



# The Indian minerals industry facing year 2000

By G D Kalra

Until the mid-1970s India followed a policy of "self-reliance". Since then this policy has been gradually reversed to a policy of economic liberalisation and integration into the world market. In two articles G D Kalra looks at some of the effects of this new policy on the Indian mineral economy.

Mineral endowments have been considered a sine qua non to the economic achievements of a country. But this may not be true in respect of countries which have developed adequate infrastructure to import and absorb mineral resources from various sources of supply. This is verified by the economic success of Japan, South Korea and West European countries with limited natural resources, thanks to the prevailing inter- and intra-regional trade in minerals.

The developing economies owning mineral resources need capital and skill of labour to have access to their own natural resources. Mineral endowments assume added importance; these provide a ready-made stock of capital which can permit the country to leap over the years that would otherwise be required to accumulate the same stock of capital out of income.

It is generally argued by one school of thought that developing countries should "moth ball" their mineral deposits for future utilisation instead of exporting them. But according to another school of thought, a mineral deposit is economical under present levels of technology and prices. Tomorrow is uncertain, both parameters may change rendering a deposit obsolete. Mineral trade is, therefore, presently a matter of global inter-dependence. India falls within this group.

The late 1980s certainly were a major milestone for the mineral industry of India. After 40 eventful years since independence, the mineral industry stood at a critical 'cross-road' for a major and purposeful foray into the next century. The list of achievements by the industry has been impressive so far. There are, however, equally nagging doubts which assail the decision on the right route for leaping into the 21st century. Value-wise, the mineral production during 1987 stood at 99.530 billion Indian rupees (GINR), a some 182-fold increase since independence.

And yet when comparison is drawn with the progress in other developing nations, eg Brazil, China or Indonesia, it reminds of the fact that the nation has yet many miles to go in realizing the full export potential through appropriate resource diplomacy measures.

India followed the economic experiment of 'self-reliance' until mid 1970s. Certainly imports were effectively diminished, the ratio of imports to GNP declined at an exponential trend rate of 3.4 percent from 1961-62 to 1973-74.

This rendered India an extremely closed economy with imports being only 5 percent of GNP by mid 1980s. The share of imports in India GNP currently however ranges between 6 to 7 percent, thanks to import liberalization in vogue at present. The imports could not boost exports, the exports presently account for only 4.5 percent of the GNP. The annual growth in exports has been 14.4 percent whilst that of imports 15.2 percent, leading to an annual trade deficit of about 6 GUSD.

Besides there was a sharp increase in the external debt service ratio to 24 percent in 1987-88, as against only 13.3 percent in 1979-80. This calls for a multi-pronged campaign for additional exports to earn foreign exchange. The export target for the financial year 1989, 187.950 GINR, envisages a growth rate of 20 percent over last years performance. The export of aluminium and alumina produced by NALCO is included to yield additional earnings of 2.150 GINR.

Besides the nation's bounty in mineral endowment on-shore, India as a 'Pioneer Investor' claimed a 150 000 km<sup>2</sup> deep sea mine site in Central Indian Ocean in August 1987.

Despite the natural gift and resources in technical manpower, India is still searching for a spring board for development of mineral resources. India's economic experiments of 'self-reliance' until the late 1970s, lack of innovative steps in liberalisation of investment and

G D Kalra is a Senior Mineralogist at the National Council of Applied Research (NCAER), New Dehli, India

The articles in this issue are part of a longer study by the author. For further information contact him at the following address:

NCAER  
Parisila Bhawan, 11, Indraprastha Estate,  
New Dehli-110002  
INDIA

the national commitment to state enterprises in the mineral sector have spawned a mixed bag of results, with continuing resources crunch, low technological status, low productivity, as has been reflected in the low economic indicators of the mineral industry.

But there appears to be a silver lining to the resource crunch. The Government has allowed the public sector undertakings engaged in production and export of minerals to enter the capital market with public issues of bonds and or long term deposits from the public. This has relieved the units from relying exclusively on budgetary support of the government needed hitherto for expansion and /or diversification of their activities. Besides, there has been recently a quantum jumps in liberalisation of economic policies adopted by India. This encompasses the following steps related to the mineral industry:

- India now welcomes introduction of foreign technology and capital instead of going for the self-sufficiency it had aspired for.
- India is skipping the middle stage technology advancement and going

straight for high technology. This brings in a simultaneous upgradation of capabilities: to supply the necessary raw materials, and to use high technology.

- There are plans to change the trade structure through import of latest technology for processing of minerals/ores to cater to the specifications of export markets.

- India has embarked on barter trade in minerals/metals in the international market. As for instance, India has concluded an agreement with Zimbabwe for the export of tractors against the import of asbestos and with Zambia for export of buses against import of copper. Agreements have also been signed with Trinidad and Tobago for the export of rock phosphate and urea. The country has also chosen a vast range of products for counter trade export of minerals.

- Business ventures abroad are likely to add to the dimensions of mineral trade of India. India is entering into joint ventures with the province of Manitoba in Canada for a project to produce 2 million tonnes of potash annually and with Saudi Arabia for a phosphatic fertiliser plant. Plans for rock phosphate mining

in USA are also in the pipeline. India is planning to enter into joint venture mining projects for diamond in Africa and Latin America.

Besides gearing to meet the structural changes that have taken place presently in the global mineral consumption and those apprehended in the future, India has to be cost competitive in its mineral foreign trade. In addition to the anticipated hike in the prices of various inputs to the mining sector, measures to be taken for future environment control may prove to be the single major contributory factor in cost escalations. The measures conceived are:

- restoration of land to its original shape,
- afforestation and plantation over tailings,
- prevention of pollution of water sources,
- control of dust and noise
- disposal and utilisation of solid waste,
- reclamation of process water,
- impact of mining on human settlements,
- preserving flora and fauna.

The Environment (Protection) Act 1986 of India is a precursor in this direction.

**Table 1**

**India's contribution to global trade in principal exportable minerals, 1987 in Mt (provisional)**

Mineral	Production	Export	Resources	Percentage of global		
				Production	Export	Reserves
Iron ore	48.5	29.5	17 500	5.20	8.00	8.46
Manganese ore	1.20	0.538	135	5.85	9.20	0.83
Bauxite	4.24	0.12	2 654	4.40	0.36	10.68
Chromite	0.638	0.265	135	6.12	5.12	0.78
Barytes	0.435	0.365	74	15.62	22.23	30.3
Sheet mica	0.0058	0.0032	Not available	95.00	80.00	Not available

Source:  
NCAER