

China-India Brief

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Guest Column

India's Critical Minerals Strategy: Deciphering Between Two Dependencies on China

By Nishant Rajeev and Hu Xinyue

After three decades of continuous development and investment, China today **occupies** a central position in global supply chains of critical minerals. Beijing leverages this dominance, through economic statecraft, to punish or retaliate against states during times of geopolitical tension. Such moves have raised concerns in several capitals around the world, including in New Delhi.


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The *China-India Brief* is a monthly digest focusing on the relationship between Asia's two biggest powers. The Brief provides readers with a key summary of current news articles, reports, analyses, commentaries, and journal articles published in English on the China-India relationship. It features a Guest Column weighing in on key current issues in China-India relations.

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India has pursued both international and domestic measures to address this concern. During Secretary of State Marco Rubio's visit to India in May 2026, India and the US **signed** a bilateral Critical Minerals Framework. On the same day, the Quad also **launched** the Critical Minerals Initiative Framework. Domestically, the Indian government has embarked on an ambitious plan to address its critical minerals supply chain vulnerability to China, through the National Critical Minerals Mission (NCMM) launched in 2025.

China's dominance in critical minerals rests on both access to the resources and control over processing, creating two types of dependencies in critical minerals supply chains. Although India is proceeding coherently on the first dependency, it faces several challenges on addressing the second.

India's Critical Minerals Supply and the Challenge of Overdependence on China

Leveraging its dominance, China is increasingly imposing export controls on critical minerals and related products to obtain favourable geostrategic outcomes. For instance, in **April 2025**, China imposed export restrictions on rare earth magnets and related materials, in response to the US tariffs on Chinese goods. Although these measures may not have been aimed directly at India, they significantly disrupted Indian **electric vehicle manufacturing capacity**. One major Indian automaker was forced to **halve production** due to a shortage of rare earth magnets. Beijing may later **ease** or

suspend such export restrictions, as seen previously. Even so, they have heightened concerns in **India** over the risks associated with overdependence on China-dominated critical mineral supply chains.

India possesses notable critical mineral reserves, but the extent to which these deposits can reduce India's dependence on China remains uncertain. For instance, it holds substantial rare earth reserves of around **6.9** million tonnes, ranking **3rd** globally. However, most of these are **light rare earths**, rather than heavy rare earths, where Chinese supplies remain dominant. India is also the world's **7th** largest lithium resource-rich country. The Geological Survey of India has estimated **5.9** million tonnes of inferred Lithium resources in Jammu and Kashmir's Reasi district. Nevertheless, exploration has been **repeatedly** hindered by insufficient information on grade and by the technical challenges associated with extraction.

India's vulnerability is particularly severe in midstream processing. India currently imports **80–90 percent** of its rare earth magnets and related materials from China, while China accounts for **around 90 percent** of the global rare earth processing and refining capacity. Additionally, India's **limited** domestic lithium refining capacity leaves it heavily dependent on China, which controls **more than two-thirds** of the global total. Such overdependence on China could give Beijing leverage over the pace of India's energy transition and potentially constrain the development of technologies such as semiconductors.

India's Approach to Addressing Overdependence on China

India's vulnerability to China has two distinct dimensions, often collapsed into the broader category of supply chain vulnerability. The first concerns access to critical minerals; the second concerns the capacity to process them into finished products. In 2025, the Indian government **launched** the NCMM to address both vulnerabilities and strengthen its critical mineral supply chains. Implementation, however, has been uneven, alleviating some vulnerabilities while leaving others largely unaddressed.

The two main **goals** of India's NCMM are to secure access to critical mineral resources and strengthen domestic value addition. The latter includes enhancing recycling capabilities as well as domestic processing capabilities. New Delhi has set ambitious **benchmarks** under the NCMM. By 2030, India aims to operationalise 1200 exploration projects domestically and acquire fifty foreign mines. On the processing front, the goal is to implement 400 recycling projects and hold 1000 patents "across the critical minerals lifecycle."

The Indian government has pursued both fronts through domestic policy and international collaboration. It has **earmarked** nearly 2 billion USD for mineral extraction for domestic mining projects and the acquisition of foreign mining blocks. At home, it has begun auctioning several critical mineral mining blocks, although bringing these projects into

operationalisation remains a **challenge**. KABIL (Khanij Bidesh India Ltd), a public sector enterprise established in 2019, is spearheading efforts to secure overseas assets. Its focus has been on Lithium and Cobalt, both essential to battery production, with acquisitions pursued in Argentina, Chile and Australia, among other countries.

Recognising the potential of mineral recycling, the Indian government has pledged 170 million USD to support the sector. This is to be matched by another 500 million USD commitment from the private sector. In the scheme's initial phase, fifty-eight private sector companies have been **selected** for the Incentive Scheme for Promotion of Critical Mineral Recycling.

Finally, India is also leveraging international partnerships to boost critical minerals supply chain security. Critical minerals collaboration forms an important pillar of India's bilateral partnerships with the US, Japan, Australia, and Indonesia, among others. Multilaterally, India is **part** of the Biden-era Minerals Security Partnership (MSP), the **Quad's Critical Minerals Initiative** and more **recently**, the Trump administration's Pax Silica Initiative.

Challenges for India's Critical Mineral Strategy

Despite these positive developments, India's key challenges remain on the processing front, where its strategy appears increasingly hollow.

For now, India is relying on foreign collaboration to bridge the processing gap.

Apart from **copper**, India has few companies **engaged** in processing critical minerals or converting them into finished products. It therefore remains heavily reliant on imports for most other minerals and finished products. This limited domestic industrial base also constrains India's ability to fully participate in and benefit from multilateral initiatives such as Pax Silica, which are largely industry-led and designed to facilitate B2B collaboration. India can use these platforms to bring in foreign investment, but the gains are likely to remain limited without stronger domestic capabilities. Japanese investments in India illustrate this constraint. Major investments such as **Toyota's** 2012 investment and potential **investment** by Proterial involve establishing local manufacturing facilities in India. These measures can strengthen domestic economy and create jobs, but they may do little to build indigenous technological and technical know-how.

Moreover, the Indian government has set a target of producing 1000 patents as part of its effort to develop domestic processing capabilities. But financial support for this objective remains limited. It has earmarked just 60 million USD, compared with nearly 4 billion USD allocated cumulatively to mining and extraction.

More broadly, India's key challenge lies in fostering a strong R&D ecosystem to build industrial capacity at scale to reduce processing dependencies. India **spends** only 0.6 percent of GDP on R&D, compared to 3.5 percent for the US and 2.4 percent for

China. Furthermore, while in the United States and China, the private sector contributes 75 percent and 77 percent respectively for R&D expenditure, in India the **figure** is at 41 percent.

R&D expenditure in critical minerals processing also remains low. In 2023–2024, mineral processing industrial sector in India did not feature among the **top ten** domestic industrial sectors by R&D Expenditure. The picture was similar in 2020–2021, when metallurgical industries in India **spent** approximately 50 million USD on R&D, while mineral processing industries were again absent from the leading industrial groups by R&D expenditure. Such limited investments in R&D, both in the sector and more broadly, highlight the scale of the capability gap India must overcome to reduce its dependencies on China.

Developing a domestic knowledge base will be central to any meaningful reduction of India's dependence on China. This requires a substantially more coherent approach, one that addresses the structural issues in India's scientific capacity, including in mineral processing.

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