

WHY INDIA? WHY NOW?

By Mike O'Driscoll

This article was written by Mike O'Driscoll, founder of IMFORMED Industrial Mineral Forums & Research Ltd. It was adapted with permission from his blog at Imformed.com.

India has always been one of the world's great sources and markets for industrial minerals, but now looks set to significantly raise its profile.

Already the world's fifth largest manufacturer, India remains on track to be the world's fastest growing economy with the International Monetary Fund estimating gross domestic product growth of 7.3 percent for fiscal 2019 and 7.4 percent for fiscal 2020.

Meanwhile, the fiscal average in GDP growth in the last five years has topped 7.5 percent, defining a new normal for the Indian economy.

This economic boom has naturally driven strong growth in primary mineral consuming market sectors such as construction, steel, foundry, cement, glass, ceramics, paper, paint, and plastics. This growth has been reflected in recent activity by overseas manufacturers keen to establish subsidiaries and participate in joint ventures in India, for example, RHI Magnesita, Imerys, Vesuvius, Omya, and Almatris.

At the start of 2019, India overtook Japan as the world's second largest steel producer, and by the end of the year is expected to become the world's second largest steel consumer.

However, despite having an abundance of mineral resources, some of which still enjoy strong export markets, there are certain domestic

markets which have been caught out by their over-reliance on Chinese mineral imports—now interrupted, and in some cases declining in availability, while fluctuating in price—which has forced an urgent reassessment of domestic and import options.

This has given rise to a new wave of mineral resource and product development in India (and other Asian countries) as the challenge grows for consumers keen to secure new and alternative sources of industrial mineral supply as their markets expand.

The mining and minerals sector in India is expected to witness a major upward transition in the next few years, boosted by a new National Mining Policy unveiled in February 2019 (to mixed reviews), and driven by nationwide reforms such as "Make in India" initiative (making India a global manufacturing hub), "Smart Cities Mission" (urban renewal and retrofitting), "Saubhagya scheme" (rural electrification), and a focus on building renewable energy projects under the National Electricity Policy.

Rising demand from infrastructure and transportation sector schemes such as housing for all by 2022, "Bharatmala Pariyojana scheme" (84,000 kilometers of new highways by 2022), expansion of the railway network, and development of "Industrial Corridors" (e.g., Amritsar-Delhi-Kolkata, Bengaluru-Mumbai, Visakhapatnam-Chennai) will also help boost and facilitate mineral demand.

INDIA'S MINERALS: DOMINATED BY NONMETALLICS

During 2017–18, India's mining and quarrying industry accounted for about 2.3 percent of the gross value added (GVA) at current prices, and, according to the latest data from the Indian Bureau of Mines (IBM), mineral production in India increased by 2.3 percent (as per index of mineral production base year 2011–12) compared to the previous year.

This increase was mainly owed to a rise in production of raw coal, lignite, and natural gas among fuel minerals; copper concentrates, gold, iron ore, lead concentrates, zinc concentrates, manganese ore, and tin concentrates, among metallic minerals; and phosphate, diamond, fluorspar, garnet, kyanite, sillimanite, and limestone among nonmetallic minerals.



Minerals industry in India. Credit: Imformed

The value of metallic minerals produced in 2017–18 was INR500 billion (US \$7 billion), an increase of about 27 percent over the previous year. Nonmetallic minerals' value was INR82 billion (US \$1 billion), representing a decrease of 2 percent.

However, it should be noted that these figures do not account for "atomic minerals" (uranium, thorium, niobium, tantalum, beryllium, lithium, zirconium, titanium, rare earths), and, crucially, "minor minerals" (all other industrial minerals) as classified by the IBM.

INVESTMENT: CLIMATE RIPE ALTHOUGH NEW MINING POLICY QUESTIONED

With barely 20 percent of reserves mined, India presents a major opportunity for investors. The Geological Survey of India has earmarked 100 blocks for auctioning regional exploration.

One hundred percent FDI is allowed in the steel and mining sectors under the automatic route, and some US \$13.83 billion of FDI has been channeled into the metallurgical and mining sectors since 2000.

On 28 February 2019, the Union Government approved the National Mineral Policy 2019, the key focus of which is on transparency, better regulations and enforcement, balanced growth, and sustainability. The National Mineral Policy 2019 replaces the National Mineral Policy 2008.

Key features include:

- Encouraging the private sector to take up exploration
- Encouragement of merger and acquisition of mining entities
- Creation of dedicated "mineral corridors" to boost private sector mining areas
- Proposals to grant status of industry to mining activity to boost financing of mining for private sector and for acquisitions of mineral assets in other countries by private sector
- Long term import-export policy for minerals will help private sector in better planning and stability

Of high concern is a perceived lack of focus on the future of India's minerals security. Owing to little or no major exploration and discoveries of certain domestic minerals, there has not been any significant change to their inventory base for decades. Moreover, there has been little development in required mineral processing technology. Opportunity knocks for new mineral investors and developers?

REFRACTORIES: DRIVEN BY STEEL GROWTH

India is now the second largest crude steel producer in the world, generating an output of 106.5 million tonnes in 2018, a growth of 3.7 percent year-on-year. Indian steel demand is set to grow by 7.1 percent in 2019 while globally, steel demand has been projected to grow by 1.3 percent. India is certainly one of the few bright spots for world steel growth.

As well as expanding, the Indian steel industry is producing higher grade steels which is demanding higher quality refractories and con-

sequently higher quality refractory minerals. A major challenge is that much of India's refractory raw material requirements are imported.

Refractories production in India for fiscal 2018–19 was 1.2 million tonnes, representing a significant recovery and growth of 9 percent over the previous year, driven mostly by steel, but also by the country's growing cement and glass sectors.

Leading international refractory groups are present in India, for example Krosaki Harima, RHI Magnesita, and Vesuvius, and activity is increasing.

May 2019 saw Dalmia Seven, the Katni, Madhya Pradesh-based monolithics joint venture between Dalmia-OCL, India's fastest growing refractory company, and Seven Refractories of Slovenia come on stream.

CERAMICS & FILLERS: CONSTRUCTION BOOM LOOMS

Driven by the growing construction sector and a rise in exports, the Indian ceramic industry, which has the potential to be the largest producer in the world, is looking to double its turnover by 2021.

The industry produces around 2.5 percent of the total global output, in which Gujarat accounts for 70 percent of the total output.

With many new infrastructure projects in the pipeline, the construction sector is growing at an approximate rate of 7–8 percent per annum. The demand for industrial ceramic products such as ceramic tiles, sanitaryware, and pipes required in construction applications are therefore expected to follow suit.

PROCESSING: ESSENTIAL SUPPORT TO MINERAL DEVELOPMENT

Core to the successful development and expansion of India's mineral sector is the investment in and utilization of modern processing technology.

Without the appropriate crushing and grinding equipment, calcination technologies, and beneficiation methods, India's minerals will be unable to meet the growing and increasingly sophisticated requirements of the expanding minerals consuming markets.

FUTURE DEVELOPMENTS: ELECTRIFICATION & BATTERY MARKETS

As well as meeting the demand of India's growing existing markets, mineral developers are also looking to the future mineral consuming markets in the region, in particular, the new generation energy markets using lithium-ion batteries and solar power.

The lithium-ion battery market is expected to grow exponentially in the next five years in India, driven by initiatives such as the National Electric Mobility Mission Plan 2020, with a projection of having 6–7 million electric vehicles on Indian roads by 2020, and installation of 175 GW of renewable energy by 2022. ▀

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