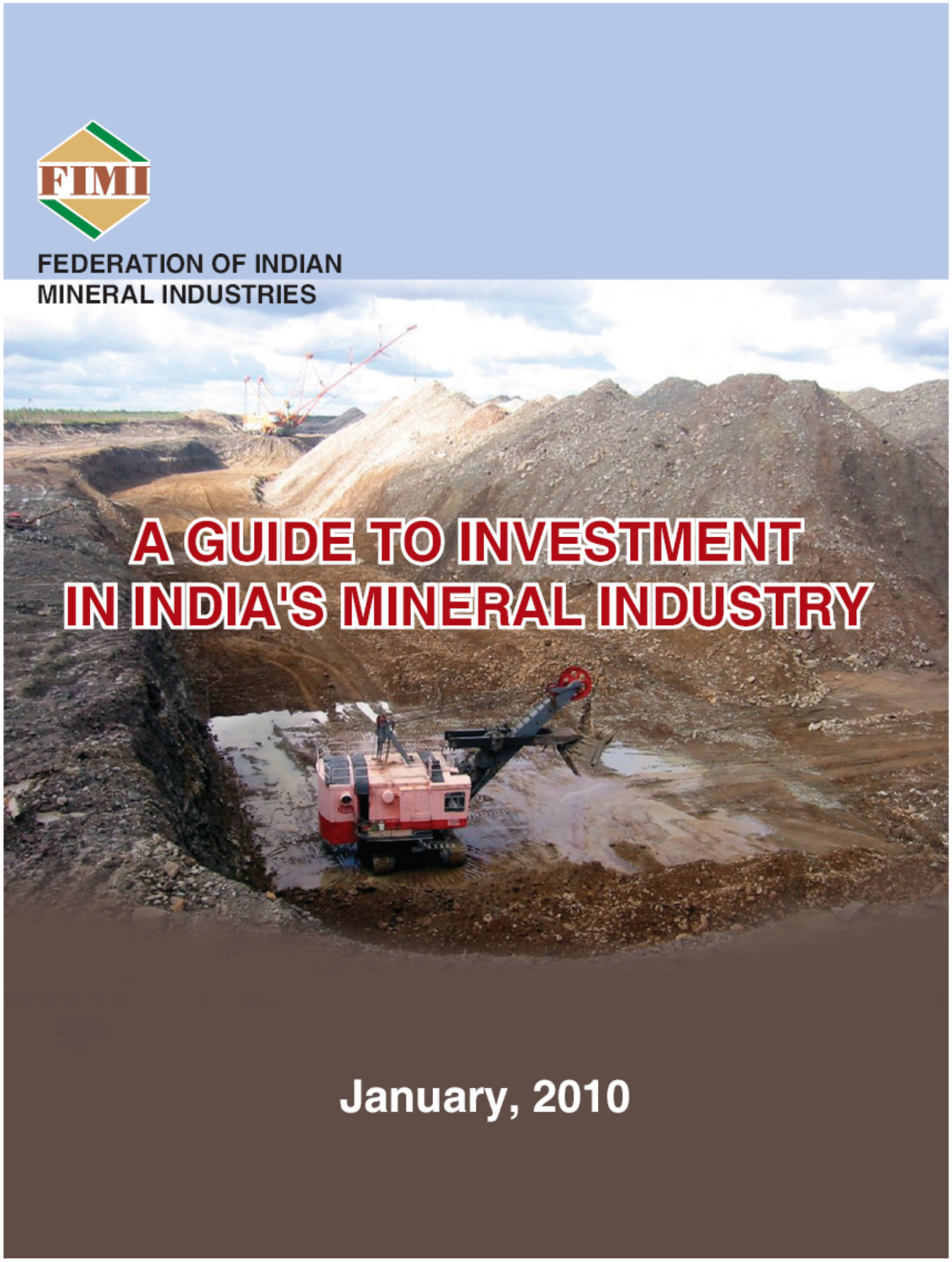
FIMI
FEDERATION OF INDIAN
MINERAL INDUSTRIES
A GUIDE TO INVESTMENT
IN INDIA'S MINERAL INDUSTRY
January, 2010

PREFACE

The mines and minerals sector today constitutes a vast expanding canvas. On the one hand, achievements in mineral technologies are constantly providing new opportunities but on the other, globalization in all its socio-economic dimensions is posing increasingly complex challenges. The strategy to meet the increasing demand of raw materials and to mitigate the adverse impacts have therefore to be part of the mineral development strategy. As such, the role of mining legislation for any country needs to be formulated in terms of strategies best serving to national interest in the competitive world.

The mining industry in India is significant for its economic development. The industry provides raw materials to domestic industries, and also contributes to India's export earnings. Not only that, it also offers employment opportunities in rural areas. Mining has a strong multiplier effect on the rest of the economy as every penny generated from the mining industry generates 2.4 times the direct and indirect output in the economy. States like Jharkhand, Orissa and Chhattisgarh are especially dependent on mining for their economic development.

However, the mining industry in India is not able to realize its full potential, the industry contributes around 2% to the overall GDP. During FY04-09, while the GDP in India grew at a CAGR of 8.5%, the mining industry registered a slower growth at 5.7%. The key factor is the low thrust on exploration which accounts for less than 0.5% of the global exploration expenditure of USD12.6 billion in 2008. But, supported by low cost advantage, strategic location and an untapped mineral base, the industry has the potential for higher growth and attracting capital to the exploratory stage of mining. Despite huge mineral reserves, the country has not been able to create global mining leaders. The scale of operations of Indian producers is very small by international standards. In contrast, countries like China, Brazil and Australia have been successful in developing global companies with large scale of operations. These companies generally dictate the price environment in the global market for key minerals.

In pursuance of the reforms initiated by the Government of India, a new National Mineral Policy was announced in March, 2008. With a view to giving effect to the National Mineral Policy 2008, the Mines and Minerals (Development and Regulation) Act 1957 has been redrafted in 2009 which will come into effect in 2010. The new MMDR Act 2009 provides for the provincial Governments to grant mineral concessions without reference to the central Government for all minerals except for fuel and atomic minerals. There is no restriction on foreign equity holding in mining sector. There will be seamless movement for reconnaissance licence to prospecting licence and ultimately mining lease. There will be stability of tenure of mining concessions with the minimum period of mining lease for 20 years and an option for extension. The time limit have also been prescribed for conveying a decision on applications for mineral concessions.

In the above background, the Federation of Indian Mineral Industries(FIMI) under the guidance of Ministry of Mines, Government of India, has made an attempt to bring this publication for an easy understanding of the forthcoming mining legislation which will provide a first hand knowledge to one and all for investment in India's mining industry.

12, January, 2010

(SIDDHARTH RUNGTA)
President
Federation of Indian Mineral Industries

(I)

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INDIA's MINERAL RESOURCES & MINERAL INDUSTRY

India is endowed with significant volume of mineral deposits. It is estimated that India holds abundant reserves of minerals such as non-coking coal, iron ore, bauxite (metallurgical grade), dolomite, gypsum, limestone and mica; adequate level of reserves of minerals such as lignite, chromite (metallic), manganese, zinc, graphite; but is deficient in mineral reserves such as coking coal, chromite (refractory), bauxite (chemical grade), copper, lead, apatite, rock phosphate and kyanite.

India produces 86 minerals, which include 4 fuel minerals, 10 metallic, 46 non-metallic, 3 atomic and 23 minor minerals (including building and other materials). The industry is characterized by a large number of small operational mines. The number of mines which reported mineral production (excluding minor minerals, petroleum, natural gas and atomic minerals) in India was 2954 in 2008-09 as against 2854 in the previous year. Out of 2954 reporting mines, 433 were located in Gujarat followed by Andhra Pradesh (406), Madhya Pradesh (298), Jharkhand (298), Rajasthan (252), Orissa (236), Karnataka (230), Tamil Nadu (159), Maharashtra (154), Chhattisgarh (150) and West Bengal (113). During 2007-08, 556 of these mines were for coal and lignite, 630 for metallic minerals and 1,688 mines for non-metallic minerals. Public sector holds 755 mines while the remaining belongs to the private sector.

The Eastern States−Jharkhand, Chhattisgarh, Orissa and Southern States− Andhra Pradesh, Karnataka−as well as Rajasthan in Western India are the most important mineral-rich regions in the country. The contribution of mining to the GDP of these regions is between 8-13%, as against about 2.5% for the country as a whole.

The rapid growth of user industries such as steel, power, construction, automobiles will propel growth in the Indian mining industry. Strong long-term demand from the steel industry is expected to boost iron ore industry while positive trends in power sector will catapult demand for coal. Key drivers for growth will include booming construction, automobiles and power industries which are expected to lend support to the sector. As per business Monitor International, the overall mining industry is expected to grow at a CAGR of 9% during 2008-12 to reach INR 1.9 trillion by 2012. The industry is expected to form 2.7% of GDP by 2012.

Ample mining reserves in India

Geologically, India can be divided into three distinct lithological and tectonic settings. From South to North they are:

- Peninsular India – comprising a Precambrian Shield overlain by the Late Carboniferous to Cretaceous Gondwana Series, Mesozoic-Tertiary basaltic flows of the Deccan Traps, and Tertiary to Recent successions along the coastal areas.

- Indo-Gangetic Alluvial Plain – consisting of Pleistocene to Recent sediments infilling a large linear depression south of the Himalayas.

- Extra-Peninsular Region – formed by the collision of the Indian plate and the Tibetan plate some 45 million years ago. This region comprises remnants of the Precambrian Shield and rocks of the Palaeozoic, Mesozoic and Cenozoic, all of which have been extensively deformed. This geologically complex region has not yet been fully explored, but what is known about the area indicates its massive potential for a number of mineral occurrences, especially of base-metals.

The total mineral potential area in India covers 5.75 lakh sq. kms, of which only 75,000 sq. kms. area has been explored in detail so far. The exploration scenario of certain important minerals is given below:

	Geological environment In sq.km.	Area covered by prospecting and future
Basics: Geological map: 1;50,000/63,360 available along with aero-geophysical map for 3,74,040. Sq.km.	Gold: 1,12000 Base metal: 1,82,000 Diamond & Gemstone: 3,00,000	20 to 30% of the potential area prospected. Huge scope remains for prospecting and exploration in virgin areas demanding investment.
	Iron ore: 4000 Manganese ore: 4,600 Chromite ore: 2,500	Geological mapping and delineation of potential area - 90% completed for haematitic ore, 80% for manganese ore and 40% for chromite ore. Resource assessment carried out in early eighties, Most areas covered under lease or forest. Free areas may be taken up.
	Platinum Group of elements: 8,000	1 to 2% area covered by prospecting, virtually an untapped field.
	Coal: 48,500	70% explored up to 900m depth.
	Lignite: 9,300	40% explored between depth 300 to 500m.

GENERALISED GEOLOGICAL MAP OF INDIA SHOWING THE MAJOR TECTONIC ELEMENTS.

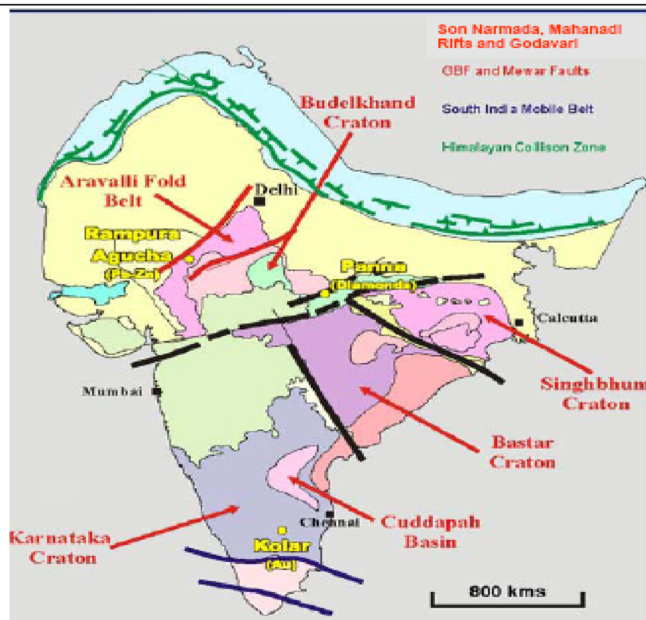
TOTAL LAND AREA : 3.28 M.SQ.KM.

HARD ROCK: 2.42

ALLUVIAL COVER : 0.86

Deccan trap : 0.60m.sq.km

2.4% land area supporting 16% population



India has high reserves of iron ore, limestone, bauxite and coal. It finds a place amongst the top ten countries globally for these ores. India also commands a leading position in mica (No. 1), barytes (No. 2), chromite (No. 4), kaolin (No. 4), and manganese (No. 7). The table below highlights the key mineral reserves in India.

Mineral	Proven reserves in 2005 (mt)	Quality	Location
Bauxite	3,290	Reserves consist primarily of gibbsite, whose conversion to alumina is less expensive compared to the other two forms, bohemite and monohydrate	Orissa, Andhra Pradesh and Maharashtra
Copper	1,394	Low; metal content ~1.2%, as against world average of 2-3%	Rajasthan, MP, Jharkhand
Iron ore	25,249	Good; metal content ~60%, compared to world average of 40- 45%	Jharkhand, Chhatisgarh, Orissa and Karnataka
Lead-Zinc ore	523	Good; 8-10% metal content compared to world average of ~5%	Rajasthan
Manganese ore	379	Medium; ~35% metal content	Orissa, M.P.
Chrome ore	66	Good; 40-52% Cr_2O_3	Orissa

However, despite the huge reserves, the industry has seen abysmally low exploration activity and minimal private sector participation.

STATUS OF MINERAL RESERVES IN INDIA				
Grouping	**Abundant**	**Adequate**	**Deficit**	**Scarce**
Fuel Minerals	Non-coking coal	Lignite	Coking coal	Petroleum crude
Metallic (ferrous) Minerals	Iron ore	Chromite (metallic), Manganese	Chromite (refractory grade)	Nickel, Tungsten, Cobalt, Molybdenum,Vanadium
Metallic (non-ferrous) Minerals	Bauxite (metallurgical grade)	Zinc	Bauxite (chemical grade), Copper, Lead	Antimony, Gold, Platinum group of minerals, Tin,
Industrial Minerals	Dolomite, Gypsum, Limestone, Mica	Graphite	Apatite, Rock-phosphate, Kyanite	Sulphur, Potash
Precious Stones	-	-	-	Diamond, Emerald, Sapphire, Ruby

India's Mineral Resources, Future Needs and Potential Investment Areas

Commodity	Resources	Future needs	Potential Investment Areas
Aluminum	• Rich ore grade (40% Al2O3), • Good mining infrastructure • surplus production	• Cheap power supplies for smelting, • Improved technology for aluminum • Semi-fabrication and end use facilities	• Bauxite mining/ beneficiation • Export-oriented refineries and smelters, • Production from secondary sources and red mud, • Gallium recovery

Commodity	Resources	Future needs	Potential Investment Areas
Copper	• Unsatisfied and growing demand • Large Market • Trained manpower • Basic infrastructure	• Exploration for new deposits, • Improved beneficiation and smelting facilities	• Exploration projects • Hydro metallurgy, bioleaching and downstream products
Lead	• 70% demand satisfaction, • Trained manpower	• Environment friendly technologies	• Exploration projects, • Joint ventures in lead concentration, • Exploration and primary/secondary production
Zinc	• Near self-sufficient • Modern mining abilities	• Environment friendly technologies	• Exploration and primary/secondary production
Gold	• Limited resources of economically viable grade, • Trained manpower, • Advanced mining technologies for deeper depth	• Increased exploration in Archean green stone belts/laterites, • Mining of low-grade ores/tailing dumps, • Improved technology	• Advanced exploration projects, Low-grade ore mining, • Column flotation, bioleaching, smelting and refining
Diamond	• Expertise in cutting and polishing	• Increased exploration and mining	• Intensive exploration and mining, • Upgrading
Tungsten/ Nickel/Tin	• Basic infrastructure in both mining and metallurgy	• Increased exploration, mining, beneficiation and smelting	• Turn-key plants

Indian Mineral Regime

Indian mineral regime can be divided in three distinct categories:

1. 95% of the bulk minerals like limestone, bauxite and almost 20% iron ore are captive to industries for which they are raw materials. The balance quantity is extracted by a large number of concessionaires spread all over the country.

2. In other cases, the ownership of mineral concessions is mostly with individuals, partnership firms or private limited companies.

3. The minerals/metals with which India is vitally concerned now and will be in future such as gold, lead/zinc, copper, nickel, PGMs, diamond not yet fully developed or their potential not realized because of:

    - Lack of state-of-the-art exploration technologies
    - High risk and size of the capital required not available in India so far
    - Most of the deposits so far are thus chance discoveries
    - This category of minerals / metals will require latest and state-of-the-art technology for exploration as well as exploitation.

Some such areas are delineated in subsequent sub-section:

Technology Upgradation

i. Latest technology to delineate the mineral reserves in geologically potential areas

a) Most of our exploration efforts by GSI, MECL or other Government agencies or mining companies were restricted to area near ancient mine workings or near surface deposits by using conventional exploration techniques.

b) Advanced integrated exploration techniques are needed to thoroughly explore deeper deposits or deposits in complex geological environment including deposits concealed in offshore zone.

c) State-of-the-art drilling techniques with sophisticated rigs (such as RC) for three-dimensional sub-surface delineation of ore body as well as for directional drilling and underground exploratory drilling are needed to be employed.

d) More than 60 kimberlite/lamproite occurrences are found in central India, which should be explored adequately to find new diamond bearing rocks.

ii. **Suitable technology for mining of deeper deposits with high geothermic temperature to sustain coal production and hence to fulfill the ever increasing energy demand of India.**

iii. **Underground mining technology for iron ore mining:**

Suitable technology to mine iron ore especially magnetite ore at deeper depth in following conditions.

a) in ecologically fragile zone
b) with lower iron content.

iv. **Technology to utilize:**

a) high phosphorous and low Mn containing, manganese ore,
b) for use of iron ore fines in iron and steel sector.

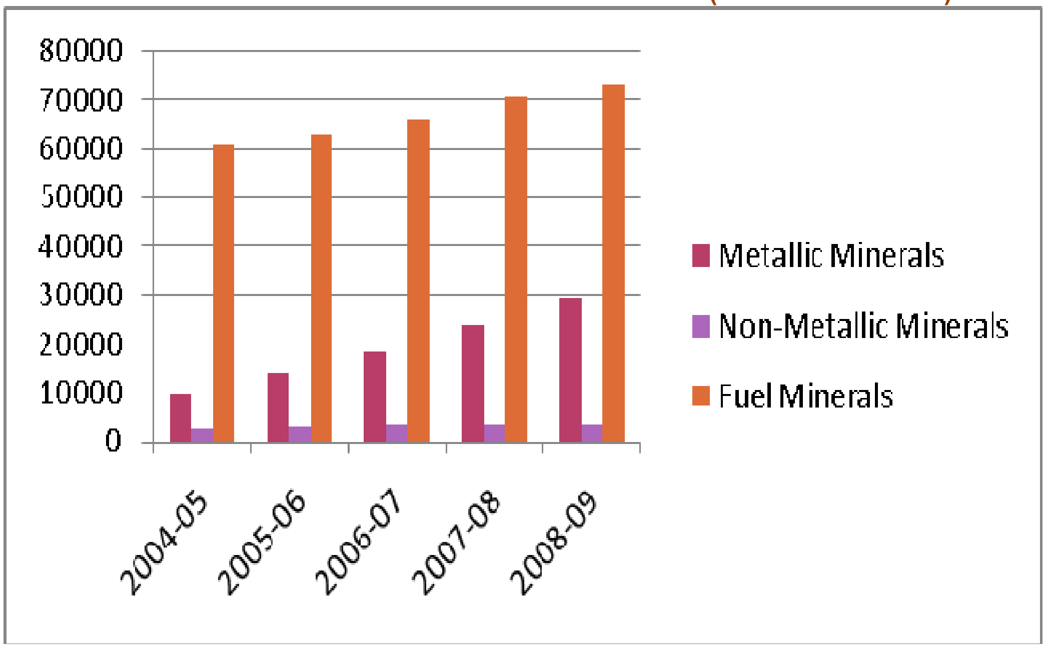
v. **Technological up-gradation in underground non-ferrous metal mining in respect of sub-level stoping methods for improving productivity.**

vi. **Human resource development needs a lot of stress to fulfill the future requirements of the coming greenfield as well as brownfield mines with state-of-the-art technologies. Many of our high tech mines, especially in underground, could not give expected level of success mainly due to inadequate quality manpower and shortage of spare parts availability in time.**

Mineral Production

The total value of mineral production (excluding atomic minerals) during 2008-09 is estimated at Rs. 1159800 million which shows an increase of about 7.10% over that of the previous year. The fuel minerals account for 63% to the total value of mineral production followed by metallic minerals at 25%, non-metallic minerals 3% and minor minerals 9%.

Value of Mineral Production (By Groups)
(value in Rs. Crore)



Foreign Trade in Mining Sector

The value of export of ores and minerals during 2007-08 was Rs. 95022 crores. Diamond (mostly cut) was the principal item of export which accounted for 60%, followed by iron ore with a contribution of 25%, granite 5%, zinc ore and concentrates 1%, chromite 1%, bauxite 1% and alumina 1%. Building and monumental stones, emerald, coal (including lignite), marble etc. were other important minerals exported.

The value of import of ores and minerals during 2007-08 was Rs. 349507 crores. Petroleum (crude) was the main constituent of mineral import during 2007-08 which accounted for 74% of the total value of import of ores and minerals followed by diamond (uncut) with 9%. Coal, natural gas, coke, copper ore and concentrates, rock phosphate and sulphur etc. were the other minerals imported.

Growth and Demand Potential

GROWTH AND DEMAND POTENTIAL (11TH FIVE YEAR PLAN 2011-12)

Metal	Recent Consumption		Yearly Growth (in %) : 11th Plan
Copper	2006-07	4,40,000 tonnes	6
Zinc	2005-06	4,30,000 tonnes	8
Lead	2005-06	2,39,000 tonnes	11
Aluminum	2006-07	1.9 mt.	2.50 million tonne
	Export	2.1 mt.	2.00 million tonne
Diamond			15-20 (mostly for re-export)
Gold		800-1000 tonnes	Immense domestic demand

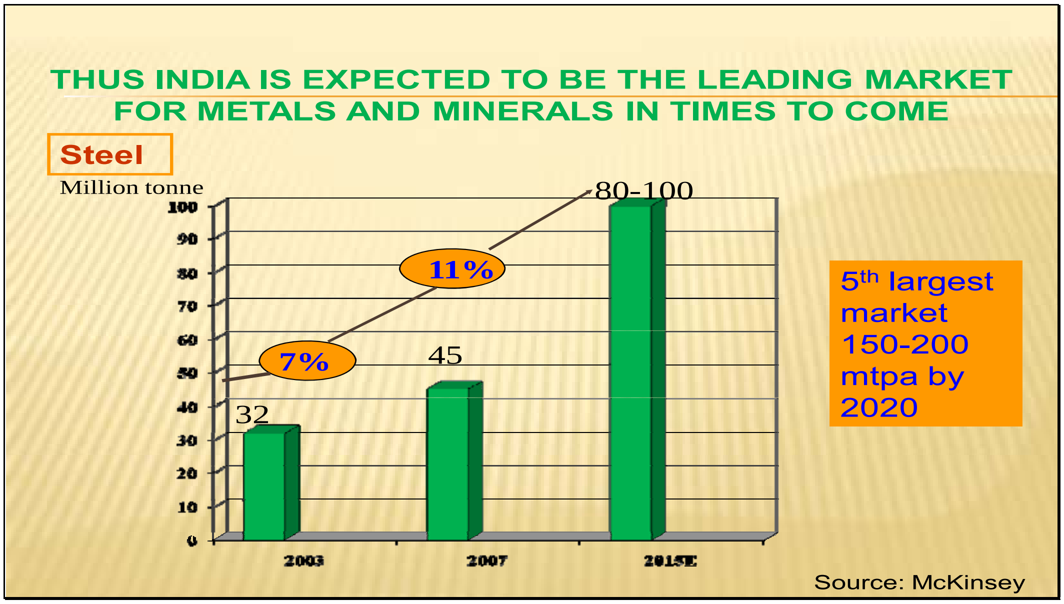
Source: 11th Five Year Plan Document

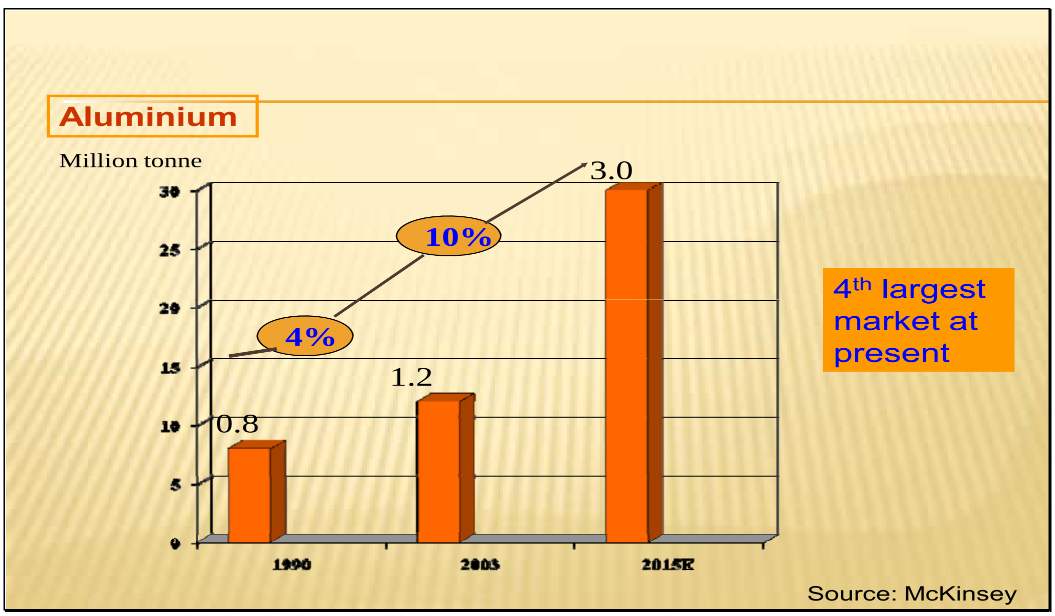
AS AGAINST THIS DEMAND POTENTIAL, FOLLOWING IS THE ESTIMATED UNUTILIZED POTENTIAL.

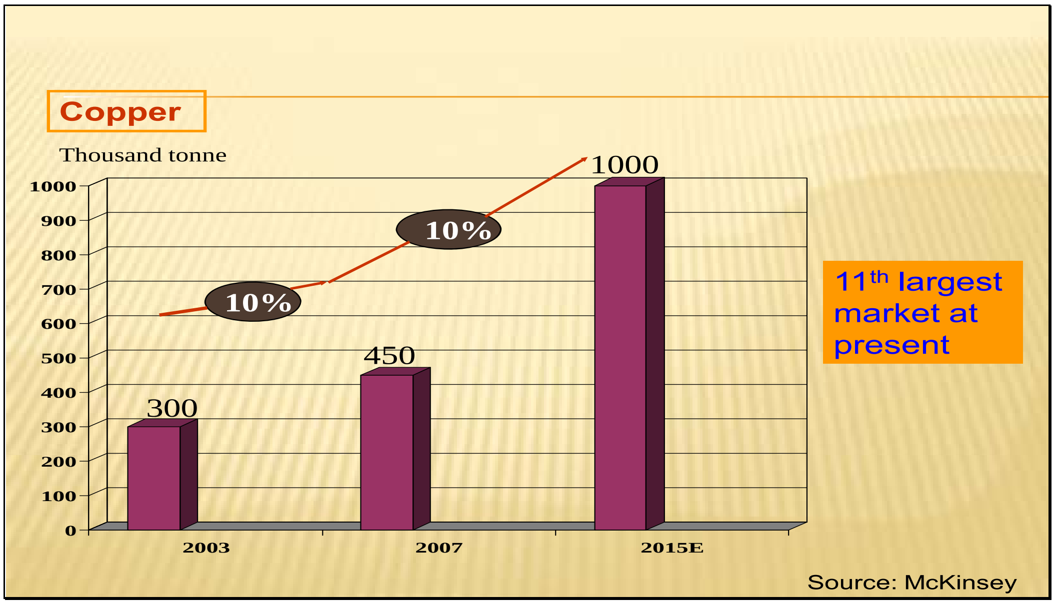
(IN MILLION TONNES)

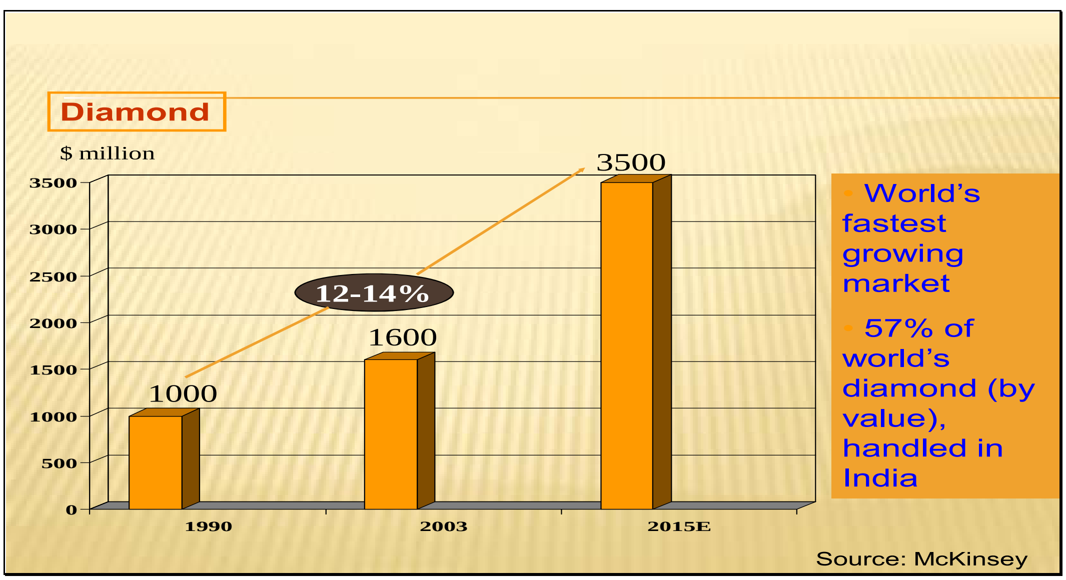
Commodity	Global		India	
	Resources	Reserves	Resources	Reserves
Copper	1600	940	11.4	4.4
Zinc	1900	460	24.2	11.0
Lead	1500	140	7.2	2.6
Nickel	140	140	1.9	0.0
Gold*	90,000	90,000	497	85.00
Diamond**	1250	1250	4.6	1.2

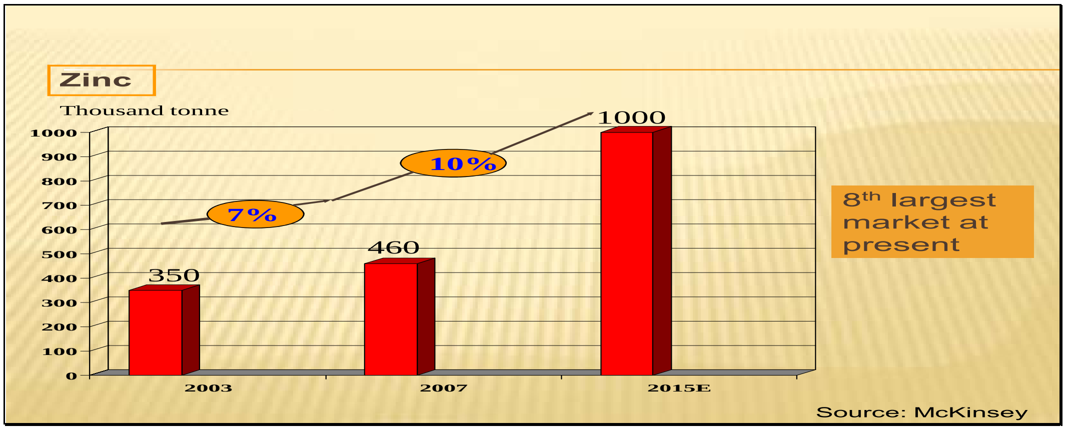
Notes : * in tonnes ** in million carats
Source: 11th Five Year Plan Document

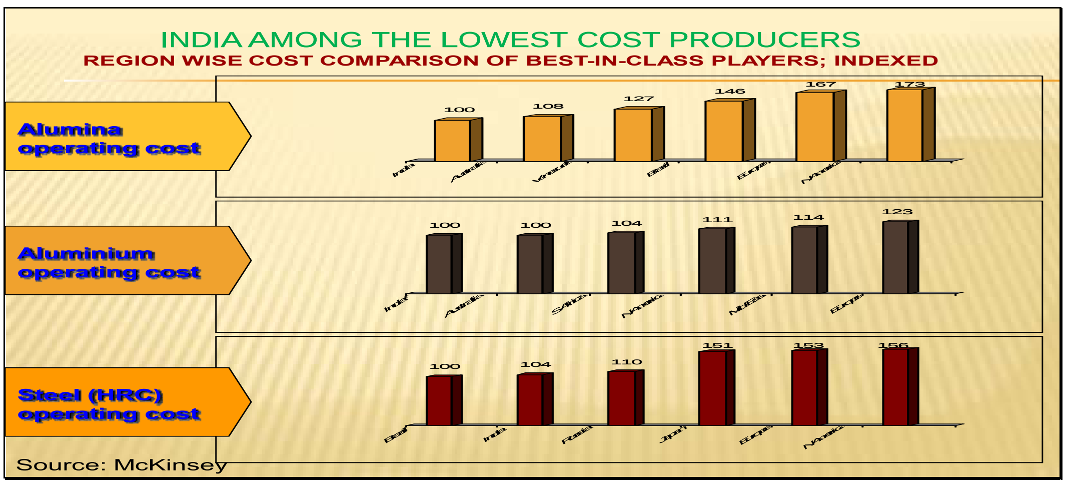

THUS INDIA IS EXPECTED TO BE THE LEADING MARKET FOR METALS AND MINERALS IN TIMES TO COME
Steel
Million tonne
100
90
80
70
60
50
40
30
20
10
0
32
45
80-100
7%
11%
2003
2007
2015E
5th largest market 150-200 mtpa by 2020
Source: McKinsey


Aluminium
Million tonne
30
25
20
15
10
5
0
0.8
1.2
3.0
4%
10%
1990
2003
2015E
4th largest market at present
Source: McKinsey


Copper
Thousand tonne
1000
900
800
700
600
500
400
300
200
100
0
300
450
1000
10%
10%
2003
2007
2015E
11th largest market at present
Source: McKinsey


Diamond
$ million
3500
3000
2500
2000
1500
1000
500
0
1000
1600
3500
12-14%
1990
2003
2015E
World's fastest growing market
57% of world's diamond (by value), handled in India
Source: McKinsey





- India is and may be one of the largest markets for key metals with lowest cost potential.
- Demand will require intensive exploration activity and hence an opportunity for junior prospecting companies to open shops in India.
- 100% FDI now possible in mining and metals sector.
- Geological prospectivity quite promising for gold, diamond, base metals and other minerals.

National Mineral Policy (NMP) 2008

The National Mineral Policy 2008 brought out by the Union Government aims at achieving the twin goals of large scale prospecting with optimal mining and attracting investments with the latest technology. **The salient features of the NMP include :-**

Role of the State

- The Central Government in consultation with State Governments shall formulate the legal measures (including corresponding amendments in the MMDR Act, the MCR and the MCDR) necessary for implementing NMP, 2008.
- Geological Survey of India(GSI), Indian Bureau of Mines(IBM) and the state Directorates of Geology and Mining(DGM) would be upgraded to the level of state-of-the-art.
- Private sector would be the main source of investment in reconnaissance and exploration and government agencies will work only in areas where private investment is not forthcoming despite the desirability.

Improving Regulatory Environment to Attract Private Investment

- Allocation of concessions to be fully transparent and seamless; the security of tenure to be guaranteed.
- The first in time principle in the case of sole applicant and the selection criteria in the case of multiple applicants.

Value Addition

- Preference may be given to a value addition industry, but not at the cost of security of tenure to a holder of concessionaire.
- To get advantage of multiplier effect of mineral development, value addition would be encouraged.

Regulation of Mining

- An open sky policy of non-exclusivity for reconnaissance work would be adopted to expedite the completion of reconnaissance of the entire country.
- Large Area Prospecting Licence (LAPL), a new instrument, would be introduced to attract investment and high technology.
- Duration of all concessions would be rationalized and the area of operations enlarged. A mining tenement registry and a mining atlas will be prepared by IBM in coordination with GSI, for the development of a proper inventory of resources and

reserves. The resource inventory will be in accordance with the latest version of the UNFC system as well as traditional IBM convention of resources and probable and proven reserves.
- Mine closure should be scientific, which would not only restore ecology and regenerate bio-mass but also ensure socio-economic well-being of the region.

Strategy of Development

- Guiding principle in the strategy of development of any mineral shall ordinarily be extraction cost relative to market price.
- To maximize gains from minerals, mineral development will be prioritized in terms of import substitution, value addition and export, in that order.
- Zero waste mining to be the ultimate goal.
- To ensure uninterrupted supply of the mineral raw materials from domestic sources, the user industry will be encouraged to develop long-term linkages with mineral producing units including equity participation.
- Indigenous mining equipment industry shall be strengthened. Induction of foreign technology and participation for mining equipment manufacturing shall be encouraged. Use of equipment and machinery, which improves efficiency, productivity, economics of mining and safety and health of persons involved shall be encouraged. Import of such equipment and machinery shall be freely allowed.
- Presently only mining projects involving a substantial component of machinery, equipment and buildings are being financed by the financial institutions. Steps shall be taken to facilitate financing of mine development and also of exploration projects.
- A framework of sustainable development will be designed to take care of biodiversity issues and for ensuring restoration of the ecological balance. Mineral development as well as protection of environment should get equal preference for sustainable development. The guiding principle shall be that a miner shall endeavour to leave a mining area in a better shape than he found it.
- Interest of indigenous (tribal) population must be protected. Project affected persons(PAPs) will be protected through comprehensive relief and rehabilitation (R&R) packages in line with National Rehabilitation and Resettlement Policy(NRRP).

Research and Development

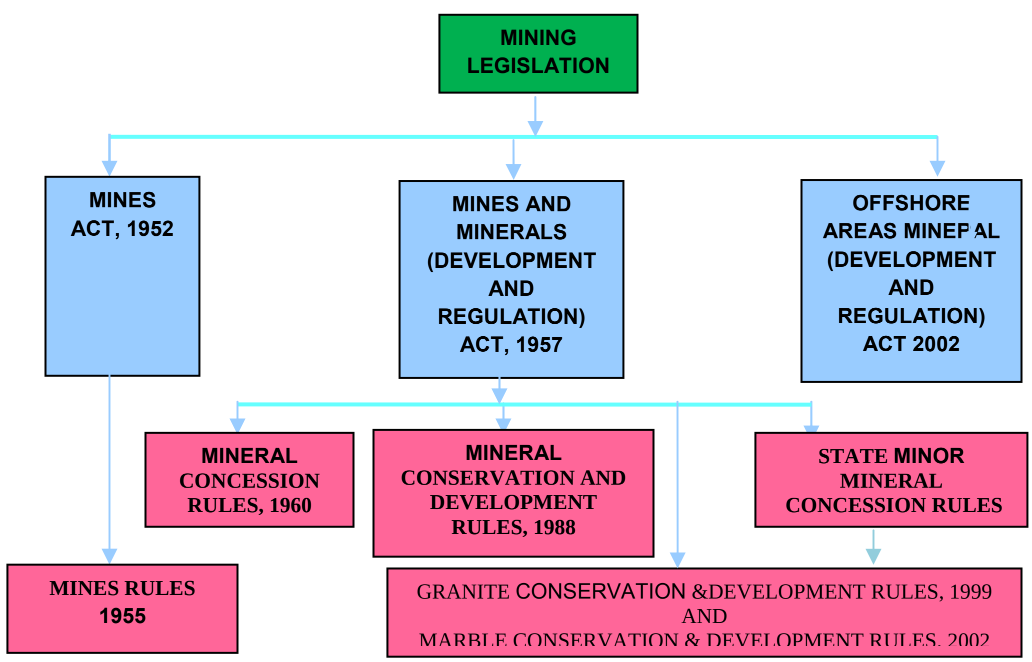
- Appropriate technologies shall be developed to enable indigenous industries to utilize the minerals in which the country is abundantly endowed and as substitutes for minerals whose reserves are poor.

MINING LEGISLATION

The mines and Minerals (Development & Regulation) Act, 1957, ('MMDR') and the Mines Act, 1952, together with the rules and regulations framed under them constitute the basic laws governing the mining sector on land in India. For territorial waters, continental shelf, exclusive economic zone and other maritime zones of India, recently the Offshore Areas Mineral (Development and Regulation) Act, 2002 has been enacted and made effective with effect from 31st January 2003.

The relevant rules in force under the MMDR Act, are the Mineral Concession Rules, 1960, the Mineral Conservation and Development Rules, 1988, Granite Conservation and Development Rules, 1999 and Marble Development and Conservation Rules, 2002. The health and safety of the workers is governed by the Mines Rules, 1955, framed under the Mines Act, 1952.

The Mineral Concession Rules, 1960 outline the procedures and conditions for obtaining a Reconnaissance Permit or a Prospecting Licence or a Mining Lease, for all minerals other than petroleum and natural gas and also other than those minerals notified as `minor' minerals. The Mineral Conservation and Development Rules, 1988 lay down guidelines for ensuring mining on a scientific basis, while at the same time, conserving the environment. The provisions of Mineral Conservation and Development Rules are, however, not applicable to coal, atomic minerals and minor minerals.The State Governments have powers to formulate the Minor Mineral Concession Rules and grant mineral concessions for such minerals under such rules.



The Mines and Minerals (Development & Regulation) Act- 2009

In pursuance of the reforms initiated by the Government of India in July, 1991 in fiscal, industrial and trade regimes, a new National Mineral Policy was announced in March, 2008. With a view to give effect to the National Mineral Policy 2008, the Mines and Minerals (Development & Regulation) Act, 1957 is proposed to be re-drafted as **Mines and Minerals (Development and Regulation) Act – "MM(DR) Act – 2009"** which will be given effect to after the approval of the Parliament.

Key features of MM (DR) Act as on 17/11/2009 are given at Appendix – I.

The royalty rates revised in August, 2009 are given at Appendix - II.

Procedures for Grant of Mineral Concessions as per Existing Legislation

Ownership of Mines and Minerals

In Indian federal structure, the State Governments are the owners of minerals in their respective territorial jurisdictions. In offshore areas, territorial waters, continental shelf, exclusive economic zone and other maritime zones of India, the rights are vested in the Central Government.

Laws and mineral rights empower the Government to receive payment of royalty from the lessee for extraction and consumption of minerals. The rates of royalty for various minerals, other than minor minerals, are specified by the Central Government through a notification. The royalty rates for minor minerals are specified by the concerned State Government.

- **Access Over Land**

Both state owned and privately owned land are available for exploration and mining, except in certain areas, which the Government may reserve through a notification. Since the surface rights of land may vest in either the Government or an individual, the access over land is subject to the consent of the owner of the surface rights.

- **Reconnaissance Permit**

An application for grant of reconnaissance permit in respect of any land in which the minerals vest in the Government shall be made to the Director, Mines and Geology, of the State Government concerned along with fees as prescribed. The State Government shall acknowledge receipt of the application and shall grant the reconnaissance permit to every applicant who is eligible in terms of the MMDR Act, 1957 and the Rules made thereunder.

A Reconnaissance permit entitles the holder to undertake operations for preliminary prospecting of mineral(s) through regional, aerial, geophysical or geochemical surveys and geological mapping. But, excluding pitting, trenching, drilling (except drilling of 20-25 boreholes per 100 sq. km. with 4" diameter) and sub-surface excavations. These permits are granted for a period upto 3 years which is not extendable. The maximum area over which a permit can be granted is 5000 sq.km. subject to total ceiling of 10,000 sq. km. in a State. The Reconnaissance Permits are granted as per the procedure laid down in the Mineral Concession Rules, 1960.

The holder of a Reconnaissance Permit has a preferential right to obtain a Prospecting Licence in respect of the land remaining under the permit subject to certain conditions including those relating to minimum expenditure commitment and specific physical targets. The other conditions governing the grant of Reconnaissance Permit require the permit holder to progressively relinquish the area granted under permit as follows:

i. On completion of two years, the area shall be reduced to 1000 sq. km. or 50% of the area granted, whichever is less; and
ii. The area would be further relinquished to not more than 25 sq. kms. at the end of the third year.

- **Prospecting Licence**

An application for grant of a Prospecting Licence shall be made to the District Collector of the State Government concerned along with prescribed fees. The State Government shall acknowledge the receipt of the application and shall consider only such applications as are eligible in terms of MMDR Act, 1957 and the Rules made thereunder.

The prospecting licence holder has a preferential right for obtaining a mining lease in respect of the minerals explored in a particular area. A Prospecting Licence may contain other conditions relating to compensation for damage to land, restriction regarding felling of trees, entry on occupied land, etc.

A Prospecting Licence entitles the holder to search and explore the land for minerals, and permits the removal of limited quantities of substances for testing. Prospecting Licenses are granted for upto a period of 3 years. These can be extended, but the total term of the Prospecting License can not exceed 5 years. Maximum area prescribed for prospecting licences is 25 sq. km in a State, which can also be relaxed by the Central Government in the interest of mineral development.

One important right attached to the Prospecting License is the right of pre-emption. This right gives preferential right to the holder, for obtaining a Mining Lease in respect of the minerals explored on a particular area of land.

The holder of the Prospecting License has also the right to transfer the license or any right, title or interest therein to an income tax payee, subject to the sanction of the State Government. The procedure for obtaining the licence is given in the Mineral Concession Rules, 1960.

- **Mining Lease**

An application for grant of mining lease in respect of any land in which minerals vest in the Government shall be made to the District Collector of the State Government concerned along with prescribed fee. Every such application shall also include with it the consent of the land owner and any person having occupation rights over the land.

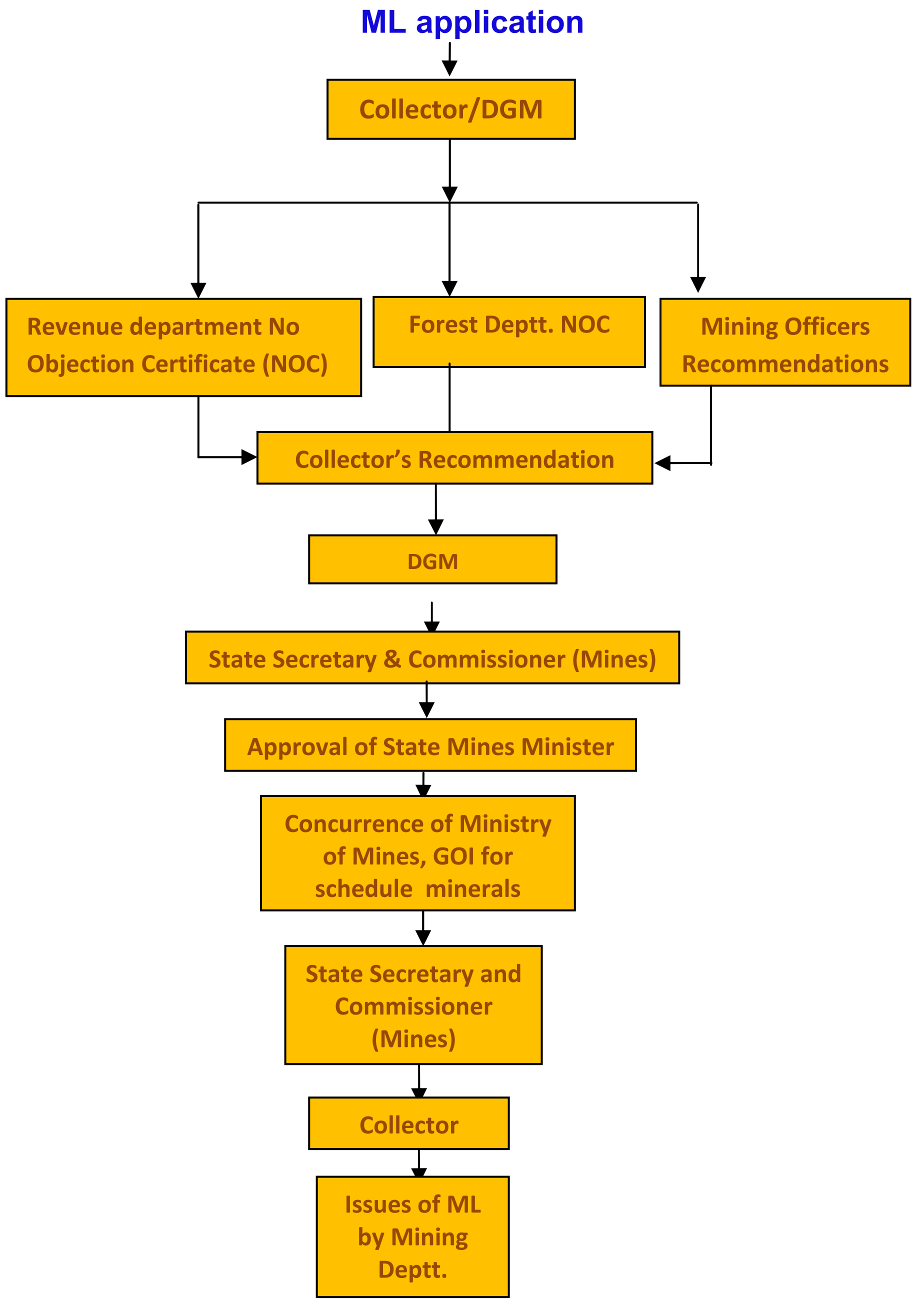
An acceptance of application for a mining lease and before the execution of the lease, the applicant shall prepare a mining plan which is to be approved by the Indian Bureau of Mines(IBM) for the leased area. No mining plan shall be approved unless it is prepared by a qualified person empanelled in this behalf in the prescribed manner.

A Mining Lease allows for the development and production of minerals from ore bodies discovered by prospecting or exploration operations. Mining Leases can be held for a period, which may vary from a minimum of 20 to 30 years with rights of renewal. Every person who is holding a mining lease for a mineral which is used in his own industry shall be entitled for the renewal of his mining lease for a period not exceeding 20 years, unless he applies for a lesser period.

A Mining Lease is subject to the ceiling on the area being mined. The ceiling prescribed is a maximum of 10 sq. kms. in a State. The ceiling may be relaxed by the Central Government if it deems the relaxation to be in the interest of mineral development. The mining lease is transferable, subject to the approval of the State Government.

The holder of a mining lease is liable to pay a dead rent till any mineral is removed or consumed. On removal or consumption of the mineral, the holder of a Mining Lease has to pay royalty or dead rent, which ever is higher.The royalty rates and dead rent for various minerals are specified in the second and third schedule to the MMDR Act. The Government has the right to revise the rates. However, the MMDR Act, restricts the Government from enhancing the rates before a period of 3 years have elapsed, from the date of last increase. The procedure for obtaining a mining lease is prescribed in the Mineral Concession Rules, 1960.

The procedure in grant of mineral concessions for a mining lease is depicted in the chart given below.


ML application
Collector/DGM
Revenue department No Objection Certificate (NOC)
Forest Deptt. NOC
Mining Officers Recommendations
Collector's Recommendation
DGM
State Secretary & Commissioner (Mines)
Approval of State Mines Minister
Concurrence of Ministry of Mines, GOI for schedule minerals
State Secretary and Commissioner (Mines)
Collector
Issues of ML by Mining Deptt.

- **Time Limit for Decision on Granting Mineral Concessions**

Times limits have been prescribed for conveying a decision on application for mineral concession viz. six months for Reconnaissance permit, nine months for prospecting license and twelve months for Mining lease. In case time limit is not adhered to, the reasons for delay will have to be recorded in writing.

- **Private Participation in the Mining Sector**

According to the National Mineral Policy 2008, private investment (both domestic and foreign), has been permitted for the exploration and exploitation of all non-fuel/non-atomic minerals without any fetters.

- Level playing field between Government owned companies and others have been provided. For example, prematurely terminated lease area is available for re-grant to both public and private sector. The permission of the Government is required in case of transfer of mining lease.

- Time limits have been prescribed for conveying a decision on applications for grant of mineral concessions, and for approval of mining plans.

APPLICABILITY OF OTHER ACTS & RULES

Clearance from Ministry of Environment and Forests

Environmental controls for the mining sector are regulated by the Forest (Conservation) Act, 1980 and Environment (Protection) Act, 1986 ('EPA').

FOREST CLEARANCE

For exploring and mining on forest land, prior permission of the government is required, under the provisions of the Forest (Conservation) Act, 1980. Rule 6 of the Forest (Conservation) Rules, 2003 prescribes the procedure for submission of proposals for seeking prior approval of the Central Government under Section 2 of the Act. All proposals relating to diversion of forest land up to 40 hectares and proposals for clearing of naturally grown trees for reforestation shall be sent directly to the concerned Regional Office of the MOEF by the State/UT government or other authority.

Compensatory afforestation and payment of net present value of forest land are the most important conditions stipulated by the Central Government while approving proposals for de-reservation or diversion of forest land for non-forest uses. Compensatory afforestation is required to be done over equivalent area of non-forest land. The other **standard conditions** for mining projects include:

(a) phased reclamation of mined area,

(b) safety zone area, its afforestation and fencing,

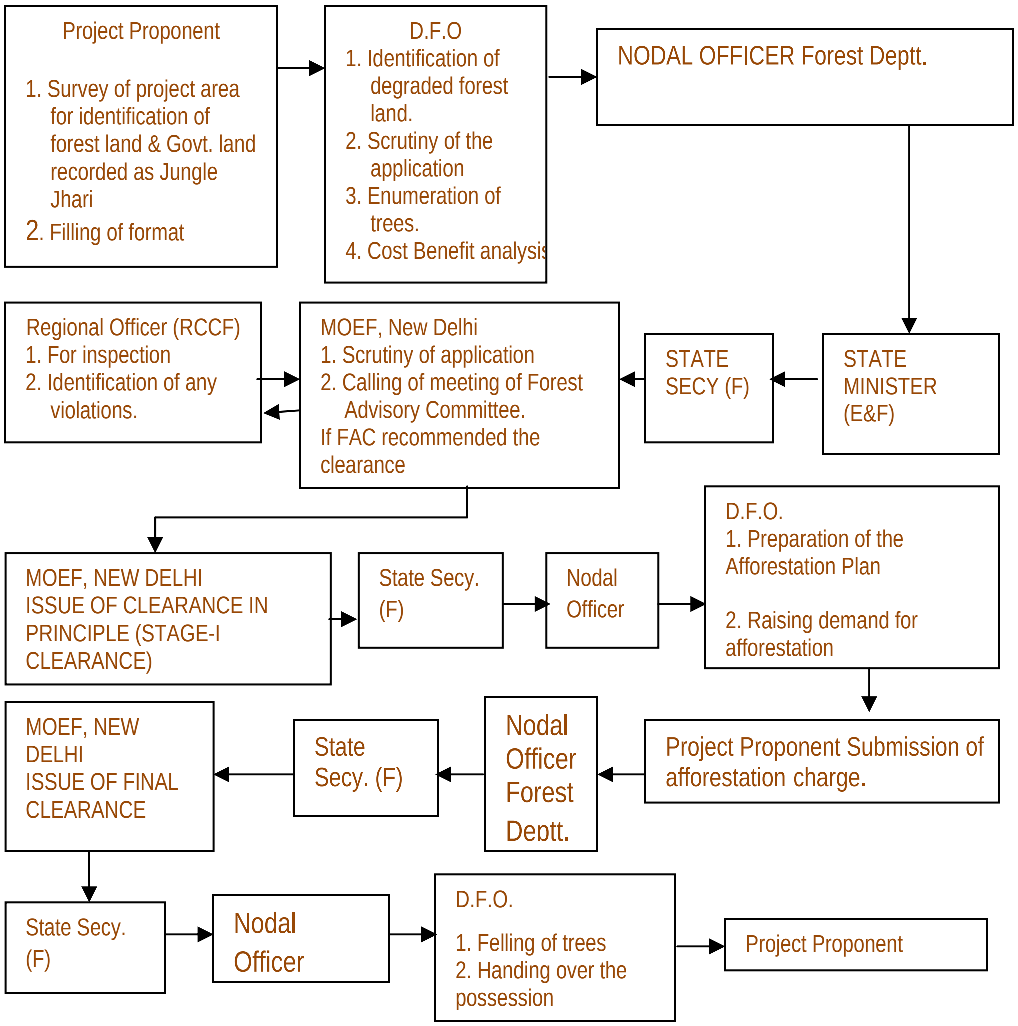
(c) afforestation on one and half times degraded forest land in lieu of the area used for safety zone and

(d) In case of under ground mines, areas on surface to be fenced and afforested.

(e) Lands identified for compensatory afforestation to be transferred to the Forest Deptt.

(f) Two stage clearance of proposals. In first stage, the proposal shall be agreed to in principle whereas in the second stage, the final approval will be accorded.

Procedure for Processing of Application for Mining in Forest Land



ENVIRONMENT CLEARANCE

Environment (Protection) Act, 1986 and the Rules framed under it provide for prospecting and exploration of major minerals in areas above 500 hectares only with prior permission from the Ministry of Environment and Forests. In this respect an application in the prescribed form is required to be made to the Ministry of Environment and Forests. The application must be accompanied by the Environment Impact Assessment Report and the Environment Management Plan, in accordance with the guidelines issued by the

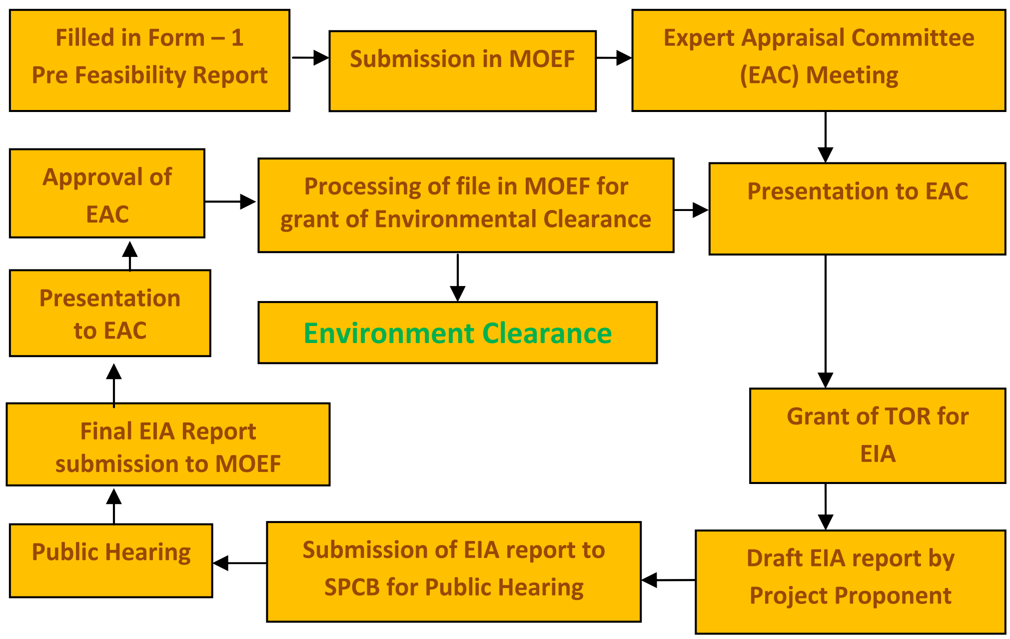
Government. However, the Environment (Protection) Act, 1986 has been amended as on **19th January, 2009** and the provisions for mining projects include the following:

Project or Activity	Category with threshold limit		Conditions if any
	A	B	
(i) Mining of Minerals	≥ 50 ha of mining lease area in respect of non-coal mine lease.	<50 ha ≥ 5 of mining lease area in respect of non coal mine lease.	General Condition shall apply
(ii) Slurry pipelines (coal lignite and other ores) passing through national parks/ sanctuaries/coral reefs, ecologically sensitive areas.	> 150 ha of mining lease area in respect of coal mine lease. Asbestos mining irrespective of mining area.	≤ 150 ha ≥ 5 ha of mining lease area in respect of coal mine lease.	Note: Mineral prospecting is exempted.

The Environment Impact Assessment (EIA) Report submitted with the application shall be evaluated and assessed by the Ministry of Environment and Forests. The assessment shall be completed within a period of ninety days from the receipt of the requisite documents or data. If no comments are received within this time period, the project, would be deemed to have been approved.

A half yearly report is required to be submitted to the Ministry of Environment and Forest, to monitor efficiency of the implementation of the recommendations and conditions, subject to which environmental clearance has been given.

Grant of Environment Clearance by MOEF



WILDLIFE PROTECTION

The provisions of the Wildlife (Protection) Act 1972 amended in 2003 are applicable to all the mining lease areas. There is ban on diversion of notified sanctuary area for non-forest purposes. Any forest area notified under Section 26-A of this Act cannot be diverted for non-forest purposes without obtaining sanction from MoEF, Government of India, under Section-2 of the Forest (Conservation) Act, 1980. Acquisition of mining rights in non-forest area of sanctuary violates provisions of the Section-20 of the Wildlife (Protection) Act, 1972 which imposes restrictions on the accrual of rights. In the sanctuaries or national parks declared by the Central Government, there is ban on the de-notification of forests/sanctuaries/national parks. A mining lease area has to be 10 km away from the boundary of national parks/sanctuaries.

Rehabilitation and Resettlement

The National Rehabilitation and Resettlement Policy, 2007 aims to minimize large-scale displacement as far as possible. The Policy stipulates that only the minimum area of land commensurate with the purpose of the project may be acquired. Also, as far as possible, projects may be set up on wasteland, degraded land or un-irrigated land. Acquisition of agricultural land for non-agricultural use in the project may be kept to the minimum; multi-cropped land may be avoided to the extent possible for such purposes, and acquisition of irrigated land, if unavoidable, may be kept to the minimum. Prior to initiating the acquisition of land for a project, the appropriate Government should, inter alia, take into consideration the alternatives that will (i) minimise the displacement of people due the acquisition of land for the project; (ii) minimize the total area of land to be acquired for the project; and (iii) minimize the acquisition of agricultural land for non-agricultural use in the project. The options assessment may be in terms of the alternative project plans, potentially suitable sites, technological choices available, or a combination of these.

Suitable institutional mechanism would be developed and adopted by the appropriate Government for carrying out the task in a transparent manner. Where large numbers of families are affected, it is mandatory to do social impact assessments and provide all required infrastructural facilities and amenities in the resettlement area. More particularly, where the Scheduled Tribes people are being displaced in sizeable numbers, a well thought out Tribal Development Plan must be put in place.

These are the broad model provisions of the national R&R Policy. Every state has its own R&R Policy which a stake-holder has to adopt and follow.

Labour and Safety in Mines

The Mines Act, 1952 seeks to regulate the working conditions in mines by providing measures to be taken for the safety of the workers employed therein. The implementation of the Mines Act, 1952 is ensured through the provisions of the Mines Rules, 1955, Mettalliferous Mines Regulations, 1961, and the Maternity Benefit (Mines) Rules, 1963, etc.

The Mines Act, 1952, prescribed duties of the owner (defined as the proprietor, lessee or an agent to manage mines and mining operation, and the health and safety in mines. It also prescribes the number of working hours in mines, the minimum wage rates, and other related matters. The Mines Rules, 1955, provide the procedural aspects.

Both penal and pecuniary punishments are prescribed for contravention of obligations and duties under the Act.

The Metalliferous Mines Regulations, 1961 provide for the certification of the competency and fitness for the managers of mines, mine engineers, supervisory staff, foreman, and surveyors. The regulation also prescribes the types of mining plans, the types of surveys of mining plans, the types of survey and mining instruments to be used, the equipment used for access and egress of workers to the mines, transportation of men, minerals, and other related matters.

MINERAL TAXATION REGIME

Overview of Indian tax law

The principal taxes applicable in India to mining include the following:

- Indirect taxes, including customs duties, cenvat, service tax, and State VAT;
- Direct taxes, consisting mainly of the corporate income tax and minimum alternate tax; and taxes on extraction of resources

Direct and indirect taxes are common to all industries, and are of a kind found in other international jurisdictions. Similarly, the taxes on extraction of resources are also not unique to India. However, the impact of a tax on an industry in general, and mining in particular, is contingent upon the manner in which it is levied.

Indirect Taxes

Indirect taxes are applicable to activities ranging from manufacturing to final consumption. Such activities include distribution, trading and imports of goods, as well as services. In India, the principal indirect taxes are the Central excise (Cenvat), customs, the State VAT (levied by the State governments), and the service tax (levied by the Centre). Additionally, other indirect taxes such as entry tax and octroi are also levied by State governments and municipalities but their incidence on the mining sector is limited.

Excise duty

Excise duty or Cenvat is levied on the manufacture of goods within India and is governed by the Central Excise Act, 1944 ('Excise Act'). The rates of excise duty are as determined in the Central Excise Tariff Act, 1985 ('CETA') read with the relevant Schedules and notifications.

The general excise duty rate is 14%, which has been reduced to 8% under the fiscal stimulus package announced by the Centre early 2009. The general rate of excise comes to 8.24 % including 3% cess.

Minerals are classified under Chapter 26 of the CETA. Minerals are generally exempt from excise duty vide specific exemption notifications. This exemption is based on the fact that extraction of minerals is not considered to be a manufacturing activity, and thus beyond the purview of the central excise.

However, cess is levied on mineral ore under various legislations. For instance, cess on iron ore, manganese ore and chrome ore are levied under the 'Iron Ore Mines, Manganese Ore Mines and Chrome Ore Mines Labour Welfare Cess Act, 1976'. However, currently, there is an exemption from cess on production of iron ore and manganese ore but production of chrome ore still attracts cess of Rs 6/- per metric tonne.

Custom duty

Customs duty is levied on the import of goods into India. The liability to pay customs duty is on the importer, i.e., the person importing the goods into India. The levy and the rates of customs duty are as per the Customs Act, 1962 and the Customs Tariff Act, 1975 ('CTA') respectively.

The basic components of customs duty on imports are the following:

- Basic customs duty;
- Additional customs duty in lieu of excise duty;
- Special additional customs duty in lieu of sales tax/ VAT;
- Education cess; and
- Secondary and higher education Cess

At present the general effective customs duty rate is 24.42% on most products.

Mineral imports generally attract lower duties on two counts. First, minerals are not subject to excise duties when produced locally. As a result, the additional customs duty in lieu of excise duty is zero. Second, the basic customs duty on minerals such as iron ore, manganese and bauxite is lower than the general rate. Overall, the effective customs duty rate on iron ore, manganese and bauxite is 6.14% whereas it is 14.71% for limestone and dolomite.

Service tax

The service tax is levied by the Centre at the rate of 10.30% (12.36% prior to the fiscal stimulus package) on specified services provided by service providers in India. This tax is unique in many ways and is not found in other jurisdictions.

There is a wide gamut of services which are procured by the mining sector as inputs and currently attract the service tax, They include services acquired at all stages of mining, from exploration to mineral production, handling and transportation. Some of the taxable service categories that are relevant for the mining industry are as follows:

- Mining of mineral, oil or gas service;
- Survey and exploration of mineral, oil or gas service;
- Site formation and clearance, excavation and earth-moving and demolition service;
- Cargo handling service/ transportation of goods by road service;

Value added tax

Value Added Tax ('VAT') is levied by the States on the sale of goods in India. India means the landmass as well as the territorial waters up to 12 nautical miles. The application of VAT is limited to sale of goods within a state. Inter-state sales attract the Central Sales Tax (CST), which is in the process of being phased out. The general VAT rates are 1%, 4% and 12.5%. Presently, in most states minerals are liable to VAT at the rate of 4%. However, precious metals like gold and silver are taxed at the reduced rate of 1%. Because the mine output is subject to VAT, miners are allowed to claim a credit for VAT paid on their inputs. The Vat charged by miners on their output is, in turn, creditable to the manufacturers or processors who buy the mine output as an input to further processing.

Direct Taxes

Mining, like any other sector attracts corporate taxes under the Income Tax Act, 1961 ('IT Act'). The specific corporate taxes levied under the IT Act are as follows:

Corporate income tax

Any company incorporated in India or having its management and control in India is a resident and is liable to pay taxes in India on its worldwide income. A non-resident company is taxed only on the income received in India or derived in India from Indian operations or in certain cases on income that is deemed to accrue or arise in India.

Taxable business income is computed either on a net income basis or on a deemed income basis. The tax laws provide for specific deductions and allowances in computing income on a net income basis. The effective corporate tax rate is 33.99% for domestic companies, and 42.23% for foreign companies.

Minimum alternate tax

If tax payable as per regular tax provisions is less than 10% of its book profits, corporations must pay 10% (plus applicable surcharge, education cess, and secondary and higher education cess) of book profits as tax. Book profits for this purpose are computed by making prescribed adjustments to net profit disclosed by corporations in their financial statements. Carry forward and set off of Minimum Alternate Tax is available in 7 subsequent tax years. Set off is allowed to the extent of difference between tax payable on total income under normal provisions of the Act and Minimum Alternate Tax payable during the year in which set off is being claimed.

Carry forward and set off business losses

Business losses can be carried forward for eight years and can be set off only against profits and gains of business and profession. Unabsorbed depreciation can also be carried forward and set off even if the same business is not continued.

Capital gains

Gains on sale of capital assets held for more than 3 years (1 year for shares and listed securities) are treated as long term capital gains and accorded concessional tax treatment. Long term capital gains are taxed at a flat rate of 20 per cent with indexation or 10 per cent without indexation for Indian companies and 10 per cent for foreign companies.

Tax deductions

In computing the profits for taxation for mining companies, the following two deductions are allowed:

- The expenditure incurred wholly and exclusively on prospecting, extraction or production of any mineral during 4 years prior to the start of commercial production is deductable once the commercial production commences.

- Depreciation on plant and machinery is 15% of the written down value. Further, an additional depreciation of 20% is allowed in the first year for any new plant and machinery. Tubes, winding ropes, haulages ropes, stowing pipes and safety lamps used in mines and quarries are allowed 100 per cent depreciation. Environment protection equipment, pollution control equipment, energy saving equipment also qualify for 100 per cent depreciation.

Other Levies

In addition to the levies under the MMDR Act, a mine operator is also required to pay other fees and levies with regard to the use of forest land for mining operations under the Forest Conservation Act 1980 and the Indian Forest Act 1927. Such other levies are briefly highlighted below:

- Forest tax which is levied on forest produce removed from forest areas. The rate varies from state to state.
- Compensatory afforestation charges which are levied in order to undertake afforestation. The charges vary from state to state.
- Net Present Value of forest land diverted for mining which depends on the density of forest.
- Other charges such as charges for clearing of jungle, development of land, replantation, etc.

Export and Import Policy (Exim Policy)

Under the Export and Import Policy 2004-2009, there are no restrictions on export and import of major minerals such as asbestos, bauxite, chrome ore, copper ore, gold, iron ore, lead, manganese ore, precious stones and zinc except that export of iron ore of iron content of more than 64% and manganese ore excluding lumpy/blended with more than 46% manganese, some types of chrome ore has to be routed through State Trading Enterprises(MMTC). Lumpy/blended Manganese ore with more than 46% manganese and some varieties of chrome ore can be exported after obtained export licences.

Duty exemption/Remission scheme under the Exim Policy provides for duty free import of inputs required for export production.

Export promotion capital goods (EPCG) scheme under Exim Policy allows import of new capital goods including CKD/SKD thereof as well as computer software systems at 5% customs duty subject to an export obligation equivalent to 8 times of duty saved on capital goods imported under EPCG scheme to be fulfilled over a period of 8 years reckoned from the date of issuance of licence.

FOREIGN INVESTMENT

Company law and modes of finance

Company Law

The Companies Act, 1956, governs the law relating to companies. The Indian mining law requires that mineral concessions are granted to companies registered in India under the Companies Act, 1956, irrespective of the pattern of foreign holding therein. Companies incorporated under the Act can be ‘Public’ or ‘Private’ companies, with or without limited liability. The limited liability structure can be achieved through limitation by shares, or by guarantee. Even an unlimited company can be incorporated under the Indian Companies Act.

The Government has also enacted the Competition Act, 2002 on 13th January, 2003 keeping in view the economic development of the country, to provide for the establishment of a Commission to prevent practices having adverse effect on competition, to promote and sustain competition in markets, to protect the interests of consumers and to ensure freedom of trade carried on by other participants in markets in India, and for matters connected therewith or incidental thereto.

MODES OF FINANCE

The two basic methods of funding projects are either by means of equity or debt. Outlined below are some of the more common instruments in India, and a brief description of them.

Equity share capital (common stock)

Ordinary shares are the basic element of ownership of a company. They carry voting rights, and therefore, are the ultimate means of exercising control of a company, as well as rights to dividends and return of capital upon winding up. The normal value of equity shares is Rs. 10 per share. Shares may be issued at par, at a premium or at a discount, by existing companies. The companies can freely price their equity shares. However, they have to give justification of the price in the offer document/letter of offer. Companies can also issue non-voting equity shares, equity shares with equal voting rights and shares with differential rights, as to dividend, voting, or otherwise.

A listed company is eligible to make a public issue if the issue size (i.e. offer through the offer document, firm allotment and promoters’ contribution through the offer document) is less than five times its pre-issue net worth. An unlisted company however, has to satisfy certain laid down minimum capitalization criteria to be eligible to make a public issue.

Preference share capital (preferred stock)

A company can issue preference shares, but these must be redeemed within 20 years.

Debentures and public deposits

Indian companies can raise funds through the issue of debentures (which have a wider impact and include debenture stock), bonds and any other securities of a company. However, the issue of debentures carrying voting rights is not permitted.

Another source of raising finance is through the acceptance of deposits. The Companies Act provides the manner and the sources from which deposits can be invited and accepted.

Loans

An integrated network of financial institutions caters to the long and medium term financing needs of the industrial projects, by way of project loans, underwriting, deferred payment, guarantees, leasing, venture capital, and a variety of other financial products. Moreover, debt funding from overseas can be obtained through External Commercial Borrowings, after prior permission from the Ministry of Finance/Reserve Bank of India.

Foreign Direct Investment (FDI)

Foreign investment and technology transfer

Foreign direct investment is freely allowed in the mining sector. The foreign direct investment can be approved either through the Automatic Route under powers delegated to the Reserve bank of India(RBI), or by the Government as the case may be. The Government approvals are accorded on the recommendations of the Foreign Investment Promotion Board (FIPB). FDI up to 100% is allowed with prior FIPB approval in mining and mining separation of titanium bearing minerals and ores, its value addition and integrated activities subject to Mines & Mineral (Development & Regulation) Act, 1957. FDI is not permitted in mining of "prescribed substances" as listed in a notification issued by the Department of Atomic Energy. The automatic approval for 100% foreign direct investment (FDI) is now applicable to all non-atomic minerals including diamonds and precious stones and metallurgy and processing.

Automatic route

Existing companies who may not be in the mining sector but who have an expansion programme in the mining sector, and the existing companies in the mining sector, are also eligible for automatic approval for induction of foreign direct investment if they propose to increase the equity base in line with the increase in the equity level, and bring in remittance in foreign currency for the purpose. In a significant relaxation of the general policy governing the process of automatic approval for foreign direct investment, for the mining sector, the automatic route for foreign direct investment and / or technology collaboration is also available to those who have or had any previous joint venture or technology transfer agreement. The investors in such cases will have to file a declaration to the RBI that they have no existing joint venture for the same area and/ or the mineral concerned.

The RBI has given permission to the Indian companies to accept investment under the automatic route without obtaining prior approval of RBI. The investors are required to notify the Regional Officer concerned of the RBI of receipt of inward remittance within 30 days of such receipt and file required documentation within 30 days of issue of shares to the foreign investor. This facility is available to the Non Resident Indians and Overseas Corporate Bodies also.

Government approval

For proposals not fulfilling the parameters for automatic approval, i.e. foreign direct investment exceeding the prescribed ceilings for automatic approval, or in cases where the proposal is for acquisition of the existing shares and in cases where the investors have existing joint venture for the same area and/or the mineral concerned, Government approval would be necessary.

Technical Collaborations

Indian companies receive automatic approval for technology transfer agreements with foreign companies provided that the terms of payments satisfy the following conditions specified by the Government:

- The lump sum know-how fee payable does not exceed US $ 2 million.
- Royalty payments do not exceed 5 per cent of domestic sales and 8 per cent of exports.

The payments are subject to an overall ceiling of 8 per cent of total sales over a 10 year period from the date of agreement, or over a 7 year period from the date of commercial production. These payments may be net of Indian taxes.

Foreign nationals

All matters relating to exchange control are governed by the Reserve bank of India (RBI) which is Central Bank of India.

Foreign nationals require 'Employment visa' for undertaking employment in India. Foreign nationals who are not permanently resident in India can establish bank accounts in India in Indian currency subject to approval by RBI. Such accounts however, can by operated for approved purposes only.

Foreign nationals are allowed to repatriate upto 75 per cent of their net salary earnings from India. Higher repatriation has to be approved by the RBI.

Any foreign national who wishes to enter India, whether for business or otherwise, must obtain a visa. Each visa specifies the period within the individual must enter India and the period for which he is permitted to stay.

The foreigner entering India holding 'Business visa' do not require registration, if continuous stay does not exceed 180 days. If the foreigner wants to stay in India for more than 180 days he should get himself registered with Foreigners' Registration Office/Foreigner's Regional Registration Office well within 180 days. Foreigners who enter India with an Employment Visa for more than 180 days are required to get themselves registered within 14 days.

The spouse and children of such foreign nationals are also required to register themselves if they intend to stay for a period exceeding 180 days.

A BRIGHT FUTURE

India's mining industry certainly has a bright future. The government's new economic policies have stimulated both foreign investment and the expansion of the country's private sector. There are numerous plans under way to modernize and expand existing facilities, many of which will require overseas investment.

The government is very keen to encourage initiative in the private-sector, both from domestic and foreign companies. Modern, environmentally-friendly technology is required, along with foreign expertise in exploration, mining and processing.

India is an emerging market with an enormous mineralogical potential. The lack of detailed exploration programmes in the past, coupled with the abundance of recent discoveries using modern techniques, demonstrates the high possibility of discovering new deposits, as well as expanding the reserves of existing mines.

India - Mineral Potential Vs Achieved Potential

Commodity	*India – 1980*	*India – 2008*	*Australia – 1980*	*Australia - 2008*
Iron Ore Reserve (Hematite)	11 billion tonnes	14 billion tons	15 billion tons	50 billion tons
Diamond Reserve	Majhgawan	2.6 million carats (Majhgawan)	0	230 million carats
Gold Reserve	55 metric tons	325 metric tons	400 metric tons	6000 metric tons
Coal Reserve	111 billion tons (Measured + Indicated)	240 billion tons (Measured + Indicated)	29 billion tons (Measured)	42 billion tons (Measured)
Bauxite Reserve	2.5 billion ton	2.6 billion ton	3 billion dry tons	9 billion dry tons

Source: Paper presented by Nik Senapati, Managing Director, Rio Tinto India Pvt. Ltd. In FIMI Seminar at Bangalore on 16 September, 2009

Appendix-I

MINES AND MINERALS (DEVELOPMENT AND REGULATION) ACT – 2009

(As per Ministry of Mines website dated 17.11.2009)

KEY FEATURES

Eligibility for grant of Concessions – No person shall be eligible for grant of a mineral concession unless such person is an Indian National or a Company as defined in Sub-Section (1) of Section 3 of the Companies Act, 1956, and has registered himself with the Indian Bureau of Mines or the State Directorate as the case may be in such manner as may be prescribed.

Concession System – The State Governments may by notification invite application for grant of mining lease through competitive bidding and auction in any area where prospecting has been conducted and sufficient evidence of enhanced mineralisation has been established, but no application for a mining lease is pending. The bidding process may give appropriate weightage to the investment on account of :-

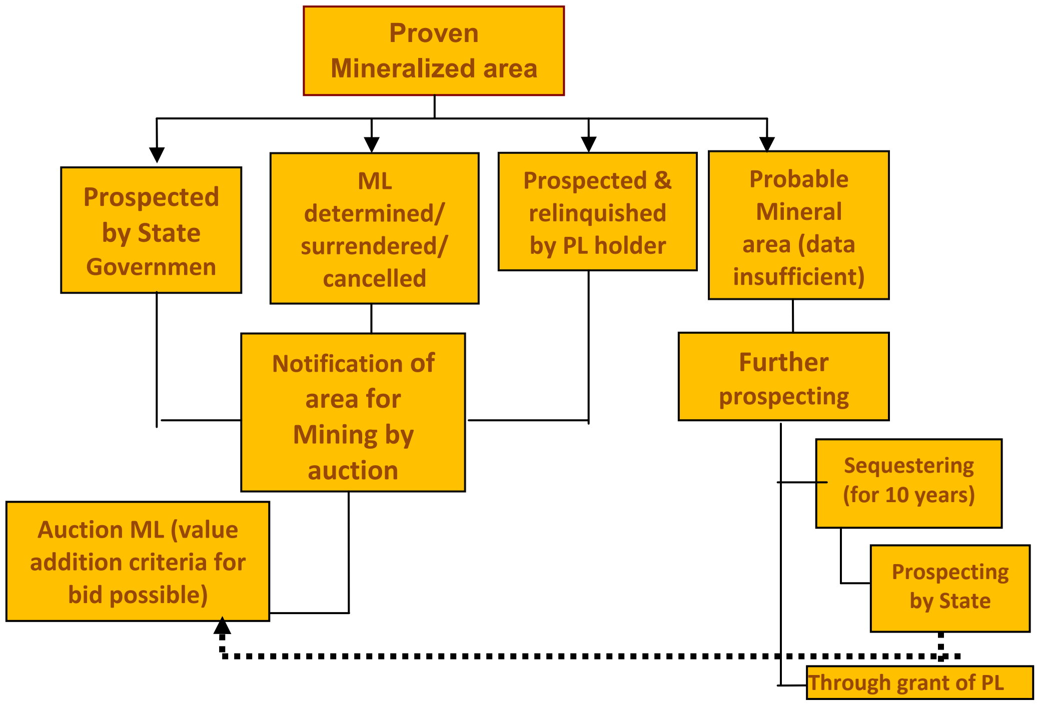
a) value addition such as mineral processing and beneficiation;

b) end use including industries based on the mineral; and

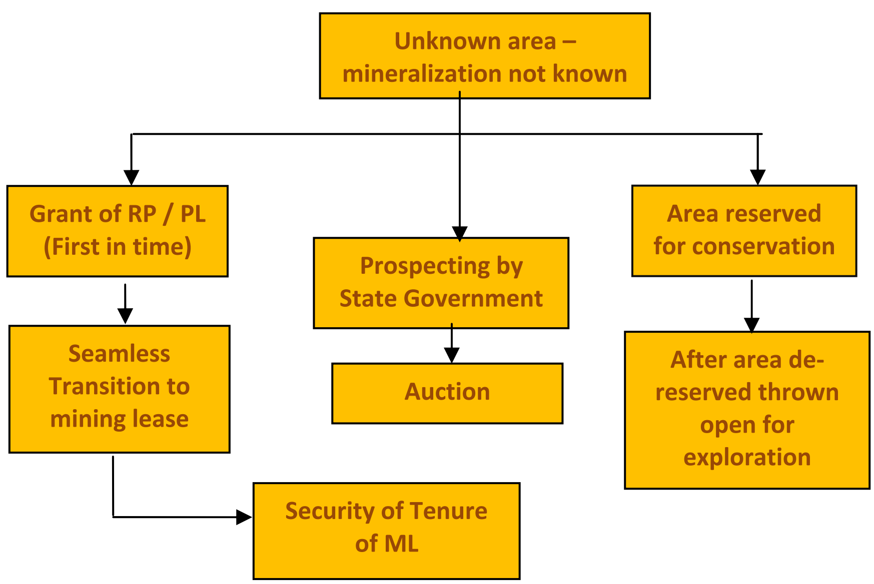
c) construction of transportation network (road and rail) and other infrastructure facilities in the mineral bearing area.

The approach for the concession will be based on the area and the quality of exploration data available in respect of Proven Mineralised area, Unknown area(mineralisation not known) and mining lease as presented in the tables given below.

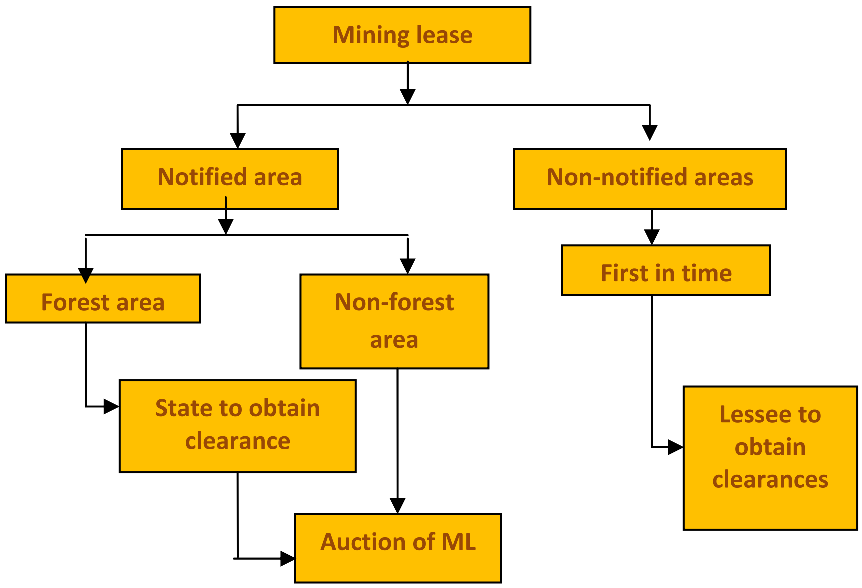
CONCESSION SYSTEM



CONCESSION SYSTEM



CONCESSION SYSTEM
(Mining Lease)



Notification of the area – State Governments may notify an area for grant of PL/ML subject to the condition that :

a) No PL/ML application pending on the area,
b) No PL/ML application filed after RL/PL was completed 6 months ago on the area,
c) In case of forest area, clearance to be obtained by State Government,
d) Notification valid for a period not less than 90 days and not more than 180 days.

Increase in area of concessions

a) Non-exclusive Reconnaissance Licence (RL) over 10000 sq kms.
b) Large area Prospecting Licence(LAPL) over an area of 5000 sq kms.
c) Prospecting licence (PL) area increased from 25 sq kms to 500 sq kms (minimum area allowed 1 sq km).
d) Mining Lease (ML) area increased from 10 sq kms to 100 sq.kms. (minimum area allowed 0.10 sq kms).

Increase in period of grant and extension of a concession with regard to reconnaissance, prospecting licence and mining lease.

a) A RL shall be granted for a period of not less than one year and not more than three years and may be extended for a period not exceeding one year.
b) A LAPL shall be granted for a period of not less than three years and not more than six years and may be extended for a period not exceeding two years.
c) A PL shall be granted for a period of not less than two years and not more than three years and if sum total of the time granted to the licence and his predecessor-in-interest for reconnaissance, prospecting, general exploration and detailed exploration does not exceed eight years.
d) A Mining Lease for major minerals shall be granted for a period of not less than 20 years and not more than 30 years.

Time limits for disposal of applications – The State Governments shall dispose of the application for grant of reconnaissance licence, prospecting licence or mining lease within the following period:

a) RL within three months from the date of receipt of the application.
b) LAPL and PL within three months from the date of receipt of the application.
c) Letter of Intent for ML within three months of opening of bids and execution of ML within three months of intimation or the date of approval specified in the Letter of Intent.

Independent Tribunal - Where an application is not disposed of within the time limit as given above, the applicant shall have the right to apply to National Mining Administrative Tribunal in the case of major minerals and State Mining Administrative Tribunal in case of minor minerals in the following manner:

a) to hear on applications from affected persons and confirm or modify or set aside any order passed by the Central or State Government.
b) to hear applications in relation to implementation of Mining Plans and Mine Closure Plans.
c) to adjudicate on applications seeking directions to Central or State Governments to dispose an application for grant of concession for major mineral in such cases where the Central and State Government have failed to dispose the application within the time prescribed by the Act.
d) All revision cases pending before the Central Government shall stand transferred to the National Mining Administration Tribunal on its establishment.

Transfer of Concessions – The holder of PL, LAPL or PL may except in case of atomic minerals and coal, transfer his licence to any person eligible to hold such concessions under this Act and Rules made thereunder after expiry of a notice of not less than 30 days to the State Government concerned.

Decentralization -

a) Prior approval of Central Government necessary for grant of concessions for atomic and coal minerals.
b) State Government has powers to sequester a mineral bearing area for five years-extendable by another five years.
c) Maximum area defined−minimum area defined for prospecting and mining lease. States may grant concessions in the area defined.
d) State Governments may terminate lease without seeking prior approval of the Centre.

Transparency, investor-friendly & scientific mining

a) Auction process to reduce gap between captive and non-captive.
b) No reservation for exploitation by PSUs, but preference for downstream value investment during bidding process (lead to revenue generation from Central PSUs)
c) Full transferability of concessions and data.
d) Assured progression through systematic relinquishment.
e) Extensiion of concession rather than renewal.
f) ML only if data on mineralization adequate.
g) Mining plan, Mine closure plan essential.
h) Cluster-mining for small deposits.
i) All mining activities to comply with the Sustainable Development Framework.

Transition Management

a) All the existing concessions to be brought into the new Act.
b) In case of applications pending,

- Against non-notified areas, "First-in-time" principles to be used for disposal.

- Against forest areas notified for grant and where State Government has not obtained clearances, all applications shall be deemed to have lapsed.

- For non-forest areas notified for grant of concessions, last date as the date of enactment, and applications to be dealt in terms of new Act.

Proposed fee structure for concessions

a - **Reconnaissance Licence (RL)** –

(i) Licence fee→Rs. 50/- – Rs. 500 per sq. km or part thereof per year

(ii) earnest money along with application

(iii) Security deposit: equal to licence fee for first year

b – Prospecting Licence (PL) —

(i) Prospecting fee → Rs.50-500 per hectare for each year or part of a year

(ii) Occupier of surface to be paid compensation as may be prescribed

(iii) Security deposit → Rs. 5000/- per sq. km or part thereof

c– Mining Lease —

(i) Deposit → Rs. 10,000 per hectare for due observance of terms and condition of the lease

(ii) Earnest money along with application

(iii) Surface rent, water rate, etc.

(iv) Dead rent

(v) Royalty

d – Cess on major Minerals —

National Mineral Fund — not exceeding 10% of royalty (non lapsable)

e– Cess on minor minerals –

State Mineral Fund – not exceeding 10% of royalty (non lapsable)

Other important features

a) In areas where mineralization is not known, State Governments have to grant mineral concessiions on the basis of First-in-time principle.
b) In notified areas, where applications have been called, ML to be given by auction only.
c) Application for PL by a RP holder, who applies first, shall be granted PL subject to eligibility and fulfillment of conditions.
d) Application for ML by a person who has done prospecting under PL/LAPL shall be approved for grant of ML subject to eligibility and fulfillment of conditions.

e) State Government's powers to impose conditions in PL and ML defined−conditions would not alter in case of transfer.
f) All rights and liabilities under the concession also gets transferred to the successor-in-interest.
g) A LAPL shall be granted only for such groups of associated minerals as may be prescribed, and on such general conditiions regarding use of advanced technologies and methodologies as may be notified from time to time by the Central Government.
h) Creation of Mineral Fund at Centre and State for :

   - promoting scientific management of mining activities, and mine closures, including rersearch and development and training.
   - mitigating adverse impacts of mining activity in peripheral areas of the mine including restoration and improvement of local infrastructure.
   - maintenance of community assets and services for local populations in the area.
   - human resource development of local populations for creating employment and self-employment capabilities.
   - such other public purposes in mining areas as may be deemed expedient by the Central Government from time to time.

i) Reservation to be allowed only for the purpose of mineral conservation.
j) Simplification and streamlining of the grant of mineral concession procedures.

Appendix-II

MINISTRY OF MINES
NOTIFICATION
New Delhi, the 13 August, 2009

G.S.R. 574 (E). — In exercise of the powers conferred by sub-section (3) of section 9 of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957), the Central Government hereby makes the following further amendments to the Second Schedule to the said Act, namely :-

In the Mines and Minerals (Development and Regulation) Act, 1957, for the Second Schedule, the following Schedule shall be substituted, namely :-

"THE SECOND SCHEDULE
(See section 9)
RATES OF ROYALTY IN RESPECT OF MINERALS AT ITEM 1 TO 9, 11 TO 37, 39 TO 45 AND 47 TO 51.

1.	Apatite and Rock Phosphate	
	(i) Apatite	Five percent of sale price on *ad valorem* basis.
	(ii) Rock Phosphate	
	(a) above 25 percent P_2O_5	Eleven percent of sale price on *ad valorem* basis.
	(b) upto 25 percent P_2O_5	Six percent of sale price on ad valorem basis.
2.	Asbestos	
	(a) Chrysotile	Eight hundred and eighty rupees per tonne.
	(b) Amphibole	Fifteen percent of sale price on *ad valorem* basis.
3.	Barytes	Five and half percent of sale price on *ad valorem* basis.
4.	Bauxite and Laterite	a) Zero point five zero percent of London Metal Exchange Aluminium metal price chargeable on the contained aluminium metal in ore produced for those despatched for use in alumina and aluminium metal extraction. b) Twenty five percent of sale price on ad valorem basis for those despatched for use other than alumina and aluminium metal extraction and for export.
5.	Brown Ilmenite (Leucoxene), Ilmenite, Rutile and Zircon	Two percent of sale price on ad valorem basis.

6.	Cadmium	Fifteen percent of sale price on *ad valorem* basis.
7.	Calcite	Fifteen percent of sale price on *ad valorem* basis.
8.	China clay/Kaolin : (including ball clay, white shale and white clay)	
	(a) Crude (b) Processed (including washed)	Eight percent of sale price on *ad valorem* basis. Ten percent of sale price on *ad valorem* basis.
9.	Chromite	Ten percent of sale price on *ad valorem* basis.
10.	Coal (including Lignite)	*
11.	Columbite-tantalite	Ten percent of sale price on *ad valorem* basis.
12.	Copper	Four point two percent of London Metal Exchange Copper metal price chargeable on the contained copper metal in ore produced.
13.	Diamond	Eleven point five percent of sale price on *ad valorem* basis.
14.	Dolomite	Sixty three rupees per tonne.
15.	Felspar	Twelve percent of sale price on *ad valorem* basis.
16.	Fire Clay (Including plastic, pipe, lithomargic and natural pozzolanic clay)	Twelve percent of sale price on *ad valorem* basis.
17.	Fluorspar (also called fluorite)	Six point five percent of sale price on *ad valorem* basis.
18.	Garnet :	
	(a) Abrasive (b) Gem	Three percent of sale price on *ad valorem* basis. Ten percent of sale price on *ad valorem* basis.
19.	Gold :	
	(a) Primary	Two percent of London Bullion Market Association Price (commonly referred to as "London Price") chargeable on the contained gold metal in ore produced.
	(b) By-product gold	Three point three percent of London Bullion Market Association Price (commonly referred to as "London Price") chargeable on the by-product gold metal actually produced.
20.	Graphite	
	(a) with 40 percent or more fixed carbon	Two percent of sale price on *ad valorem* basis.

	(b)with less than 40 percent fixed carbon	Twelve percent of sale price on *ad valorem* basis.
21.	Gypsum	Twenty percent of sale price on *ad valorem* basis.
22.	Iron ore: Lumps, Fines and concentrates all grades	Ten percent of sale price on *ad valorem* basis.
23.	Lead	Seven percent of London Metal Exchange lead metal price chargeable on the contained lead metal in ore produced. Twelve point seven percent of London Metal Exchange lead metal price chargeable on the contained lead metal in ore produced.
24.	Limestone	
	(a) L.D. Grade (less than one and half percent silica content)	Seventy two rupees per tonne.
	(b) Others	Sixty three rupees per tonne.
25.	Lime Kankar	Sixty three rupees per tonne.
26.	Limeshell	Sixty three rupees per tonne.
27.	Magnesite	Three percent of sale price on *advalorem* basis.
28.	Manganese Ore	
	(a) Ore of all grades	Four point two percent of sale price on *ad valorem* basis.
	(b) Concentrates	One point four percent of sale price on *ad valorem* basis.
29.	Crude Mica, Waste Mica and Scrap Mica	Four percent of sale price on *ad valorem* basis.
30.	Monazite	One hundred and twenty five rupees per tonne.
31.	Nickel	Zero point one two percent of London Metal Exchange nickel metal price chargeable on contained nickel metal in ore produced.
32.	Ochre	Twenty rupees per tonne.
33.	Pyrites	Two percent of sale price on *ad valorem* basis.
34.	Pyrophyllite	Twenty percent of sale price on *ad valorem* basis.
35.	Quartz	Fifteen percent of sale price on *ad valorem* basis.
36.	Ruby	Ten percent of sale price on *ad valorem* basis.
37.	Silica sand, Moulding sand and Quartzite	Eight percent of sale price on *ad valorem* basis.
38.	Sand for stowing	**
39.	Selenite	Ten percent of sale price on *ad valorem* bais.

40.	Sillimanite	Two and half percent of sale price on *ad valorem* basis.
41.	Silver:	
	(a) By-product	Seven percent of London Metal Exchange Price chargeable on by-product silver metal actually produced.
	(b) Primary silver	Five percent of London Metal Exchange silver metal price chargeable on the contained silver metal in ore produced.
42.	Slate	Forty five rupees per tonne.
43.	Talc, Steatite and Soapstone	Eighteen percent of sale price on *ad valorem* basis.
44.	Tin	Seven point five percent of London Metal Exchange tin metal price chargeable on the contained tin metal in ore produced.
45.	Tungsten	Twenty rupees per unit percent of contained WO_3 per tonne of ore and on pro rata basis.
46.	Uranium	***
47.	Vanadium	Twenty percent of sale price on *ad valorem* basis.
48.	Vermiculite	Three percent of sale price on *ad valorem* basis.
49.	Wollastonite	Twelve percent of sale price on *ad valorem* basis.
50.	Zinc	Eight percent of London Metal Exchange zinc metal price on *ad valorem* basis chargeable on contained zinc metal in ore produced. Eight point four percent of London Metal Exchange zinc metal price on *ad valorem* basis chargeable on contained zinc metal in concentrate produced.
51.	All other minerals not here-in-before specified [Agate, Clay (Others), Chalk, Corundum, Diaspore, Dunite, Felsite, Fuschite, Kyanite, Quartzite, Jasper, Perlite, Rock Salt, Shale, Pyroxenite, etc.]	Ten percent of sale price on *ad valorem* basis.

* Rates of royalty in respect of item No. 10 relating to Coal (including Lignite) as revised vide notification number G.S.R. 522 (E), dated the 1st August, 2007, of the Government of India in the Ministry of Coal shall remain in force until revised through a separate notification by the Ministry of Coal.

** Rates of royalty in respect of item No. 38 relating to Sand for stowing as revised vide notification number G.S.R. 214 (E), dated the 11th April, 1997, will remain in force until revised through a separate notification by the Department of Coal.

*** Rate of royalty in respect of item No. 46 relating to Uranium as revised vide notification number G.S.R. 96(E), dated the 13th February, 2009, will remain in force until revised."

Note: The rates of royalty for the State of West Bengal in respect of the minerals except the mineral specified against item No. 10 shall remain the same as specified in the notification of the Government of India in the Ministry of Steel and Mines (Department of Mines) number G.S.R. 458 (E), dated the 5th May, 1987 till the outcome of litigation pending in the Supreme Court of India."

[F. No. 3/1/2005-M-VI]
AJITA BAJPAI PANDE Jt. Secy.

Note: The Second Schedule to the Mines and Minerals (Development and Regulation) Act, 1957 was amended earlier vide notification numbers :-

1. GSR No. 175 (E) dated 31st March, 1975
2. GSR No. 407 (E) dated 14th July, 1975
3. GSR No. 584 (E) dated 13th December, 1975
4. GSR No. 321 (E) dated 12th June, 1978
5. GSR No. 2(E) dated 1st January, 1979
6. GSR No. 67 (E) dated 13th February, 1979
7. GSR No. 63 (E) dated 12th February, 1981
8. GSR No. 449 (E) dated 23rd July, 1981
9. GSR No. 458 (E) dated 5th May, 1987
10. GSR No. 856 (E) dated 14th October, 1987
11. GSR No. 516 (E) dated 1st August, 1991
12. GSR No. 100 (E) dated 17th February, 1992
13. GSR No. 748 (E) dated 11th October, 1994
14. GSR No. 27 (E) dated 13th January, 1995
15. GSR No. 214 (E) dated 11th April, 1997
16. GSR No. 713 (E) dated 12th September, 2000
17. GSR No. 187 (E) dated 15th March, 2001
18. GSR No. 572 (E) dated 16th August, 2002
19. GSR No. 677 (E) dated 14th October, 2004
20. GSR No. 522 (E) dated 1st August, 2007
21. GSR No. 96 (E) dated 13th February, 2009

NOTIFICATION
Delhi, the 13th August, 2009

G.S.R. 575 (E) — In exercise of the powers conferred by sub-section (2) of section9A of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957), the Central Government hereby makes, the following amendments to the Third Schedule to the said Act, namely: —

In the Mines and Minerals (Development and Regulation) Act, 1957, for the Third Schedule, the following Schedule shall be substituted, namely:

"THIRD SCHEDULE
(See Section 9A)
RATES OF DEAD RENT

1. Rate of dead rent applicable to the leases granted for low value minerals are as under:

Rates of Dead Rent in Rupees per Hectare Per annum

From second year of lease	Third year and fourth year	Fifth year onwards
200	500	1000

2. Two times the rate specified in paragraph 1 in case of lease granted for medium value mineral(s).

3. Three times the rates specified in paragraph 1 in case of lease granted for high value mineral(s).

4. Four times the rates specified in paragraph 1 in case of lease granted for precious metals and stones.

Note:
1. For the purpose of this notification -

a) **"precious metals and stones"** means gold, silver, diamond, ruby, sapphire and emerald;

b) **"high value mineral"** means semi-precious stones (agate, gem garnet), corundum, copper, lead, zinc, asbestos (chrysotile variety) and mica;

c) **"medium value minerals"** means chromite, manganese ore, kyanite, sillimanite, vermiculite, magnesite, wollastonite, perlite, diaspore, apatite and rock phosphate, fluorite (fluorspar) and barytes ;

d) **"low value minerals"** means minerals other than precious metals and stones, high value minerals and medium value minerals;

2. The rates of dead rent for the State of West Bengal shall remain the same as specified in the notification of the Government of India in the Ministry of Steel and Mines (Department of Mines) number G.S.R. 458(E), dated the 5th May, 1987 till the outcome of pending litigation in the Supreme Court of India."

[F.No. 3/1/2005-M-VI]
AJITA BAJPAI PANDE, Jt. Secy.

Note: The Third Schedule to the Mines and Minerals (Development and Regulation) Act, 1957 was amended earlier, vide notification numbers:-

1. GSR No. 458 (E), dated 5th May, 1987.
2. GSR No. 856 (E), dated 14th October, 1987.
3. GSR No. 214 (E), dated 11th April, 1997
4. GSR No. 714 (E), dated 12th September, 2000
5. GSR No. 678 (E), dated 14th October, 2004