

CHAPTER 15

MINING

Mining comprises extraction of any material that cannot be grown through agricultural processes, or created artificially in a laboratory or factory. It includes non-renewable resource (e.g., petroleum and natural gas.). Most of the materials recovered by mining are base metals, precious metals, iron, uranium, coal, diamonds, limestone, oil shale, rock salt and potash. The activity of mining and quarrying also covers all the supplementary activities such as dressing and beneficiation of ores, crushing, screening, washing, cleaning, grading, milling floatation, melting, palletising, topping and other preparations carried out at the mine site which are needed to render the material marketable. Both open cast mining and underground mining operations are carried out and drilling/pumping is undertaken for extracting liquid or gaseous fuels.

India produces and works with roughly 100 minerals, which are an important source for earning foreign exchange as well as satisfying domestic needs. India exports iron ore, titanium, manganese, bauxite, granite and imports cobalt, mercury, graphite.

The Mines and Minerals Development and 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 in India.

The relevant rules in force under the MMDR Act are the Mineral Concession Rules, 1960, and the Mineral Conservation and Development Rules, 1988. The health and safety of the workers is governed by the Mines Rules, 1952 created under the jurisdiction of the Mines Act, 1952.

The Mineral Concession Rules, 1960 outline the procedures and conditions for obtaining a Prospecting License or Mining Lease. The Mineral Conservation and Development Rules, 1988 lays down guidelines for ensuring mining on a scientific basis, while at the same time, conserving the environment. The provisions of Mineral Concession Rules and Mineral Conservation and Development Rules are, however, not applicable to coal, atomic minerals and minor minerals. The minor minerals are separately notified and come under the purview of the State Governments. The State Governments have for this purpose formulated the Minor Mineral Concession Rules.

This chapter presents important statistics on production and value by minerals in India and in States. The production statistics included in the chapter cover fuel, metallic and non metallic minerals except those minerals which are declared as prescribed substances under the Atomic Energy Act, 1962.

Mineral resources of the country are surveyed by Ministry of Mines, which also regulates the manner in which these resources are used. The ministry oversees the various aspects of industrial mining in the country. Both the Geological Survey of India and the Indian Bureau of Mines are also controlled by the Ministry. Natural gas, petroleum and atomic minerals are exempt from the various activities of the Ministry of Mines. Production statistics of natural gas and petroleum (crude) are shown separately for off-shore deposits

Source of Data:

- (i) Metallic and Non-Metallic Minerals: Monthly returns received from Mine owners under 45(1) (a) of Mineral Conservation and Development Rules, 1988
- (ii) Sulphur: Fertilizer plants and oil Refineries
- (iii) Coal and Lignite: Coal Controller Kolkatta
- (iv) Petroleum and Natural Gas (Utilised): Economic and Statistics division, Ministry of Petroleum and Natural Gas, New Delhi
- (v) Ferrous Metals: Joint plant Committee Kolkatta
- (vi) Ferro-Alloys: Joint plant committee, Kolkatta and individual producing units
- (vii) Non-Ferrous metals: Individual producing Units

The value of production of metallic and non-metallic minerals is calculated by multiplying each case the quantity of production and the pits mouth value per unit as furnished by mine owners in the returns in all cases, excepting captive mines for which the value is calculated on the basis of cost of production. Value figures in respect of coal and lignite are supplied by the Office of the Coal Controller, Kolkatta on annual basis. In the case of petroleum and natural gas (utilised), administrative prices notified from time to time by the Government of India are taken into account by adding royalty, taxes and duties as applicable. The value of sulphur, produced as a by-product from fertilizer plants and oil refineries, is not included in the total value of mineral production. The value of non-ferrous metals is furnished by the respective units.

The Index of Mineral Production (base: 1993-94=100) covers all the minerals in the mining and quarrying sector except, atomic minerals. Minor minerals are also represented in the Index of Mineral Production. The Index includes 67 items and these have been classified according to the National Industrial Classification (NIC). In preparing the weighing diagram for the index in question the gross value added has been taken into account instead of the net value added which was employed for the index released previously.

Highlights

- Number of mines does not change substantially over the years, because as new mines are explored empty mines also are closed. However, mining in India during 2008-09 consists of 2991 mines, out of which 570 are fuel mines, 691 are mines for metals, and 1730 mines for extraction of non-metals. Of the total number of mines, maximum number of mines are either Coal Mines or Lime Stone Mines followed by mines for extraction of Iron Ore, Bauxite and Manganese Ore
- The value of mineral production (excluding atomic minerals) is estimated at ₹ 1235771 millions in 2008-09, which registered an increase of 110.75 % as against ₹ 586356 millions in 2000-2001. It is observed that over the years, in the total value of mineral production, contribution of coal varies between 31% to 37%. Contribution of Iron Ore is continuously increasing. It is increasing from 3.6 % in 2000-2001 to 20.35 percent in 2008-09. Other two major contributor are limestone and lignite, their contribution to the value of mineral production varies around 2 % in almost all the years.
- Fuel minerals include coal, lignite, natural gas and petroleum (crude). Fuel minerals in 2008-09 from Bombay High was at Rs. 200907 millions or 28.5% of the total value of fuel production followed by Orissa 13.12%, Andhra Pradesh 7.1% , Jharkhand 7.61%. Contribution of Assam, Goa, Gujarat, Karnatka, Maharastra, Rajasthan, Tamilnadu and West Bengal is in between 2% to 5 %.
- Of the total coal mining, maximum contribution is from Jharkhand (21%) followed by Madhaya Pradesh (18.1%) then Chattisgarh (16.6%), Orrisa (10.4%), Maharastra (9.9%) and West Bengal (8.1%). More than 75% of Natural gas is from Bombay high, remaining Natural Gas is contributed from Gujarat, Assam Andhra Pradesh and Tamil Nadu.
- As mentioned earlier, Iron Ore is one of the major contributors to the value of minerals, and the state which has maximum Iron Ore is Orissa (36.8%), other contributors are Chattisgarh (21.0%) then Karnataka (18.1%) and Goa (15.5%)

This chapter contains the following tables:

Table 15.1 - Number of Reporting Mines in India

Table 15.2 - Production of Minerals and Ores by Selected Items

Table 15.3 - Index of Mineral Production