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this issue contains...

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President's Message.....

Dear members..

The Indian mining sector continues to demonstrate strong momentum, driven by the nation's growing focus on critical minerals, resource security, and sustainable development. Recent initiatives such as the proposed auction of critical mineral blocks and strategic collaborations. I am pleased to note that Gujarat Mineral Development Corporation Ltd. (GMDC) has signed an MoU with NMDC Limited to explore collaboration in the rare earth elements sector. This is a significant and timely step towards building a robust rare earth elements ecosystem in India. The proposed collaboration is to develop an integrated value chain in Gujarat-covering exploration, mining, beneficiation, processing, and downstream applications, particularly at the Ambadungar deposit, which reflects a strategic and forward-looking approach. Such partnerships between leading public sector organizations will accelerate technology adoption, strengthen domestic capabilities, and reduce import dependence in critical minerals.

At the same time, it is important to acknowledge the practical challenges faced by the industry, particularly in expediting statutory clearances, land acquisition, and operationalization of auctioned mines. Addressing these bottlenecks through policy support, streamlined procedures, and greater stakeholder coordination will be essential to translate intent into perceptible outcomes.

Equally encouraging is the increasing emphasis on sustainable mining practices, including scientific mine closure, land reclamation, and community engagement. The transformation of legacy mining areas into productive and environmentally responsible assets highlights the sector's evolving commitment to long-term value creation.

I am delighted to share that our Association has expanded its presence with the inauguration of the ***Northeast Chapter*** at Shillong on 8th March 2026. This milestone marks the establishment of the ***28th chapter*** and reflects MEAI's continued commitment to strengthening its reach across all key mining regions of the country. The northeastern region, with its rich mineral potential and unique geological setting, holds significant importance in India's mining landscape. The formation of this chapter will provide a dedicated platform for professionals in the region to engage, collaborate, and contribute to the advancement of the mining sector. My congratulations to the Chapter Chairman, Mr. Ibrahim Sharif, and his team. I also congratulate Dr. Pukhraj Nenival, VP-II, for his initiative to open the chapter.

I extend my appreciation to the Bangalore Chapter for successfully organizing the National Seminar on "***Mining for Viksit Bharat Vision–2047***." The seminar provided a valuable platform for meaningful deliberations on the future of India's mining sector, bringing together its leaders, policymakers, academicians, and professionals to exchange ideas and insights.

I extend my congratulations to all the chapters for their proactive initiatives in organizing technical discussions, workshops, seminars, and various knowledge-sharing events for the benefit of mining professionals. The commitment shown by our chapters in promoting professional excellence and enhancing technical competence, encouraging innovation, and keeping members abreast of the latest developments, technologies, and best practices in the mining sector.

D.B. Sundara Ramam
President

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Dr. P.V. Rao
Chief Editor, MEJ

India's Coal Auction Experiment: Promise, Progress, and Persistent Gaps

In September 2014, the Supreme Court of India cancelled 204 coal block allocations made between 1993 and 2011, declaring the Screening Committee process "arbitrary and illegal." The CAG had estimated windfall gains of Rs. 1.86 lakh crore handed to private and public allottees through discretionary favour. "Coalgate" was not merely a scandal-it was a systemic indictment of how India governed its most critical mineral resource. The Coal Mines (Special Provisions) Act, 2015, was Parliament's answer: replace discretion with competition, opacity with transparency, and allocation with auction. A decade on, that experiment deserves an honest reckoning.

What Has Been Achieved

The numbers are, on their face, impressive. Since 2015, India has auctioned or allotted 213 coal mines-including 136 blocks under commercial mining launched in June 2020, with a cumulative peak rated capacity of 325 Mtpa. Revenue shares bid by competing companies range from 5% to a remarkable 288%, reflecting genuine market interest. The 136 commercial blocks alone are projected to generate Rs. 43,330 crore annually for coal-bearing states and mobilize Rs. 48,756 crore in capital investment. For states like Jharkhand, Odisha, and Chhattisgarh-historically resource-rich but revenue-poor-this is transformational.

Production from captive and commercial mines has climbed sharply: from roughly 45 Mt in FY 2018 to 147 Mt in FY 2024 and to 190.95 Mt in FY 2025, with commercial mines alone recording 67% production growth and 77% dispatch growth in the last fiscal year. India crossed the historic one-billion-tonne total production milestone on 20 March 2025. Coal imports fell 8.4% in April–December 2024, saving approximately $5.43 billion in foreign exchange. The diversification of supply away from Coal India's near-monopoly-itself long overdue-is real and gathering pace.

Institutionally, the introduction of the National Coal Index as a market-linked, transparent pricing mechanism and the operationalization of the Single Window clearance portal represent genuine governance improvements over the opaque Screening Committee era.

Where the System Falls Short

Yet beneath the headline numbers lies a troubling performance gap. Of the 98 blocks scheduled to be producing coal by end-2025, only 55 are actually operational. Over 40% of due-to-produce mines have missed their timelines-by months, sometimes by years. India has become considerably better at auctioning coal blocks than at getting coal out of the ground.

The causes are well-known and, frustratingly, unresolved. Environmental and forest clearances remain the single largest bottleneck; compensatory afforestation land is scarce, and the MoEFCC process is unpredictable. Land acquisition under the Coal Bearing Areas Act is cumbersome for private developers in ways it is not for PSUs. Incomplete geological data and not categorizing coal resources and reserves compliant to international public reporting standards like IMIC at the time of auction mean bidders price risk poorly-leading either to aggressive, unsustainable bids or to post-allocation surrender. In multiple rounds, the majority of offered blocks attracted no takers at all; the 13th round, for instance, auctioned just 3 of 14 offered mines.

The coking coal situation is a separate and unresolved crisis. Despite several blocks auctioned, India still imports approximately 95% of its metallurgical coal requirement. Coking coal imports actually rose from 51.2 Mt in FY 2021 to 57.6 Mt in FY 2025. The auction system has not-and structurally cannot-solve a problem that is partly geological.

The Honest Assessment

India's coal auction system has delivered more than its critics predicted and less than its architects promised. It has eliminated the institutional rot of discretionary allocation, generated genuine competition for national resources, and created a revenue stream for historically neglected mining states. These are not insignificant achievements.

But a transparent auction is only the first step. What follows-exploration, reporting standards, clearance, land acquisition, mine development, rail connectivity, and evacuation infrastructure-remains a complicated gauntlet that deters serious investors and stalls production. The gap between blocks awarded and tonnes produced is the true measure of the system's effectiveness, and by that measure, the work is far from complete.

India's coal endowment-estimated at ~400 billion tonnes-is among the world's largest. Whether the country unlocks it efficiently, equitably, and in time to meet its 1.5 billion tonne production target by 2030 will depend not on the quality of its auction design but on the quality of its governance that follows the hammer's fall.

- Chief Editor

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NEWS FROM THE MINERAL WORLD

➤ US launches $500M initiative to boost critical minerals processing

The US Department of Energy (DOE) plans to provide up to $500 million in funding to expand domestic critical minerals processing and battery materials manufacturing and recycling, as Washington seeks to reduce reliance on foreign supply chains.

The funding opportunity, issued by the DOE's Office of Critical Minerals and Energy Innovation (CMEI) on Friday afternoon, seeks to support demonstration and commercial-scale facilities that process or recycle critical materials used in batteries and energy technologies.

The initiative targets minerals such as lithium, graphite, nickel, copper and aluminum, along with other materials contained in commercial battery systems.

"For too long, the United States has relied on hostile foreign actors to supply and process the critical materials that are essential in battery manufacturing and materials processing," Energy Secretary Chris Wright said in a statement.

According to the DOE, strengthening domestic supply chains will help the country meet growing energy and AI-related electricity demand while supporting broader energy security goals.

Collaboration with partners

The announcement comes as Assistant Secretary of Energy for Energy Efficiency and Renewable Energy (EERE) Audrey Robertson attends the Indo-Pacific Energy Security Ministerial and Business Forum in Japan, where US officials are meeting with regional allies to discuss cooperation on supply chain resilience.

Robertson said collaboration with partners remains critical even as the US expands domestic production.

"Critical minerals processing is a vital component of our nation's critical minerals supply base," she said. "Boosting domestic production, including through recycling, will bolster national security and ensure the United States and our partners are prepared to meet the energy challenges of the 21st Century."

The funding call represents the third round of financial support under DOE programs focused on battery materials processing and battery manufacturing and recycling.

Projects will be selected across three main areas: critical minerals processing from raw feedstocks; critical materials recycling; and battery materials and component manufacturing.

The move is part of a broader push by Washington to rebuild domestic critical mineral supply chains, which are currently dominated by overseas processing hubs, particularly in China.

By supporting new processing and recycling capacity, the DOE aims to strengthen the upstream and midstream segments of the battery supply chain, helping secure raw materials needed for electric vehicles, grid storage and other energy technologies.

Staff Writer, Mining.Com I March 15, 2026

➤ US pours $1B into into Latin America critical minerals

Lithium ponds in Chile's Atacama desert

The United States has poured more than $1 billion into critical minerals investments across Latin America since January 2025, signalling a more assertive effort by Washington to secure supplies of lithium, copper and rare earths vital to energy, defence and advanced technology.

The spending surge under the second Trump administration reflects a broader shift in how governments view mining, with critical minerals increasingly treated as matters of national and energy security rather than simply commodities tied to the energy transition, according to a report by law firm White & Case.

The law firm's global head of mining and metals Rebecca Campbell and project financing partner Fernando J. de la Hoz say projects in Brazil and Argentina are drawing direct interest from US agencies and multilateral lenders through loans, equity stakes and structured offtake agreements designed to channel output into US-aligned supply chains.

"Development of rare earth and critical minerals projects is no longer just a matter of energy transition, but rather, energy security," Tiago Abreu, chief development officer of Brazilian Rare Earths, told delegates at a mining summit in Belo Horizonte in June 2025.

Recent financing underscores the trend. The Inter-American Development Bank approved a $100 million loan for a $2.5 billion lithium project in Argentina, while the US Development Finance Corporation is considering a $465 million investment to expand Serra Verde's rare earth operations in Brazil's Goiás state.

Latin America sits at the centre of the strategic push, holding roughly 60% of the world's lithium reserves.

Lithium momentum

Brazil and Argentina have emerged as focal points for critical minerals development, driven by vast reserves, government policy and rising foreign investment.

Brazil hosts the world's second-largest rare earth reserves after China and has seen growing interest in Minas Gerais, where a cluster of projects has earned the nickname "Lithium Valley." Despite holding about 23.3% of global rare earth reserves, the country accounts for only about 0.02% of production, highlighting the scale of potential growth.

Argentina has moved aggressively to attract investment. The Incentive Regime for Large Investments, or RIGI, launched in July 2024, offers tax, customs and foreign exchange stability for projects worth more than $200 million. Rio Tinto (ASX, LON: RIO) became the first company approved under the framework in May 2025 for a $2.5 billion lithium project in Salta.

The country already hosts Latin America's largest number of lithium projects, with seven operating. National lithium output capacity rose from 75,500 tonnes per year in 2023 to about 186,000 tonnes in 2025, and the government expects it to reach 658,000 tonnes by 2035.

Market conditions are also improving after a prolonged downturn. Battery-grade lithium carbonate traded near $18,200 per tonne in early January 2026, rebounding as grid-scale energy storage systems expand even as the global energy transition progresses more slowly than early projections suggested.

Geopolitical balancing

While US investment is accelerating project development, Latin American governments continue to balance geopolitical interests between Washington and Beijing.

Chinese companies remain dominant in mineral processing, particularly rare earths, where more than 90% of global processing occurs in China. Campbell and de la Hoz say governments across the region remain pragmatic, welcoming investment from both sides as they seek capital and technical expertise to develop mineral resources.

Inter-American Development Bank president Ilan Goldfajn said in December that countries across the political spectrum are focused on building domestic processing capacity to capture more value from their resources.

"We are hearing from countries from left to right, independent of political inclination, that this is the moment to increase the value added to their critical minerals," Goldfajn told the Financial Times.

Geopolitics is increasingly influencing mining transactions and regulatory approvals. Campbell and de la Hoz point to MMG's proposed acquisition of Anglo American's nickel assets in Brazil, now undergoing a Phase II merger review by European regulators, as an example of how decisions in Brussels or Washington can shape mining deals thousands of kilometres away.

Critical minerals are also gaining strategic importance beyond clean energy. Defence, aerospace and advanced technology sectors are driving demand for secure supply chains, prompting some mining companies in Latin America to align projects with US strategic priorities to secure financing and long-term markets.

Domestic policy changes are also reshaping the investment landscape. Argentina has moved quickly to simplify regulations and attract foreign capital, while Brazil's reforms have been more incremental and in some cases have increased compliance requirements.

Political risk and community engagement remain key factors shaping project timelines. Resource nationalism, environmental permitting and bureaucratic hurdles continue to influence development schedules even as government-backed financing reduces some investment risk.

Copper in driver's seat

Copper is expected to remain the primary driver of mining investment across Latin America. Chile and

Argentina are advancing major copper projects as global demand for the metal - essential for electrification and power grids - is projected to nearly double by 2035.

Several copper projects in Chile alone are expected to begin operating next year with combined investment exceeding $7 billion, reinforcing the metal's central role in regional mining strategies.

For Campbell and de la Hoz, the surge in lithium and critical minerals investment reflects a broader shift in the global mining landscape, where geology, government policy and geopolitical strategy increasingly determine where projects move forward.

Cecilia Jamasmie, Mining.Com | March 12, 2026

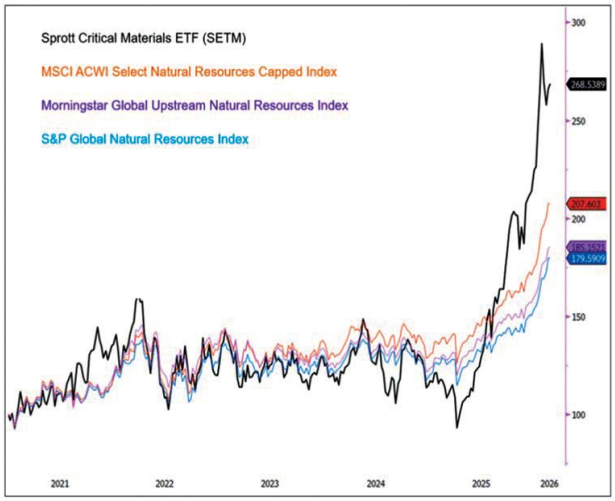
➤ Critical minerals drive new commodity supercycle: Sprott

Governments and investors are increasingly treating critical materials such as copper and uranium as strategic assets, helping drive what Sprott says could be the early stages of a new commodity bull market.

Commodity markets entered 2026 with renewed momentum as resource equities broke above long-term trading ranges after years of underrepresentation in global portfolios. According to a Sprott report released this week, the emerging cycle differs sharply from past booms, with structural forces such as deglobalization, fiscal expansion and rising geopolitical tensions reshaping demand for raw materials.

Critical materials versus traditional resources
(in total returns)

(1/1/2021 - 18/2/2026)



Source: Bloomberg. Data as of 2/18/2026. S&P Global Natural Resources Index tracks companies engaged in the ownership, management, or production of natural resources, including energy, metals and mining, and agriculture-related businesses, MSCI ACWI Select Natural Resources Capped Index (USD) represents companies in the energy, metals and mining, and agriculture sectors, with issuer weights capped to limit concentration, and Morningstar Global Upstream Natural Resources Index measures the performance of companies primarily involved in upstream natural resource activities, such as exploration, development, and production of energy, metals, mining, and agricultural inputs. Past performance is no guarantee of future results.

Rather than mirroring the China-driven construction boom of 2000-2014 or the inflation-led rally of the 1970s, the emerging cycle is being powered by investment in electricity systems, digital infrastructure and energy security.

Governments are increasingly prioritizing control over critical supply chains, pushing materials tied to electrification, defence and advanced infrastructure into strategic territory.

Within the broader resource sector, performance has begun to diverge sharply. Materials tied directly to electrification, power generation and energy security are outperforming traditional bulk commodities that dominated earlier cycles.

The report highlights that the Sprott Critical Materials ETF (SETM) has significantly outperformed broader natural resource benchmarks since April 2025, underscoring growing investor focus on metals essential to modern infrastructure.

Copper sits at the centre of this shift., helping tighten its supply-demand balance relative to construction-focused bulk commodities. According to Sprott, copper-focused producers have increasingly outperformed large diversified miners whose earnings remain more closely tied to iron ore and other bulks.

Uranium over oil

Energy markets show a similar divergence. Oil markets still face ample supply and a long-term decline in consumption intensity relative to global GDP. Uranium, by contrast, is entering the cycle with constrained supply and strengthening demand as countries revisit nuclear power.

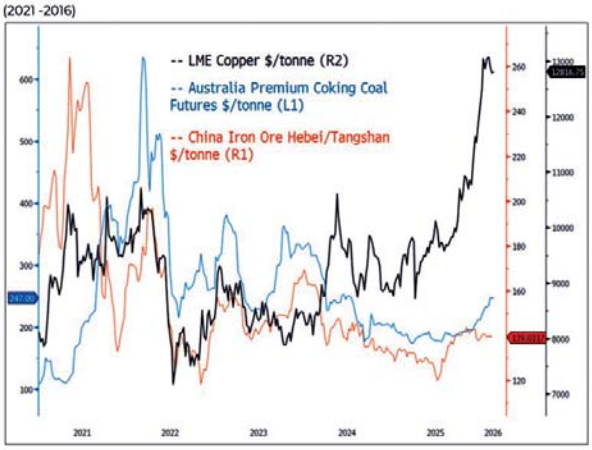
Sprott says the renewed interest in nuclear energy is driven primarily by energy security rather than environmental policy. Governments are extending reactor lifespans, planning new capacity and rebuilding long-term uranium contract coverage on the back of rising geopolitical tensions.

Beyond copper and uranium, the firm sees favourable fundamentals for other critical materials including lithium, rare earth elements and silver. Lithium and rare earths are essential for batteries and high-efficiency motors, while silver benefits from both industrial demand and its role as a monetary metal.

The report argues that critical minerals are increasingly being valued not only by traditional supply-demand dynamics but also by their strategic importance to national security and technological infrastructure.

Copper vs. bulk commodities (iron ore, met coal)

(2021 -2016)



Source: Bloomberg. Data as of 2/18/2026. London Metal Exchange (LME) Copper futures contracts represent the market price of Grade A copper cathode, quoted in U.S. dollars per metric tonne, and are widely used as the global reference price for physical copper transactions. Australia Premium Coking Coal Futures Index reflects the market price of premium coal exported from Australia. China Iron Ore Hebei/Tangshan Index tracks domestic iron ore concentrate prices in Tangshan, Hebei Province, commonly referencing ~66% Fe iron ore concentrate, used as a key indicator of supply demand conditions in China's primary steelmaking hub. One cannot invest directly in an index. Past performance is no guarantee of future results.

Despite the shift, many resource allocations still emphasize broad exposure to sectors that dominated earlier cycles, such as chemicals, forest products and agriculture. Sprott says this lag in recognition is typical in the early stages of commodity bull markets.

The firm expects investment in power generation, electricity grids, data centres and mineral supply chains to drive demand over a multi-year horizon. At the same time, long project lead times and a decade of underinvestment in new supply could keep markets tight.

Targeted exposure to critical minerals may therefore offer stronger returns than broad commodity allocations, Sprott says. The firm highlights investment vehicles such as the Sprott Critical Materials ETF (NASDAQ: SETM), which focuses on companies deriving at least 50% of revenue or assets from critical materials, and the actively managed Sprott Active Metals & Miners ETF (NYSE: METL).

While volatility remains likely, Sprott believes the structural forces reshaping the global economy could support sustained outperformance for select commodities and mining companies tied to electrification and energy security.

Staff Writer, Mining.Com | March 5, 2026

➤ Mongolia presses Rio Tinto for bigger Oyu Tolgoi cut

Mongolia is demanding earlier profit payments and a larger share of revenue from the massive Oyu Tolgoi copper mine it co-owns with Rio Tinto (ASX: RIO), reopening negotiations over the $18-billion project's commercial terms.

The government, which holds a 34% stake through state-owned Erdenes Mongol LLC., considers the current agreement unfair and wants dividend payments accelerated while raising Mongolia's share of returns to about 60%, Financial Times reported.

"These discussions reflect our continued commitment to working together to achieve Oyu Tolgoi's full potential for the benefit of all partners," Rio Tinto said in an emailed statement Tuesday.

The dispute underscores Mongolia's push to secure greater economic benefits from the mine, a cornerstone of Rio's long-term growth strategy as demand for copper surges with the global energy transition.

Under the existing deal, Mongolia is not expected to receive dividends until it repays a multi-billion-dollar loan from Rio that financed its share of development costs, which climbed far above early estimates and could delay payouts until next decade.

Rio Tinto, the world's second-largest miner by market value, has invested billions of dollars to expand Oyu Tolgoi's underground operations. Copper production at the mine rose 61% last year as development advanced.

Renewed tensions

Relations between the partners have fluctuated in recent years. In 2022, Rio waived $2.4 billion in debt owed by Mongolia in what it called a reset of the partnership, clearing the way for underground mining to proceed.

Rio Tinto rejects allegation it dodged $700 million in Oyu Tolgoi taxes

Tensions have since resurfaced. Mongolia is suing Rio Tinto over alleged tax underpayments of about $450 million tied largely to depreciation accounting for the 2021 and 2022 tax years, a dispute now moving through the courts.

Political pressure is also rising as Mongolia heads toward elections next year while copper and gold prices hover near record highs.

Rio Tinto expects Oyu Tolgoi, which began as an open-pit operation in 2011, to become the world's fourth-largest copper mine by 2030.

Cecilia Jamasmie, Mining.Com | March 10, 2026

(Continued on Page 22)

MINING AND ECONOMY: A COMPREHENSIVE ASSESSMENT OF TAMIL NADU'S MINERAL VALUE CHAIN AND THE ECONOMIC VALUE GENERATED BY MAJOR AND MINOR MINES

*Subhakaran B **Partheeban G

Abstract

The economic significance of Tamil Nadu's mining sector, focusing on the comparative value generation of major and minor minerals. The data from the Government of Tamil Nadu Handbook of Statistics (2022–23) and NLC India Limited annual report, the study quantifies production, royalties, and employment contributions from lignite, limestone, rough stone (M-sand) operations. Results show that while lignite mining contributes substantially through power generation, the minor mineral sector particularly rough stone (M-sand) has a more decentralized and employment-intensive impact. In 2022–23, rough stone operations generated approximately ₹11,000 crore in value, nearly matching lignite's ₹13,000 crore despite occupying a fraction of the land area. The findings highlight that Tamil Nadu's "minor" minerals have a major role in sustaining regional economies and rural livelihoods. The study advocates recognizing minor minerals as strategic economic assets within state industrial and development policies.

Keywords: *Tamil Nadu, mining economy, minor minerals, lignite, M-sand, economic value chain, regional development.*

1. INTRODUCTION

Any bounded region anywhere in the world that wants to progress in the present framework of the system that countries follow will have to develop the basic infrastructure of buildings, skilled human resources, entertainment, etc., which basically depends on the primary sector, mining. So while this mining is the very basic step for any economy to grow and be self-sustainable in the long term. In Tamil Nadu the mining is in very diversified locations, and it is also not known as a major resource-rich state. The value of the minerals mined in the state helps it very much to boost the economic activities to be the second state behind Mumbai, the financial capital of India. In this paper we will delve into the insights of a less highlighted contribution.

Tamil Nadu holds the limestone in the districts of Salem, Ariyalur, Tirunelveli, and Karur; bauxite in Salem district; and quartz and feldspar in the districts of Salem, Namakkal, and Karur. The development of mineral resources such as limestone, magnesite, graphite, vermiculite, granite, quartz and feldspar, lignite, petroleum, natural gas, and atomic minerals has led to the growth of mineral-based industries such as the cement and granite industry, creating employment opportunities and generating revenue and bringing overall development to the state economy. The minor mineral sector in the state, like in other states, helps the semi-urban and rural economies. For example, in 2023 the NLCIL in TN has paid a royalty of Rs. 272 crores for mining 215 lakh tonnes of lignite, and the rough stone quarries have paid a royalty of Rs. 262 crores for 440 lakh tonnes. In the NLCIL case, most of that has been concentrated in a single district, and in the case of rough stone, it has spread out all over the state, which has made it diversified and boosted it overall. In a case like Singapore, which has less area and has a high concentration, it is good, leaving no area behind, but in the case of TN, which has a larger landmass, it has a huge potential that can be initiated through a kind of diversification and boosting the hotspot economies like the rough stone does. This study aims to quantify and compare the economic contribution of major (lignite) and minor (rough stone, M-sand) minerals in Tamil Nadu.

2. LITERATURE REVIEW

The transition of the modern world has always been driven by advances in science and technology-from the first industrial revolution to the present age of artificial intelligence. Although human civilization spans more than 2000 years, the last 3–4 decades have generated growth that rivals the pace of the previous centuries, largely due to the shift of computational power from humans to machines. In a similar way, a nation develops not only by what it possesses but also by how effectively it uses its available resources. After the economic liberalization period, India witnessed rapid expansion across multiple sectors, including mining. The country officially holds resources of 95 minerals, and over time, high-value minerals have often been emphasized more than their actual contribution warrants. When we think of any country, we typically visualize its built environment, like buildings, infrastructure, and architecture. Yet we rarely acknowledge the basic construction materials that make these structures possible, in contrast to the focus placed on valuable minerals.

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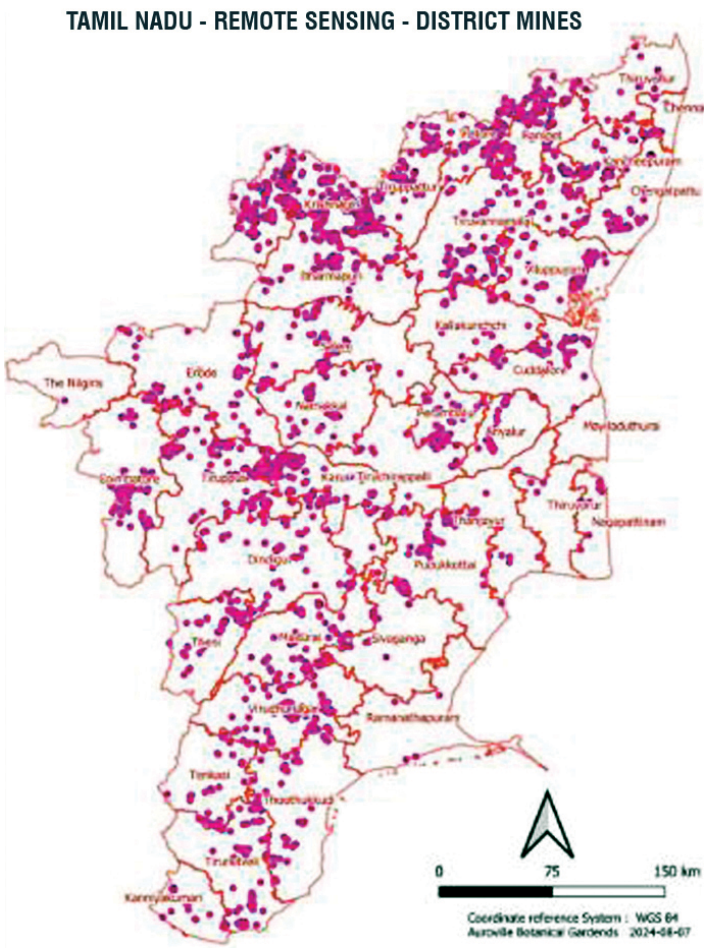

Figure 1: location of mines across Tamil Nadu (based on TnGIS Data)

This paper examines the overall economic value created by such minor minerals in the region of Tamil Nadu. The state contains notable deposits such as lignite (about 70% of India's share), magnesite (around 60%), and several others. However, major minerals in Tamil Nadu are geographically concentrated, like lignite, which is mined primarily by a single entity in Cuddalore, and magnesite, which is produced by a limited number of public and private operators in and around Salem. In contrast, minor minerals are distributed widely across the state. Among minor minerals, rough stone (aggregates, M-sand) has experienced significant growth over the last decade, driven by India's infrastructure expansion, which requires essential raw materials such as sand, aggregates, steel, and cement. While steel and cement production have increased to match national demand, sand, mainly river sand, has become insufficient to support ongoing construction requirements. Consequently, M-sand emerged as the primary alternative, with nearly 2044 leases (Department of Mining & Geology) operating across Tamil Nadu. The focus of this paper is not only the scale of these operations but also the substantial economic value generated by this widespread M-sand and rough-stone ecosystem.

3. BASIC FRAMEWORK OF MINING

Generally, all mines, whether large or small, depend on a basic set of operational inputs that enable extraction, handling, and movement of the mineral. These include an identified mineral-bearing area, appropriate machinery and prime movers, manpower for drilling, blasting, and loading, and supporting services such as transport and equipment maintenance. These elements together form the backbone of day-to-day mining operations, and they directly influence the cost of production and the economic performance of the mine. Before comparing large-scale mining with small-scale quarrying, it is useful to outline these major operational components.

3.1. Area for Mining

Any mining operation begins with selecting a mineral-bearing area that is economically viable for extraction. The presence and quality of the mineral are established through exploration and estimation techniques such as geological mapping, drilling and core sampling, and basic reserve estimation methods like block modelling or grade–thickness evaluation. These confirm whether the deposit can sustain consistent production.

Regardless of scale, the operational feasibility of the area also depends on factors like the stripping ratio, access for heavy machinery, and suitability for drilling and blasting. Both large and small mines face challenges during this stage, but large-scale operations typically require more detailed pre-mining studies due to the higher production targets and longer life of the mine.

3.2. Operational Requirements

Mining operations, irrespective of scale, depend on a defined set of operational inputs that determine their daily production capability. The core components begin with drilling equipment, where small quarries may use jackhammers or portable compressors, while medium and large mines deploy crawler drills or wagon drills capable of deeper and wider blast-hole patterns. Blasting follows as a key requirement, using explosives such as ANFO, slurry explosives, or emulsion cartridges, along with detonators and safety accessories, where the blast design directly influences fragmentation and loading efficiency. The broken material is then handled by excavators and loaders, with bucket capacities ranging from 0.8 m^3 to over 5 m^3 depending on output needs. For haulage, quarries typically rely on tippers of 10–20 tonnes, while larger mines may use 35–100 tonne dumpers; these vehicles constitute one of the major fuel-consuming units. Hard-rock operations also require crushing systems, beginning with primary jaw crushers and extending to secondary or tertiary crushers to produce M-sand or aggregate.

All these components depend on prime movers such as diesel engines, compressors, hydraulic pumps, and electrical drives that enable continuous operation. Fuel, mainly diesel, forms a dominant portion of daily operating costs, covering excavators, tippers, compressors, and DG

(diesel generator) sets. Together, these operational inputs define the achievable production per shift, influence the cost per tonne, and shape the overall efficiency of the mining or quarrying operation.

4. COMPARISON OF LARGE-SCALE WITH SMALL-SCALE MINING OPERATIONS

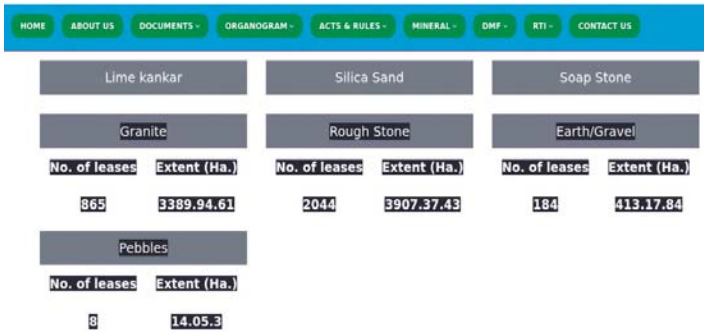

Figure 2: Showing the number of Rough Stone leases in Tamil Nadu (Depart. od Mining & Geology)

For comparison we choose NLCIL (Neyveli Lignite Corporation India Limited) as a large-scale mine and a small-scale regional quarry within Tamil Nadu; the values of the single quarry is multiplied by the number of operational quarries across TN to make it a fair comparison in terms of economic value generation. So as per the TN Department of Mining and Geology, there are 2044 rough stone leases in the state, and as per TNGIS (Tamil Nadu Geological Information System), there are 1055 quarrying entities in operation. The difference in the data of the number of quarries is due to the multiple leases being managed by the same entity in the same area. And most of the quarries are located along the Western Ghats, leaving the coastal districts with fewer mines. So with the number of mines available, the base year for comparison was considered as 2022-23 because of the rich data availability in those years.

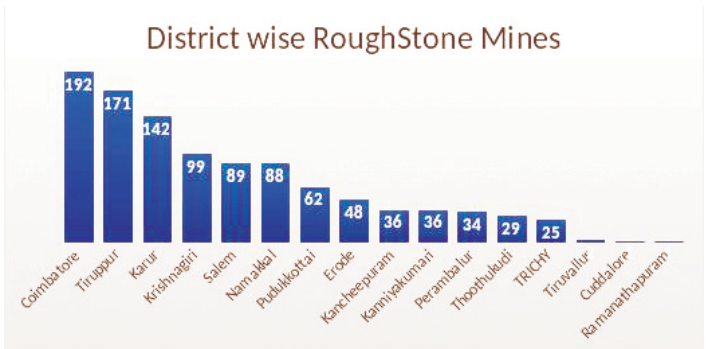

Figure 3: District wise number of Quarries

So, starting with the royalty paid by lignite and rough stone, it is almost the same as mentioned in the table below. Yet the area requirements are different (NLCIL is operated in 25000 ha, while the Rough Stone is operated on 3500 ha (Department of Mining & Geology, Govt. of TN), and the mineral uses are totally different in each case. Because the power generation from the lignite is the basis for many industries and households, while the aggregates are also very basic for the infrastructure development of road connectivity and other constructional requirements.

Government of TamilNadu, Handbook of Statistics 2022-23			
	Quantity	Royalty	Royalty Rs/ Unit
Fuel Minerals			
Lignite (Tonnes)	21,566,090	₹2,782,259,051	₹129
Non-metallic			
Limestone (Tonnes)	23,577,542	₹1,912,168,011	₹81
Minor Minerals			
Rough Stone (Cu.M)	44,000,110	₹2,624,539,420	₹59.6
Gravel (Cu.M)	19,055,152	₹1,044,403,285	₹55

Figure 4: comparison of lignite, Limestone, Rough Stone Royalty against Production for 2022-23.

The total value created by lignite and rough stone is very clearly distinctive. If the lignite is sold at pithead cost, lignite can generate 4500 crores and rough stone around 11,000 crores. But the lignite sale is only 10-15%; instead, the electricity is sold as the end product, and by that, NLCIL generates 13,000 crores as revenue in 2022-23, which now almost matches the rough stone sector. The important aspect here is that the NLCIL mining operations in Tamil Nadu are mainly operated in a single district with financial spread mostly contained within the district. Because of this, the surrounding districts of Cuddalore, being of the same size in landmass, like Villupuram, Puducherry, Kallakurichi, Perambalur, Ariyalur, Mayiladurai, etc., are comparatively low in GDDP.

Parameter	Unit	Lignite	Rough Stone (aggre., Msand & Psand)
Production	*Tonnes*	21,566,090	110,000,275
Market rate	*Rs/Tonnes*	₹2,150	₹1,000
Total sales value (including taxes)	*Rs*	₹46,367,093,500	₹110,000,275,000

Figure 5: sales value generated by multiplying the production with average market price of mineral.

However, the rough-stone sector, which operates through thousands of units spread across Tamil Nadu with an average of 28 quarries in each district, distributes its revenue widely and enables more effective financial inclusion throughout the state. According to the employment report, NLCIL has employed over 20,000 workmen, including permanent and contractual (Annual report, NLCIL, 2022-23). In the rough stone sector, with 1055 entities operating with a range of 75–100 workmen for an entity, it contributes more than 1 lakh

in employment in the state. The state does have explosive manufacturers to support the blasting operations carried out in the mines for mineral extraction.

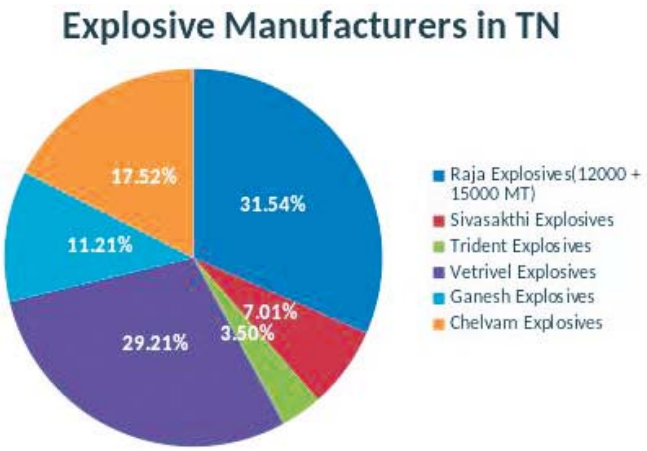

Figure 6: Pie-chart showing manufacturing capacity across Tamil Nadu

Likewise, other mining machinery manufacturers are found in western Tamil Nadu, which gives the mining industry all the supporting infrastructure readily available. Another is the power supply for the quarries, which is through the state TANGEDCO (Tamilnadu Generation and Distribution Corporation). As we were comparing with NLCIL, the Neyveli Thermal power plants generate 12,000 MU (million units) of electricity annually, which can sustain Tamil Nadu's electricity demand for one month, given the state's average consumption of around 400 MU per day (approximately 100,000 MU per year), as per the Handbook of Statistics, Government of Tamil Nadu. Moreover, without the continuous availability of this power, quarry operations themselves cannot function normally, highlighting the interdependence between large-scale lignite-based power generation and the decentralized rough-stone/M-sand industry.

4.1. Comparison with the Singapore economy

It is not always the case that a resource-rich region performs better economically; rather, economic performance depends on how effectively available resources, whether natural or human, are utilized. A clear illustration of this principle is the nation of Singapore. Singapore's GDP is approximately USD 564 billion, whereas Tamil Nadu's GSDP stands at around USD 420 billion. Yet, Tamil Nadu is nearly 69 times larger in land area, which, for perspective, is Singapore being the size of Chennai. Despite this vast difference in physical size and natural resource availability, Singapore's economic output is significantly higher because its growth model is built on manufacturing, high-value exports, global financial services, and strategic economic policies.

Singapore is particularly notable for its absence of natural resources. It lacks mineral wealth, basic construction materials including sand for construction and land reclamation purposes, and even fresh water sources, which it imports in large quantities from foreign countries. In contrast, Tamil Nadu possesses abundant natural resources, human capital, and geographic advantages, including access to ports, mineral deposits, and an extensive industrial base. This comparison highlights that Tamil Nadu has substantial potential to scale its economic output, provided its policies, infrastructure, and resource-management frameworks continue to evolve to leverage these structural strengths.

5. CONCLUSION

Although M-Sand and rough stone are classified as *minor minerals* and priced far lower per tonne than major minerals such as lignite and limestone, the economic system built around M-Sand is substantially larger, more employment-intensive, and more geographically widespread. When measured through production volume, royalty contribution, number of operating units, machinery requirements, transport linkages, and rural economic spillovers, the M-Sand/rough-stone economy outperforms the major-mineral economy in Tamil Nadu.

The lower unit value of rough stone causes the sector to appear less important in traditional mineral statistics. However, this classification obscures the fact that the mining process, technological intensity, blasting operations, machinery utilization, fuel consumption, and labour involvement in M-Sand quarries are effectively comparable to those of major mineral mines. The only major distinction lies in the *market price* of the extracted material, not in the scale or complexity of the extraction activity.

When economic contribution is understood in terms of total value generated, including royalty, wages, contractor payments, machinery procurement, diesel consumption, transport demand, and construction sector dependence, the M-Sand industry emerges as a critical pillar of Tamil Nadu's mining economy, often exceeding lignite and limestone in overall economic impact.

Thus, the analysis demonstrates that M-Sand and rough stone should be recognized on par with major minerals in their contribution to the state economy, and the current "minor mineral" label reflects regulatory classification rather than economic importance.

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OPERATIONAL EXCELLENCE IN THE MINING BUSINESS BY DIGITALIZED MINE PLANNING DRIVEN BY GEO-MIN COMPETENT PERSONS

Sanjay Singh

Abstract

For mining projects, accurate and reliable data from standard exploration activities is crucial for declaring minable reserves and developing a pre-feasibility report. The competent person's evaluation of exploration data is the foundation for determining the minable reserves and the pre-feasibility report, both crucial steps in developing a successful mining project.

Digitalized mine planning is becoming increasingly important for modern mining operations due to the complex deposits and potential for significant improvements in efficiency, safety, sustainability, and decision-making.

1. INTRODUCTION

Digitalized mine planning allows for a holistic view of the entire mining operation, including geology, orebody modelling, extraction sequencing, equipment allocation, and ventilation planning. This comprehensive data analysis enables informed decision-making regarding resource optimization, safety measures, and production scheduling.

The major benefits of digitalized mine planning are:

1.1 Optimized stripping ratio & Lead for overburden

Digitalized mine planning can identify the most efficient extraction paths with exposure and mining of coal/ore with a minimum stripping ratio leading to improved resource utilization, facilitate input dumping, and lead optimizations with positive cash flow at the start of the mining project.

1.2 Data-Driven Decision Making

Regular updates of geological and survey data collection and analysis provide valuable insights for better decision-making in various aspects of mining, including exploration, production optimization, and risk management.

1.2 Enhanced safety planning

By simulating various scenarios within the digital mine plan, potential safety hazards can be identified and addressed proactively, reducing the risk of accidents based on pit design and HEMM capacity with respect to traffic and total material handling.

2. DATABASE REQUIREMENTS FOR GEOLOGICAL MODEL & PIT DESIGN

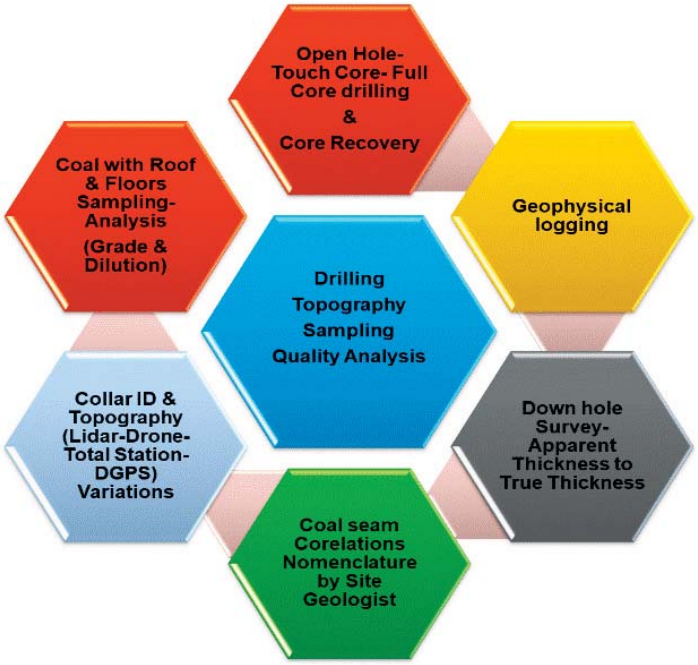
Accuracy of the geological model required a robust exploration database system that was certified by a competent geologist for a particular type of deposit of mineral or coal based on the complexity of the ores.

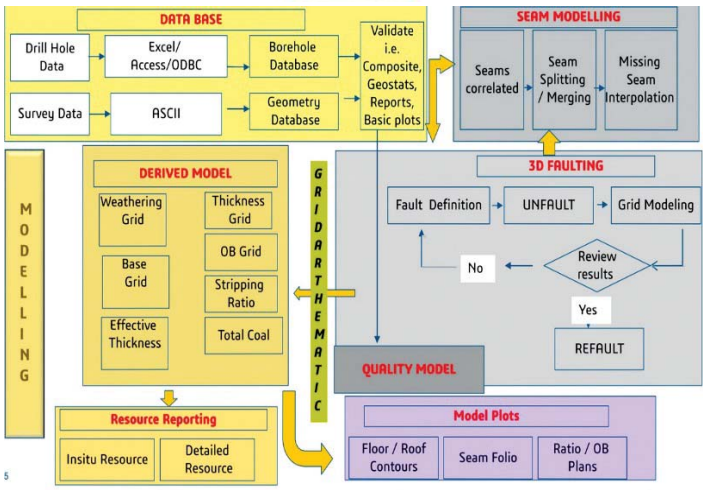
The following data are mandatory to prepare the geological model and resource-reserve estimations.

- Review of regional geological map, geological mapping of the mining concession area, Outcrops coordinates, Sampling and lab reports, General strike and dip, Infrastructure and logistic details around mining concession area.
- Exploration drilling operation-open hole, touch coring, or full coring with lithology details, core recovery, photographs, and storage of core box and sample.
- Geophysical logging and its interpretations with Core samples
- Downhole survey and Interpretations for True thickness & dip wrt Apparent Thickness and dip
- Stratigraphy for total number of coal seams/ mineralization during exploration drilling.
- Preparation of lithology of each borehole, weathered zone, and coal/mineralization details.
- Topography data is based on Lidar survey/drone/total stations/laser survey/DGPS survey and its accuracy in coordinates and elevations wrt the National/Universal benchmark.
- Drill hole collar elevations deviation with Topography and correction factors
- Coal/ore sample analysis for grade quality estimations.
- In situ density, bulk density, strength, and other geotechnical parameter analysis.
- Roof/Floor or HW/FW analysis for dilutions
- Geotechnical analysis to decide the bench dimension and stope size.

AVP-Operations & Project, South West Mining Limited, Barmer, Rajasthan

- Hydrology study to estimate the volume of ground and surface water during mining operations and its impact on operations.
- Situation map of mining boundary and permanent surface features as related to land details, highways, railways, rivers, or any other infrastructure that may require shifting during mining operations.
- Geological interpretations of coal seams/ore bodies in terms of nomenclature, splitting, etc., by explorations geologist
- Unexplored Area and future drilling plan based on mineralization

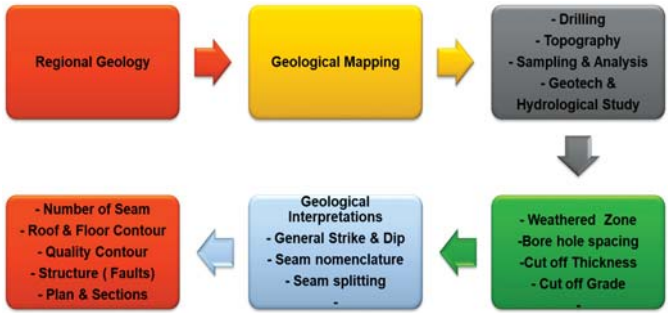




3. GEOLOGICAL MODEL OUTCOMES

Three-dimensional details of the coal deposit/ore mineralization may be prepared by a competent geologist.

1. Number of coal seams/ore bodies in the mining concession
2. Continuity of each coal seam/ Ore body along strike and dip based on extrapolation and interpolation data
3. Subcropline of the deposit along topography
4. Washed-out zone/Weathered zone/Faulted zone based on geological discontinuity
5. Roof & Floor of all coal seams/ore body
6. Plan and sections with respect to thickness and grade along strike and dip
7. Categorization of Geological resources into Measured-Indicated-Inferred based on drill hole distribution for individual coal seam/ore body



4. MINABLE RESERVE ESTIMATIONS & PRE-FEASIBILITY STUDY

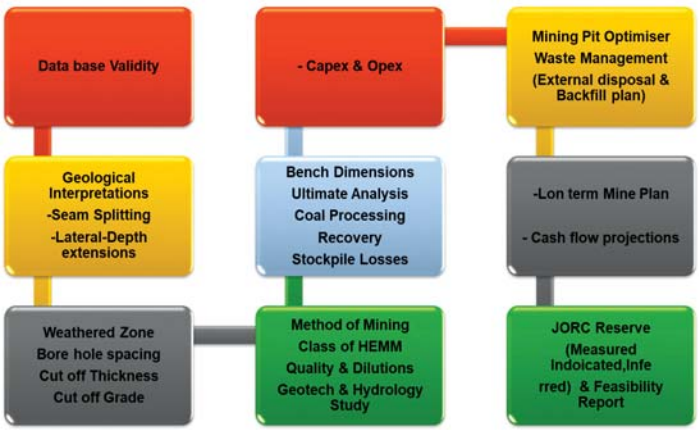
Mineable reserve estimation involves identifying the portion of a mineral deposit that can be extracted economically and responsibly under current conditions. This process considers various criteria known as modifying factors, which include a wide range of technical, economic, environmental, social, and governmental aspects.

The key factors important for minable reserve estimations are as defined below:

1. Cut off thickness of Coal deposit/Ore body
2. Cut-off grade of Coal deposit/Ore body
3. Bench design parameter/ultimate pit slope/stope size based on geotechnical and hydrology study
4. Dilution in quality parameter from Roof-Floor, HW-FW
5. Ore recovery percentage based on geological model and method of mining
6. Pit block optimiser based on different stripping ratios (SR)
7. Coal washing/ore processing/recovery % estimations
8. Stacking, crushing, loading & Transport of Product as washed coal/concentrated ore
9. Capex and Opex estimations for Coal/Ore
10. Selection of Mining pit based on economic SR
11. Area demarcation for infrastructure development and overburden/waste management (external disposal

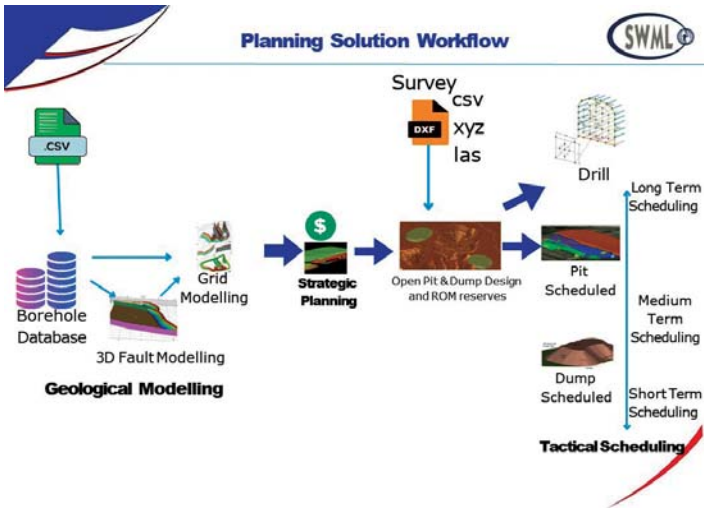
within the mining concession area or rehandling of waste)

12. Material balance for Overburden based on Mine Opening-External disposal area for Overburden and Inpit dumping
13. Cash flow projections
14. Declaration of Minable reserve and Pre-feasibility study for the deposit by a competent person



5. MINE PLANNING SOLUTION WORKFLOW

A summary of mine planning activities is detailed in the below flowchart.



6. RISK & SENSITIVITY ANALYSIS

Geological & economic uncertainty are crucial for mining projects. The confidence level of a competent person based on data is an important key factor.

Sensitivity analysis helps identify which variables most influence project performance, while risk analysis assesses the likelihood and impact of various risks. By combining these analyses, mining companies can make more informed decisions and develop effective mitigation strategies.

7. CONSTRAINTS OF FUTURE MINING PROJECTS IN INDIA AND AROUND THE GLOBE

- Partially explored area even declared as a fully explored area in the proposed mining lease block.
- Geological resource recovery is considered with 90-95% recovery without basic study, considering the combination of mining method and new technology.
- Many mining lease areas are coal-bearing areas that may lead to external disposal areas outside the mining lease or underground potential areas or rehandling of overburden in future mining.
- Mostly mining lease areas have rivers, highways, villages, etc., that need to be planned for shifting with R & R, etc., and may impact the recovery of coal/ore.
- Minimum exploration data

Initial techno due diligence involves a thorough review of technical data and documentation, site visits, and discussions with relevant stakeholders. Key areas like geology, resource estimation, mine planning, processing, environmental permitting, and infrastructure are scrutinized.

The mining project may be reviewed independently by competent persons based on all parameters on the checklist as described in this article to uncover potential risks and hidden liabilities.

8. CONCLUSIONS & RECOMMENDATIONS

Quality of exploration data, Reverification of data, Competent persons with advance mining software like Minscape-Minex-Surpac- Datamine with regular updates of the geological model and estimations based on mining progress will increase the confidence level of the competent team based on data analysis, and project uncertainty may be controlled, and operations may be reoptimized on time to run the overall project in a sustainable way.

Both techno due diligence and digitalized mine planning are essential for navigating the complexities and challenges of the modern mining industry, ensuring projects are well-evaluated, operations are optimized, and companies remain competitive, safe, and recovered future resources by sustainable mining business.

Centralized mine planning and a technical team with advanced software availability and standard code for reporting of minable reserves and a feasibility report system are not yet streamlined in the Indian mining industry, and the same may be planned to reduce the dependency on International Mining Consultancy and hidden constraints in feasibility reports of new mining projects in the future.

9. REFERENCES

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(Continued from Page 14)

➤ BHP wins UK appeal ending case over Brazil dam collapse claims

The 2015 mine tailings dam failure poured 50 million tonnes of mud and toxic waste into Brazil's Rio Doce river and valley, pictured here. (Image courtesy of Samarco.)

BHP (ASX, LON: BHP) has won a UK Court of Appeal ruling that ends contempt of court proceedings tied to claims it funded litigation aimed at preventing Brazilian municipalities from suing the miner in London over the 2015 Mariana dam disaster.

The case centred on allegations by lawyers for hundreds of thousands of Brazilian claimants, including local governments and businesses. They said BHP backed legal action in Brazil through mining lobby group Ibram to block municipalities from joining lawsuits in the UK. The claimants argued the move interfered with the administration of justice and amounted to contempt of court.

BHP had previously failed to have the case dismissed, but the Court of Appeal overturned that earlier decision on Monday, bringing the contempt proceedings to an end. The world's largest miner welcomed the ruling, while lawyers for the claimants said their focus remains on the broader litigation over the dam collapse.

The judgment comes as BHP awaits another key decision in the sprawling case over the Samarco dam failure, one of Brazil's worst environmental disasters. The structure, owned and operated by the Samarco joint venture between BHP and Vale (NYSE: VALE), collapsed in southeastern Brazil in 2015.

Last week, BHP sought permission to appeal a High Court ruling that found it liable for the disaster following a trial that began in October and concluded in March. The Court of Appeal is expected to decide in the coming weeks whether the miner can challenge that liability finding.

A second trial to determine damages is scheduled to begin in October, with another phase expected in April 2027 to assess compensation owed to claimants.

BHP has consistently denied liability, arguing the London case duplicates legal proceedings and compensation programs already underway in Brazil.

"We welcome the Court's decision to uphold BHP's appeal, which brings to an end the contempt proceedings that were brought against us. BHP remains confident that the Brazil agreement provides the most effective and efficient solution to compensate those impacted by the dam failure and Brazil is the right place for these issues to be resolved," the company said in an emailed statement to MINING.COM.

"Samarco, BHP Brazil and Vale continue to implement the ~$32 billion compensation and remediation agreement reached with the Brazilian public authorities in October 2024. In total more than 625,000 people have received approximately $6.5 billion in compensation and financial aid since the dam failure," the miner noted.

MINING.COM Editor / March 16, 2026

➤ JSW Steel wins rights to develop coking coal mine in Mozambique

JSW Steel Ltd., India's biggest steelmaker by capacity, won rights to develop a coal mine in Mozambique's Tete province, securing access to a key raw material used in steel manufacturing.

The company's Minas de Revuboe project in Mozambique's Moatize coal basin holds about 850 million tons of reserves and could produce 250 million tons of saleable coal used in steelmaking, JSW Steel said in a statement late Friday.

JSW Steel plans to develop the mine in phases. The first stage is expected to take about two and a half years and produce 2.4 million tons of coal a year, according to the statement. Its proximity to ports could make the project a strategic supplier to other Indian steel plants.

As the company plans to increase its annual steelmaking capacity to 50 million tons in India by 2030, the asset will help secure and diversify raw-material supplies while cushioning JSW from volatile global coking coal prices, the company said.

With India's domestic reserves limited, captive overseas sourcing has become a strategic priority, it said.

Bloomberg News / March 14, 2026

(Continued on Page 33)

MEAI NEWS

BANGALORE CHAPTER

ONE-DAY NATIONAL SEMINAR ON "MINING FOR VIKSIT BHARAT VISION-2047" HELD ON 12.3.2026

The Mining Engineers Association of India-Bangalore Chapter conducted a one-day National Seminar on the topic "Mining for Viksit Bharat Vision-2047" in association with the Department of Mines and Geology, Government of Karnataka (DMG), on 12-03-2026 at the Auditorium of the Indian Institute of Engineers, Karnataka State Centre, Dr. B. R. Ambedkar Veedhi, Bengaluru. The National Seminar was attended by over 130 delegates from the Department of Mines & Geology, Industry, life members of MEAI, etc., and 50 student members.

The National Seminar is composed of an inauguration session, two technical sessions, and a validatory session. The inaugural session was started with an invocation by Kumari D. A. Pranavi and the Karnataka Nadageete. Dr. T. N. Venugopal, Chairman of the Bangalore chapter, welcomed all the dignitaries, delegates, and students during the inaugural session. The lighting of the lamp is done by dignitaries as a mark of the seminar inauguration. Shri S. Rangappa IAS, Director DMG, inaugurated the seminar, released the seminar souvenir, and addressed the attendees as the chief guest. Shri. Srinivasulu IFS-Principal Secretary, Department of Environment and Ecology, Government of Karnataka; Shri. G. V. Kiran-Chairman cum Managing Director, KIOCL Limited; and Shri. Basavaraju KAS-Managing Director, Karnataka State Mineral Corporation Limited, also addressed the gathering as the guests of honour. Shri Dhananjaya G. Reddy, Vice President-I MEAI, presided over the inaugural session. Shri Sitaram Kemmannu, secretary of the Bangalore Chapter, delivered a vote of thanks.

The details of technical sessions are as below.

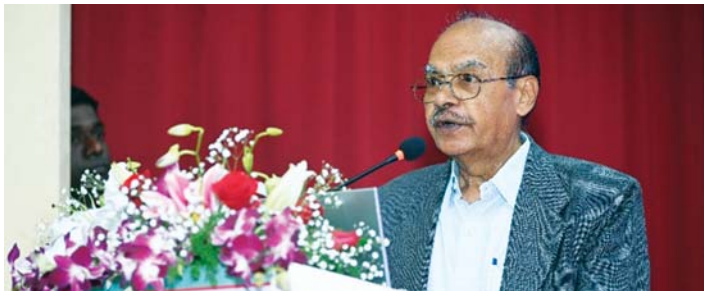
Technical Session-I	
Chair: Dr. Pukhraj Nenival	Co-Chair: Dr. P. V. Rao
1. Sustainable Mining as a Pillar of Nation-Building	Shri Srinivasulu, IFS Principal Secretary, Ecology & Environment Department, GoK.
2. Environmental Clearance Reforms for the Mining Sector (2005-2025)	Dr. Dola Bhattacharya, Scientist, Ministry of Environment, Forest & Climate Change, Regional Office, Bengaluru
3. Note on Policy for Exploration of Critical Minerals in New Projects and Recovery of Critical Minerals from Overburden, Dumps, and Tailings of Existing Mines, 2025.	Shri Lokesh Kumar G. N. Deputy Director, Department of Mines & Geology, Bengaluru.
4. 'Advancing Next-Generation Mineral Exploration in India: GSI's Role in Overcoming Cover Constraints	Shri Dattatreya S. Jeere & Ms. Anindya Bhatattacharya RSAS, Geological Survey of India.
Technical Session-II	
Chair: Dr. V. D. Rajgopal	Co-Chair: Shri M. Narsaiah
1. Decoding Occupational Safety, Health, and Working Conditions Code, 2020	Shri A. R. Vijay Singh Mining/CA Consultant
2. Role of Education System in Creating a New Generation of Geoscientists and Mining Engineers with Strong Knowledge of AI, ML, and IoT for Mission Viksit Bharat Vision-2047.	By Shri Anant P. Mahajan and Shri N. B. Rao
3. Israel online session: opening remarks a. AI-Driven Excavation Optimization – Turning Heavy Equipment into Smart Machines b. Wastewater Treatment for Mining Industry c. Plexgol: Innovative & Durable Piping Solution for the Mining Industry	By Shri Yair Osheroff, Head of Economic Mission to South India, Israel Economic & Trade Mission, Bengaluru. Shri Noam Rotem, CEO, Dig Robotics. Shri Nayan Shah, Sales Director, IDE Technologies India, Pvt. Ltd. Shri Motti Yitzhaki, BD & Sales Director, India Emirates Golan Renewable Industries.
4. Geology, Mineralization, Mining, Beneficiation, and Hydrometallurgical Processes for Recovery of Rare Earths from Bhatikhera Deposit, Rajasthan	Shri. Uppugunduri Vishwanath
5. Gravitas Presentation	Shri Arjun Javali

Dr. Pukhraj Nenival, VP-II, MEAI, presided over the validatory function and addressed the gathering. Shri. N. B. Rao summarized the proceedings of the national seminar. Shri Sitaram Kemmannu proposed a vote of thanks. The national seminar ended with the national anthem.

Invocation by Kumari D. A. Pranavi

Karnataka Nadageete

Lighting of Lamp by Dignitaries



Welcome address by Dr. T. N. Venugopal, Chairman, Bangalore Chapter

Adress by Sri. Basavaraju KAS MD, KSMCL

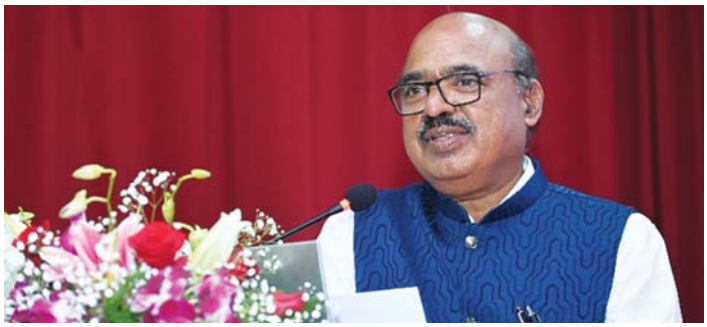
Address by Shri. G. V. Kiran MD KIOCL

Address by Shri. Srinivasulu IFS, Principal secretary Department of Environment & Ecology.

Address by Chief Guest Shri. S. Rangappa -IAS, Director DMG

Release of Seminar Souvenior

Presidential address by Shri. Dhananjay G. Reddy -VP-I MEAI



Vote of Thanks by Shri. Sitaram Kemmannu Secretary MEAI Bengaluru Chapter

Technical Session-I Chaired by Dr. Pukhraj Nenival and Dr. P.V. Rao

Chair, Co-Chair, and Speakers of Technical Session- I

Technical Session-II Chaired by Dr. V. D. Rajgopal & Shri. M. Narsaiah

Address by Mr. Yair Osheroff - Head of Economic Mission to South India, Israel Economic & Trade Mission

Israel Companies online presentation

Session-II Authors with Chair & Co-Chair

Valedictory Session

Delegates after the valedictory function

National Anthem

Audience

Dignitaries

BELGAUM CHAPTER

On 2nd March, we organized a one-day hands-on training on "Geological Identification of Minerals and Ores" for Shri BMK Ayurveda Mahavidyalaya 2023 UG students at both Shri BMK Ayurveda Mahavidyalaya, Belagavi, and the Geology Department, GSS College, Belagavi, institutes. Chairman Dr. P. T. Hanamgond gave a keynote talk on "Origin of Earth, Geological Processes, and Types of Rocks"; Mr. Suraj Mense gave a talk on "Physical Properties of Minerals"; and Mrs. Priyanka Shinde (Waghmare) gave a talk on "Ore Minerals and Medicinal Geology" in the morning session. In the afternoon session, hands-on training was provided at the geology department, and a visit to the geology museum was made. Mr. Yogesh Kutre briefed about the museum collections for the students.

On 9th March 2026, Dr. Prabhakar Sangurmath visited the Geology Department, GSS College. Had interaction with BSc students about opportunities in geology. Also, he presented a photo of Hutti Gold Mines, consisting of raw materials to final production, as well as his recently published book to the department, the library, and the staff.

On 12 March 2026, from our chapter Shri Rachappa VPIII, Dr. P. T. Hanamgond, Shri SS Hiremath, Mr. Amit Ghooly, and

Mr. Anant Mahajan were present. Mr Anant also presented a paper on "AI, ML, & IoT in Mineral Exploration & Mining" at the National Seminar "Mining for Vikasit Bharat Vision 2047" at the Indian Institute of Engineers, Bangalore.

World Water Day Celebrations

On 23rd March we celebrated World Water Day. Dr. B.K. Purandara, former chairman of the Belgaum Chapter and retired scientist of NIH Belgaum, was the chief guest. Shri DS Malkai, retired Sr Geologist, MGD, Belgaum, presided over it.

Dr. P. T. Hanamgond and Suraj Mense, HoD, Geology Department, GSS College & Jt. Secretary, Belgaum chapter, shared the dais. Dr. Purandara briefed about WWD and its importance, along with opportunities in water resources management for students. Shri Malkai explained about saving water and highlighted his springs study around Belgaum.

Dignitaries presented prizes to winners of essay competitions held on Indian Mining Day. Also presented the MEAI student members with certificates. At the outset Mr. Suraj Mense welcomed the gathering. Dr. Raju Sukhaye introduced Dr. Purandara and Dr. Hanamgond and introduced Shri Malkai. Mrs. Priyanka Shinde proposed a vote of thanks. Mr. Sagar Waghmare, secretary of Belgaum, also graced the event.

Glimpses of the program

BELLARY – HOSPET CHAPTER

Nature walk

Date: 8.3.2026
Location: Shri Jambunatha Temple (Hill), Hosapete, Karnataka.

Shri Jambunatha Temple is a historic hill temple located near Hosapete in the Vijayanagara district of Karnataka. The temple is dedicated to Lord Shiva, worshipped here as Shri Jambunatha Swamy. It is situated on Jambunatha Hill, nearly 3 miles from Hosapete town, and stands at an elevation of about 3000 feet above sea level. The temple is believed to be very ancient and has been a place of devotion for local people for several generations. Devotees reach the temple by climbing around 500 steps through a scenic pathway that passes through rocky hill terrain and natural surroundings.

The hill area around the temple is known for its beautiful landscape, peaceful atmosphere, and fresh environment, making it a popular place for spiritual visits and nature walks. There is also a natural mineral spring near the temple, which is believed by devotees to have healing properties. Because of its natural beauty and spiritual importance, the place attracts many visitors, trekkers, and devotees throughout the year. On 8 March 2026, the Bellary–Hospet Chapter organized a "Nature Walk" at Shri Jambunatha Temple Hill with the objective of promoting environmental awareness, physical fitness, and fellowship among members.

Around 52 members participated in this nature walk and enjoyed the scenic beauty of the hill while trekking towards the temple.

The event was attended by Shri G. Laxminarayana, GM – RBSSN Pvt. Ltd.; Shri P. V. Rao, Secretary – BH Chapter; and Shri Yogananda T. L., HOD – TMAES Polytechnic, along with other life members of MEAI. Family members and children also actively participated in the nature walk, making the event lively and enjoyable for everyone.

The nature walk commenced from the bottom entry gate of Shri Jambunatha Temple Hill.

A tasty and refreshing breakfast was kindly arranged by M/s RBSSN Pvt. Ltd. for all the participants after the walk. The members expressed their appreciation for the thoughtful hospitality and enjoyed the gathering in a friendly and pleasant atmosphere. The nature walk concluded successfully with participants appreciating the initiative taken by the Bellar–Hospet Chapter to encourage health, environmental awareness, and camaraderie among members.

For the nature walk, Shri G. Laxminarayana and Shri P. V. Rao expressed their sincere gratitude to all the participants for their enthusiastic involvement. They thanked the members and representatives from different organizations, including Baldota Group, JSW Steel Limited, RBSSN Pvt. Ltd., and TMAES Polytechnic, along with other life members of the association.

They also appreciated the presence and active participation of family members and children who joined the event and made the nature walk more vibrant and memorable. The organizers acknowledged the support and cooperation extended by all the participants in making the program a grand success.

They further emphasized that such activities help strengthen professional bonding, promote environmental awareness, and encourage a healthy lifestyle among members of the mining community. The event concluded with a note of appreciation to everyone who contributed to the successful organization of the Nature Walk 2026.

GOA CHAPTER

Goa chapter, in association with Goa College of Engineering, Farmagudi, organized a guest lecture at Seminar Hall, Dept. of Mining Engineering, GEC, on 09/03/2026 on “Urgent Need of Transdisciplinary Translational Industry-Oriented Research for Sustainable Mining” by Dr. Singam Jayanthu, Professor, NIT Rourkela. Shri Hymakar Reddy, Chairman of the Goa Chapter, welcomed Dr. S. Jayanthu and gave the objectives and activities of MEAI. Dr. Ulhas G. Sawaiker, HOD (Mining Engineering), spoke about the Mining Engineering Department at Goa College of Engineering, its activities, and laboratory facilities.

Dr. S. Jayanthu, in his lecture, stressed the importance of transdisciplinary research that needs to be taken up in the mining industry. He welcomed all the engineering and allied fraternities to look into the on-the-ground problems faced by the mining industry and come up with the out-of-the-box solutions that will benefit the mining industry and society at large. He presented a few case studies of the research work taken up by NIT Rourkela and the proposals put up to the Ministry of Mines involving the students, research scholars, and faculty of mining and other disciplines, viz., CSE, electronics, mechanical, civil, mathematics, science, etc. Some areas that he requested the audience to look into are the development of techniques for artificial intelligence (AI) / machine learning (ML) and data analytics for automated mine management systems; the development of mixed reality (virtual reality, augmented reality & extended reality) for mining (UG & OC) operations & training; and the extraction of value-added products from mine waste, plant tailings, etc. He said cooperative research among organizations associated with the mineral sector is the need of the hour. The seminar was well attended by the students and faculty of mining and other engineering and senior executives of the industry. The lecture was arranged in hybrid mode, where the students, research scholars, and executives from other geographical areas participated online.

Glimpses of the program

NORTHEAST CHAPTER

INAUGURATION FUNCTION

Venue: State Convention Centre, Shillong, Meghalaya
Date: 8 March 2026
The Mining Engineers' Association of India (MEAI) proudly marked a significant milestone in its journey of growth and regional expansion with the formal inauguration of its 28th Chapter-**Northeast**-on 8 March 2026.

Significance of the Northeast Chapter

The establishment of the Northeast Chapter is a strategically important step, considering the rich mineral resources and untapped potential of the Northeast region of India. The region is endowed with limestone deposits, coal reserves, and other minerals. With increasing emphasis on sustainable mining practices, environmental protection, scientific mine planning, and adoption of modern technologies, the Northeast region is poised to become a key contributor to India's mining sector.

The formation of this chapter is expected to strengthen regional representation in MEAI, promote professional networking, encourage knowledge sharing, facilitate industry–academia collaboration, and support skill development of mining professionals.

On this auspicious occasion, Shri Ibrahim Sharief has been elected as the chairman and Shri Dasari Venkata Ramanayya as the secretary of the Northeast Chapter.

Core Objectives of MEAI

Based on the goals established for the new Northeast Chapter, the association focuses on several key pillars:

- Technical Advancement: Organizing seminars, workshops, and conferences to promote modern mining technologies and scientific mine planning.
- Skill & Capacity Building: Facilitating training programs, field-based learning, and capacity building for mining professionals.
- Safety and Compliance: Promoting rigorous mine safety standards and ensuring compliance with DGMS (Directorate General of Mines Safety) regulations.
- Environmental Stewardship: Emphasizing sustainable mining practices and environmental protection.
- Professional Networking: Strengthening regional representation, encouraging knowledge sharing, and facilitating collaboration between the industry and academia.

Strategic Regional Focus

The association identifies and expands into regions with significant mineral potential. For instance, the Northeast Chapter was established specifically to tap into the region's rich resources, such as

- Limestone
- Coal
- Other minerals essential to India's mining sector

Executive Committee

Office bearers:
Shri Ibrahim Sharief – Chairman
Shri Pankaj Nayon – Vice Chairman
Shri Dasari Venkata Ramanayya – Secretary
Shri Sharma Hemant – Joint Secretary
Shri Mairembam Prabindas Singh – Treasurer

Executive Committee Members:
Shri Umesh Kumar
Shri Sikandar Prasad
Shri G. Anil Kumar
Shri P. V. Phani Krishna Kumar

Key Objectives of the Northeast Chapter

1. Technical Development – Organizing seminars, workshops, and conferences and promoting modern mining technologies.
2. Skill Development – Training programs, capacity building, and field-based learning.
3. Safety & Compliance – Promoting mine safety and DGMS compliance.
4. Environmental Management – Sustainable mining and environmental protection.
5. Industry Collaboration – Strengthening industry–academia partnerships.

The Northeast Chapter aims to actively organize technical seminars, workshops, training programs, and field-oriented discussions that will contribute to capacity building and skill development among mining professionals. It also intends to promote best practices in mine planning, safety, environmental management, and the adoption of advanced technologies in mining operations.

Ceremonial lighting of the lamp by the chief guest, Dr. Pukhraj Nenival, vice president II.

Address by Shri. M. Narsaiah, Secretary General

Inaugural Welcome Address

By Shri Dasari Venkata Ramanayya, Secretary

Honorable Chief Guest, Dr. Pukhraj Nenival, Vice President II of MEAI; our respected Secretary General, Shri M. Narsaiah; our newly elected Chairman, Shri Ibrahim Sharief; distinguished guests, fellow mining engineers, and friends. It is my distinct honor to welcome you all to this historic milestone-the formal inauguration of the Mining Engineers' Association of India (MEAI), Northeast Chapter.

As we gather here to mark the birth of our Association's 28th chapter, it is important to reflect on what MEAI stands for. Our association is a premier national body dedicated to:

- Professional Growth: Strengthening regional representation and promoting professional networking among mining experts.
- Knowledge Sharing: Encouraging the exchange of technical expertise and facilitating collaboration between the industry and academia.
- Skill Excellence: Supporting the continuous skill development and capacity building of mining professionals through workshops and field-oriented discussions.
- Sustainable Advancement: Leading the charge in environmental protection, scientific mine planning, and the adoption of modern, advanced technologies.

The establishment of this chapter is a strategically vital step for MEAI. The Northeast region of India is a treasure trove of mineral wealth, endowed with significant limestone deposits, coal deposits, and various other minerals.

By forming this chapter, we aim to promote best practices in safety and environmental management within the region, ensure DGMS compliance, and promote mine safety as a top priority and actively organize seminars and training programs to empower our local mining community.

In my capacity as secretary, I am committed to working alongside our office bearers and executive committee members to ensure this chapter becomes a key contributor to India's mining sector. I welcome all our newly enrolled life members and look forward to our collective journey toward sustainable and scientific mining.

Thank you, and once again, a very warm welcome to you all.

Address by Shri Ibrahim Sharief – Chairman, Northeast Chapter

Address by Shri Dasari V. Ramanayya-Secretary, Northeast Chapter

Dr. Pukhraj Nenival is presenting certificates to the newly enrolled life members of the Northeast Chapter.

Office Bearers & Executive Committee members of the Northeast Chapter

View of members who attended the inaugural program of Northeast Chapter

Welcoming Shri M. Narsaiah, Secretary General

Vote of thanks

First and foremost, on behalf of the Northeast Chapter, I extend my heartiest thanks to our Chief Guest, Dr. Pukhraj Nenival, Vice President – II. We are deeply grateful for his presence, the ceremonial lighting of the lamp, and his inspiring words regarding the strategic role of MEAI in India's mining sector. His presentation of certificates to our newly enrolled life members has truly motivated the professional community in this region."

We also express our sincere gratitude to Shri M. Narsaiah, Secretary General, for his presence and for sharing his valuable insights into the growth and regional expansion of the association. His guidance remains a cornerstone for the success of this 28th chapter.

A special thanks to our newly elected chairman, Shri Ibrahim Sharief, and secretary, Shri Dasari Venkata Ramanayya, for taking on the mantle of leadership for the Northeast Chapter. We also acknowledge the efforts of the entire Executive Committee-including Shri Pankaj Nayon (Vice Chairman), Shri Sharma Hemant (Joint Secretary), and Shri Mairembam Prabindas Singh (Treasurer)-along with our executive members for their commitment to the chapter's objectives.

I thank all the mining professionals and life members who attended today's program.

Finally, I thank the organizers and the staff at the State Convention Center for their hospitality. We look forward to a future of sustainable mining and scientific progress in the Northeast.

RAJASTHAN CHAPTER - JODHPUR

Technical Talk on Mining Automation in Jodhpur

The Rajasthan Chapter-Jodhpur successfully hosted a technical talk focusing on *modern mining technologies* at the MBM Alumni Association Building, opposite Senapati Bhavan. The event, held from 4:00 PM to 5:00 PM, brought together mining leaseholders, entrepreneurs, and industry professionals to explore how automation and digital innovations are reshaping mining operations across the state. The session underscored the growing importance of advanced technologies in enhancing efficiency, safety, and sustainability within Rajasthan's mining sector, marking a significant step toward modernizing traditional practices.

Er. Manish Sharma, Mining Engineer (Vigilance) from the Department of Mines and Geology, Government of Rajasthan, explained that the theme of the technical session was "Weighbridge Automation and Vehicle Tracking Systems." He highlighted advanced solutions designed to modernize mining operations, including RFID/ANPR-based automation for seamless vehicle identification, GPS-enabled tracking to monitor fleet movement, real-time dashboards for operational transparency, E-Ravanna integration to streamline documentation and compliance, and geofencing applications to ensure secure and controlled mining activities. These technologies, he noted, are crucial for enhancing efficiency, reducing manual errors, and strengthening regulatory oversight in the mining sector.

The chief guest of the program was Er. Akhilesh Joshi, former Director of Hindustan Zinc Limited and currently serving as Director at RSSM, Wonder Cement, Wolkem India Limited, and several other companies. In his remarks, he underscored the importance of technological innovations in the mining industry and encouraged participants to embrace modern solutions to improve efficiency, sustainability, and competitiveness. The event also featured Er. Y. S. Saiwal, Additional Director of Mines, Jodhpur, who was the special guest, whose presence added further significance to the gathering of industry leaders and professionals.

The program was conducted by Er. Bhagwan Singh Bhati, joint secretary of the Rajasthan Chapter-Jodhpur.

The Vote of Thanks was delivered by Er. Rakesh Purohit, secretary of the Rajasthan Chapter-Jodhpur, expressed his gratitude to the distinguished guests, speakers, and participants for their valuable contributions and active involvement in the session. He acknowledged the efforts of the organizers and highlighted the importance of such technical discussions in driving innovation and progress within the mining industry. Concluding his remarks, he warmly invited all attendees to join for high tea, fostering an opportunity for informal interaction and networking among industry professionals.

Glimpses of the program

(Continued from Page 22)

➤ **Government to launch 7th critical mineral auction tranche to boost resource security**

Synopsis: India is set to auction 19 critical and strategic mineral blocks. This move aims to boost the nation's economic development and mineral security. These minerals are vital for clean energy and advanced technologies. The auction follows successful previous tranches. Reforms have streamlined the process for greater transparency and efficiency. Bidders will participate in an online, two-stage ascending forward auction.

Union Coal and Mines Minister G Kishan Reddy will launch the 7th Tranche of Auction of Critical and Strategic Mineral Blocks on Monday, according to a statement.

Critical minerals are pivotal for the country's economic development and mineral security. The global transition towards clean energy and advanced technologies has significantly increased the demand for minerals such as lithium, graphite, rare earth elements (REE), tungsten, vanadium, titanium, and other rare metals. Their limited availability and geographical concentration pose challenges to resilient supply chains worldwide.

Recognising their strategic importance, the Government of India amended the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) on August 17, 2023, notifying 24 minerals as Critical and Strategic Minerals.

This amendment empowers the Central Government to auction Mining Leases and Composite Licences for these minerals. The revenue generated from these auctions accrues to the respective State Governments, the statement added.

So far, the Ministry of Mines has successfully launched six tranches of auctions, with 46 critical and strategic mineral blocks already auctioned, reflecting strong industry participation and growing confidence in India's mineral sector.

Building on this momentum, the Seventh Tranche will offer 19 blocks across several States under Mining Lease and Composite Licence. These blocks comprise a diverse basket of minerals essential for sectors such as clean energy, advanced technologies, fertilizers and strategic industries, the release further stated.

The auction framework has been progressively strengthened to ensure transparency, efficiency and faster operationalisation of mineral blocks.

Recent reforms, including the Mineral (Auction) Second Amendment Rules, 2025, have streamlined post-auction timelines such as submission of performance security, upfront payment, and issuance of a letter of intent. Additionally, the Mineral (Auction) Amendment Rules, 2026, have introduced the provision of an insurance surety bond as an alternative to bank guarantees, enhancing flexibility for bidders.

The auction will be conducted online through a transparent two-stage ascending forward auction process, wherein the successful bidder will be selected based on the highest percentage of value of mineral dispatched quoted, the statement added.

ANI / Mar 22, 2026

READERS' VIEWS

This has reference to the article published in the March 2026 issue of MEJ on 'Mining is Positive,' written by Mr. Ajay Kumar Jain.

A well-written article explaining the importance of mining for the material progress of society. In spite of this, unfortunately, people still have a negative perception, the reason being, as per the author, "that we never advertise our good things and best practices about responsible and sustainable mining." Yes, through proper media platforms by influencers of the mining fraternity.

In this context, another neglected issue is that of according due recognition to the people serving the mining industry. The material comforts the present society is enjoying is due to the combined effort of professionals working in mines who risk their limbs and lives so that the rest of humanity can live in comfort.

While it is gladdening to note that measures like CSR and District Mineral Foundation are in place to mitigate the negative impact from mining, unfortunately no such incentive initiatives are yet visible for those struggling professionals serving the critical mining industry-FIMI/AIMEA listening!

Regards,

PKG PAPPINISSERY.
Author of "Memoirs of a Mining Engineer"
Email: pkgovindaswamy@hotmail.com

CALL FOR NOMINATIONS

Mining Engineers' Association of India

Annual Awards 2025 - 26

The Mining Engineers' Association of India presents awards Instituted by the Industry / Individuals during the Annual General Meeting in June - July every year. Nominations for the following Awards are invited in the prescribed form, so as to reach the Secretary General by 30th of April 2026. Nomination can be submitted by a member for one award only.

NMDC Excellence Gold Medal Award

Bylaws:

A. The award is known as the NMDC Excellence Gold Medal Award, instituted by M/s. NMDC Ltd.

B. The award is presented to a mining engineer or geologist or any qualified person engaged in mining industry for the meritorious services rendered by him/her to the Indian Mining and Mineral Industry.

C. The applicant shall be a Life Member of the Association, who is at least 50 years of age and has 20 years of experience in the Mining or Mineral Industry.

D. The applicant shall submit required proof/documents, if any, in support of contribution to the Mining or Mineral Industry.

E. The award consists of a Gold Medal and a certificate.

Abheraj Baldota Memorial Gold Medal Award (Mining Engineer of the Year)

Bylaws:

A. The award is known as the MEAI – Abheraj Baldota Memorial Gold Medal Award (Mining Engineer of the Year), instituted by M/s. MSPL Ltd - Baldota Group, in memory of its founder, the late Shri. Abheraj Baldota.

B. The award is presented to a mining engineer with a degree or diploma in mining engineering and a Mine Manager's Certificate of Competency with 20 years of experience in mining and allied disciplines.

C. The applicant shall be a life member of the Association and shall be at least 45 years of age as of the date of filing the nomination and has contributed substantially to the mining and mineral industry in the areas of management, production, mining technology, human resource development, protection of the environment, mineral conservation, beneficiation, etc.

D. The award consists of a Gold Medal and a certificate, made available by MSPL Ltd. - Baldota Group every year.

Abheraj Baldota Memorial Gold Medal Award (Young Mining Engineer of the Year)

Bylaws:

A. The award is known as the MEAI – Abheraj Baldota Memorial Gold Medal Award (Young Mining Engineer of the Year), instituted by M/s. MSPL Ltd - Baldota Group, in memory of its founder, the late Shri. Abheraj Baldota.

B. The award is presented to a young mining engineer with a degree or diploma in mining engineering or manager's certificate of competency with five years' experience in the mining industry.

C. The applicant shall be a Life Member of the Association and has not completed 35 years of age as of the date of filing his nomination for the award and contributed to the mining or mineral industry in the areas of management, production, mining technology, protection of the environment, mineral conservation, beneficiation, etc., and also actively participate in MEAI activities.

D. The award consists of a Gold Medal and a certificate, made available by MSPL Ltd. - Baldota Group every year.

DMT Gold Medal Award for Information Technology & Digitalization

Bylaws:

A. The award is known as the MEAI - DMT Gold Medal Award for Information Technology and Digitalization in Mining Projects, instituted by M/s. DMT Consulting (P) Ltd., in memory of the late Shri. T N Gunaseelan, the late Shri. Sriram Srinivasan, and the late Shri. Pradeep Kumar Bhattacharya, founding members of the company.

B. The award is presented to a qualified mining engineer/geologist/any qualified person for his/her significant contribution in information technology and digitalization to the mining or the mineral industry.

C. The nominee shall be a Life Member of the Association.

D. The award consists of a Gold Medal and a Certificate.

TATA Steel Woman Professional Gold Medal Award

Bylaws:

A. The award is known as the MEAI – TATA Steel Woman Professional Gold Medal Award, instituted by M/s. TATA Steel Ltd.

B. The award is presented to a woman professional engaged in the mining or mineral industry for her meritorious services to the mining or mineral industry of India for a minimum of 3 years and for being a life member of the Association.

C. The award consists of a Gold Medal and a Certificate.

Annual Awards 2025 - 26

CALL FOR NOMINATIONS

Sitaram Rungta Memorial Award

Bylaws:

A. The award is known as the MEAI – Sitaram Rungta Memorial Award, instituted by M/s. Rungta Group of Mines.

B. The award is presented to a mining engineer/geologist or any other qualified person engaged with the mining industry or mineral industry, who is a life member of the Association with at least 10 years of experience and presented a paper on mining or mineral industry-related issues in any of the paper meetings, seminars, or workshops organized by the Association during the previous financial year.

C. The paper was not published in any journal/magazine in India or abroad other than the MEJ.

D. The author did not deliver a lecture/talk related to this paper in any other forum other than in the seminars/workshops, etc., organized by MEAI.

E. The award consists of Rs. 25,000/- cash prize with plaque and a certificate.

SCCL Coal Awards instituted by Singareni Collieries Company Ltd (2 Awards)

Bylaws:

A. The awards are known as the MEAI - SCCL Coal Awards, instituted by M/s. SCCL Ltd.

B. The award is presented to any qualified person engaged in the coal mining or mineral industry:

i) Mining Engineer

ii) Geologist

C. The awards are presented for the meritorious services rendered by him/her to the coal industry or for publication of papers related to coal industry.

D. The applicant shall be a Life Member of the Association and has 5 years of experience in the Coal Industry.

E. The award consists of a plaque/medal and a certificate.

Smt. Bala Tandon Memorial Award

Bylaws:

A. The award, known as the MEAI-Smt. Bala Tandon Memorial Award, was instituted by Padma Bhushan Shri. G.L. Tandon in memory of his late wife Smt. Bala Tandon.

B. The award is presented to a mining engineer/geologist or any qualified person associated with the mining or mineral industry in recognition of his/her meritorious services for improving ecology, environment, and afforestation in mining or mineral industries.

C. The applicant shall be a Life Member of the Association and has 5 Years of experience in the Mining or Mineral Industry.

D. The award consists of a plaque/medal and a certificate.

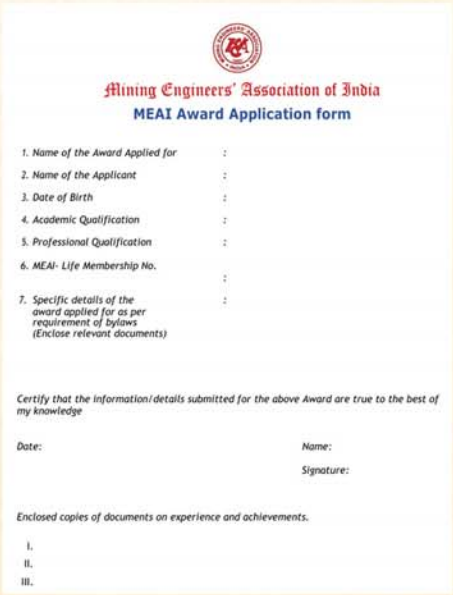
Note:

For detailed guidelines please visit the website **www.meai.org** and the memorandum of association and rules and regulations (as on 26.08.2022)

Applications and Guide Lines

The application (Hard Copy) shall be forwarded/sent to Secretary General MEAI NHQ in Prescribed Format (Copy Enclosed) to reach before 30th April 2026 to (MEAI NHQ Address: Mining Engineers' Association of India, F-608 & 609, VI Floor, Raghava Ratna Towers 'A' Block, Chirag Ali Lane, Abids, Hyderabad - 500001. Mob – 7780117320) and the Soft copies should be enclosed in PDF format with the subject. MEAI Awards 2026 and shall be sent to email - meai1957@gmail.com

Applications are to be submitted along with the enclosed Sample Award Format.



Mining Engineers' Association of India

MEAI Award Application form

1. Name of the Award Applied for :
2. Name of the Applicant :
3. Date of Birth :
4. Academic Qualification :
5. Professional Qualification :
6. MEAI- Life Membership No. :
7. Specific details of the award applied for as per requirement of bylaws (Enclose relevant documents) :

Certify that the information/details submitted for the above Award are true to the best of my knowledge

Date: Name:

Signature:

Enclosed copies of documents on experience and achievements.

I.
II.
III.

Please scan the QR Code to download the Award Format (PDF).

CONFERENCES, SEMINARS, WORKSHOPS ETC.

INDIA

2-4 April 2026: **A 3-Day QGIS-Based Remote Sensing & GIS Training Program**. Organized by Rajasthan Chapter – Jodhpur at the MBM Alumni Association, Jodhpur. For further information, contact Shri Er. Rakesh Purohit at +91 9829021098.

ABROAD

11-12 Apr 2026: **International Conference on Mining, Material, and Metallurgical Engineering (ICMMME - 2026)** in Barcelona, Spain. Mail: info@academicsworld.org. Web: www.academicsworld.org.

20-21 Apr 2026: **International Conference on Geosciences, Mineralogy and Petrology (ICGMP-2026)**. New York, United States. Organized by World Academy of Science, Engineering and Technology. Website URL: https://waset.org/geosciences-mineralogy-and-petrology-conference-in-april-2026-in-new-york.

21-22 Apr 2026: **International Mining Geology Conference 2026**. Brisbane Convention and Exhibition Centre, Brisbane, Australia. Contact AusIMM at T: 1800 657 985 or +61 3 9658 6100 (if overseas); https://www.ausimm.com/conferences-and-events/mining-geology/.

5-7 May 2026: **Global Resources Innovation Expo 2026. Perth Convention & Exhibition Centre**, Perth, Australia. Hosted by Austmine and AusIMM.

18-19 May 2026: **International Conference on Mining and Economic Geology (ICMEG -2026)**. London, United Kingdom. Website URL: https://waset.org/mining-and-economic-geology-conference-in-may-2026-in-london.

24-25 May 2026: **International Conference on Mining and Economic Geology (ICMEG 2026)**. in London, United Kingdom. Website URL: https://waset.org/mining-and-economic-geology-conference-in-may-2026-in-london.

24-26 Jun 2026: **The 27th World Mining Congress and exhibition in Peru**. Contact details: Phone: +48 32 324 66 03; e-mail: wmc@gig.katowice.pl.

29-30 Jun 2026: **International Conference on Geological and Earth Sciences ICGES** in Istanbul, Turkey. Website URL: https://waset.org/geological-and-earth-sciences-conference-in-june-2026-in-istanbul.

20-21 Jul 2026: **Accelerating Commercial Exploration, Discovery and Extraction** in Cairo, Egypt. Conference Enquiry: conference@egyptminingforum.com.

9-10 Aug 2026: **International Conference on Geology, Geophysics and Earth Sciences ICGGES** in New York, United States. Website URL: https://waset.org/geology-geophysics-and-earth-sciences-conference-in-august-2026-in-new-york.

6-7 Sep 2026: **International Conference on Mining and Petroleum Geology (ICMPG-2026)**. Málaga, Spain. Website URL: https://waset.org/mining-and-petroleum-geology-conference-in-september-2026-in-malaga.

5-7 Oct 2026: **Mine Health & Safety Conference 2026. Pan Pacific Perth**. Contact on: T: 1800 657 985 or +61 3 9658 6100 OR Po Box 660 Carlton, VIC 3053, Ground Floor, 204 Lygon St, Carlton VIC 3053.

19-21 Oct 2026: **Mill Operators Conference. Brisbane Convention and Exhibition Centre**, Brisbane. Contact on T: 1800 657 985 or +61 3 9658 6100 OR Po Box 660 Carlton, VIC 3053 Ground Floor, 204 Lygon St, Carlton VIC 3053.

25-26 Oct 2026: **International Conference on Hydrometallurgy and Mining ICHM** in Istanbul, Turkey. Website URL: https://waset.org/hydrometallurgy-and-mining-conference-in-october-2026-in-istanbul.

17-19 Nov 2026: **Strategic Mine Planning Conference 2026**. Residence on Langley Park, Perth. Contact on: T: 1800 657 985 or +61 3 9658 6100.

2-3 Dec 2026: **International Conference on Geosciences and Geological Engineering (ICGGE-2026)**. Tokyo, Japan. Website URL:https://waset.org/geosciences-and-geological-engineering-conference-in-december-2026-in-tokyo.

REQUEST TO READERS/ MEMBERS OF MEAI

The Editorial Board of the Mining Engineers' Journal (MEJ) requests our esteemed Readers/ Members of MEAI to share their valuable Research work in geosciences/ mining or Best practices developed/ adopted while employed in the mineral industry, for publication in our Mining Engineers' Journal (MEJ), for the benefit of the mineral industry fraternity.

Interested professionals may please contact the Editor, MEJ for obtaining "Author(s) guidelines" for submitting technical papers at **editor.mej.meai@gmail.com**.

Chief Editor, MEJ

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