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Balancing Mineral Extraction and Environmental Regulation: An Analysis of the Mines and Minerals (Development and Regulation) Act, 1957 and the 2023 Amendment

Arisha Aamir

Abstract

In recent past we have witnessed India's mineral sector being reshaped into a competitive commercial market, instead of its traditional image as a discretionary licensing system. The repeatedly amended Mines and Minerals (Development and Regulation) Act, 1957, with the recent amendments of 2015 and 2023, presently allocates mineral franchise largely through auctions, and has made available exploration and critical minerals to a wide private presence. This paper asks whether the amended Act, read with the surrounding environmental framework, balances mineral extraction against environmental protection legal system. It argues that the reforms have redesigned mining as a market while leaving environmental compliance outside the ambit of the incentive structure of that market, so that concession holders, who have the greatest control over environmental outcomes, face weak financial and governance incentives to comply. Using a doctrinal method, the paper tracks the statutory evolution of the Act, inspects the 2023 Amendment, reviews the judicial response, and then evaluates three management law mechanisms: auction design, the District Mineral Foundation alongside corporate social responsibility, and sustainability disclosure. It identifies five problems and suggests a corresponding reform for each: baseline screening at the exploration stage, earlier environmental scrutiny in the allocation process, environmental weighting in auctions, community-centred use of mining levies, and mine-level disclosure.

Keywords: mining regulation; MMDR Act; 2023 Amendment; critical minerals; environmental governance; District Mineral Foundation.

Introduction

Minerals sustain energy and manufacturing, construction and increasingly the technologies of the energy transition. Mineral wealth introduces every resource-rich democracy to a same dilemma. This all comes at a heavy cost as extracting them disturbs not only forests but also soil media, water systems and the communities residing above the deposits. In India the dilemma is acute. The country relies on mining for industrial growth and public revenue, and it has recently placed critical minerals such as lithium and rare earth elements at the centre of its economic and strategic planning.¹ Concurrently, mining regions are amidst the most socially vulnerable and ecologically fragile parts of the country, with many being the home to Scheduled Tribes whose livelihoods depend on forestland.

The Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)² is the principal statute governing the grant of mineral rights. Over the past decade it has been transformed. Elective allocation has paved way to competitive auctions, captive mines have been permitted to sell part of their output, and the Mines and Minerals (Development and Regulation) Amendment Act, 2023 (the 2023 Amendment)³ has started exploration and the critical mineral sector to wider participation. Auction outcomes are frequently presented as proof of success. Yet reports of illegal mining, displacement and unspent community funds continue to accompany those outcomes⁴. This paper tackles that puzzle.

The central research query is this: does the MMDR Act, as amended in 2023 and read along with surrounding environmental statutory framework, strike a workable balance between mineral extraction and ecological protection, or is it inclined towards extraction?

The paper argues that India has redesigned mining as a market while leaving environmental compliance outside that market's incentive edifice. The Act now determines who mines, at what price and how quickly. Environmental safeguards, by contrast, sit in separate statutes, are triggered at different stages, and are often enforced only after damage has occurred, often making it inefficient. As a result, concession holders face weak financial and governance

¹ D. K. Srivastava, *Getting India future-ready: Role of rare earth elements*, EY BLOG, (Oct 5, 2026, 9:43 PM), https://www.ey.com/en_in/insights/tax/economy-watch/getting-india-future-ready-role-of-rare-earth-elements .

² Mines and Minerals (Development and Regulation) Act, 1957, No. 67 of 1957 (India).

³ Mines and Minerals (Development and Regulation) Amendment Act, No. 16 of 2023 (India).

⁴ Mayank Aggarwal, *India proposes overhaul of mining sector amid concerns over legality and social impact*, MONGABAY, (Oct 5, 2026, 9:13 PM), <https://india.mongabay.com/2020/09/india-proposes-overhaul-of-mining-sector-amid-concerns-over-legality-and-social-impact/> .

incentives to comply, even though they are in control, when it comes to the outcomes that matter most.

The analysis is doctrinal. It examines the text of the legislation, the regulatory instruments around it and the relevant judicial decisions, and it adds a management-law lens drawn from corporate law and securities regulation.

How Mining Became a Market

The MMDR Act was enacted in 1957⁵ under the Union List entry that empowers Parliament to regulate mines and mineral development to the extent it declares such regulation expedient in the public interest. The States retain legislative power over mines and minerals under the State List, subject to that parliamentary declaration.⁶ The result is a division of roles that is still important today: the Union shapes the rules for granting mineral rights, while the States hold the minerals within their territory and collect the royalty.

For most of its history the Act operated as a licensing legislation. Prospecting licences and mining leases were granted by State governments on application, with due preference given to earlier applicants and wide room for administrative discretion. Economic liberalisation in the 1990s increased private participation, but the method of grant remained largely discretionary. That discretion attracted criticism for presence of opacity, delay and the speculative holding of concessions.

The turning point came in the early 2010s. In its 2012 opinion on the allocation of natural resources, the Supreme Court held that auction is not a constitutional requirement for every disposal of natural resources, but accepted that it is often the most transparent method where the objective is revenue maximisation.⁷ Two years later, in the coal blocks litigation,⁸ the Court cancelled a large number of allocations made without a competitive process, a decision that signalled how seriously it viewed discretionary distribution of national resources.

⁵ Mines and Minerals (Development and Regulation) Act, 1957, No. 67 of 1957 (India).

⁶ Advay Vora, *State's power to tax mines and minerals: Judgement Explainer*, SUPREME COURT OBSERVER, (last visited Oct. 5, 2026, 8:24 PM), <https://www.scobserver.in/journal/states-power-to-tax-mines-and-minerals-judgement-explainer/>.

⁷ RE: SPECIAL REFERENCE NO.1 OF 2012 [Under Article 143(1) of the Constitution of India], [2012] 9 S.C.R. 311.

⁸ *Manohar Lal Sharma v. Principal Secretary*, (2014) 9 SCC 516 (SC).

Parliament responded in 2015. The amendment of that year made auction the main route for granting mining leases for minerals that were duly notified and extended lease terms. It also created two institutions: the District Mineral Foundation,⁹ funded by contributions from lease holders to benefit those communities which were affected by mining, and the National Mineral Exploration Trust,¹⁰ financed to promote exploration. In the same period the Act introduced a mechanism for transferring auctioned leases, which treated a concession as a transferable commercial asset. The 2021 Amendment continued the shift by removing the distinction between captive and merchant mines and permitting captive mines to sell a portion of their production on the open market on payment of an additional amount.¹¹

Read together, these reforms share logic. Allocation became competitive, transparent and revenue-oriented. Concessions turned into commercial assets that can be traded and capitalised. In effect, the State became a seller of mineral rights in a market full of private players. But the reforms were designed to solve a problem of allocation, namely discretion and opacity. They were not designed to address the environmental conduct of those who win concessions.¹²

The answer to the question, then, is that mining became a market through reforms aimed at fixing the allocation of rights, and the ecological magnitude was left to be handled elsewhere.

The 2023 Amendment through the Market Lens

The 2023 Amendment counters to a new strategic priority. As India commits to energy transition and seeks to decrease dependence on import for minerals used in batteries, renewable energy equipment and electronics, the government has identified some minerals as a matter of national importance. The Amendment adapts the Act to this priority in three principal ways.

⁹ MINISTRY OF MINES, <https://mines.gov.in/webportal/content/about-dmfpmkky> , (last visited Oct. 5, 2026).

¹⁰ MINISTRY OF MINES, <https://mines.gov.in/webportal/content/aboutnmedt> , (last visited Oct. 5, 2026, 8:34 PM).

¹¹ PRS INDIA, <https://prsindia.org/billtrack/the-mines-and-minerals-development-and-regulation-amendment-bill-2021> , (last visited Oct. 5, 2026, 8:44 PM).

¹² Srestha Banerjee, *Mining and Jurisprudence: Observations for India's mining sector to improve environmental and social performance*, CENTER FOR SOCIAL AND ECONOMIC PROGRESS, (Oct. 5, 2026, 8:26 PM), <https://csep.org/working-paper/mining-and-jurisprudence-observations-for-indias-mining-sector-to-improve-environmental-and-social-performance/> .

First, it creates a legislative category of critical minerals through a new schedule and empowers the Central Government to auction mining leases and composite licences for those minerals, rather than leaving all auctions to the States.¹³ A decision of real consequence, namely who obtains critical mineral rights and on what terms, is thereby centralised in the Union.

Second, it narrows the list of atomic minerals that had been reserved from private participation. Several minerals, including lithium, beryllium, niobium, titanium, tantalum and zirconium, were removed from that list, which allows concessions in them to be granted through the ordinary auction process. The effect is to enlarge the pool of mineral blocks open to commercial bidders.¹⁴

Third, it introduces a new exploration licence for deep-seated and critical minerals. The licence is designed to attract firms that specialise in the high-risk, early stage of the mining cycle. The licensee carries out exploration and, if a deposit is discovered, shares in the proceeds when the block is subsequently auctioned.¹⁵

Each of these additions is defensible on its own terms. Mineral security is a genuine public objective, and exploration is costly and uncertain; without a commercial incentive, deep-seated deposits are undiscovered. The difficulty lies in what the Amendment leaves unaddressed.

The exploration licence illustrates the point best. Exploration is often treated to be benign because it precedes extraction. In practice it involves surveys, drilling, access roads and clearance of vegetation, frequently in forested or ecologically sensitive areas. Here, how environmental concern and ecological review applies at this stage is important. The Act treats exploration primarily as a licensing question, and environmental obligations arise through separate legislations. The Forest (Conservation) Amendment Act, 2023,¹⁶ passed in the same year, carves out certain types of survey and investigation work for the forest clearance

¹³ PIB, <https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=1945102®=48&lang=2>, (last visited Oct. 5, 2026, 8:34 PM).

¹⁴ Rohan Malhotra, *India's decision to allow private players to mine lithium, other critical minerals step towards self-reliance in clean energy*, DOWN TO EARTH, (Oct. 5, 2026, 8:40 PM), <https://www.downtoearth.org.in/mining/india-s-decision-to-allow-private-players-to-mine-lithium-other-critical-minerals-step-towards-self-reliance-in-clean-energy-90604>.

¹⁵ Diksha Munjal, *How does the Mines and Mineral Bill 2023 plan to bring the private sector into mineral exploration?*, THE HINDU, (Oct. 5, 2026, 8:45 PM), <https://www.thehindu.com/news/national/explained-the-push-to-bring-the-private-sector-into-mineral-exploration/article67168185.ece>.

¹⁶ The Forest (Conservation) Amendment Act, No. 15 of 2023, (India).

requirement. Taken together, the two reforms make the earliest stage of the mining cycle the stage of lightest environmental scrutiny, and Mining Act has made it commercially attractive at precisely this moment.

The incentive structure combines the concern. The exploration licensee is rewarded via a share of auction proceeds, a reward that depends on speed and on discovery. It does not depend on how the work is done, hence naturally, care for soil, water and habitat is a cost that the licensee bears and the reward does not recognise.

The centralisation of critical mineral auctions raises a related issue of institutional design. The Union decides allocation, but the local environmental and social consequences of mining fall on the host State and its districts. When authority over the allocation decision and responsibility for its consequences sit at different levels of government, accountability can fall between them.

The Environmental Rulebook Next Door

The Environment (Protection) Act, 1986¹⁷ and the Environment Impact Assessment Notification, 2006¹⁸ require prior environmental clearance for mining projects above specified thresholds, through a process of screening, scoping, public consultation and expert appraisal. Where a project requires forest land, the diversion of that land requires separate clearance under the forest conservation law, termed as the Van (Sanrakshan Evam Samvardhan) Adhiniyam.¹⁹ The Forest Rights Act, 2006 recognises the rights of forest-dwelling communities and ties forest diversion to the consent procedure of the Gram Sabha. In Scheduled Areas, the Fifth Schedule to the Constitution and the Panchayats (Extension to the Scheduled Areas) Act, 1996²⁰ add further safeguards for the tribal land.

Each of these enactments has its own authority, its own timeline and its own mode of enforcement. The MMDR Act²¹ connects to them mainly through conditions attached to the

¹⁷ The Environment (Protection) Act, 1986, No. 29 of 1986, Acts of Parliament, 1986 (India).

¹⁸ Ministry of Environment and Forests, Environment Impact Assessment Notification, S.O. 1533(E) (Sept. 14, 2006) (India).

¹⁹ Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, No. 69, Acts of Parliament, 1980 (India).

²⁰ The Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996, No. 40, Acts of Parliament, 1996 (India).

²¹ The Mines and Minerals (Development and Regulation) Act, No. 67 of 1957, § 4(1), *amended by* The Mines and Minerals (Development and Regulation) Amendment Act, 2026.

lease: a lessee cannot lawfully operate without the required clearances. The connection is therefore a condition on operation, not a feature of allocation.

This sequence is the root of weakness. Under the auction system, the successful bidder is selected first and the clearances are pursued afterwards, within prescribed time limits. The bidder therefore prices a block without knowing whether it can be mined as planned, what conditions will attach to the clearances, or whether forest and community consent will be obtained or not. Two consequences are bound to follow. Optimistic assumptions about clearances may be incorporated into bids. Once the auction is done with, both the State and the bidder face pressure to quickly secure clearances, because the bid amount has already been pledged. Environmental review becomes a barrier to a transaction already struck, instead of a prerequisite to it.

What Courts Have Done to Fill the Gap?

Indian judiciary has been the main arbitrator of this balance. In *Lafarge Umiam Mining v. Union of India*,²² the Supreme Court handled sustainable development as the framework for reconciling economic activity with ecological protection and stressed that environmental and forest clearances are distinct and both necessary. In *Goa Foundation v. Union of India*,²³ the Court stopped mining in Goa after finding vast irregularities and relied on the idea of intergenerational equity, reasoning that minerals are a non-renewable resource held for present and future generations.

In *Samatha v. State of Andhra Pradesh*,²⁴ the Court held that mineral leases in Scheduled Areas cannot be granted to non-tribal people in a way that defeats the protective purpose of the Fifth Schedule and the prohibition on transfer of tribal land. In *Orissa Mining Corporation v. Ministry of Environment and Forests*,²⁵ for the Niyamgiri hills, the Court directed that the Gram Sabhas decide whether the project would affect the religious and cultural rights of local communities, giving practical effect to the Forest Rights Act.²⁶

²² *Lafarge Umiam Mining Pvt. Ltd. v. Union of India*, (2011) 7 SCC 338.

²³ *Goa Foundation v. Union of India*, (2014) 6 S.C.C. 590.

²⁴ *Samatha v. State of Andhra Pradesh*, (1997) 8 SCC 191.

²⁵ *Orissa Mining Corp. v. Ministry of Env't & Forests*, (2013) 6 SCC 476.

²⁶ The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, No. 2, Acts of Parliament, 2007 (India).

In *Common Cause v. Union of India*,²⁷ concerning illegal mining in Odisha, the Court imposed liability on lessees who had extracted minerals unlawfully, requiring compensation to be measured by the value of the illegally extracted minerals. The decision shows judicial willingness to attach real financial repercussions to violators.

The pattern across these cases is consistent. Courts intervene when the system has already failed, by stopping operations, voiding grants, imposing penalties and clarifying jurisdictions. They do so with considerable principle, but they act after the fact and on a case-by-case basis. They cannot redesign the incentives that produced the violations in the first place, and litigation is slow, costly and available mainly where a petitioner has the resources to bring a case.

Incentives, Money and Disclosure: Management Law Layer and Mining Regulation

The three mechanisms examined here form a single chain. Auctions decide who mines and under what financial pressure. The District Mineral Foundation and corporate social responsibility obligations decide where the money goes afterwards. Disclosure rules decide who can see what happened. Environmental accountability can leak at each link.

1. Auction Design and Compliance

Competitive bidding is the centrepiece of the post 2015 enactment. Under the auction rules, bidders contest by offering a percentage of the value of the mineral dispatched as a payment to the State government, subject to eligibility conditions. The block goes to the bidder offering the highest percentage. This design is simple, transparent and revenue generating. It is also largely silent on environmental performance. A bidder's environmental record, its plan for managing impacts and its capacity to comply do not meaningfully dictates who wins.

Two concepts from management and economics explain why this matters. The first is the winner's curse: in competitive bidding where the value of the asset is uncertain, the winner is often the party that most overestimated that value, and so confronts pressure to recover the payment. The second is moral hazard, which arises when a party takes risks because another bears the consequences. In mining, the bidder commits to a payment calculated on mineral

²⁷ *Common Cause v. Union of India* is *Common Cause (A Regd. Society) v. Union of India*, (2018) 5 SCC 1.

value, but many of the ecological and social costs of operations fall on the surrounding ecosystem and communities, not on the bidder.

Combined, these two concepts reveal the incentive structure. A bidder who has committed to a high premium, and whose clearances are still pending, has reason to protect its margins. Spending on water management, dust suppression, reclamation and monitoring is a cost that is easy to shelve and difficult for the public to observe. The auction does not cause violations, but it creates an environment in which compliance competes with a financial commitment already made to the State.

A fair counterargument must be acknowledged. Auctions replaced a system of discretion whose failings were well documented, and transparent allocation is a public good in itself. The argument here is not that auctions should be abandoned. It is that transparency in allocation is different from accountability in operation, and the present design addresses only the first.

2. The District Mineral Foundation and CSR

The District Mineral Foundation (DMF), established under section 9B of the MMDR Act,²⁸ is a statutory trust in each mining district funded by contributions from lease holders, calculated as a proportion of royalty at rates that differ for older and newer leases. Its purpose is to work for the benefit of persons and areas affected by mining.

Corporate social responsibility (CSR) arises under section 135 of the Companies Act, 2013.²⁹ Companies that meet prescribed thresholds of net worth, turnover or profit must constitute a board committee and spend at least two per cent of their average net profit on CSR activities listed in the Act, which include environmental sustainability.

The comparison shows a structural advantage for the DMF. Its funds are tied to the mining district and controlled by a body with public accountability, so the money is directed towards the people who bear the costs of mining. CSR, in contrast, is controlled by the company, can be spent anywhere in the country, and may be applied to activities chosen for reputational value more than local need. A mining company can therefore meet its CSR obligation without spending a rupee in the district where it operates.

²⁸ Mines and Minerals (Development and Regulation) Act, S. 9B, No. 67 of 1957 (India).

²⁹ Companies Act, No. 18 of 2013, S. 135 (India).

The structural advantage, however, does not guarantee results. A framework that funds communities on paper can still fail them in practice if the money is collected but not spent, spent without community participation, or spent on projects that do not address mining's actual consequences.

CSR flexibility is sometimes defended as strength, since companies can fund environmental rehabilitation directly. That is true, but the same flexibility means there is no guarantee that CSR reaches communities that are affected by mining, and no mechanism ensures that it addresses the harm the company's own operations would cause.

3. Disclosure and ESG

Disclosure is often proposed as a market-based alternative for direct regulation: if investors and the public can see environmental performance, they will reward good performers and penalise defaulters. In India, the main instrument is the Business Responsibility and Sustainability Report (BRSR)³⁰ framework prescribed by the Securities and Exchange Board of India. It requires listed companies in the prescribed categories to report on environmental, social and governance indicators, and a subset of core indicators is subject to assurance.

Applied to mining, this framework has two limits. The first is coverage. BRSR reaches the largest listed companies. A significant part of the mining sector consists of unlisted private operators, State-owned entities and small leaseholders, many of whom fall outside it. The second is granularity. BRSR reporting is largely at the level of the company, while environmental harm occurs at the level of the individual mine. A company-level figure for water consumption or emissions can conceal a single mine with serious compliance problems.

The Ministry of Mines has developed its own instruments, including a Sustainable Development Framework and a star rating scheme for mines, which assess operations against environmental and social parameters at the level of the mine. These are better matched to the problem, but their value depends on whether the ratings carry consequences. A rating that does not affect lease renewal, transfer, or access to future auctions informs the public but does not change behaviour.

³⁰ EY India, *BRSR reporting and the evolving ESG landscape in India*, EY BLOG, (Oct 5, 2026, 9:53 PM), https://www.ey.com/en_in/insights/climate-change-sustainability-services/brsr-reporting-and-the-evolving-esg-landscape-in-india.

There is also a risk of selective or promotional reporting, in which disclosure becomes a branding exercise instead of an accountability tool. Disclosure works when it is comparable, verifiable and linked to consequences, and mining disclosure currently meets these conditions only in part.

8. Conclusion

This paper asked whether the MMDR Act, as amended in 2023 and read with the surrounding environmental framework, balances mineral extraction against environmental protection. The answer is that the balance is incomplete. The reforms since 2015 have succeeded in making allocation transparent and revenue creating, and the 2023 Amendment responds credibly to a real strategic need for critical minerals. But the Act has redesigned mining as a market without building environmental accountability into that market. Safeguards sit in separate statutes and operate after allocation. Auctions reward price, exploration is commercialised before it is screened, community funds underperform, and disclosure does not reach the level at which harm occurs. Courts have stepped in with principled decisions, but they correct failures after the event and cannot reshape the incentives behind them.

The five reforms proposed here would not reverse the market-oriented direction of the law. They would complete it by placing environmental accountability at the points where decisions about mineral rights are actually made. If India wants to meet its mineral ambitions without repeating the consequences its courts have already had to address, the next stage of reform should treat environmental performance as part of the design of the mining market, not as a constraint applied to it afterwards.