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## Status of Critical Minerals in India

### Why in news?

The Centre for Social and Economic Progress (CSEP) in its report have cited concerns about poor critical mineral supply chain management.

### What are critical minerals?

- **Critical Minerals** - [Critical minerals](#) refer to mineral resources, which are essential inputs in the production process of an economy.
- Critical minerals includes both primary and processed minerals.
- Centre for Social and Economic Progress (CSEP) in its recent report notified 23 minerals as critical minerals.
- Minerals such as antimony, cobalt, gallium, graphite, lithium, nickel, niobium, and strontium are among the 22 assessed to be critical for India.
- Many of these are required to meet the manufacturing needs of green technologies, high-tech equipment, aviation, and national defense.

*Three-fifths of rare earth minerals, essential for clean energy, electronics, and defense technologies, are mined in China.*

### What are the challenges to critical minerals supply chains?

- **China** - China being an important player in the critical minerals supply chains and it is yet to overcome the effects of covid-19 and so India faces short falls in the supply
- **Russia-Ukraine war** - Russia being significant producers of nickel, palladium, titanium sponge, & scandium and Ukraine being producer of titanium, the [war](#) has disrupted the supply chains.
- **Power shifts** - Due to low supply from Russia and china the developed countries have drawn up plans such as [Minerals Security Partnership \(MSP\)](#) and G7's Sustainable Critical Minerals Alliance.
- **Demand for green technologies** - Since India lacks the critical minerals requirement demand for the green technologies it has depend on other countries.
- **Geographic hurdles** - The geographic concentration of mining and processing of the minerals may also adversely impact their availability.
- **Trade agreements** - Lack of trade agreements with other mineral-endowed countries.
- **Private sector** - Lack of private sector involvement in the critical mining industries.

- **Multilateral Minerals Security Partnership (MSP)** - India is not a part of it which brings countries together to build robust critical minerals supply chains needed for climate objectives.
- **Periodic assessments** - Lack of periodic assessments for critical minerals to be sustainable.

*India requires a critical minerals strategy comprising measures aimed at making the country Atmanirbhar (self-reliant) in critical minerals needed for sustainable economic growth and green technologies.*

## What is the way forward?

- India needs to explore the unexplored critical minerals.
- At present critical minerals can be processed only by the public sectors.
- Hence, the Mines and Minerals (Development and Regulation) (MMDR) Act 1957 needs to be amended to exclude the critical minerals as atomic minerals.
- The assessment of critical minerals for India needs to be updated every three years to keep pace with changing domestic and global scenarios.
- Critical minerals must be prospected, explored, and mined on priority as any delays may hinder India's emissions reduction and climate change mitigation timeline.
- Reconnaissance and exploration of minerals must be encouraged, with particular attention given to deep-seated minerals.

### Quick facts

#### **Minerals Security Partnership (MSP)**

- MSP focuses on critical minerals that are inputs for electric vehicles and advanced batteries.
- Australia, Canada, Finland, France, Germany, Japan, Korea, Sweden, the United Kingdom, the United States, and the European Union have joined the MSP.

#### **The Centre for Social and Economic Progress (CSEP)**

- CSEP is based in New Delhi and registered as a company limited by shares and not for profit, under Section 8 of the Companies Act, 1956.
- The mission of CSEP is to conduct research and analysis on urgent and critical policy issues and offer solutions that are both relevant and practical.

## References

1. [IEA | About Minerals Security Partnership \(MSP\)](#)
2. [The Indian Express | India's Challenges To Critical Minerals](#)
3. [CSEP | About CSEP](#)
4. [Hindustan Times | India's Status Of Critical Minerals](#)



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