

CHAPTER 15

MINING

15.1. India is endowed with significant mineral resources. India produces about 100 minerals out of which 4 are Fuel minerals, 11 Metallic, 52 Non-metallic and the rest minor minerals. India is the world's largest producer of mica blocks and mica splittings. With the recent spurt in world demand for chromate, India has stepped up its production to reach the second rank among the chromate producers of the world. Besides, India ranks, 3rd in production of Coal & Lignite, 2nd in Barites, 4th in Iron ore, 5th in Bauxite and crude Steel, 7th in Manganese ore and 8th in Aluminum.

15.2. The Ministry of Mines is responsible for the survey and exploration of all minerals (other than Natural Gas and Petroleum), for mining and metallurgy of Non-ferrous metals like Aluminum, Copper, Zinc, Lead, Gold, Nickel, etc., and for the administration of the Mines and Minerals, other than Coal, Natural Gas and Petroleum. The Ministry of Mines has jurisdiction over Geological Survey of India and Indian Bureau of Mines, both of which are subordinate offices.

Geological Survey of India (GSI)

15.3. The GSI is the principal agency responsible for the assessment of geological and regional mineral resources of the country. GSI was established in 1851 and is one of India's oldest investigative agencies in the field of earth sciences. Its areas of operation encompass scientific surveys and research and for locating mineral resources. GSI operates through six regional offices and four specialized wings – Marine, Coal Geophysics, Airborne surveys and Training.

15.4. The GSI has to its credit geological mapping, covering an area of approximately 3,146 million sq.km, or 94 percent of the area of India. The GSI is also actively involved in the research and development of mapping and exploration techniques. It has set up a chain of modern petrological paleontological, chemical, mineralogical, geotechnical and geophysical laboratories in its different operational bases, and offers its facilities and services on payment.

Indian Bureau of Mines (IBM)

15.4. IBM is the principal government agency responsible for compiling exploration data and mineral maps and for providing access to the latest information in respect of mineral resources in the country. IBM has both regulatory as well as service functions.

15.5. IBM offers technical expertise and proven experience in the fields of geology, mine planning and feasibility studies. The geological services of IBM include survey and preparation of mine plans, preparation of geological plans, preliminary geological appraisal of mineral properties, including the formulation of an initial scheme of detailed exploration with estimate of cost and preliminary reconnaissance, quick survey to determine potential areas out of large properties etc.

Mineral Exploration Corporation Limited (MECL)

15.6. MECL is a public sector company, which undertakes detailed exploration of various minerals / ores by drilling and exploratory mining. It is also engaged in proving the existence of reserves for their eventual exploitation. Exploration is taken up both on a promotional basis on behalf of the Government of India and on contractual basis for other agencies.

15.7. 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, 1955 created under the jurisdiction of the Mines Act, 1952.

15.8. 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.

15.9. 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.

15.10. The Highlights of the present Chapter are as follows :



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 2009-10 consists of 2999 mines, out of which 574 are fuel mines, 700 are mines for metals, and 1725 mines for extraction of non-metallic minerals.

- ✚ Out of the total number of mines, maximum number of mines are either Coal Mines (19%) or Lime Stone Mines (18%) followed by mines for extraction of Iron Ore (11%), Bauxite (7%) and Manganese Ore (5%).
- ✚ The value of mineral production (excluding atomic minerals) is estimated at 17,96,455 millions in 2009-10 (provisional), which registered an increase of 3.4 % as over the corresponding value in 2008-2009.
- ✚ During 2009-10, Crude Petroleum is the largest contributor to the total value of mineral production which contributed 31% while Natural Gas contributed about 8%. It is observed that over the years, contribution of Coal has decreased from 35% in 2000-01 to 27 % in 2009-10. In contrast, contribution of Iron Ore has increased from 3.6 % in 2000-2001 to 15% 2009-10.
- ✚ Of the total of coal mining, maximum contribution in value terms is from Jharkhand (22%) followed by Madhya Pradesh (16%) then Chhattisgarh (15%), Orissa (11%), Maharashtra (10%) and West Bengal (7%). More than 80% 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. In 2009-10, Orissa contributed 36% of the total production in value terms. Other contributors are Goa (22%) and Karnataka (18%) and Chhattisgarh (16%).

15.12. 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 (Quantum Index)