



# National Critical Mineral Mission (NCMM)

**FY 2024-25 to FY 2030-31**

**January 2025**

# Critical Minerals and Importance

“

*Critical minerals are those minerals which are essential for economic development and national security, the lack of availability of these minerals or even concentration of existence, extraction or processing of these minerals in few geographical locations may lead to supply chain vulnerability and disruption*

”



- ❑ Production and processing of many critical minerals are geographically concentrated, making global supply vulnerable to several risks.
- ❑ China's restrictions on certain CM, Russia-Ukraine War, and others issues highlight the fragility of critical mineral supply and the need for diversifying sources.

# India's Climate Commitments



खान मंत्रालय  
MINISTRY OF  
MINES

To reduce Emissions Intensity of its GDP by 45 percent by 2030, from 2005 level

India is committed to achieving 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030

Achieving the target of net zero emissions by 2070.



# Budget Announcement of NCMM

Hon'ble Union Finance Minister, announced setting up of 'Critical Mineral Mission' in the Union Budget speech 2024-25 on 23.07.2024.

*“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.”*

# Budget Announcement of NCMM

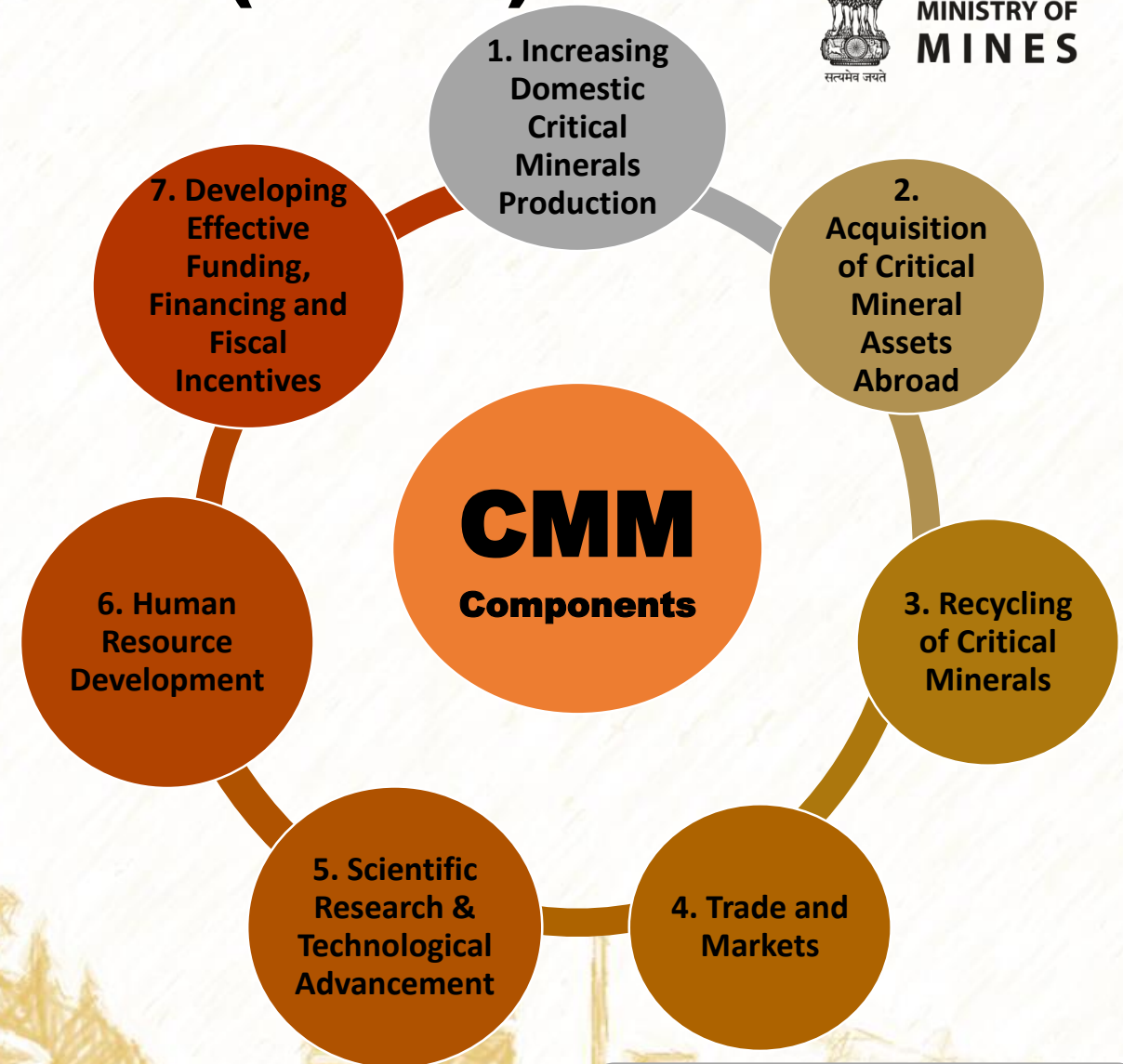
*“As India embarks on the journey of Viksit Bharat 2047, minerals will continue to play an important role for the nation’s progress. The National Critical Mineral Mission (NCMM) envisions securing a long-term sustainable supply of critical minerals and strengthen India’s critical mineral value chains encompassing all stages from mineral exploration and mining to beneficiation, processing, and recovery from end-of-life products.*

*The NCMM seeks to develop a holistic action plan through strategic interventions in the form of policy reforms, financial support, infrastructure facilities, human resource development, technological advancements and international collaboration. The Government’s aim is to build a globally competitive and resilient critical mineral ecosystem for India.*

# National Critical Mineral Mission (NCMM)

## Objectives

- i. To secure India's critical mineral supply chain by ensuring mineral availability from domestic and foreign sources.
- ii. Strengthening the value chains by enhancing technological, regulatory, and financial ecosystems to foster innovation, skill development, and global competitiveness in mineral exploration, mining, beneficiation, processing, and recycling.



# Mission Components

## (i) Increasing Domestic Critical Minerals Production

### 1. Expanding exploration and mining activities

- ❖ Undertake **1200 exploration projects**.
- ❑ More than **100 blocks** of critical mineral resources **to be auctioned**.

### 2. Mining in offshore areas

**Polymetallic nodules** contain minerals like Cobalt, REE, Nickel, Manganese etc. Enhanced efforts to explore more CM bearing blocks in offshore areas and start mineral production.

### 3. Critical Minerals Regulatory Support Programme

Create a **fast-track regulatory approval process** for domestic critical minerals exploration and mining projects.

### 4. Concession for Private Exploration

New concession viz; **Exploration Licences (EL)** for encouraging private participation in exploration activities.

### 5. Recovery of Critical Minerals from overburden/tailings/fly ash/red mud etc.-

Regulatory regime to be relaxed to encourage optimum recovery of critical minerals from various sources such as overburden, tailings, fly ash, red mud, existing mines  
A lower revenue share for critical minerals associated with major minerals.

# Mission Components

## (i) Increasing Domestic Critical Minerals Production

### 6. Assessment of Trace Elements/Critical Minerals during Exploration

Enable collaboration across ministries to **integrate data with NGDR portal** for optimum assessment of trace elements/ critical minerals. **The Mission along with agencies like GSI, and IBM may prepare SOP/guidelines** to facilitate the trace elements assessment.

### 7. Formation of Mineral Processing Parks

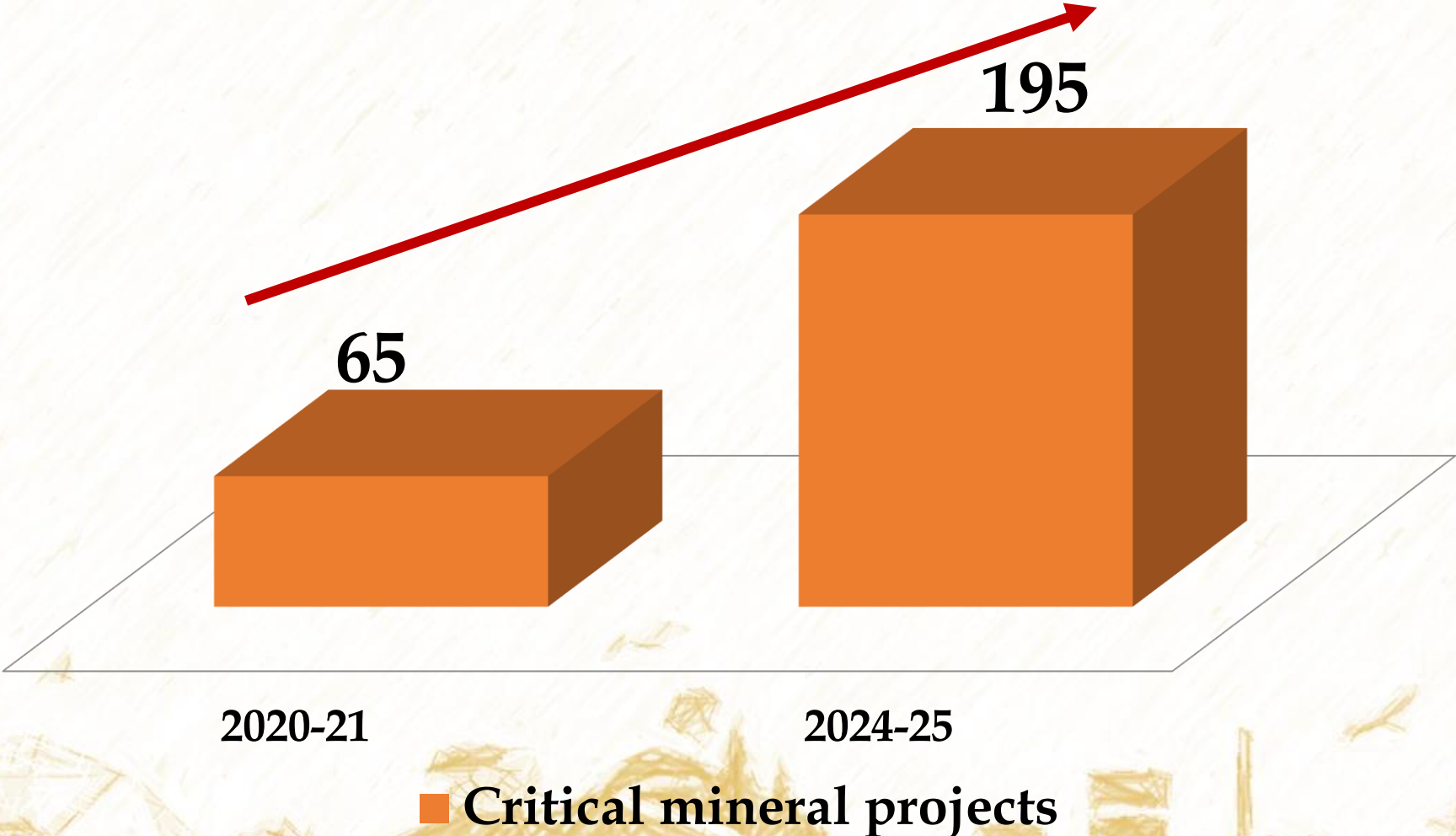
Allocate funds to support **Critical Mineral Processing Parks**.

### 8. Role of State Governments

To **promote exploration, mining, processing, and R&D** in CM value chain and infrastructure support. **State PSUs to actively participate in acquiring mineral assets abroad** or make financial investments to support other Central PSUs.



# Critical Mineral Exploration Projects by GSI



# Auction of Critical Mineral Blocks (ML-4, CL-20)



खान मंत्रालय  
MINISTRY OF  
MINES

Tranche	Launched	No. of Blocks	Critical minerals	Status
I	29.11.2023	20	Glaucosite (3), Nickel (2), Nickel & PGE (1) Potash (1), Graphite (5), Molybdenum (5), Phosphorite (1), Lithium & Titanium (1), Lithium & REE (1)	Preferred bidder for 6 blocks has been announced.
II	29.2.2024	18	Tungsten (3), Graphite & Vanadium (4), REE (1), Graphite (2), Glaucosite (1), Phosphorite (1), Cobalt (1), Nickel & PGE (2), Nickel & Cobalt (1), Potash (2)	Preferred bidder for 4 blocks has been announced.
III	14.3.2024	7 (2 <sup>nd</sup> attempt)	Glaucosite (3), Graphite (1), Potash (1), Lithium & Titanium (1), Nickel & PGE (1)	Preferred bidder for 4 blocks has been announced.
IV	24.06.2024	21 (10 fresh)	Graphite (2), Graphite and Vanadium (3), Cobalt, Manganese and Iron (Polymetals) (1) Glaucosite (2), Nickel, Chromium and associated minerals (1), Nickel, PGE (1), Phosphorite (1), Phosphorite & Limestone (2), Phosphate & REE (1), Potash & Halite (2), Tungsten (2), Tungsten & Associated Minerals (Mo,Au,Pb,Zn) (1), REE and Associated Minerals (Copper, Gold& associated minerals) (1), REE (1).	Preferred bidder for 10 blocks has been announced.

# Mission Components

## (ii) Acquisition of Critical Mineral Assets abroad

### 1. Mapping and Acquisition of Significant Critical Mineral Assets

- 1) The Mission will extend support for mapping and detailed exploration of Critical Mineral Assets in resource-rich countries.
- 2) The Government will earmark funds **to support Critical Minerals Exploration Activities outside India.**

### 2. PSUs and private companies in Overseas Critical Mineral Assets Acquisition

- 1) Motivate the Central PSUs and encourage private sector companies to allocate funds for the acquisition of critical mineral assets overseas.
- 2) The **Empowered Committee** will give broad directions and inter-ministerial support to PSUs and stakeholders to acquire critical mineral assets abroad.
- 3) empower the Central PSUs and their JVs, subsidiaries to invest in mineral assets abroad by issuing necessary guidelines.

# Mission Components

## (ii) Acquisition of Critical Mineral Assets abroad

### 3. Facilitation of PSU-led Asset Acquisitions with Private Sector Collaboration

The Government of India will facilitate **central PSUs in leading asset acquisitions in association with private companies** contributing capital and sharing revenue.

### 4. Encouraging Private Sector Companies

To encourage the participation of Indian public and private sector companies in the acquisition of assets abroad, the Government will **provide targeted subsidies for mining, and for setting up evacuation infrastructure** with appropriate finances.

### 5. Infrastructure Support

The Ministry of Mines will **work very closely with the Ministry of External Affairs (MEA)** to engage with the regulators from the resource country to support the development of mineral evacuation infrastructure.

# Critical Mineral Asset Acquisition by Khanij Bidesh India Ltd. (KABIL)

- ❑ KABIL has signed an agreement with the state-owned enterprise of Catamarca province of Argentina- (CAMYEN SE) on 15.01.2024.
- ❑ First ever project for Lithium has been started for exploration and development of 5 adjacent lithium brine blocks covering an area of about 15,703 Ha.
- ❑ KABIL signed MoU with Critical Mineral Office (CMO), Department of Industry, Science and Resources (DISER), Govt. of Australia in March, 2022. Due diligence of projects for selection of lithium and cobalt projects for investment by KABIL through off take arrangements started.

# International Collaboration

- i. Mineral Security Partnership (MSP)
- ii. Initiative on Critical and Emerging Technology (iCET)
- iii. International Collaboration- Indo-Pacific Economic Framework (IPEF)
- iv. Quadrilateral Security Dialogue (Quad)
- v. India-UK Technology and Security Initiative (TSI)
- vi. Bilateral MoUs

## i) Mineral Security Partnership (MSP)

- ❖ MSP is a collaboration of 14 countries and EU. Current chair is Republic of Korea.
- ❖ MSP is considering 32 projects of Critical Minerals in different countries.
- ❖ Indian companies showing interest in MSP projects.

## ii) Initiative on Critical & Emerging Technologies (iCET)

- ❖ Announced in May 2022.
- ❖ Annual iCET review meeting held on 17 June 2024 in New Delhi.
- ❖ 12 Projects prepared for taking up under iCET by involving GSI, IBM and IREL along with concerned institutes/ organizations in USA.

### iii) Indo-Pacific Economic Framework (IPEF)

- ❖ US led initiative bringing together 14 partner countries, launched in May 2022.
- ❖ Ministry of Mines presented in Trade Promotion Workshop under IPEF Critical Mineral Dialogue on 30th September, 2024 through VC, highlighting India's initiatives to develop the critical mineral value chain and auctioning of critical and strategic mineral blocks in India.

### iv) India-UK Technology and Security Initiative (TSI)

- ❖ UK-India Technology Security Initiative launched on 24 July 2024.
- ❖ M/o Mines is in the taking up research projects related to Critical Minerals under India-UK TSI.



## v) Quadrilateral Security Dialogue (Quad)

- ❖ Strategic security forum involves- India, USA, Australia and Japan.
- ❖ At 2023 leaders' summit, partners announced a Quad statement of “Principles on Clean Energy Supply Chains in the Indo-Pacific.
- ❖ Quad partners have set up the Quad Investors Network (QIN), with a working group focusing on clean energy and critical minerals.

## vi) Bilateral MoUs

- ❖ To develop bilateral cooperation with countries having rich mineral resources and advanced technologies, M/o Mines entered into MoUs with Governments of various countries such as Australia, Argentina, Chile etc.

# Mission Components

## (iii) Recycling of Critical Minerals

### 1. Guidelines/SOPs for Recycling of Critical Minerals

Formulation of **separate guidelines/SOPs for recycling of critical minerals** to streamline the informal mineral recycling sector in the country.

### 2. Incentive scheme for Recycling

An **Incentive scheme for setting up minerals recycling** shall be introduced by the Government.

### 3. Formation of Recycling Advisory Group on Critical Minerals

Formation of a **Recycling Advisory Group** to assess the presence of different critical minerals in domestic and imported products and suggest necessary measures for optimum recovery of critical minerals from these products.

# Mission Components

## (iv) Trade and Markets

### 1. Enhance Trade with Resource-Endowed Countries

- 1) to enter into **Critical Minerals Partnership Agreements (CMPA)** with resource-rich countries.
- 2) To work to include Critical Minerals chapters in **existing bilateral/Free Trade agreements with countries of interest.**

### 2. Harmonize Tariffs through Bilateral FTAs

To actively engage with stakeholders concerning revising **Critical Minerals sector relevant Harmonized System (HS) codes.**

### 3. Eliminate Import Duty on Critical Minerals

The Government has **eliminated import duty on critical minerals** based on strategic requirements to facilitate easier flow of these essential resources into the country. Periodic review also be done.

### 4. Removal of Import Duty and other Barriers on Recyclable Materials

**Import duties and other barriers on recyclable materials** such as scrap, black mass, and e-waste shall be **reviewed/eliminated.**

### 5. Develop National Critical Mineral Stockpile/Reserves

A joint initiative between central PSUs shall be institutionalised to develop a **National Critical Mineral Stockpile/ Reserves Programme**, to guard against supply disruptions and aid mineral supply for domestic utilization.

# Mission Components

## (v) Scientific Research & Technological Advancement for Critical Minerals

### 1. Promoting Research and Innovation in Critical Minerals

To support the patent filing procedures for innovators, start-ups, and enablers through improving coordination among institutions/organisations.

### 2. Establishing a Center of Excellence (COE) on Critical Minerals

**Constitution a Centre of Excellence (CoE)** on critical minerals, working on a Hub and Spoke Model with other institutions and research labs.

### 3. Supportive Mechanisms and Regulatory Simplification

To **simplify regulations and enhance collaboration** with technology labs and academia to bolster local capabilities.

### 4. Global Collaboration on R&D

The Government will earmark **funds specifically to focus on global R&D collaboration** across the critical minerals value chain.

# Mission Components

## (vi) Human Resource Development

### 1. Promoting Expertise and Skilled Workforce in Critical Minerals

Establish **Skill Development Centers** in collaboration with MSDE and provide **funding**.

### 2. Develop Targeted Degree Programs, Scholarships, and Internships

To develop and **introduce specialised modules** on critical minerals in existing mining, metallurgy and recycling technologies degree programmes by 2026.

### 3. Capacity Building Programs for Resource-Endowed Countries

The Government will offer **Capacity Building Programmes** to resource-rich countries through GSI, MECL, IBM, Indian institutes and universities.

# Mission Components

## (vii) Developing Effective Funding, Financing and Fiscal Incentives

### 1. Developing appropriate Fiscal Measures

Mission will make efforts to develop and implement a range of fiscal measures designed to incentivise junior exploration and mining companies.

### 2. Leveraging Funding from National/International Institutions

The government will **also enable participation in international development programmes** of institutions such as the World Bank, Asian Development Bank, and the International Monetary Fund etc..

### 3. Dovetailing with Existing Schemes

While formulating specific schemes and guidelines for financing the Government activities, it will be ensured that any **existing scheme similar to the activities proposed is dovetailed** into the Mission activities

## Mission Secretariat

- Mission Secretariat will be created.
- The Mission Secretariat will comprise a dedicated team led by the Joint Secretary, who will serve as the Mission Head.
- The Mission will also have a director, geologists, mineral economists and professionals from the mining industry, mineral processing industry and finance.

## Empowered Committee on Critical Minerals

- ❑ The Ministry of Mines will be the administrative Ministry.
- ❑ The mission's activities will be coordinated by an Empowered Committee, chaired by the Cabinet Secretary and including members from relevant stakeholder ministries.
- ❑ The empowered committee shall
  - Monitor and review the activities of the Mission; and
  - Give broad directions for investment in foreign countries and minerals.



# Mission Output

Mission Objectives	Key heads		Total (2024-25 to 2030-31)
Securing Domestic and Foreign Sourcing	Domestic Critical Mineral Exploration Projects		<b>1200</b>
	Foreign Critical Mineral Mines	PSUs	<b>26</b>
		Private Entities	<b>24</b>
	Incentive scheme for recycling - total materials recycled (kt)		<b>400</b>
Strengthening Value Chains	Patents in critical mineral value chain		<b>1000</b>
	Skill development		<b>10000</b>
	Mineral Processing Parks		<b>4</b>
	Centre of Excellence		<b>3</b>
	Mineral Stockpile (cumulative)		<b>5</b>

As per the preparation of detailed guidelines, wherever required, the targets will be adjusted.

# Way Forward- Role of State Government



- ❑ Promote exploration, mining, processing, and R&D in the critical minerals value chain.
- ❑ State Public Sector Undertakings (PSUs) to be encouraged to actively participate in acquiring mineral assets abroad and/or make financial investments to support other Central PSUs.
- ❑ Simplify/Fast-track land acquisition and clearances (E.C., F.C. etc) for exploration and mining activities.
- ❑ Infrastructure Development- Develop transportation, power, and storage infrastructure near Critical Mineral mining areas, if required.



खान मंत्रालय  
MINISTRY OF  
MINES

*Thank You*





# Critical and Strategic Minerals specified in Part D of First Schedule of the MMDR Act [24 minerals]

1. Beryl and other beryllium bearing minerals.
2. Cadmium bearing minerals.
3. Cobalt bearing minerals.
4. Gallium bearing minerals.
5. Glauconite.
6. Graphite.
7. Indium bearing minerals.
8. Lithium bearing minerals.
9. Molybdenum bearing minerals.
10. Nickel bearing minerals.
11. Niobium bearing minerals.
12. Phosphate (without uranium).
13. Platinum group of elements bearing minerals.
14. Potash.
15. Minerals of the "rare earths" group not containing Uranium and Thorium.
16. Rhenium bearing minerals.
17. Selenium bearing minerals.
18. Tantalum bearing minerals.
19. Tellurium bearing minerals.
20. Tin bearing minerals.
21. Titanium bearing minerals and ores (ilmenite, rutile and leucoxene).
22. Tungsten bearing minerals.
23. Vanadium bearing minerals.
24. Zirconium-bearing minerals and ores including zircon.

