others: Zambia (2.89%), the Philippines (0.04%), and rest of the world (0.03%).
India's imports (FY2025)	<ul style="list-style-type: none"> Total import value: USD2.3 billion (INR208 billion) Total volume: 240,000 tonnes of copper cathodes. Year-on-year change in volume from FY2024 to FY2025: -34.12%
Variations from FY2024	<ul style="list-style-type: none"> Overall import values and quantities have decreased from FY2024, likely due to the aforementioned supply constraints, high prices, and concerns about copper quality. Copper cathodes typically have a purity level of 96-99.99%, making them more sensitive to quality standards. In 2024, the Democratic Republic of Congo ranked as the second-largest refined copper producer, with 26,00,000 tonnes, accounting for 9% of total global output. India is actively engaging with the country to formalise an agreement to secure minerals like copper.
Role of top supplying country	<ul style="list-style-type: none"> Japan remains a key partner for copper cathode production and export due to technological expertise harnessed by industry players like Sumitomo and Mitsubishi Materials. The country has a strong secondary smelting capacity, producing 7% of the global total smelted copper. India and Japan have a Comprehensive Economic Partnership Agreement (CEPA). Japan has become a major supplier of refined copper to India, accounting for roughly 45% of its total imports.
Global supply chain structure	<ul style="list-style-type: none"> Regionally, Asia contributed approximately 60% of global refined copper production. Chile ranked third globally in copper smelting and refining production in 2024.
Current scenario and outlook	<ul style="list-style-type: none"> To meet projected demand, India will need to add around 1,000,000 tonnes of copper smelting and refining capacity every five years. Dominant players in Indian refining currently comprise of Hindalco, Vedanta and more recently the Adani enterprise's subsidiary, Kutch Copper. These companies are also exploring copper investments in countries like Peru, Zambia and Congo.

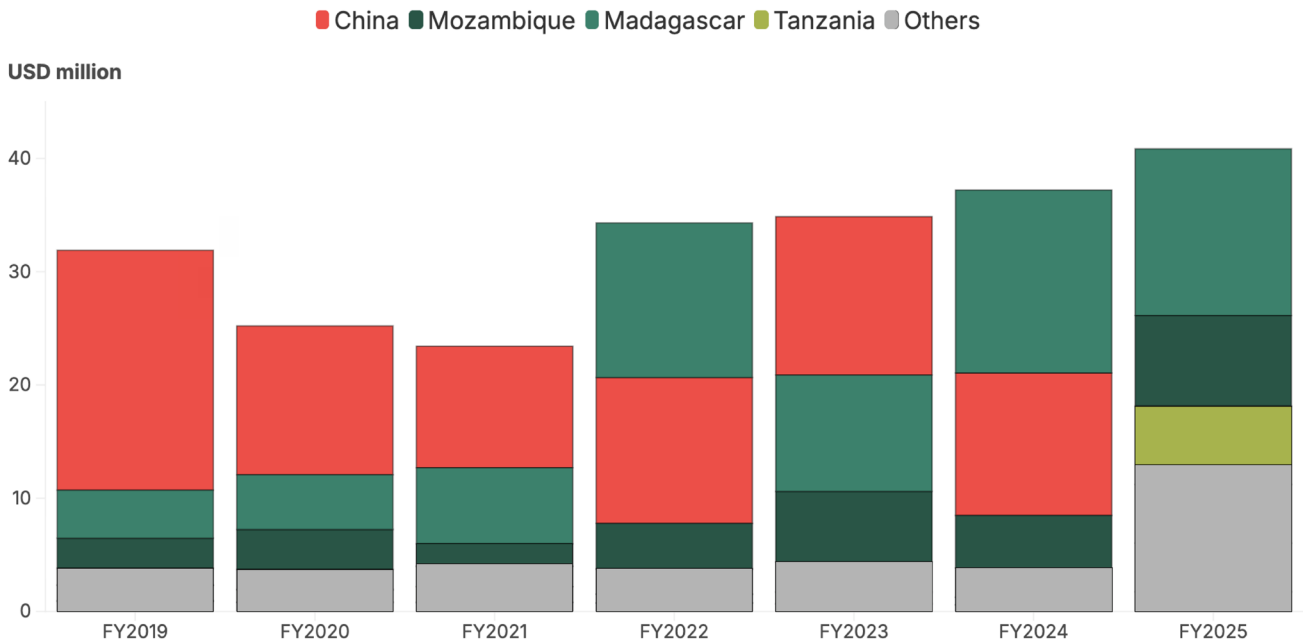


3. Graphite imports

Natural flake graphite and synthetic (artificial) graphite are both used as anode materials in lithium-ion batteries that support EVs and grid-scale energy storage. In these applications, graphite provides high electrical conductivity, stability, and charge-holding capacity.

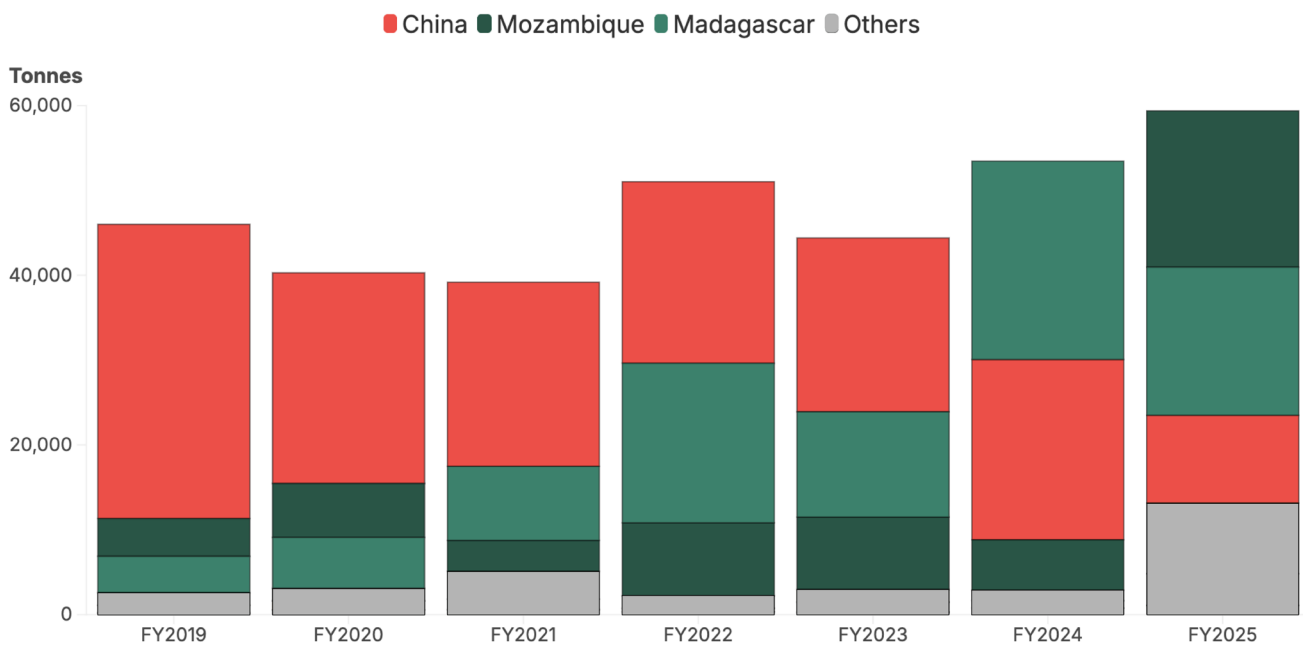
3.1 Natural graphite

Figure 9: Value of natural graphite imports — top countries



Source: UN Comtrade

Figure 10: Quantity of natural graphite imports — top countries



Source: UN Comtrade

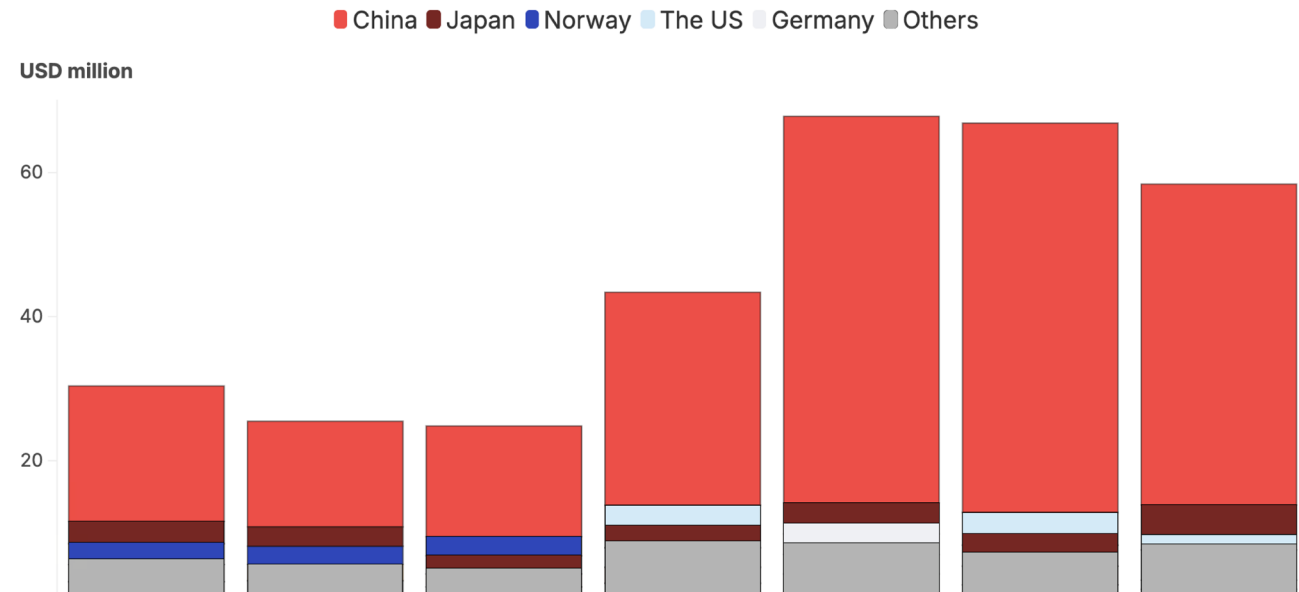


Natural graphite trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> • Mozambique (31.04%), Madagascar (29.38%), and China (17.44%). Others: Tanzania (14.01%), Malaysia (1.84%), and rest of the world (6.29%).
India's imports (FY2025)	<ul style="list-style-type: none"> • Total import value: USD40 million (INR3.61 billion). • Total volume: 60,000 tonnes of natural graphite. • Year-on-year change in volume from FY2024 to FY2025: 11.07%
Variations from FY2024	<ul style="list-style-type: none"> • China's graphite sector grew by 7% in 2024, whereas African production dropped by 30% due to civil unrest in Mozambique and logistical and administrative issues in Tanzania. • However, the imposition of export curbs by China have likely prompted India to source graphite from alternative countries.
Role of top supplying country	<ul style="list-style-type: none"> • India's key import partners such as Madagascar and Mozambique are also top graphite producing countries. Brazil and Tanzania have some of the largest reserves, with China also being a top refining country.
Global supply chain structure	<ul style="list-style-type: none"> • China produces ~70% of global natural graphite, making it the dominant upstream supplier. • On the downstream side, China also leads in global anode manufacturing, with control of 90% of the world's capacity. • Brazil, Mozambique, and Madagascar are the next-largest producers, but their output remains too small to significantly dilute China's market share. • New graphite mining projects in East Africa, North America, and Australia are under development, but most are years away from commercial production due to permission, financing, and infrastructure bottlenecks.
Price trends	<ul style="list-style-type: none"> • Graphite prices are primarily set in China. Flake graphite is a naturally occurring form of graphite with plate-like particles, and pricing is set by flake size and purity since larger, purer flakes are required for high-value applications such as lithium-ion batteries. Graphite prices have been declining since 2023. • Graphite price fell from USD2,000–2,200 (INR187,000-INR205,000) per tonne in June 2023 to USD1,774 (INR165,000) per tonne in January 2024, and further to USD1,271 (INR118,000) per tonne by October 2025. This decline has been driven by an oversupplied market, characterised by expanding production, high inventory levels, and weaker downstream demand in 2024, alongside a structural shift toward synthetic graphite, which has reduced demand for natural graphite. • Despite a growing role in trade tensions, graphite prices in China continue to be driven by underlying supply-demand dynamics, particularly oversupply and weak demand, rather than geopolitical factors. Meanwhile, smaller markets outside China may exhibit greater volatility due to speculative activity, but these have limited price-setting influence globally.
Current scenario and outlook	<ul style="list-style-type: none"> • Though India is not completely dependent on imports for graphite, it still imports over 60% of its graphite needs. • Geopolitical actions have also affected trade. India ended anti-dumping duties on graphite electrodes from China in late 2018. Additionally, US sanctions on Iran put a halt to Indian exports to the country, a key export destination for India. Iran's exposure to the sanctions affected export volumes for Indian graphite electrode producers. • China has imposed export controls on graphite since 2023, tightening supply globally. Imports from Europe and the US signal early efforts to diversify supply and build ex-Chinese value chains.



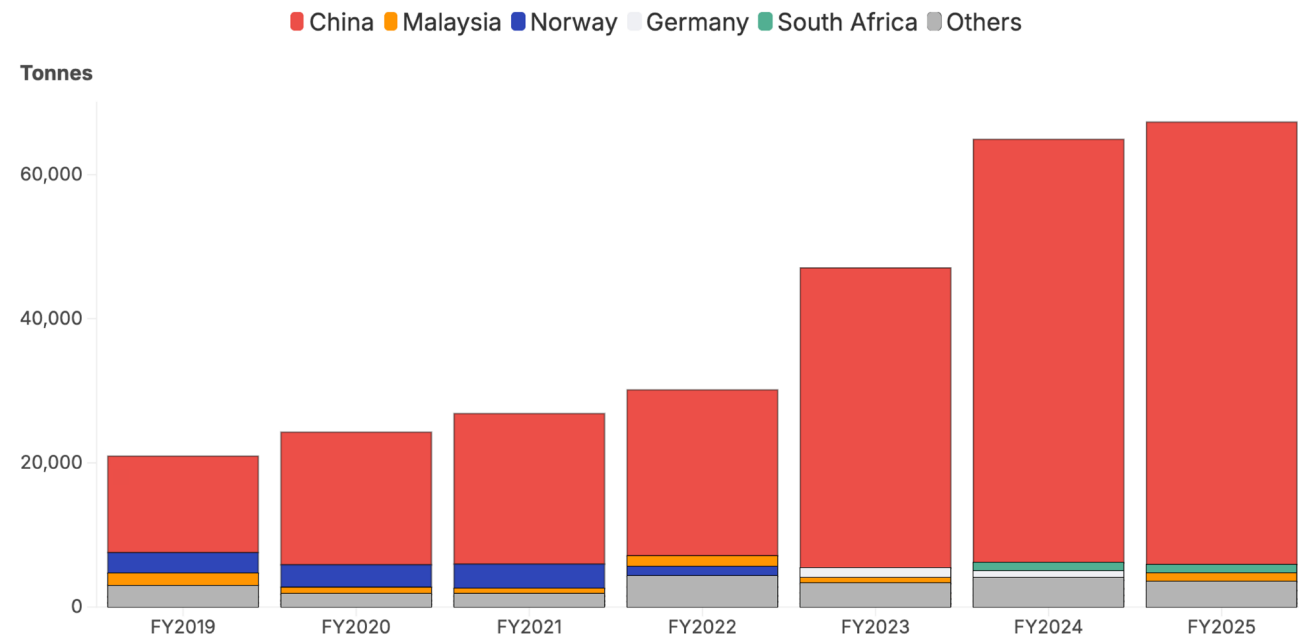
3.2 Synthetic graphite

Figure 11: Value of synthetic graphite imports — top countries



Source: UN Comtrade

Figure 12: Quantity of synthetic graphite imports — top countries



Source: UN Comtrade



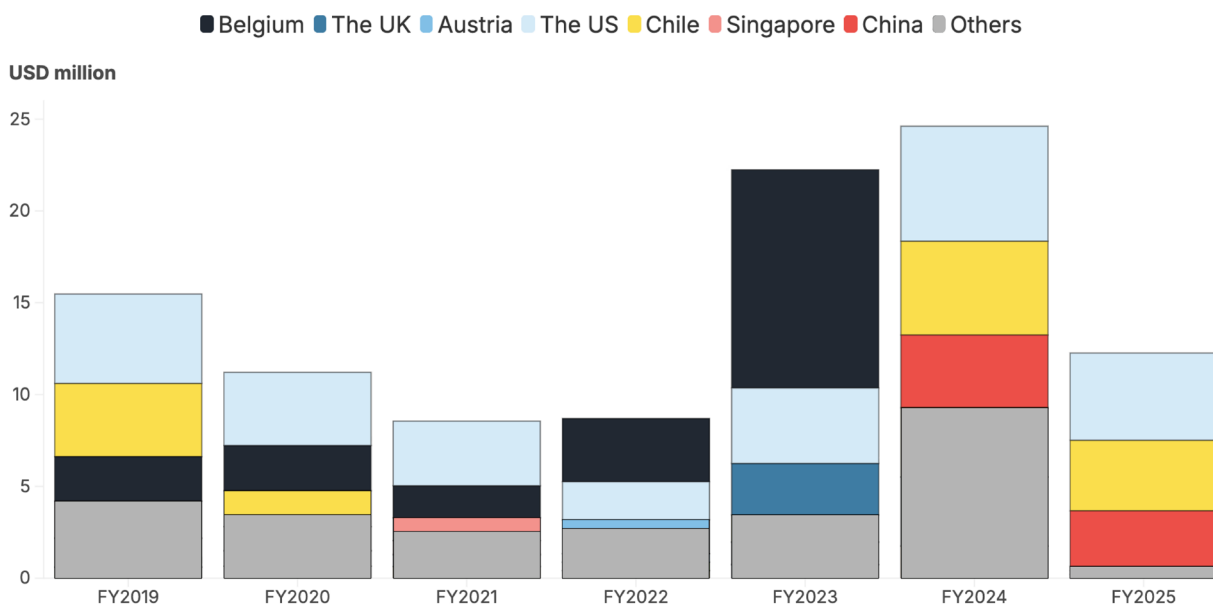
Synthetic graphite trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> China (91.26%), Malaysia (1.78%), and South Africa (1.78%). Others: Japan (0.84%), Germany (0.79%), and rest of the world (3.54%).
India's imports (FY2025)	<ul style="list-style-type: none"> Total import value: USD58 million (INR5.24 billion). Total volume: 57,000 tonnes of synthetic graphite. Year-on-year change in volume from FY2024 to FY2025: 3.69%
Global supply chain structure	<ul style="list-style-type: none"> China controls 80% of global synthetic graphite supply. Synthetic graphite is <u>priced lower</u>, more resilient, more in supply and performs more efficiently than its natural counterpart. Natural graphite prices have fallen much more sharply than synthetic graphite prices, reflecting oversupply, export frictions, and weaker demand. Synthetic graphite prices have also declined, but more gradually and with less volatility.
Current scenario and outlook	<ul style="list-style-type: none"> China's export controls on natural graphite have indirectly strengthened synthetic graphite's position. Synthetic graphite demand is holding up better despite a weak market, supported by rising anode production rates and higher utilisation among major producers, even as natural graphite markets remain oversupplied. The presence of European and American trade partners reflects an attempt to build overall graphite production and processing infrastructure for various applications, such as EV batteries.

4. Lithium imports

Lithium carbonate and lithium oxide and hydroxide are the main processed lithium compounds used to manufacture lithium-ion battery cathodes for EVs and energy storage systems. Changes in their trade, pricing, and supply directly reflect downstream battery demand and potential supply-chain risks.

4.1 Lithium carbonate

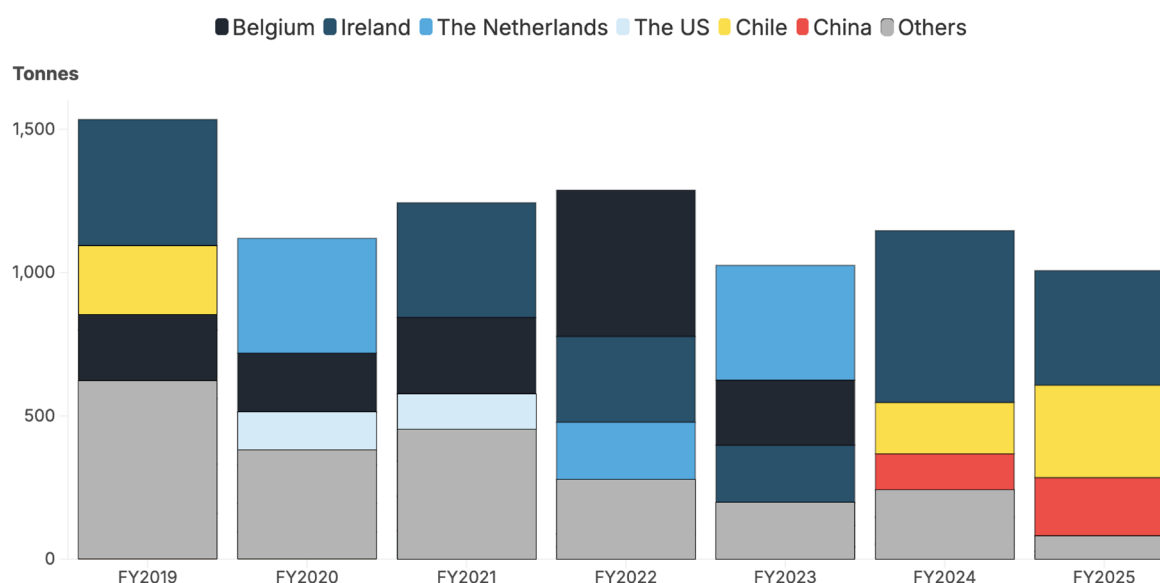
Figure 13: Value of lithium carbonate imports — top countries



Source: UN Comtrade



Figure 14: Quantity of lithium carbonate imports — top countries



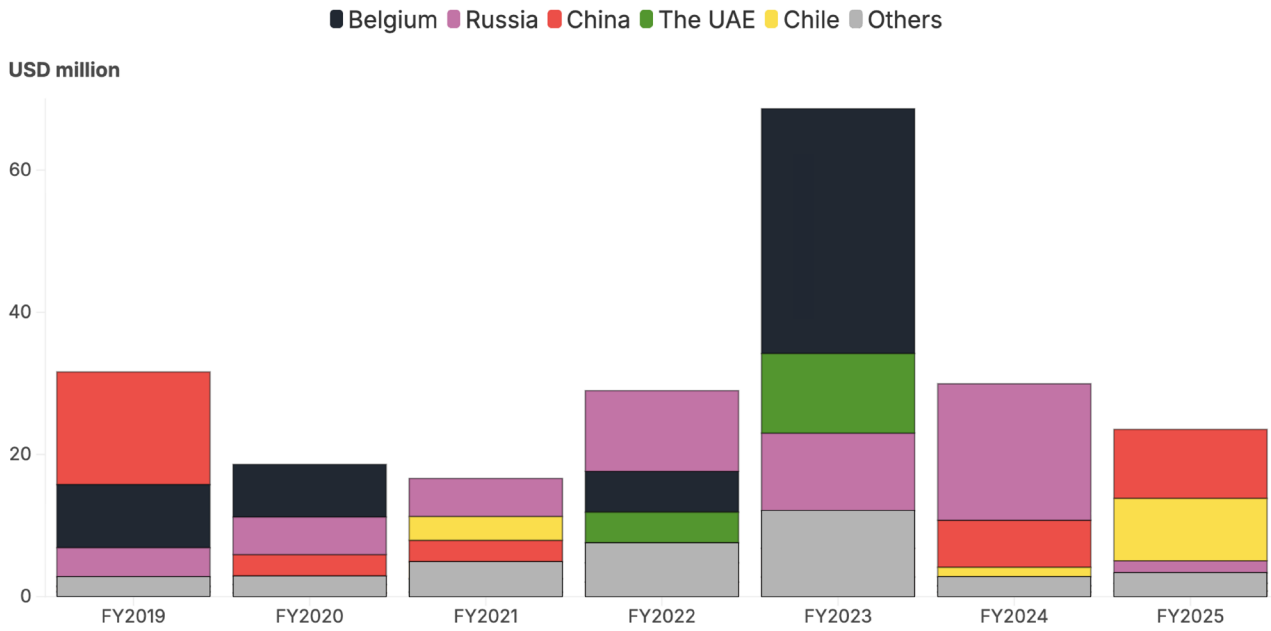
Source: UN Comtrade

Lithium carbonate trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> Ireland (39.73%), Chile (32.04%), and China (20.12%). Others: The US (5.42%), Germany (1.58%), and rest of the world (1.11%).
India's imports (FY2025)	<ul style="list-style-type: none"> Total import value: USD12 million (INR1 billion). Total volume: 1,000 tonnes of lithium carbonate. Year-on-year change in volume from FY2024 to FY2025: -12.16%
Variations from FY2024	<ul style="list-style-type: none"> Though the quantity of import remained relatively similar from FY2024 to FY2025, the value of the import has fallen by 50%. Lithium carbonate prices fell considerably in 2024, reducing import value. Global lithium demand has also fallen, reflected in slightly lowered import quantity.
Role of top supplying country	<ul style="list-style-type: none"> China produces 70% of global lithium chemicals. The Netherlands, Belgium and Ireland are likely trading hubs used to reroute lithium carbonate to India. The presence of Chile in recent years suggests a gradual diversification of India's sourcing strategy, potentially linked to efforts to build strategic partnerships amid ongoing free trade agreement discussions.
Global supply chain structure	<ul style="list-style-type: none"> The US owns 15% of lithium chemical production, offering an alternative trading partner for India. Chile and Germany have some of the largest resources of the mineral. However, there are no lithium carbonate futures contracts that are physically deliverable outside of China.
Price trends	<ul style="list-style-type: none"> Prices fell due to oversupply in the market, as a result of many new lithium projects coming online. Supply growth far outpaced demand growth. Inventories have built up across the supply chain, and buyers are not restocking at the rate expected.
Current scenario and outlook	<ul style="list-style-type: none"> The energy sector accounts for over 90% of lithium-ion battery demand. Germany and the EU have initiated various international agreements to diversify their supply chains, most recently with Canada in August 2025, which includes an memorandum of understanding (MoU) for sustainable lithium production. Although the initial diversification of imports might seem promising, there is a likelihood that scaling of imports to meet demand can skew the distribution of trading partners.



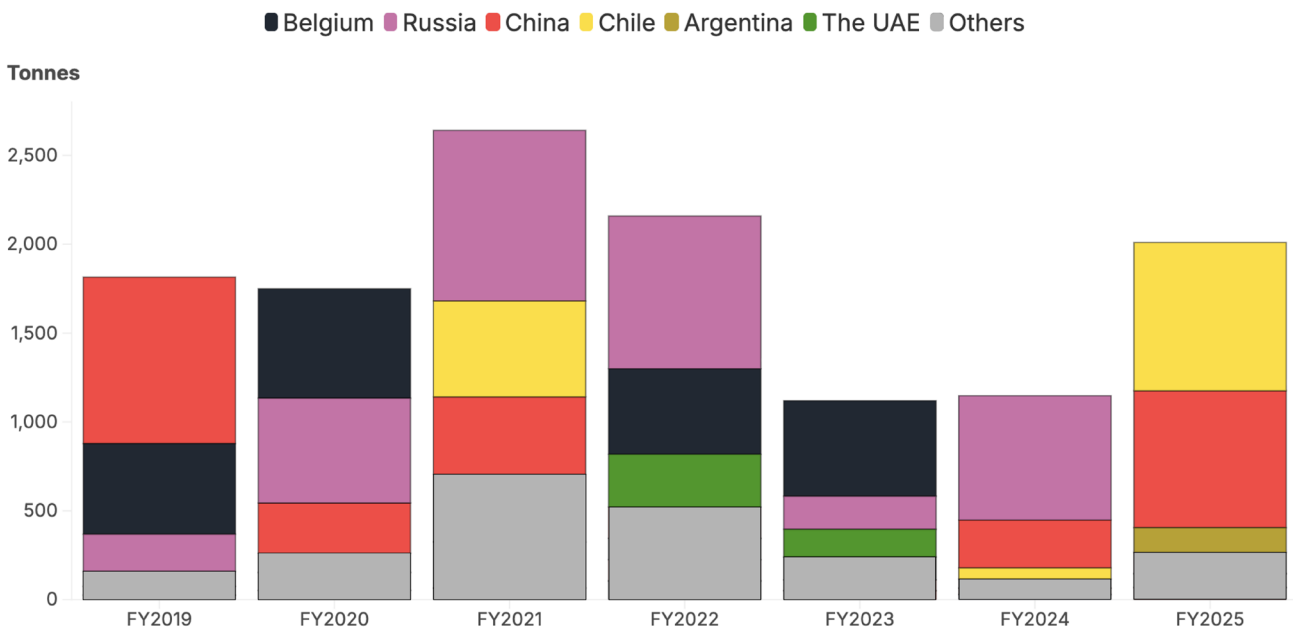
4.2 Lithium oxide and hydroxide

Figure 15: Value of lithium oxide and hydroxide imports — top countries



Source: UN Comtrade

Figure 16: Quantity of lithium oxide and hydroxide imports — top countries



Source: UN Comtrade



Lithium oxide and hydroxide trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> Chile (41.53%), China (38.31%), and Argentina (6.92%). Others: Russia (5.97%), Japan (3.38%), and rest of the world (3.89%).
India's imports (FY2025)	<ul style="list-style-type: none"> Total import value: USD23 million (INR2 billion) Total volume: 2,000 tonnes of lithium oxide and hydroxide. Year-on-year change in volume from FY2024 to FY2025: 75.19%
Variations from FY2024	<ul style="list-style-type: none"> Chile's imports to India have increased, and the two countries have been actively cooperating to expand their economic partnership.
Top supplying countries and supply chain	<ul style="list-style-type: none"> China, Chile and Argentina process lithium close to its extraction sites within the country. While Belgium and China have processing and production capacity, countries like Singapore and the Netherlands act as trading and rerouting hubs. Russia has announced its plans to scale and localise its battery production entirely. Russia is reported to have imported Chilean and Argentinian lithium and also have ties with Belgium as a supplier. With the Netherlands acting as a port, there are also reports that the country could be rerouting lithium from Russia to India.
Price trends	<ul style="list-style-type: none"> A weak price trend continues for lithium hydroxide due to lithium carbonate prices falling. Sustained high supply has kept the hydroxide market oversupplied, and inventories full.
Current scenario and outlook	<ul style="list-style-type: none"> Japan and South Korea's new extraction projects have expanded hydroxide production. India is negotiating and exploring country-level and industry-level partnerships with Japan and South Korea. A continued downward trend is expected for lithium hydroxide demand. This is due to the US shifting to lithium iron phosphate (LFP) batteries, and the EU implementing anti-subsidy policies.

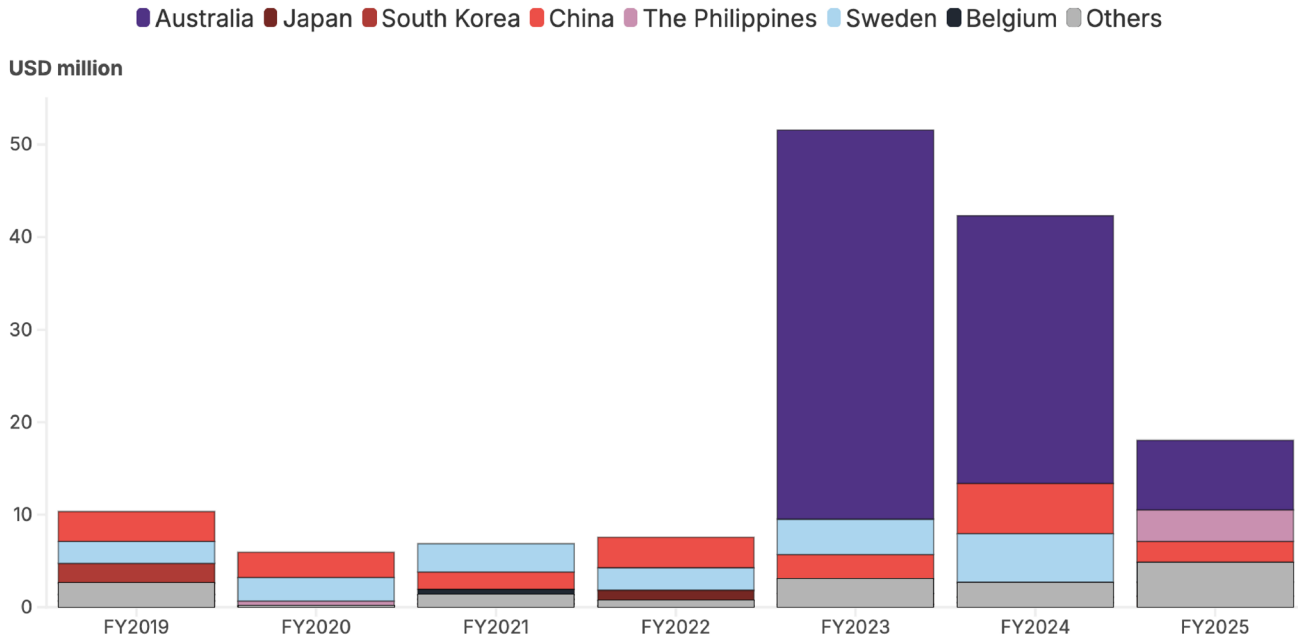


5. Nickel imports

Nickel oxides and hydroxides, and nickel sulphate are key processed forms of nickel used in rechargeable battery cathodes (lithium-ion, and other rechargeable nickel-based batteries) for EVs and grid-scale energy storage.

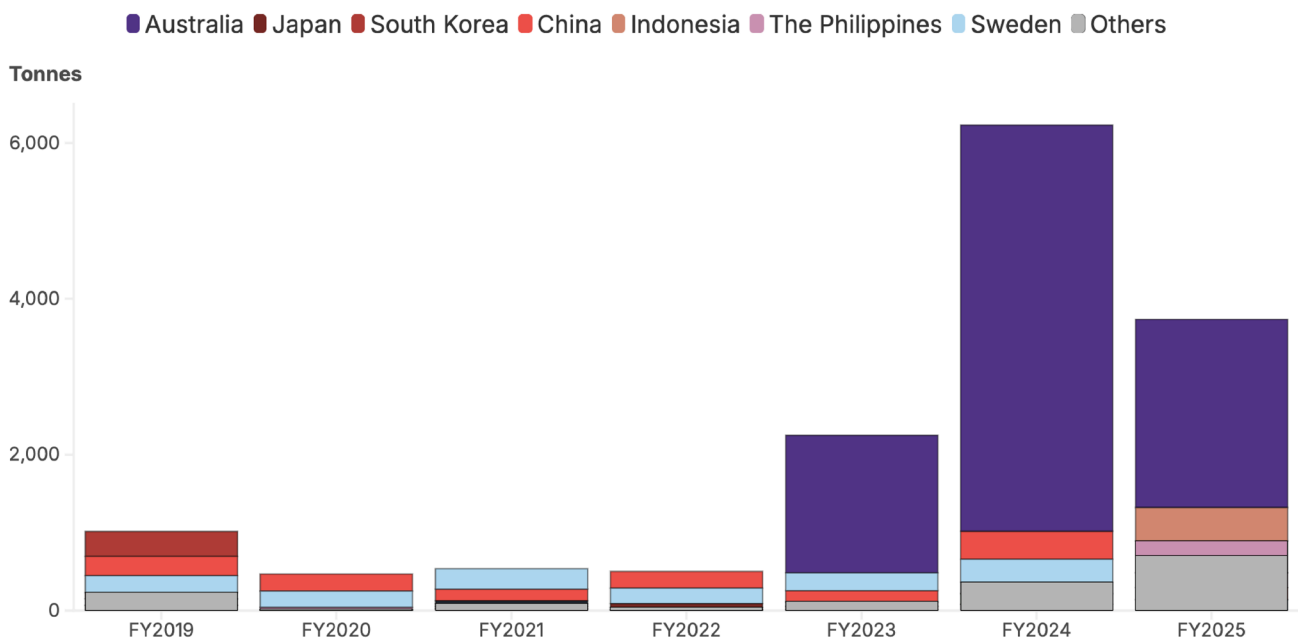
5.1 Nickel oxides and hydroxides

Figure 17: Value of nickel oxides and hydroxides imports — top countries



Source: UN Comtrade

Figure 18: Quantity of nickel oxides and hydroxides imports — top countries



Source: UN Comtrade

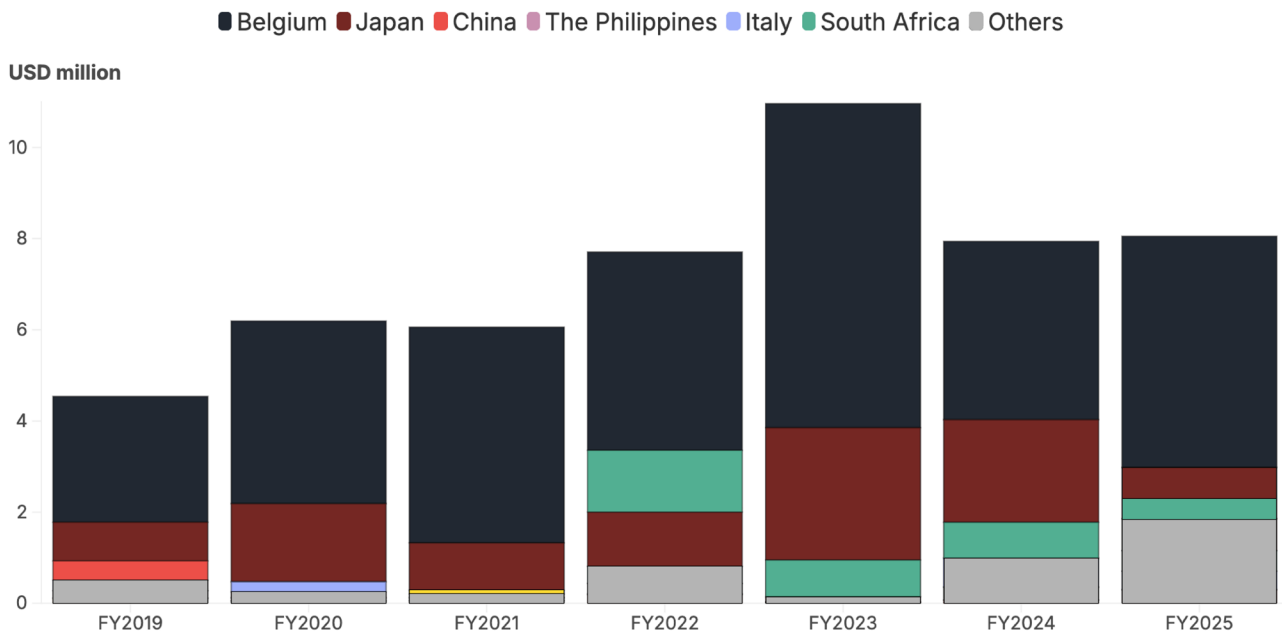


Nickel oxides and hydroxides trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> • Australia (64.69%), Indonesia (11.45%), and the Philippines (5.15%). Others - China (4.17%), Sweden (3.69%), and rest of the world (10.84%).
India's imports (FY2025)	<ul style="list-style-type: none"> • Total import value: USD18 million (INR1.62 billion). • Total volume: 3,700 tonnes of nickel oxides and hydroxides. • Year-on-year change in volume from FY2024 to FY2025: -40.02%
Variations from FY2024	<ul style="list-style-type: none"> • Nickel oxide and hydroxide imports from Australia increased significantly after 2022. However, Australian sales weakened in 2024 due to low prices, expanding Indonesian supply, and subduing global industrial activity despite growing EV and stainless-steel demand. This is reflected in India's imports as well.
Role of top supplying country	<ul style="list-style-type: none"> • Australia accounts for 5% of global production. • The Australia-India Economic Cooperation and Trade Agreement (ECTA) was initiated in 2022, and both nations have participated in evolving this partnership.
Global supply chain structure	<ul style="list-style-type: none"> • High purity Class 1 nickel is used for battery cathodes, while Class 2 nickel is used for stainless steel industry applications. The former is largely sourced from Australia, Russia and Canada, while the latter comes mainly from the Philippines, Indonesia and New Caledonia.
Price trends	<ul style="list-style-type: none"> • Nickel sulphate prices were affected by Covid-19 in 2020 and also rose significantly in 2022 due to inventories depleting and Russian nickel no longer being accessible. • The Russian invasion of Ukraine massively spiked prices, after which prices began to moderate in 2023. • Indonesian supply of Nickel has gone up. This has decreased prices and, 2024 onwards, prices were low as a result of the protectionist export regulations enacted on nickel ore.
Current scenario and outlook	<ul style="list-style-type: none"> • Russia's invasion of Ukraine and subsequent fear of sanctions of the mineral in February 2022 created anxiety over its supply as the country was a key exporter of Class 1 (battery grade) nickel to Europe. • Although India was not directly reliant on Russia for nickel imports, global supply disruptions and trade diversions highlighted the risks of concentration. • In 2026, Australia and India are looking to negotiate a Comprehensive Economic Cooperation Agreement (CECA) to expand strategic collaboration across a range of critical minerals.



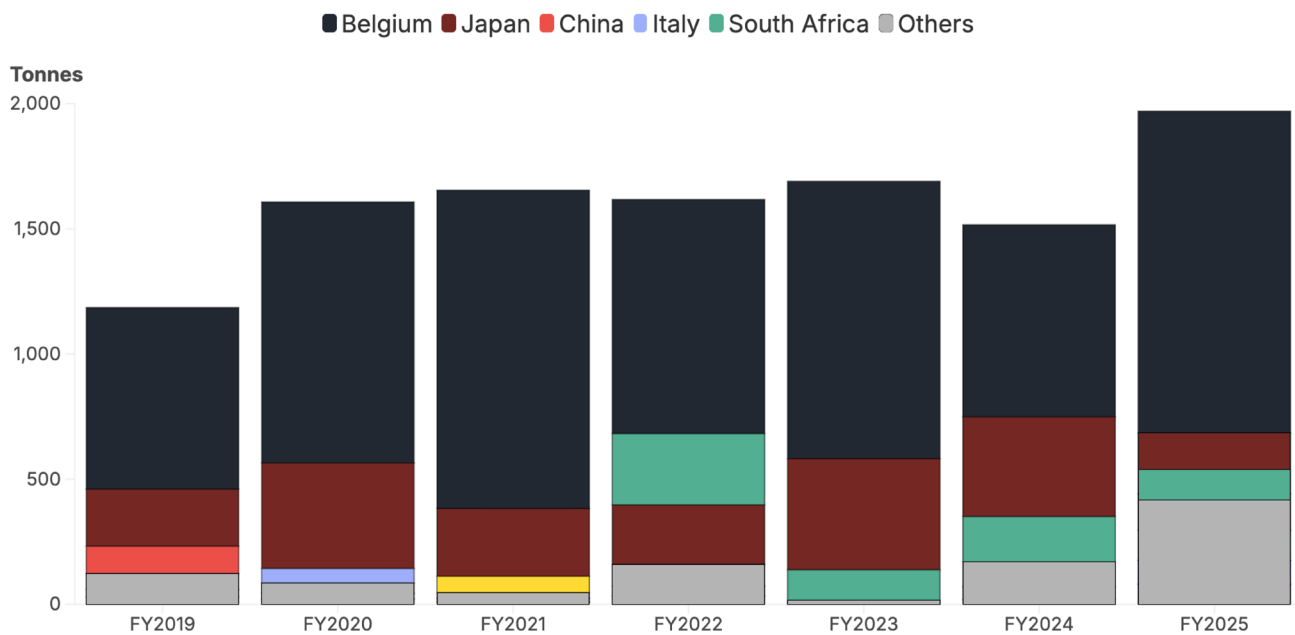
5.2 Nickel sulphates

Figure 19: Value of nickel sulphate imports — top countries



Source: UN Comtrade

Figure 20: Quantity of nickel sulphate imports — top countries



Source: UN Comtrade



Nickel sulphates trade dynamics	
Major partners in FY2025	<ul style="list-style-type: none"> Belgium (65.27%), Japan (7.41%), and South Africa (6.11%). Others: Finland (4.87%), South Korea (4.06%), and rest of the world (12.28%).
India's imports (FY2025)	<ul style="list-style-type: none"> Total import value: USD8 million (INR722 million). Total volume: 2,000 tonnes of nickel sulphates. Year-on-year change in volume from FY2024 to FY2025: 29.94%
Variations from FY2024	<ul style="list-style-type: none"> Japanese companies Sumitomo and Pacific Metals Ltd. (PAMCO) have capped output of ferronickel — from which nickel sulphates are derived. This is a response to weak prices and depressed market conditions, reflecting in lower imports to India.
Role of top supplying countries	<ul style="list-style-type: none"> Belgium and Finland produce and export nickel sulphates through companies Umicore and Terrafame. Japan produces nickel sulphates via the Sumitomo Harima Refinery.
Global supply chain structure	<ul style="list-style-type: none"> The top countries that serve as import partners are processing hubs, whereas the source material for nickel sulphates is primarily found in Australia, Canada, China and Russia.
Current scenario and outlook	<ul style="list-style-type: none"> Over time, as seen with cobalt, nickel batteries are to become the primary driver for demand, influenced by the countries that have control over nickel mining and production. Indian companies like Vedanta have called for the removal of import taxes from Japan and South Korea to ease the import of nickel sulphates into the country to help India's nascent EV industry.

Conclusion

The analysis shows that India's imports of the assessed minerals and their compounds are concentrated, underscoring significant supply risks and the importance of diversification to enhance supply security.

India is already making efforts to achieve this through diplomacy, trade and international cooperation. Its [approach to partnerships](#) spans both bilateral and multilateral, varying in scope and depth. Countries like Australia and Japan are relatively mature partners in this space, with tangible outcomes including joint ventures, secured supply, and investment linkages. India also has evolving critical mineral-focused relationships with the US, UK, EU, South Africa, Zambia, and Argentina, with more nascent and exploratory engagements with countries such as Chile, Congo, Mongolia, Morocco, Mozambique, and Saudi Arabia.

Each partner country brings distinct strengths across different segments of the critical minerals value chain. India's import partners are countries that are resource holders, refiners, and technology leaders. Building resilient supply chains, therefore, will require long-term, structured partnerships that will support mutually beneficial capacity building. To this end, India must move its engagements beyond government-to-government cooperation and operationalise deeper industry-level collaboration.

Apart from the push for diversification, India also needs to strengthen collaboration in skills development, joint exploration and mining, technology transfer, co-located processing facilities, scaled research and development, and recycling.



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The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

About the Authors

Kaira Rakheja

Kaira Rakheja is an Energy Analyst at IEEFA, where she is engaging in tracking and analysing India's progress towards its energy transition goals. Her role includes assessing the critical mineral supply chain within the country and analyzing the growth in renewable energy capacity and investments. Kaira is committed to understanding and prioritizing the resilience and the self-sufficiency of energy transition mechanisms within and outside the country. krakheja@ieefa.org

Saloni Sachdeva Michael

Saloni Sachdeva Michael is an Energy Specialist, India Clean Energy Transition at IEEFA. Saloni focuses on accelerating and sustaining the clean energy transition through policy, technology, and financial interventions. She has worked with national and several state level organisations including energy departments, distribution companies, think tanks and civil society organisations to understand the pulse of the Indian power sector. ssachdeva@ieefa.org

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