

INDIAN MINING SECTOR VIS-A- VIS SUSTAINABLE DEVELOPMENT

***Dr. Vikas Mishra**

****Dr. Rehana Khan**

'If we remove metals from the service of man, all methods of protecting and sustaining health and more carefully preserving the course of life are done away with. If there were no metals, men would pass a horrible and wretched existence in the midst of wild beasts...'

Georgius Agricola, 1556

INTRODUCTION

Mineral in any country plays an important role in upgrading the economy for any Sovereign estate and especially for a developing country like India. The energy sector does need special attention so that the minerals are utilized to the greatest good to the greatest numbers and not exploited for personal selfish needs and desire. Minerals play a significant role in the economic development of a state. Therefore the state has a larger role in regulating the extraction of minerals, which is particularly important for growth of a nation.¹

It is however recognized that mining, unless properly regulated can have serious adverse environmental and social consequences. On one hand, mining disturbs the soil, water and ecological regimes and on the other hand, unless accompanied by proactive measures to promote inclusiveness through social, education, health and other interventions, it can lead to alienation of the local population, and assume socially unacceptable dimensions.² This has necessitated fresh thinking on policy approaches and systems that ensure that Mining is done in a way that causes least damage to the natural resources such as air, water, soil, biomass, and also benefits local communities in the most appropriate way. One of the greatest challenges facing the mining sector today is integrating economic activity with environment integrity, social concerns and effective governance systems.³ The goal of that integration can be seen as more sustainable development. This requires a robust framework based on an agreed set of broad principles, an understanding of the key challenges facing the sector at different levels and in different regions and the action needed to meet or overcome them; a process for responding to these challenges for protecting the rights and interest of all involved, ability to set priorities, ensure that action is taken at appropriate levels, and an integrated set of institutional and policy instruments to ensure minimum standards of compliance as well as responsible voluntary actions. It also requires variable measures to evaluate progress and enable consistent improvements.⁴

Presently, India, a state rich in minerals, has a federal set-up for regulation of mining and minerals.

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Its regulatory structure and trajectory closely resembles to that of other developing countries.⁵ In India mining law does not stand in neglect of issues relating to environment and tribal rights, setting an epistemological connection between mining law and law relating to environment and tribal rights.⁶ This article therefore takes a bird's eye view evaluating the contemporary legal frameworks ensuring sustainable development in mining sector.

LEGAL FRAMEWORK ON MINES AND MINERAL IN INDIA

Under Article 123(1) of the Constitution on 12th January, 2015 the Government of India has promulgated Mines and Minerals Development and Regulation (MMDR) amendment ordinance, 2015. This amends certain provisions of MMDR Act, 1957. The announcement of ordinance was necessary to address various critical problems in the mining industry due to which development of new mines is not happening and big loss in revenue due to illegal mining reported. In 2006 Indian Government appointed a High Level Committee (HLC) to review the existing mining policy and rules to align them with international best practices, simplifying procedures for grant of mineral concessions in short timeframe which could attract international companies and other important stakeholders to invest in the mining sector and generate revenue for social and economic development.⁷

The Mines and Minerals (Development & Regulation) Act (MMDR), 1957⁸ is the principal legislation that governs the mineral and mining sector in India. The Act is a central legislation in force for regulation of mining operations in India. Under the act, minerals are taken under two broad heads, major minerals and minor minerals.⁹ The power to frame policy and legislation on the minor minerals are entirely subjected and delegated to the State Governments while policy and legislation relating to the major minerals are dealt by the Ministry of Mines under Union /Central Government of India. The central government has the power to notify "minor minerals" under section 3 (e) of the MMDR Act, 1957. On the other hand, as per Section 15 of the MMDR Act, 1957 State Governments have complete powers for making Rules for grant of concessions in respect of extraction of minor minerals and levy and collection of royalty on minor minerals.

Whereas in case of offshore areas (territorial Waters, Continental Shelf, Exclusive Economic zone and other Maritime zones of India), the ownership of minerals vests exclusively with the Central Government. In order to regulate the mining and development of minerals in the offshore area, the Parliament has enacted the "Offshore Areas Minerals (Development and Regulation Act, 2002". The Act empowers the Central Government to grant mineral concessions for offshore areas and collect royalty. The Indian Bureau of Mines has been notified as the administrative authority for concession management of offshore areas.¹⁰

INDIAN MINING SCENERIO

The country is home to the fourth largest reserve of coal. It is now a major power player in the mining industry, as the country is the world's largest producer of sheet mica, third largest producer of iron ore, and fifth largest producer of bauxite.¹¹

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The Indian mining scenario consists predominantly of small mines. 56% of major mineral mines are below 10 hectares, and in most cases are not based adequately on scientific exploration. Minor minerals are generally extracted in even smaller leases. Clearly the legislative framework must allow, in fact facilitate and strongly incentivize amalgamation and transfers so as to enable consolidation atleast of the major mineral extraction on geoscientific principles of contiguity, which can better address the issues of sustainability. The regulatory framework must also firmly disincentivise some of the suboptimal and unscientific practices which detract from sustainability. The MMDR (Amendment) Act, 2015 takes a step forward by enabling the State to determine the mine size for the auction.¹²

CONCERNS IN MINING REGIME

Mining scams- Alleged scams concerning illegal mining and under-the-table payoff deals with the Indian government have come to the surface of the media and have been highly speculated for years. Many territories in India, including Orissa, Goa, Madhya Pradesh, Aravalli and Uttar Pradesh, suffer detrimental problems concerning illegal mining and scams due to their rich, mine-ready areas.¹³

Environmental destruction - In India, the following problems are significant concerning mining and the environment: erosion, sinkhole creation, contamination of surface and groundwater and loss of biodiversity. All of these impacts only stem from legal mining – illegal mining, obviously, is much worse and further detrimental to the environment. Such bad practices have lead to coal fires, laden with greenhouse gases and toxic chemicals. According to Greenpeace, India is the leading country in coal fires – a blatant problem waiting to be fixed.¹⁴

Bad mining practices are also further endangering species in the area: a prime example is the Bengal Tiger. Continual destruction of the environment will shatter ecosystems and destroy comfortable wildlife setups.¹⁵

Miner health. Bad practices that continue to go on in India are very damaging to miner health, leading to increased cases like black lung, cardiopulmonary disease, chronic obstructive pulmonary disease, hypertension, lung disease, and kidney disease.¹⁶

Overall, mining is money – but eventually, money will not be able to pay off the other debts that the bad mining practices are creating. In Robert Cullen's article, "The True Cost of Coal", he notes: "coal seemed cheap, until environmentalists, state utility regulators, and some economists began to argue that the market price of coal does not reflect a wide range of "external" costs that society, or some segment of society, will eventually pay."¹⁷

Issues of resource efficiency and resource security in mining: One of the major concerns in Indian mining is the extraction efficiency of mineral resources. The National Mineral Policy 2008 advocates "zero-waste" mining.¹⁸ This includes not only the extraction of lower grade ores but also of "minor metals" which are metals that occur along with main metal of interest (e.g. iron or aluminum or copper, lead, zinc etc) in small quantities. Emphasis needs to be given to coproduction of by-product metals from base metal ores through process R&D so that the country's needs of so-called

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Technology Metals and Energy Critical Metals are effectively met, and provide raw material security on the one hand and competitive edge on the other, for the country's manufacturing sector. Bidding systems under the MMDR (Amendment) Act, 2015 will need to address this squarely by ensuring that they are factored into resource estimations and valuations.¹⁹

MINING WITHIN SUSTAINABLE DEVELOPMENT FRAMEWORK (SDF)

The MMDR (Amendment) Act, 2015, provides for the creation of a District Mineral Foundation (DMF) in every District affected by mining related operations to work for the benefit of persons and areas affected by such operations.²⁰ The MMDR (Amendment) Act, 2015 also empowers the Central government to issue directions to State governments inter-alia on minimizing and mitigating adverse environmental impacts and ecological disturbances, promoting restoration and rehabilitation work on mined out lands, and implementation of sustainable development frameworks. The MMDR Act, as amended, makes a small mention of the Framework.

The role of communities and the environment is also central in the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 ('Land Acquisition Act' in short) and the environmental laws, namely The Water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of Pollution) Act, 1981, and the Environment (Protection) Act, 1980.²¹ While the NMP 2008 and the SDF thereunder envisages the broader contours of the sustainability aspects that should be considered in every mining project, the Land Acquisition Act squarely addresses the issues relating to managing the social impacts of the acquisition and the environmental laws require the conduct of structured environmental impact assessments and preparation of management plans. The second and third level of documentation under the SDF is essential to ensure that these laws and procedures there under work in harmony and balance the social and environmental issues with those relating to the exploitation of mineral resources for economic growth and poverty reduction.²²

KEY PRINCIPLES OF THE SDF (Sustainable Development Framework)

The following eight principles form the core of sustainable development framework (SDF) for India

- 1. Incorporating Environmental and Social Sensitivities in decisions on leases:** This principle integrates sustainable development concepts at the earliest phase of the mining life cycle. The underlying philosophy of the principle is to categorize mineral bearing areas based on an environmental and social analysis taking a risk based approach. At the bidding stage the categorization of lease areas into high and low risk will allow the investors to undertake business decision with the knowledge that the cost and uncertainties of getting approvals as well as operations in high risk areas will be significantly higher than the low risk areas. It will also allow regulators to put additional commitments at an early stage for environmental and social interests of the nation, with mining priorities in the longer term.
- 2. Strategic assessment in key mining regions :** Understanding that mining activities occurs in clusters which have impacts at a regional level, undertake a strategic assessment of regional and

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cumulative impacts at a regional level, undertake a strategic assessment of regional and cumulative impacts and develop a Regional Mineral Development plan based on an assessment of the regional capacity at periodic intervals. Creating an institutional structure to own and implement such plans in key mining regions and taking critical decisions on mining, new leases, allocation of resources, and even possible moratorium on mining to ensure more sustainable planning and development in such regions;

3. **Managing impacts at the Mine level:** The key elements of this principle are impacts assessment of key environmental, social, health and safety issues, and development of management framework and systems at the mine level and continual improvement of the same on the basis of international standards on a self driven basis. A key element in disclosing performance on environmental and social parameters to external stakeholder at every stage of the project lifecycle.²³
4. **Addressing Land, Resettlement and Other Social Impacts:** This principle demands a comprehensive assessment of social impacts and displacement of mining projects at the household, community and mining region level, and management commitment to address those impacts through mitigation measures and management plans;
5. **Community engagement, benefit sharing and contribution to socio-economic development :** This principle seeks commitment to regular engagement with the the local community as well as sharing of projects benefits with the affected families. It is rooted in the principle of sharing profits with affected communities already provisioned for the in draft MMDR act awaiting approval. It details the social impact management of project operations with the CSR initiatives being undertaken and looks at an integrated approach to mitigate impacts and improve local livelihoods and living conditions in the neighborhood areas.²⁴
6. **Mine closure and Post Closure Mining:** Operations must prepare, manage and progressively work on a process for eventual mine closure. This process must cover all the relevant aspects and impacts of closure in a integrated and multi disciplinary way. This must be an auditable document and include a fully scoped and accurate estimate of planned cost of closure to the company. The cost estimates must be adequately provisioned to cover national, regional and local legal and regulatory requirements for closure, and must also include the cost of servicing all agreements made with the stakeholders towards post-closure use.
7. **Ethical functioning and responsible business practices:** This principle underlines the need for ethical business practices and a strong sense of corporate responsibility among mining companies. It recommends companies to go beyond legal compliance
8. **Assurance and Reporting:** This principle seeks mining sector stakeholders to assess their performance against this SDF and demonstrate continual improvement on this performance over the life of the project. It requires this performance to be reported in a structured manner in a sustainable development report to be disclosed in the public domain as well as to regulatory agencies to consider during approval processes.²⁵

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CONCLUSION

Mining is a growing industry in the developing countries. But unregulated mining can lead to fatal damages to environment and people. The Indian government has come up with progressive approach by way of sustainable development framework to ensure development in this sector keeping future needs in mind. Sustainability in mining regime impacts various contours and requires urgent attention. The article has highlighted various concerns appertaining to mining regime in the country.

Legal steps taken to ensure sustainable mining by way of sustainable development framework includes incorporating Environmental and Social Sensitivities in decisions on leases, Community engagement, benefit sharing and contribution to socio-economic development, assurance and reporting, Mine closure and Post Closure Mining, strategic assessment in key mining regions. The MMDR (Amendment) Act, 2015, provides for the creation of a District Mineral Foundation in every District affected by mining related operations to work for the benefit of persons and areas affected by such operations. It also empowers the Central government to issue directions to State governments inter-alia on minimizing and mitigating adverse environmental impacts and ecological disturbances, promoting restoration and rehabilitation work on mined out lands, and implementation of sustainable development frameworks.

Despite coming up with a sustainable development framework the concerns in regard to mining have not reduced due to its multifaceted impact. Mining is not just hazardous to environment but also has adverse impact on the miner, communities, wildlife and biodiversity. It cripples the entire existence of human and environment. Heavy penalties needs to be enforced against those involved in illegal mining and constant patrolling needs to be done to prevent mining excavations. The stakeholders in the sectors should constantly report the measures taken by them in regard to sustainable development in furtherance of reduction of environmental degradation. Also they must provide the steps taken by them to prevent adverse impacts on health of miners and other peoples situated in nearby areas. Mining is profitable and economically enriching but the same cannot be encouraged at the cost of environment and human health. Indian mining sector needs to imbibe measures for ensuring sustainable development keeping in mind the needs of future generations.

***Vice-Principal**

Bharat Law College, Jaipur (Raj)

****Principal**

IPSR Law College, Alwar (Raj.)

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