Mines and Minerals Amendment Bill, 2025

Source: TH

The Parliament passed the **Mines and Minerals (Development and Regulation) Amendment Bill, 2025** to boost **critical mineral** production and advance the **National Critical Mineral Mission (NCMM)** through **sustainable, zero-waste mining.**

What are the Key Provisions of Mines and Minerals (Amendment) Bill, 2025?

- **Critical Minerals Push:** Amends the **Mines and Minerals (Development and Regulation) (MMDR) Act, 1957** to allow leaseholders to add **critical and strategic minerals** to **existing leases without extra royalty.**
- **Institutional Reforms:** Empowers the government to establish **mineral exchanges**. It renamed the **National Mineral Exploration Trust (NMET)** to **National Mineral Exploration and Development Trust (NMEDT)**, raising royalty from **2% to 3%** to fund exploration and mine development.
- **Exploration & Production:** The Bill promotes **sustainable, zero-waste, deep-seated, and offshore mining** (e.g., Andaman Sea polymetallic nodules), **removes the 50% sale cap on captive mines** for unrestricted sale post end-use.
    - It also allowed a **one-time extension of lease areas** for deep-seated minerals, up to **10% for mining leases** and **30% for composite licences**.

What are Critical Minerals & NCMM?

Critical Minerals

- **About:** Minerals essential for **economic growth and national security** & supply risks arise due to scarcity or concentration of extraction/processing.
    - India has **limited reserves of critical minerals** & is **largely import-dependent** (100% lithium and nickel, 93% copper).

Sl. No.	Critical Mineral	Percentage (2020)	Major Import Sources (2020)
1.	Lithium	100%	Chile, Russia, China, Ireland, Belgium
2.	Cobalt	100%	China, Belgium, Netherlands, US, Japan
3.	Nickel	100%	Sweden, China, Indonesia, Japan, Philippines
4.	Vanadium	100%	Kuwait, Germany, South Africa, Brazil, Thailand
5.	Niobium	100%	Brazil, Australia, Canada, South Africa, Indonesia
6.	Germanium	100%	China, South Africa, Australia, France, US
7.	Rhenium	100%	Russia, UK, Netherlands, South Africa, China
8.	Beryllium	100%	Russia, UK, Netherlands, South Africa, China
9.	Tantalum	100%	Australia, Indonesia, South Africa, Malaysia, US
10.	Strontium	100%	China, US, Russia, Estonia, Slovenia
11.	Zirconium(zircon)	80%	Australia, Indonesia, South Africa, Malaysia, US
12.	Graphite(natural)	60%	China, Madagascar, Mozambique, Vietnam, Tanzania
13.	Manganese	50%	South Africa, Gabon, Australia, Brazil, China
14.	Chromium	2.5%	South Africa, Mozambique, Oman, Switzerland, Turkey
15.	Silicon	<1%	China, Malaysia, Norway, Bhutan, Netherlands

Table.1 The net import reliance for critical minerals of India (2020) (Source: A report on 'Unlocking Australia-India Critical Minerals Partnership Potential' by Australian Trade and Investment Commission, July 2021)

- **Identification:** India has identified **30 critical minerals**, with **24 listed in Part D, Schedule I of MMDR Act, 1957**, giving the **Central Government exclusive authority** to auction their mining leases and licences.
- **Applications:** Silicon, tellurium, indium, gallium (in **solar panels**); dysprosium, neodymium (in **wind turbines**); lithium, nickel, cobalt (in **EV batteries and energy storage).**
- **Global Mineral Diplomacy:** Through **KABIL (NALCO-HCL-MECL JV)**, India identifies, explores, acquires, and develops minerals abroad (**5 lithium blocks in Argentina from 2026, Zambia, Australia**) and partners with multiple countries and the **International Energy Agency (IEA)** to secure **critical minerals**.

National Critical Mineral Mission (NCMM):

- **NCMM** was launched in **2025** under the **Ministry of Mines**. It aims to **secure India's critical mineral supply chain**, ensure availability from **domestic and foreign sources**, and enhance **value chains** via technology, regulation, finance, innovation, and skill development.
- It adopts a **whole-of-government approach** with **fast-track approvals, develops stockpiles**, **processing parks**, and a **Centre of Excellence**, promotes **recycling** and **international partnerships**.
    - It also supports startups/**MSMEs** via the **PRISM initiative**.
- **Geological Survey of India (GSI)** is tasked with **1,200 exploration projects** from 2024-25 to 2030-31.

National Critical Mineral Mission

Proposed expenditure = **Rs. 16300 crore**

PSUs expected to invest = **Rs. 18000 crore**

Total investment = **Rs. 34,300 crore**

Import duty on critical minerals scrapped

Four mineral processing parks to be developed

2 objectives of the mission

- To secure India's critical mineral supply chain
- Strengthening the value chains by enhancing technological, regulatory, and financial ecosystems

The **7 mission components** are structured to address short, medium, and long-term goals, aligning with Atmanirbhar Bharat's & Viksit Bharat's broader vision.

- Increasing Domestic Critical Minerals Production
- Acquisition of Critical Mineral Assets Abroad
- Recycling of Critical Minerals
- Trade and Markets
- Scientific Research & Technological Advancement for Critical Minerals
- Human Resource Development
- Developing Effective Funding, Financing, and Fiscal Incentives

We will set up a Critical Mineral Mission for domestic production, recycling of critical minerals, and overseas acquisition of critical mineral assets. Its mandate will include technology development, skilled workforce, extended producer responsibility framework, and a suitable financing mechanism."

- Hon'ble Finance Minister Smt. Nirmala Sitharaman,

Union Budget speech 2024-25

MINI MINES
EXTRACTING WHAT MATTERS

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims:

Q1.Consider the following minerals: (2020)

1. Bentonite
2. Chromite
3. Kyanite
4. Sillimanite

In India, which of the above is/are officially designated as major minerals?

(A) 1 and 2 only

(B) 4 only

(C) 1 and 3 only

(D) 2, 3 and 4 only

Ans: D

Q2.Recently, there has been a concern over the short supply of a group of elements called 'rare earth metals'. Why? (2012)

1. China, which is the largest producer of these elements, has imposed some restrictions on their export.
2. Other than China, Australia, Canada and Chile, these elements are not found in any country.
3. Rare earth metals are essential for the manufacture of various kinds of electronic items and there is a growing demand for these elements.

Which of the statements given above is/are correct?

(A) 1 only

(B) 2 and 3 only

(C) 1 and 3 only

(D) 1, 2 and 3

Ans: C

Q. With reference to the management of minor minerals in India, consider the following statements: (2019)

1. Sand is a 'minor mineral' according to the prevailing law in the country
2. State Governments have the power to grant mining leases of minor minerals, but the pwers regarding the formation of rules related to the grant of minor minerals lie with the Coentral Government.
3. State Governments have the power to frame rules to prevent illegal mining of minor minerals.

Which of the statements given above is/are correct?

(a) 1 and 3 only

(b) 2 and 3 only

(c) 3 only

(d) 1, 2 and 3

Ans: (a)

Q. What is/are the purpose/purposes of 'District Mineral Foundations' in India? (2016)

1. Promoting mineral exploration activities in mineral-rich districts
2. Protecting the interests of the persons affected by mining operations
3. Authorizing State Governments to issue licenses for mineral exploration

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 2 only

(c) 1 and 3 only

(d) 1, 2 and 3

Ans: (b)

Mains:

Q. Discuss the multi-dimensional implications of uneven distribution of mineral oil in the world. (2021)