

THE FUNDAMENTALS OF MINING: A Beginner's Guide

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What is Mining?

Any operation undertaken for the purpose of winning any mineral¹ is mining. It incorporates activities like pitting, digging and quarrying among others undertaken to gainfully extract a mineral from the Earth's crust. But mining in India is not a simple 'dig and sell' proposition. It is, in fact, a highly complex socio-economic and environmental challenge: at stake are natural resources, people, forests, wildlife, water, environmental quality and livelihoods.²

What are Minerals?

Minerals can broadly be divided into fuel (coal and lignite) and non-fuel minerals. Atomic minerals like uranium and thorium are also fuel minerals and are primarily used in nuclear power plants to generate electricity. Among the non-fuel minerals, again two broad distinctions can be made – metallic minerals and non-metallic minerals. Metallic minerals are those minerals that can be melted to make new products. For example, iron, aluminum, copper, gold, lead, zinc, silver and tin among others. They mostly exist as 'ores'. Non-metallic minerals are minerals that are not able to create new products after melting. Examples are limestone, marble, mica, gypsum, dolomite and asbestos.³

What is the Significance of Mining Industry for the Indian Economy?

In 2016, the contribution of mining sector was 2.6 per cent to the GDP of India.⁴ India's growth is largely attributed to the rise in its exports after liberalisation.⁵ The total value of exports (including re-exports) of all merchandise in 2014-15 was ₹19 lakh crore. Coal accounts for around 60 per cent of all electricity produced in India.⁶

In Which Regions of India are These Minerals Found?

Almost all the minerals in India are found in the same regions that hold its greenest forests and most abundant river systems. These lands are also largely inhabited by India's poorest and most marginalised people – Scheduled Tribes and Scheduled Castes.⁷ Of the 50 major mining districts, 60 per cent figure among the 150 most impoverished districts of India. In fact, mineral rich states demonstrate lower per capita incomes compared to states with less or no minerals – a phenomenon called the 'resource curse'.

How is Mining Regulated in India?

The Constitution allocates the subject of mineral development and regulation to state governments (entry 23 in State List) subject to the law of Parliament (entry 54 in Union List). Mines and Minerals (Development and Regulation) Act or MMDR Act, passed by the Parliament in 1957 and recently amended in 2015 and 2016 is the parent legislation for mining in India. As mandated by the MMDR Act, the union government

¹Section 3(d), MMDR Act 1957

²Rich Land Poor People, a report by Centre for Science and Environment

³<http://ficci.in/spdocument/20317/Mining-Industry.pdf>

⁴<https://goo.gl/ywb5xY> Piyush Goyal on mining sector (Economic times)

⁵<https://goo.gl/XBUzTj> The Role of Exports in India's Economic Growth

⁶<https://goo.gl/51hqqJ> Mining, People and the Environment (CSE Report 2012)

⁷Ibid

frames the rules for regulating the grant of all minerals other than atomic and minor minerals.

Which is the Nodal Agency for Regulating Mining in India?

The nodal agency for regulating mining in India is the Ministry of Mines. However, coal - contributing more than half to the value of the entire major mineral production – has been kept separately under Ministry of Coal. Mining of coal is a government of India monopoly, barring a few private captive mines. Two major acts regulate coal mining in India - the Coal Mines (Nationalisation) Act, 1973 and the Coal Mines (Special Provisions) Act, 2015 in addition to MMDR Act.

Other minerals such as building stones, gravel, clay, sand, gypsum and mica have been notified as 'minor minerals' by the centre. They are outside the purview of Ministry of Mines. The departments of mining and geology of states have absolute control over their mining. Similarly, mining of atomic minerals is regulated separately by the Atomic Energy Act, 1962 by the Department of Atomic Energy which falls directly under the Prime Minister's Office (PMO).

Who Can Do Mining in India?

Any citizen of India according to MMDR Act, but no such restriction exists in the case of a company as long as it is registered under the Companies Act, 2013 or any such related act. In 2006, 100 per cent FDI was permitted through automatic route in the mining sector (barring titanium).⁸ Therefore, a foreign company like London-based Vedanta Resources PLC is fully capable of mining in India through its Indian subsidiary like Hindustan Zinc Ltd. if it has a mining license given by the state government as per Mineral Concession Rules, 1960 or other similar rules.

What is a Mining License?

People or companies who qualify on the parameters set by the centre or state are given a 'mineral concession' called 'mining license' or 'mining lease' which permits them to undertake mining operations. Mining license or mining lease is often used as a colloquial umbrella term for all kinds of mineral concessions.

If Tomorrow, Coal or Any Other Mineral is Discovered Under my Land, Do I Own it?

Yes! According to the Supreme Court's verdict in *Thressiamma Jacob v. Geologist, Department of Mining* in July 2013, an owner has exclusive right not only of the land under his possession but also the subsoil and minerals underneath. The court said that “there is nothing in the law which declares that all mineral wealth subsoil rights vest in the state.” The court pointed to various statutes such as Coal Bearing Areas (Acquisition and Development) Act, 1957, which only contain express provisions for “acquisition of the mines and rights in or over the land from which coal is obtainable.”⁹

If I Own the Mineral Under My Soil, Can I Also Mine and Sell it?

At present, there is no such law under which having surface rights gives any preferential right to a person for obtaining mineral concessions.¹⁰ While one may own the minerals, the state still has the power to regulate or prohibit its mining. In section 8 of Coal Bearing Areas (Acquisition and Development) Act, 1957, it is

⁸<http://www.makeinindia.com/sector/mining>

⁹<https://indiankanoon.org/doc/64111525/> *Thressiamma Jacob v. Geologist, Department of Mining*

¹⁰<http://www.tnmine.tn.nic.in/CAQ.htm> Dept. of Geology and Mining, Tamil Nadu

categorically written that if the central government is convinced that a piece of land has coal under it and wants to acquire it, its owner can't object to such an acquisition saying "that he himself desires to undertake mining operations in the land for the production of coal."¹¹

Can My Land Be Acquired Without Giving Me Any Share from Mined Minerals?

Yes, the government can do that and unfortunately, most of the governments have done that since independence. The track records of various governments show that they do not even provide a fair compensation for the land they acquire as per the prevailing laws.

How Exactly is Land Acquired for the Purpose of Mining?

Land for mining is acquired through one of these three acts - Land Acquisition (Mines) Act, 1885, Coal Bearing Areas (Acquisition and Development) Act, 1957 and Atomic Energy Act, 1962. The general law for land acquisition in India – Land Acquisition, Rehabilitation and Resettlement (LARR) Act, 2013 – does not apply in this case. This little technicality has massive ramifications. LARR Act has many people-friendly provisions. For example, it mandates that prior to acquisition, the consent of 80 per cent of land owners should be obtained for private projects (70 per cent in the case of a PPP projects and no consent is required in case of a government project). The act also provides higher compensation and rehabilitation and resettlement (R&R) not only for the land owners but also for others dependent on the land for their livelihood.¹²

Are There Provisions in MMDR Act On the Rights of the Mining-Affected People?

There are a couple of sections in MMDR Act that talk about people affected by mining. The act puts a liability on a miner to pay compensation, as decided by the state, to the land owner(s) for any loss or damage due to the reconnaissance, prospecting or mining operations. After the amendment of 2015, MMDR Act has also created a non-profit trust called District Mineral Foundation (DMF) in every mineral rich district for the welfare of persons and areas affected by mining-related operations.

What is National Mineral Exploration Trust?

The National Mineral Exploration Trust (NMET) is a non-profit trust established by the union government in August 2015 with the objective to expedite detailed mineral exploration in the country. To achieve its objective, an NMET Fund was established. It receives money from lease holders, an amount equivalent to two per cent of royalty paid in terms of the Second Schedule of the MMDR Act.¹³ Soon after the establishment of NMET, the government came up with National Mineral Exploration Policy (NMEP) in 2016 aiming to meet the objectives of NMET through enhanced participation of the private sector.

What was the Need for NMET and NMEP?

In an introductory note to NMEP 2016, the secretary, Ministry of Mines admitted that "the present regime of grant of mineral concessions provides for Non-Exclusive Reconnaissance Permit (NERP), which does not allow seamless transitions to prospecting and mining licenses. On account of this, the private sector do not seem to be enthused to take up high risk of exploration."¹⁴ India has eight lakh square kms. of possible mining area but only 10 per cent has been explored!¹⁵ Most of our mineral resources are yet to be proved.

¹¹<http://lawmin.nic.in/ld/P-ACT/1957/A1957-20.pdf> (CBA Act 1957, Page 4)

¹²<https://goo.gl/1fwB4x> (PRS legislative overview on Land Acquisition bill)

¹³<http://pib.nic.in/newsite/mbErel.aspx?reid=145253>

¹⁴ibid

¹⁵<https://goo.gl/66jcRB> Cabinet approved NMEP (ToI)

Consider this – India has around 3.5 billion tonnes of bauxite resources of which only 13 per cent are proven reserves, where mining is happening or can happen in the future!¹⁶ To ensure a continuous flow of auctionable blocks, accelerating mineral exploration activity in the country is vital.

A decade ago, India opened its mining sector to 100 per cent FDI. Unfortunately, this attempt to attract foreign money in Indian mining didn't succeed much. The reason is that preliminary geological data of Geological Survey of India (GSI) is simply inadequate to make investment decisions in most of the cases. Detailed exploration is essential to attract investment in mining sector so as to establish feasibility of the prospect.

What is the Cost to the Environment?

India loves open-cast mining, even in the case of deep-seated minerals. The ease and economy of operating open-cast mining comes at a huge cost to the environment. For example, to mine one tonne of chromite ore, 15 tonnes of overburden (OB) is excavated in open-cast mines.¹⁷ These overburdens (waste) modify the land topography and prevent plant growth resulting in acute problems of soil erosion and environmental pollution. When a river is nearby, these overburdens are dumped right into it. Open-cast mining also leaves no scope of conserving some, if not all, of the forests growing over mineral rich regions. According to a report the total forest land diverted for mining between 1980 and 2005 is 1,64,610 hectare (ha).¹⁸

What is Illegal Mining? How Serious is it?

Some of the most obvious forms of illegal mining are mining without a license or with a license given in contravention of MMDR Act or various rules under it, mining while the renewal of the license is pending, mining outside the licensed area, mining more than what's permitted, mining without securing mandatory environmental and other clearances from various central and state ministries/departments.

According to data collected by the Indian Bureau of Mines (IBM), 727 cases were filed in the year 2015-16 following inspections in 2,427 mines, of which the courts upheld 25 cases filed by the bureau. A total of 1,374 mines were operating in violation of the MMDR Act and operations were suspended by the IBM for 357 mines. Penalties worth ₹5,56,000 were levied on miners found flouting the mineral concession rules and for over-extraction.¹⁹

What are the Punitive Provisions in MMDR Act, 2015, to Curb Illegal Mining?

Under the new act, the states have been empowered to set up special courts for speedy trial of unlawful mining cases. These courts would have the same powers as those of session courts. If found guilty of illegal mining, a person can be put behind the bars for up to five years; earlier, it was up to two years. Fine has also been raised from ₹25,000 to ₹5 Lakh per hectare.²⁰ However, the fact that the offence of illegal mining has been kept 'compoundable' means that the owners of a company, even when held guilty of illegal mining, can still avoid a jail term if they agree to pay some money to the government, which, of course, they have no dearth of. This takes away all the teeth from the stringent penalty provisions. The critics say that while the new bill increases the penalty for violation, it doesn't materially alter the existing institutional framework of mining. Rather than curbing illegal mining, it could incentivise rent-seeking behavior.²¹

¹⁶<http://ficci.in/spdocument/20317/Mining-Industry.pdf>

¹⁷<http://ficci.in/spdocument/20317/Mining-Industry.pdf>

¹⁸Rich Land Poor People, a report by Centre for Science and Environment

¹⁹<https://goo.gl/EceDmS> Curbing illegal mining (Indian Express)

²⁰MMDR (Amendment) Act 2015

²¹<http://www.financialexpress.com/opinion/why-even-the-new-mining-bill-needs-a-relook/52288/>

Mention Recent SC Judgments Banning Mining

The Supreme Court intervention in mining operations goes back to 1997 when it recommended that at least 20 per cent of the profits be set aside as a permanent fund for development needs. Also, in 2002 the SC said that the Aravalli mountain range in Haryana and Rajasthan is forest land and no mining should be allowed there.²²

In September 2014, in a petition filed by Common Cause, the Supreme Court cancelled 214 coal blocks allocated to private miners between 1993 and 2009 because the allocations made by the Screening Committee of the government were illegal, arbitrary and non-transparent. The court relied heavily on the CAG report of 2012 which assessed the loss to the exchequer to the tunes of 1.86 Lakh Crores due to this illegal coal block allocation.²³

One of the most high-profile mining bans initiated by the Supreme Court, with global repercussions, was a year earlier in 2013, when it ruled in the favour of Forest and Religious rights of the Dongria-Kondh tribe of Niyamgiri Hills in Odisha. The London-based Vedanta was allowed to begin its \$1.7 billion bauxite mining project only if it had the consent of the gram sabhas (village councils) in Niyamgiri hills.

The Odisha government identified 12 villages that would be directly impacted by the open-cast mining. In the same year, all the gram sabhas unanimously said 'no' to the project.²⁴

In 2012, the Supreme Court enforced a complete ban on mining in Goa. The Shah Commission report on Goa, which estimated a whopping ₹35,000 crore loss to the exchequer due to illegal mining in the preceding 12 years,²⁵ laid the foundation for this verdict. Set up in November, 2010, the Shah Commission submitted its extensive reports on illegal mining in Goa, Odisha and Jharkhand over the next three years. Before the commission could visit Chhattisgarh, it ran out of time and the government refused to give it any extension beyond October 2013.²⁶

Prior to that, the apex court had banned mining of iron ore in Karnataka in July 2011 following allegations of illegal mining that had resulted in large scale abuse of the environment.²⁷ Multiple reports on rampant illegal mining in the state by the Lokayukta paved the way for this verdict. Most recently, the Supreme Court called for the recovery of 100 per cent compensation in lieu of the excess ore lifted from the mines in Odisha.²⁸ This verdict has also relied heavily on Shah Commission's reports.

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²²<https://goo.gl/TNKqtu> All you wanted to know about: The mining ban (The Hindu)

²³<https://goo.gl/RjkG6W> Supreme Court quashes 214 coal blocks (LiveLaw)

²⁴<https://thewire.in/126626/mha-niyamgiri-hills-maoist-vedanta-mining/>

²⁵<https://goo.gl/Lo2scU> SC bans mining in Goa (Hindustan Times)

²⁶<https://goo.gl/PSwzGZ> Shah Commission wound up (Down to Earth)

²⁷<https://goo.gl/PGTaZE> Supreme Court bans mining in iron-ore rich Bellary (Economic Times)

²⁸<https://thewire.in/164082/odisha-illegal-mining-supreme-court/>