

MINISTRY OF MINES SINCE 2024 A YEAR OF TRANSFORMATION AND PATH-BREAKING ACHIEVEMENTS

The calendar year 2024 was a momentous year for the Ministry of Mines, marked by exceptional progress and path-breaking initiatives. From transformative policies to impactful achievements, the Ministry's efforts set new benchmarks in the sector. A brief of all the significant achievements during the year is outlined below:

1. EASE OF DOING BUSINESS

To promote ease of doing business and achieve the goal of *Aatmanirbharta* in mining sector, the following key policy initiatives were undertaken:

- In pursuance to Mines and Minerals (Development and Regulation) Amendment Act, 2023, six¹ enabling rules were amended and notified with the objective to –
 - implement the provision of Exploration License (EL);
 - clarify provisions regarding disposal of minerals below threshold value and for rationalization of penalty for small miners having lease area up to 25 hectares and approved production up to 2.0 lakh tons;
 - provide methodology for calculation of Average Sale Price of critical minerals; and
 - implement other provisions of the MMDR Amendment Act, 2023.
- To facilitate the launch of auction of offshore areas mineral blocks and unlock the potential of blue economy, four² enabling rules under the Offshore Areas Mineral (Development and Regulation) Act, 2002 were notified.
- The royalty rates of 12 critical & strategic minerals³ were rationalized and notified.
- Further, the royalty rates of offshore minerals viz. Construction sand, Dolomite, Limestone and Lime mud, Polymetallic Nodules and crusts, overburden or waste, were rationalized and notified.
- Clarification was issued regarding inclusion of non-mineralised area in the existing mining lease for the purpose of dumping of mines waste/ overburden, empowering the States to include additional contiguous non-mineralized areas for the said purpose.

¹ Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Amendment Rules, 2024; Mineral Conservation and Development (Amendment) Rules, 2024; Mineral (Auction) Amendment Rules, 2024; Minerals (Evidence of Mineral Contents) Amendment Rules, 2024; Atomic Minerals Concession (Amendment) Rules, 2024; and Minerals (Other than Atomic & Hydro Carbons Energy Minerals) Concession (Second Amendment) Rules, 2024

² Offshore Areas (Existence of Mineral Resources) Rules, 2024; Offshore Areas Mineral Trust Rules, 2024; Offshore Areas Mineral (Auction) Rules, 2024; and Offshore Areas Operating Right Rules, 2024

³ Beryllium, Cadmium, Cobalt, Gallium, Indium, Rhenium, Selenium, Tantalum, Tellurium, Titanium, Tungsten and Vanadium

2. EXPLORATION

GSI Projects: GSI took up a total of 448 exploration projects, including 195 critical mineral projects, in field season 2024-25, showing a marked increase from 360 projects (including 127 critical mineral projects) in the previous field season. Since 2024, 169 GM/ GRs have been handed over to the Centre/ State governments for auction. In the field season 2025-25, GSI has taken up 450 exploration projects (including 227 critical mineral projects).

GSI also deployed advanced technologies like heliborne geophysical surveys, MT Survey, AI/ML tools for data analysis, and drone technologies for faster data acquisition and to uncover deep seated concealed mineral prospects.

Exploratory drilling by **MECL** deepened by 35% in CY 2024, reaching 3,01,759 meters in CY 2024 against 2,23,936 meters in CY 2023, enhancing operational efficiency. Further, MECL has handed over 33 GRs in 2024, enhancing the National Mineral Inventory.

The **National Geoscience Awards**, 2023 were conferred on 20.08.2024 by the Hon'ble President of India in which 12 awards including 9 individual & 3 team awards were presented to 21 Geoscientists

Notified Private Exploration Agencies (NPEAs): Continuing the thrust on private sector exploration, 12 NPEAs were notified during the year, taking the total number to 28.

NMET Funding: During the period 01.01.2024-31.01.2025, 146 exploration & procurement projects were approved for funding of Rs. 712 crore. NMET funded 48 projects (including 29 critical mineral projects) of 13 NPEAs amounting to Rs.87crore. In CY 2023, NMET had funded 17 projects (including 11 critical mineral projects) of 05 NPEAs amounting to Rs 16 crore. Expenditure incurred for on-going projects amounted to ₹ 318.25 Crore in CY 2024 (₹ 332.25 Crore upto 31.01.2025) as against Rs. 275.52 crore in CY 2023.

Innovative use of NMET funding:

- To encourage private participation in exploration, the Scheme for partial reimbursement of exploration expenses for EL holders was introduced to provide partial reimbursement of exploration expenses with ceiling of Rs. 20 crore.
- The Scheme for partial reimbursement of exploration expenses to Composite License holders, introduced in the year 2022, was modified during the year, whereby the ceiling for partial reimbursement was doubled from Rs. 4 crore to Rs. 8 crore.
- To encourage mineral exploration in districts affected by Left Wing Extremism (LWE), the cost of field components of exploration work in most affected LWE Districts⁴ was enhanced by 1.25 times of the normal rates on 08.07.2024.
- To encourage the State Governments to set up State Mineral Exploration Trust (SMET), scheme was introduced to provide a matching grant to the extent of 10% of annual

⁴12 districts in the States of Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra and Odisha

collection by the State Governments in SMET in the current and next two financial years through NMET.

Hackathon on "Innovative Mineral Hunt Techniques" was launched in July to promote mineral prognostication through integration and modeling of multi-thematic geoscience data available on the National Geoscience Data Repository with cutting-edge technologies such as AI/ ML.

To promote greater **exploration in border areas**, the guidelines pertaining to clearances within 20 km for exploration activity were relaxed. As per revised guidelines-

a) There will be no restriction on any mineral exploration or mining activity beyond 20 km from the border.

b) All activities connected with mineral exploration within 20 km along borders will have to be undertaken by the Exploration Agency subject to intimation of exploration activity at least 30 days in advance to the nodal officer in Ministry of Defence.

In the context of landslide hazard mitigation, a **National Landslide Forecasting Centre** was set up in Kolkata on 19.07.2024, which will in due course issue early warning bulletins for all landslide-prone states.

A state-of-the-art **Geoscience Museum** was inaugurated on 15.12.2024 in Gwalior, which marks a new chapter in the celebration of India's geological heritage.

3. OFFSHORE AREAS MINING

An area of 10277.10 hectares in the Arabian Sea off the coast of Daman was earlier reserved on 21.12.2023 for the grant of composite licence to the Jawaharlal Nehru Port Authority (JNPA) for exploration and production of sand for reclamation for the proposed development of greenfield port at Vadhavan, Maharashtra.

Subsequently, offshore mining has been taken to the next level. 35 offshore mineral block reports were handed over in Jan 2024. To explore and utilize India's extensive offshore mineral resources within its Exclusive Economic Zone, the first ever tranche of auction of 13 mineral blocks in the offshore areas viz. 3 blocks each of Construction sand and Lime mud, and 7 blocks of Polymetallic nodules and crusts (containing Cobalt, Nickel, etc.) was launched on 28.11.2024.

4. AUCTION AND OPERATIONALIZATION OF MINERAL BLOCKS

335 mineral blocks were put up for auction by States and Central Government, of which 106 blocks were successfully auctioned. Lease deed for 27 blocks has been executed since 01.01.2024 and 8 blocks have come into production. First time successful auctions were made in Telangana, Bihar and Arunachal Pradesh, expanding the mineral auction map of India to 14 States.

Assam has also notified mineral blocks for auction, with the auction process expected to be successfully completed soon, further bolstering the expansion of auctions in the mining sector in the north-eastern region. With Jammu & Kashmir and Kerala expected to join next, the mining sector is set for further expansion, unlocking new economic opportunities in these states. The inclusion of these states in mining auctions is expected to boost regional economies by generating employment, increasing state revenues through royalties, and fostering industrial growth.

The leases for Pottangi bauxite mines of NALCO and Surda copper mines of HCL were executed during the year. For Pottangi mines, the lease deed was executed in June 2024. In the case of Surda copper mines, mining lease was executed with the Government of Jharkhand on 28.09.2024. Mining activities have been started on 05.10.2024. It has been estimated that Surda Mine will achieve the peak rated capacity of up to 0.9 Million Ton Per Annum (MTPA) by 2030. This will increase future production of bauxite and copper ore from PSUs in the country.

PMU for mine operationalization: An agency (M/s Deloitte) has been appointed to work as Project Management Unit (PMU) for expediting the operationalization of auctioned mines.

5. CRITICAL MINERALS

Critical Mineral Mission: The Union Cabinet, on January 29, 2025, approved the launch of the National Critical Mineral Mission (NCMM) with an expenditure of Rs.16,300 crore and expected investment of Rs.18,000 crore by PSUs, etc. The Mission will encompass all stages of the value chain, including mineral exploration, mining, beneficiation, processing, and recovery from end-of-life products. The mission will have a focused approach in areas including domestic production, recycling, overseas acquisition of critical mineral assets, and research & development (R&D). Adopting a whole-of-government approach, the Mission will work closely with relevant ministries, PSUs, private companies, and research institutions to achieve its objectives.

The Central Government was empowered through the MMDR Amendment Act, 2023 to exclusively auction mining lease and composite license for 24 critical minerals, with an aim to increase exploration and mining of critical minerals and ensure self-sufficiency in their supply. 24 blocks⁵ were successfully auctioned during the year. 5th tranche of auction comprising 15 critical mineral blocks spread across 8 States was launched on January 20, 2025 during the National Mining Ministers Conference held in Konark, Odisha.

As part of the Union Budget 2024-25 announcements, import duties were eliminated for 25 critical minerals to diversify import source and support their free evacuation to the country, and to encourage domestic refining and processing.

⁵Phosphorite, Graphite and Manganese, Graphite, Lithium and REE, Graphite and Vanadium, Nickel, PGE and Chromium, Graphite and Basemetal, Glauconite, Tungsten and Associated Mineral, Cobalt, Manganese and Iron, Ni, Cr, Co and Associated Mineral

Critical mineral extraction has been added as a thrust area of the Science and Technology Programme, under which R&D and technological innovation are promoted. A total of 23 projects amounting to Rs. 14.30crore which are related to Critical Minerals, were sanctioned during the year.

In 2023, enlarging the scope of the S&T Programme of Ministry of Mines, a new component namely “Promotion of Research and Innovation in Start-ups and MSMEs in mining, mineral processing, metallurgy and recycling sector (S&T-PRISM)” was introduced to fund research and innovation in starts up and MSME working in the field of mining and mineral sector to bridge up the gap between R&D and commercialisation as also to promote the ecosystem for complete value chain in mining and mineral sector. During 01.01.2024 to 31.01.2025, a total of 26 projects from Startups / MSMEs have been selected for funding an amount of ₹ 33.23 crore.

6. INTERNATIONAL ENGAGEMENTS

On 15.01.2024, Khanij Bidesh India Limited (KABIL), a JV company under the aegis of Ministry of Mines, signed an Exploration and Development Agreement with M/s CAMYEN, a state-owned enterprise of Catamarca province of Argentina, for exploration and mining of **five Lithium Blocks in Argentina**. KABIL has also been constantly interacting with Critical Mineral Office in **Australia** with the objective of acquiring critical and strategic mineral assets.

A similar contract to exploit lithium blocks was granted by M/s CAMYEN to Greenko Energy Holdings, a Hyderabad-based private company, in 2023.

Ministry of Mines signed a Memorandum of Understanding (MoU) with the **International Energy Agency (IEA)** on cooperation in the area of Critical Minerals.

A MoU between Government of India (through Ministry of Mines) and the Government of the Republic of **Cote d’Ivoire** for collaboration in the field of Geology and Mineral Resources was signed on the side-line of Mining Indaba-2024 on 05.02.2024 in South Africa.

A MoU was signed on 30.04.2024 between the Ministry of Mines and **Shakti Sustainable Energy Foundation** – having **TERI** and the **Council on Energy, Environment and Water (CEEW)** as its partners - for providing knowledge support in the field of Critical Minerals.

A MoU was signed on 03.10.2024 between India and the United States to enhance bilateral collaboration to increase and diversify essential critical mineral supply chains and leverage their complementary strengths.

7. STATE MINING INDEX FRAMEWORK

Institution of a State Mining Index is an announcement in the Union Budget 2025-26, which is aimed at ushering in mining sector reforms in States. The State Mining Index will capture State’s

relative contribution in developing the country's mining sector, assess effectiveness of States in mining regulation & administration and instill competitive spirit among them. Ministry of Mines had already launched the framework for such an index in September 2024, for evaluating States based on four broad indicators, which are regulatory environment, mineral administration, technical expertise and sustainability. In the mining sector, the role of States is crucial since faster auction of explored mineral blocks and faster operationalization of auctioned blocks has a bearing on mineral production and mineral security. Minor minerals, which are exclusively in the domain of States, are important and aspects like adoption of auction method, mine closure policy, mineral exploration fund, sustainable mining, etc. will not only have a bearing on mining regulation but also on revenue generating potential. The State Mining Index is expected to be released in the 2nd quarter of 2025.

8. ROBUST PRODUCTION

The value of MCDR mineral production witnessed a record high of Rs. 1.40 lakh crore in FY 2023-24. In FY 2024-25, mineral production value has continued to rise with the value being Rs. 1,05,784 crore during Apr-Dec 2024 against Rs. 98,715 crore during the corresponding period of previous year.

Record production was achieved in key metallic minerals viz. iron ore (274 million ton), limestone (450 MT) and manganese ore (3.4 MT) in FY 2023-24. Iron ore and manganese ore have maintained their strong growth trajectory this year. In FY 2024-25 (Apr-Dec), iron ore production was at 208 MT, compared to 203 MT during the corresponding period of previous year. Manganese ore production stood at 2.6 MT during FY 2024-25 (Apr-Dec), compared to 2.4 MT during the corresponding period in previous year.

NALCO achieved the highest ever annual Bauxite transportation of 75,27,016 tonne in FY 23-24, surpassing the previous highest of FY 21-22. HCL achieved a 4-year high copper ore production of 3.78 MT in FY 2023-24, 13% higher than that of FY 2022-23. The Metal in Concentrate (MIC) production also reached a 5-year high with 27,404 tonne in FY 2023-24, 11% higher than that of FY 2022-23.

In the non-ferrous metal sector, record production of 4.2 MT was achieved in aluminium in FY 2023-24. Aluminium production in FY 2024-25 (Apr-Dec) has been robust at 3.2 MT. Similarly, refined copper production has risen by 8.1 percent from 3.7 lakh ton (LT) in FY 2023-24 (Apr-Dec) to 4 LT in the corresponding period this year.

NALCO's smelter plant achieved the highest ever cumulative metal production of 4,63,428 tonne in FY 23-24 surpassing the previous highest of 4,60,000 tonne in FY 22-23. NALCO also launched a new product AL-59 on 28.03.2024, catering production of alloy conductors for electrical transmission and distribution.

9. EMPLOYMENT & TRAINING

Employment under Mission recruitment for Calendar year 2024: Ministry of Mines has issued a total number of 826 appointment letters under Mission Recruitment during Calendar Year-2024. The organization-wise break-up of appointments made during the period is as under:

- (a) Geological Survey of India (GSI): 588
- (b) Indian Bureau of Mines (IBM): 106
- (c) Hindustan Copper Ltd. (HCL): 132

Mission Karmayogi: Ministry of Mines had implemented the Annual Capacity Building Plan (ACBP) for Secretariat Office w.e.f. 01.01.2024. Subsequently, ACBPs for all the seven field organizations of this Ministry were implemented w.e.f. 01.04.2024. Further, during the National Learning Week (19.10.2024 to 27.10.2024), the Ministry emerged on top with three of its field organizations i.e. HCL, MECL and JNARDDC securing their places within top three in various categories. Capacity Building Commission (CBC) has consistently ranked Ministry of Mines as one of top performing Ministries throughout the year.

10. SUSTAINABLE MINING

DMF funding: In CY 2024, Rs. 6,566 crore was sanctioned for 36,904 new projects under DMF. Highest allocations were in education, drinking water supply and health. During the year, an amount of Rs. 6,478 crore was spent. 26,289 projects were completed.

Revised guidelines on Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY), which implements developmental projects under the District Mineral Foundation, were issued on 15.01.2024. Some of the key features are as under:

- Percentage of utilization in high priority sectors increased from at least 60% to at least 70%
- New high priority sectors - Housing, Agriculture and Animal Husbandry - included;
- DMFs to prioritize achieving targets under the Aspirational Districts Programme and Aspirational Blocks Programme;
- Clear demarcation of directly affected areas (up to 15 km from the boundary of the mines) and indirectly affected areas (up to 25 km from the boundary of the mines) – 70% spending on directly affected areas;
- Provision for audit of DMF accounts by Comptroller and Auditor General

Tailings Policy: Some critical minerals like Gallium, Tellurium or Selenium are found in the tailings of minerals mined but are lost as rejects. To recover such critical elements, effective tailings management including greater investment in R&D to establish best recovery processes is the need of the hour. Accordingly, Ministry of Mines will bring out a policy for recovery of critical minerals from tailings. This has also been announced in the Union Budget 2025-26.

A new template for **Star Rating of Mines**, based on industry feedback and the experience of previous years, was launched on 23.01.2024 for small mines and large mines separately instead

of the earlier common star rating templates for all mines. In 2022-23, 776 mines were awarded 3-star rating, 285 mines were awarded 4-star rating and 68 mines were awarded 5-star rating.

Pumped Storage: NIRM and GSI signed a MoU in March 2024, guided by the Ministry of Mines, to collaborate in Pumped Storage Projects (PSP) and address challenges in hydel and critical infrastructure for generating green energy in the country.

Distribution of possession Certificates of residential accommodations sold to the beneficiaries of Special Terminal Benefit Package (STBP) of BGML: Bharat Gold Mines Ltd (BGML) had earlier closed down due to economic challenges. During the settlement process, 2,812 employees opted for the STBP package to purchase their residential houses at a concessional rate. Possession Certificates were issued to the STBP beneficiaries during a ceremony held on 27.02.2024 at KGF. A total of 571 certificates were distributed during the ceremony, with an additional 343 certificates distributed later during the year.

11. DIGITALIZATION & TECHNOLOGY USE

DMF portal: A centralized online portal for the administration and monitoring of DMFs across the country was launched on 20.07.2024. The portal offers centralized visibility into DMF project implementation, project-level oversight, dynamic analytics, and a repository of best practices for cross-learning.

Mining Tenement System (MTS): A dedicated module for average sale price based on real-time price data was launched on 22.01.2024. Further, two new modules – Final Mine Closure Plan module and Exploration License/ Composite License/ Prospecting License module of MTS were launched on 07.08.2024.

Drone survey management: IBM issued Standard Operating Procedures under MCDR, 2017 for carrying out drone survey and submission of Digital Aerial Images of Mining areas to IBM. IBM HQ has commissioned its largest Data Center with 131 TB capacity. From Jun-Nov 2024, 1349 mines have submitted online Drone data on Drone Data Management System portal.

Advanced Monitoring by NIRM: NIRM carried out Advanced Monitoring of the Sardar Sarovar Dam in Gujarat with latest technology tools, ensuring safe and efficient operation of the dam and related structures.

12. CONSULTATIONS WITH STAKEHOLDERS

State Mining Ministers' Conference: The 3rd State Mining Ministers' Conference was held in Bhubaneswar, Odisha on 20th-21st January, 2025, bringing together key leaders to shape the future of the mining sector. Wide-ranging discussions on auction performance, state best practices, etc. were held.

Chintan Shivr: Ministry of Mines organized a Chintan Shivr on 08.01.2025, in which in-depth discussions were held on four key topics viz. increasing mineral production and operationalization of mineral blocks, encouraging private exploration access to geo-scientific data to all, circular economy, and developing local ecosystem of mining equipment manufacturing.
