PACNET

KACHIN'S RARE EARTHS: OPPORTUNITIES AND CHALLENGES FOR US–INDIA–MYANMAR COOPERATION

BY CCHAVI VASISHT AND

AUNG THURA KO KO

Cchavi Vasisht *(cchavi.vasisht@crfindia.org) is Associate Fellow at Chintan Research Foundation. She has been awarded her PhD from the Centre for South Asian Studies, School of International Studies, Jawaharlal Nehru University. She has also co-edited a book titled "Revisiting Myanmar" along with Brig Vinod Anand.*

Aung Thura Ko Ko *(aung@pacforum.org) is a Resident Vasey Fellow at the Pacific Forum and an East-West Center affiliate scholar.*

In the global contest over critical minerals, Myanmar has emerged as an unlikely pivot. Rare earth elements (REE)—dysprosium, terbium, and others indispensable for magnets in wind turbines, electric vehicles, and advanced defense systems—have become geopolitical assets of immense strategic importance. Myanmar has become the world's third-largest producer of rare earth elements behind China and the US, with total production estimated at around 31,000 metric tons in 2024, up significantly from about 12,000 metric tons in 2022. The epicenter of their extraction lies in northern Myanmar's Kachin State, a region scarred by prolonged war and increasingly drawn into great-power competition. The Trump administration is weighing two options to access Myanmar's rare earths: strike a deal with the military junta or bypass Naypyidaw and negotiate directly with the Kachin Independence Army (KIA), which controls most of the mining areas.

The war economy in Kachin

Mining is concentrated in Chipwi and Pangwa, with smaller operations in Nhkawng Pa near the Chinese frontier. For years, ores from these mountains were trucked across border crossings at Pangwa and Kan Paik Ti into Yunnan. Historically, Chinese firms ran the operations, employing local villagers worked as manual laborers. They used toxic in-situ leaching methods which poisoned streams, destroyed fertile farmland, and sparked community protests.

Since the 2021 coup, extraction has multiplied—by some estimates fivefold—as both the military regime and ethnic armed groups turned to minerals to finance the war. The battlefield has shifted, however. By late 2023, the KIA launched sweeping offensives, seizing more than 200 junta outposts and capturing Chipwi and Pangwa. The KIA and its political wing, the Kachin Independence Organization (KIO), have now become the gatekeepers of Myanmar's rare earth belt. The number of active rare earth mining sites rose from about 130 in 2020 to over 370 by the end of 2024. In Chipwi alone, more than 2,500 leaching pits have been recorded. However, exact geological reserve volumes remain unclassified publicly, but satellite and field data suggest tens of thousands of tons of recoverable HREEs concentrated in Kachin.

Mineral/ Element	**Occurrence / Reserve**	**Significance / Use**	**Production**
Tin (Sn)	Wa State (Man Maw area)	Critical for soldering, electronics, 5G, semiconductors	~ **40,000 metric tons** mine-production in 2022; Wa State ≈ 70% of this.

Tungsten (W)	Mawchi Mine (Kayah State)	Used in hard-metals, aerospace, defense, industrial tooling.	229% increase in concentrates in one year (2020)
Antimony (Sb)	Shan State (epithermal vein systems)	Used in flame retardants, specialty alloys	~ **6,000 metric tons** Sb content est (2019)
Rare Earth Elements (REEs)	Kachin State & northern Shan State	Key for permanent magnets, EVs, wind turbines, defense tech	~ **31,000 metric tons** est production in 2020 (about 12% of world output)
Nickel (Ni)	Western Myanmar ultramafic/ophiolite belts	Critical for EV batteries, stainless steel, green technologies.	Exploration stage; no verified public large-scale production data
Lead- Zinc (Pb-Zn)	Shan State – Bawdwin Mine	Batteries, shielding, alloys; base-metal importance for industrial use.	~ **44 million tonnes** (lead-zinc ore)
Lithium (Li)	Mogok Metamorphic Belt (pegmatites)	Critical for battery technologies, energy transition	Very early stage; commercial production not publicly documented

Regulatory and logistical challenges

While the military regime continues to cling to power, its role in the rare earth sector is limited. The junta does not control key mining zones in Kachin, nor the surrounding terrain needed to secure transport routes. Any arrangement with Naypyidaw would be materially ineffective.

Additionally, China's dominance in processing—close to 90% of global capacity—ensures that profits and leverage remain firmly in its hands. Beijing quickly adjusted to the new power dynamics in Myanmar. After briefly shutting border gates, Chinese officials made a new deal with the KIA in late 2024: ore exports resumed at a fixed price of 35,000 yuan per ton plus a 20% tax. It is estimated that up to two-thirds of the world's heavy rare earths now originate in Myanmar, yet nearly all pass through Yunnan for refining. China's imports of heavy rare earth oxides from Myanmar surged from about 19,500 metric tons in 2021 to 41,700 metric tons in 2023, with a trade value of approximately $1.4 billion in 2023. This dependence highlights the structural challenge.

Where does India stand

Since the coup, India's government has tried to maintain its relationship with Naypyidaw as part of broader diplomatic efforts to navigate Myanmar's transition. However, attempts to secure access to rare earths minerals from Myanmar reflect both strategic necessity and a pragmatic approach to regional realities. With China controlling over 90% of global rare earth mineral processing and tightening exports of processed rare earths, it is crucial for India to pursue its goal for securing critical minerals supply for clean energy, technology and defence sectors. In the fiscal year ending March 2025, India imported more than 53,000 metric tons of rare earth magnets, the vast majority from suppliers dependent on China's stock or processing. Even domestic production is below 3,000 tons, mainly due to outdated facilities and lack of private sector innovation. India has set an

ambitious target of unlocking investments totaling nearly ₹18,000 crore (about $2.2 billion) from public sector and private industry by 2030 under its Critical Minerals Mission. Additionally, a new ₹7,300 crore (about $822 million) government incentive scheme has been earmarked.

Engaging with Myanmar complements India's "Act East" policy and regional integration efforts. Efforts range from economic integration initiatives and infrastructure connectivity projects like the India-Myanmar-Thailand Highway and Kaladan Multi-Modal Transit Transport Projects. Recently, talks and negotiations on rare earth minerals have generated great attention. Recognizing these vulnerabilities, India's Ministry of Mines directed both state-owned (IREL India Ltd) and private companies to explore direct procurement options from the KIA. In July 2025, a government-led initiative helped coordinate transfer of rare earth samples for verification in Indian laboratories, with the KIA actively gathering and preparing samples. Delhi has also maintained talks with Myanmar's military to preserve its interests as overall access for any infrastructure or large-volume commercial supply would require transit or regulatory cooperation through centrally governed regions. This dual-track engagement strategy shows India's willingness to balance geopolitical risks and opportunities.

However, no formal supply contracts have been signed or announced. There are challenges and limitations in utilizing existing resources. Kachin is landlocked, and current transport options are limited. The terrain is mountainous and lacks all-weather roads. Routes to the sea run through conflict zones in Sagaing or Chin. This underscores the urgency of finding alternative infrastructure development. Fortunately, while most rare earth concentrates from Kachin flow into Yunnan for processing, this is not the only conceivable route.

For India, there limitations in terms of building "processing capacity" which add to technical and financial hurdles. India needs immediate capital, expertise, and political will to build refining and processing facilities. Given China's near-monopoly on refining, India could also explore partnering with the US and Japan. Pilot projects could include small-scale modular refining facilities in India, with Japanese or South Korean partners, that could process limited volumes once secure transport links are established. With the US, New Delhi can start building a more diversified supply chain in pursuit of long-term investments. Currently, there are concerns about illicit mining and environmental degradation; efforts should focus on promoting sustainable economic growth in fragile border regions.

A narrow but real alternative

The pragmatic path to explore and process rare earth minerals lies in cautiously engaging the KIA/KIO. With external support, it could be encouraged to adopt environmental safeguards and transparent trade practices. This would not immediately shift ore flows from China, but it would create options. If India—backed by other countries such as Japan or US—develops processing capacity in the coming years, Kachin feedstock could be redirected westward.

Engagement with the KIA/KIO is not without risks. The civil war, poor logistics and transportation systems, along with a long-term governance capacity constraint are challenges across KIO-administered areas. China controls the refining and supply chain and there is the US–China strategic rivalry. The more realistic course is to acknowledge who holds power on the ground, support responsible practices, and work with regional players such as India to build long-term infrastructure with the US that might one day loosen China's grip. This will not be a quick win, but in the struggle over twenty-first century supply chains, it is worth pursuing given strategic interests and regional realities.

PacNet commentaries and responses represent the views of the respective authors. Alternative viewpoints are always welcomed and encouraged.