India-Brazil MoU on Critical Minerals

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Why in News?

Recently, India and Brazil signed an MoU on rare earths and critical minerals during President Lula da Silva's state visit to India

- **Critical Minerals –** They are ***both primary and processed minerals*** that are essential inputs in the production process of an economy.
    - Its supplies are likely to be disrupted due to the ***risks of non-availability or unaffordable price spikes.***

India-Brazil MoU

- **Aim –** To strengthen supply chains and enhance strategic cooperation in critical minerals.
- **Scope of Cooperation –** Covers the full value chain from exploration, mining, processing, recycling, and refining.
- Encourages long-term investments and supply stability.
- **Benefits for India –** Reduces import dependence on China for rare earths and critical minerals.
- Strengthens bargaining power with other suppliers.
- Signals supply security for domestic industries like EVs, electronics, defence and green technologies.
- **Benefits for Brazil –** Promotes exploration of untapped reserves (only around 30% explored).
- Attracts Indian investment and long-term buyers.
- Encourages value addition within Brazil instead of raw export.
- **Trade & Strategic support –** Both countries aim to double bilateral trade to USD 30 billion by 2030.
- Supports South-South cooperation and strengthens resilience against export controls and geopolitical shocks.
- Complements India's participation in the ***U.S.-led Pax Silica initiative.***
- Reinforces collaboration in technology, renewable energy, and strategic sectors within BRICS.
- **Significance –** The MoU ensures secure, diversified access to critical minerals, supports domestic industrial growth, and deepens India-Brazil strategic and economic partnership.

India's Domestic Efforts in Critical Minerals

- **National Critical Mineral Mission (2024-2031) –** Covers exploration, mining, beneficiation, processing, and recovery from end-of-life products.
    - *National Critical Mineral Stockpile (NCMS)* is an initiative under the NCMM to ensure the availability of rare earth elements in the country.

Rare earth elements (REEs)—a subset of critical minerals and materials. REEs include a group of 17 minerals vital for electric vehicles, wind turbines and electronics due to their unique magnetic and electrical properties.

- **Supply Diversification –** India is exploring ***overseas acquisitions and partnerships (e.g., Argentina, Chile).***
- **Manufacturing Initiatives –** Plans to produce rare-earth permanent magnets domestically by 2026.
- **Policy Support –** Mines & Minerals (Development & Regulation) Amendment Act 2023, customs duty reductions for imports and recycling of critical minerals.

Quick Fact

Critical Minerals in India
• The Ministry of Mines in 2023 *identified 30 critical minerals.* • They are Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium, and Cadmium.

References

1. TH | India-Brazil critical minerals MoU
2. ToI | India Brazil Rare earth deals
3. The Diplomat | India-Brazil Critical Minerals Pact

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