

# Rare Earth Crisis: Vedanta Is On a Mine To Magnet Strategy

Once the exploration efforts of rare earth bear viable fruit, the authorities can opt for a price discovery model. This will mitigate the key challenge of limited geological exploration data and turn this sector into an investor-friendly one, says Priya Agarwal Hebbar, chairperson, Hindustan Zinc

BY **SHRABONA GHOSH**

JUL 10, 2025

Share 

*Opinions expressed by Entrepreneur contributors are their own.*

*You're reading Entrepreneur India, an international franchise of Entrepreneur Media.*



*Priya Agarwal Hebbar, chairperson, Hindustan Zinc Ltd; non-executive director, Vedanta Ltd*

**C**hina's export restriction on rare earth is choking India. Precursory events could have hinted at the future. "In October 2023, a rare earth shipment bound for India was delayed for weeks due to new export controls imposed by China. The consignment, essential for manufacturing high-performance magnets used in electric vehicles, sat at a foreign port, stalling production lines and sending ripple effects across downstream industries. It was a reality check! A reminder of what happens when 90 percent of India's magnets come from one single

Although India holds the third-largest reserves of rare earths globally, at approximately 6.9 million tonnes, it contributes less than two percent to the global supply chain. Without domestic magnet-making capacity, EVs, wind turbines, and defense sectors will stay exposed to foreign supply risks.

As the mining pioneer, Hindustan Zinc is attempting to change the narrative. With an investment outlay in low-impact, high-yield technologies, biodiversity offsets, and local partnerships, it has plans to commit \$20 billion in various projects across metals, mining, hydrocarbons, rare earths and critical minerals over the next five-six years.

### **Changes Taking Place**

"We have already secured a rare earth block in Uttar Pradesh and are exploring ways to recover rare earth elements (REEs) from mine tailings at Hindustan Zinc. Our goal here is to extract more, refine better, and build domestic supply chains from mine to magnet. When opportunities arise whether in India's auctions or abroad, we can act quickly and with capital readiness. We do not have a resource gap, but a processing and value addition gap. Today, we still export raw rare earths like neodymium to countries like Japan, without building the downstream magnet-making capabilities here. That has to change, and we want to be part of that solution," she said.

The Indian government has opened up mineral and rare earth element exploration to private companies, including thirteen acreages for auction. India imported over 53,000 tonnes of rare earth magnets last year, with more than 90 percent coming from China. India lacks large-scale separation plants for rare earths. "Most of our Monazite and Bastnaesite ores, which are rich in valuable REEs, are either underutilized or sent abroad for refining. That needs to change fast. Pilot facilities for separation and alloying are now being built, including one by IREL in Odisha. But unless these scale quickly and feed into downstream users, our reserves alone won't solve the problem," she explained.

## **What's Next In the Pipeline?**

"To fast track the rare earth security, we need to move away from the auction system and bring India's best metals and critical minerals companies to the forefront to explore these blocks. Once the exploration efforts bear viable fruit, the authorities can opt for a price discovery model. This will mitigate the key challenge of limited geological exploration data and turn this sector into an investor-friendly one," she added.

"At Vedanta, our focus is on circular innovation, recycling REEs from tailings at Hindustan Zinc and reducing our waste footprint. We see this as a practical, scalable model that can supplement India's raw extraction efforts. We're also closely watching policy around REE value addition zones. If those are developed with shared infrastructure, they can dramatically cut our timeline to scale," she said.

## **Removing Roadblocks**

To power Make in India, one must go beyond auctions. The current auction regime treats critical minerals in almost the same manner as bulk minerals. Auctions may not be the best way to operate critical mineral blocks, this has resulted in reluctance from experienced private and foreign players as the successful recovery rate for these minerals is very low and requires extensive investments in exploration, refining, production facilities and technological prowess. "In addition, this has resulted in companies with almost no demonstrated expertise in mineral processing entering the critical mineral segment. In national interest, the solution to this can be a consortium of the top five mining companies of India with a demonstrated track record to explore these blocks and assess the viability of mineral extraction, post which the price discovery process can start," she said, explaining the blocks to self-sufficiency in critical minerals.

With vast deposits of Lithium, Vanadium, Nickel, and Graphite across the Northeast, Chhattisgarh, Rajasthan, and Maharashtra, India has the foundation. But less than 20 percent of this potential has been explored. "The government's push through the National Critical Minerals Mission is a pivotal move. Already, 34 of the 55 auctioned blocks have been successfully allocated. Vedanta has secured 10 of them, spanning Cobalt, REEs, Vanadium, Graphite, and Potash," she concluded.