

Centre releases first ever list of 30 critical minerals

Aims at reducing import dependencies and enhancing supply-chain resilience

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In a significant move to enhance its strategic resource security, India has officially released its first-ever critical minerals list, identifying 30 key critical minerals crucial to the nation's economic growth and technological development.

This pioneering step aims at reducing import dependence, enhancing supply-chain resilience, and supporting the country's net-zero objectives.

Union Minister Parliamentary Affairs, Coal and Mines Pralhad Joshi, while releasing the *Critical Minerals for India* report in New Delhi on Wednesday, said, "India is readying for an *Atmanirbhar Bharat*."

The critical minerals list, formulated by the Ministry of Mines, includes a diverse range of minerals considered essential for various industries such as defence, electronics, renewable energy, telecommunications, and transportation, among others.

The list comprises 30 minerals, including 17 rare earth elements (REEs) and six platinum-group elements (PGE), each designated as critical based on their economic importance and limited availability in India's geological reserves.

Among the minerals featured on the list are antimony, beryllium, bismuth, cobalt, copper, gallium, germanium, graphite, hafnium, indium, lithium, molybdenum, niobium, nickel, PGE, phospho-



Critical minerals for which India is 100% import-dependent

Mineral	Major application
Lithium	Rechargeable batteries, ceramics
Cobalt	Rechargeable batteries and superalloy
Nickel	Stainless steel, superalloys, rechargeable batteries
Vanadium	Alloying agent for iron and steel, batteries
Niobium	Steel and superalloys, construction, transportation
Germanium	Fiber optics and night vision applications
Rhenium	Superalloys, aerospace and machinery use
Beryllium	Alloying agent in aerospace and defense industries
Tantalum	Electronic components, mostly capacitors and in superalloys
Strontium	Aluminium pigments and fillers, glass, magnets

Source: A report on *Unlocking Australia-India Critical Minerals Partnership Potential* by Australian Trade and Investment Commission, July 2021/ Critical Minerals of India report

rous, potash, REE, rhenium, silicon, strontium, tantalum, tellurium, tin, titanium, tungsten, vanadium, zirconium, selenium, and cadmium as critical to Indian economy.

Ten minerals on the list are 100 per cent import-dependent. These are lithium cobalt, nickel, vanadium, niobium, germanium, rhenium, beryllium, tantalum, and strontium.

Union Mines Secretary Vivek Bharadwaj stated that India's international commitments towards

reducing carbon emissions require the country to urgently relook its mineral requirements for energy transition and net-zero commitments. "The ministry will be revisiting the critical mineral list periodically," he added.

To expedite the development of domestic mineral resources, the government plans to encourage public and private investments in exploration, mining, and processing facilities.

It also intends to facilitate the adoption of advanced technologies

and international collaborations to enhance efficiency and environmental sustainability in the extraction and processing of critical minerals.

India has already entered into the US-led Mineral Security Partnership to secure a global supply chain for critical minerals. This is India's second such alliance this year.

In April, in a first-of-its-kind partnership, the Indian and Australian governments decided to jointly invest \$3 million each for five critical mineral exploration projects in Australia.

In mid-2020, India, through Khanij Bidesh India Limited, a joint venture of three public sector undertakings — National Aluminium Company, Hindustan Copper Limited, and Mineral Exploration Company Limited — signed an agreement with an Argentinian firm to jointly prospect lithium. Besides this, it is also exploring options in Chile and Bolivia, said Bharadwaj.

The government has also asked Jammu & Kashmir to hold lithium auctions at the earliest, said Joshi.

The government hopes to find more lithium reserves in the region later this year, added Bharadwaj.

Critical minerals have complex global supply chains with a high concentration in the extracting and processing countries, resulting in high supply risks.

The US has declared 50 minerals critical in light of their role in national security or economic development.