



# 2022 Minerals Yearbook

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## INDIA [ADVANCE RELEASE]

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World rankings for mineral production, shares of world production, and reserves presented in this chapter are derived from the referenced sources. Production data in this chapter may differ from data in other sources because of differences in the date of reporting.

# THE MINERAL INDUSTRY OF INDIA

By Keita F. DeCarlo

India's economy had grown strongly in the past decade, which resulted in an increase in India's production of, and demand for, mineral commodities. In 2022, the country was ranked first in the world in the production of barite (excluding United States production) accounting for 33% (estimated) of the world total; talc, 23% (estimated); and feldspar, 19% (estimated). The country was ranked second for bentonite and Fuller's earth production, each accounting for 18% of the world total; cement (9%) and wollastonite (excluding United States production), 9% (estimated); raw steel, 7%; and aluminum (smelter) and pig iron, 6% each (aluminum value is estimated). The country was ranked third for kaolinite production, accounting for 16% of the world total; and salt, 11% (estimated). The country was ranked fourth for chromium and iron ore (iron content) production, each accounting for 18% of the world total (chromium value is estimated); ammonia, 9%; zinc, 7%; and alumina, 5%. The country was ranked fifth for lead production, accounting for 5% of the world total. India's mineral reserves of chromium accounted for 14% of the world total (ranked third worldwide); titanium (ilmenite), 12% (ranked third); titanium (rutile), 10% (ranked second); and rare earths, 6% (ranked fourth) (Apodaca, 2024; Bolen, 2024; Brioche, 2024; Cordier, 2024; Gambogi, 2024; Hatfield, 2024; Klochko, 2024; Londono, 2024; McRae, 2024; Merrill, 2024a, b; Sangine, 2024; Schulte, 2024; Simmons, 2024; Tolcin, 2024; Tuck, 2024a, b).

## Minerals in the National Economy

In 2022, India's real gross domestic product (GDP) increased by 5.3% compared with an increase of 7.0% in 2021. The nominal GDP in 2022 was \$3.42 trillion. The mining and quarrying sector accounted for 2.2% of India's gross value added (GVA), and the GVA of the sector increased by 3.2% in 2022; the manufacturing sector accounted for 17.8% of India's GVA, and the construction sector, for 8.3%. The construction sector accounted for 12.5% of total employment; the manufacturing sector, 11.6%; and the mining and quarrying sector, less than 1% (Ministry of Statistics & Programme Implementation, 2021, p. 8, 9; 2023, p. 7, 8; International Labour Office, 2024, p. 42; World Bank, The, 2024).

## Government Policies and Programs

The legal and regulatory policy of the mineral industry in India classifies minerals as either major or minor minerals, with minor minerals primarily referring to clay, gravel, sand, and stone. Concessions for both major and minor minerals are awarded by State Governments, but the Federal Government has primacy with regards to the legal and regulatory framework for major minerals. Since 2015, State governments have granted concessions predominantly using auctions. The Mines and Minerals (Development and Regulations) Act, 1957 (MMDR) (amended in 2016) is the primary law that governs the development and regulation of mines and minerals in

India, including auctions and concessions. Although the issue of ownership of mineral and subsoil rights is not specified in India's Constitution, the MMDR clearly stipulates that no mining operations may be undertaken without a mining concession, so Government approval is required for all mining operations in the country. All mining leases are granted for a period of 50 years. State governments are allowed to terminate licenses early, as they deem appropriate, including for the preservation of the natural environment. Various clearances, such as forest or environmental clearances, are required and set capacity limits for the extraction of minerals. Leases also lapse if no production occurs for at least 2 years (Times of India, The, 2016; PRS Legislative Research, 2023; Sudarsan and others, 2024).

In May, the United States launched the Indo-Pacific Economic Framework for Prosperity (IPEF), which was composed of 14 member countries, including India. The IPEF is an economic initiative that focuses on "four pillars" of (1) fair and resilient trade, (2) supply chain resilience, (3) infrastructure, clean energy, and decarbonization, and (4) taxation and anticorruption. India opted out of the trade pillar, partly because of concerns about retaining regulatory autonomy (White House, The, 2022; Nandi, 2023).

## Production

In 2022, the production of tin (concentrate) increased by 158%; elemental bromine, by 98%; barite, by 69% (estimated); graphite (crystalline flake), by 63%; mined manganese ore and concentrate (Mn content), by 46%; refined gold (bullion), by 33%; ferromolybdenum and phosphate rock (gross weight), by 30% each; ferrovanadium and gold ore (gross weight), by 18% each; ammonia (N content) and silicomanganese, by 13% each; total coal, by 12%; and smelter copper and sulfur (byproduct, S content), by 10% each. The production of sillimanite decreased by 44%; vermiculite, by 40%; kyanite, by 36%; ferroaluminum, by 33%; fluorspar (metallurgical grade), by 30%; chromite, by 18%; ferrotitanium, by 17%; mica, by 12% (estimated); and refined lead (primary and second), by 10%. Data on mineral production are in table 1.

## Structure of the Mineral Industry

The Federal Government accounted for 28% of the ownership in the mineral industry in 2008. Major mineral industry-related state-owned enterprises (SOEs) included those operating in the crude petroleum sector, which accounted for 17% of all SOEs; the coal sector, 15%; and the petroleum refining and marketing sector, 8%. In 2020, as part of an amendment to the MMDR, the Government allowed private noncoal companies to invest in the coal industry. The privatization of the coal industry was expected to increase coal production and competitiveness in bidding and pricing (Agarwal and others, 2022, p. 8; Krishna, 2022;

World Bank, The, 2022, p. 10). Table 2 is a list of major mineral industry facilities.

## Mineral Trade

In 2022, India's total exports were valued at \$453 billion. Exports of mineral commodities were valued at \$184 billion. Of this amount, exports of mineral fuels and fuel products were valued at \$98.1 billion; precious and semiprecious stones and metals, \$39.3 billion; ferrous metals and articles thereof, \$25.3 billion; nonferrous metals and articles thereof, \$13.8 billion; and ores and concentrates, \$1.99 billion. Of the exports of mineral fuels and fuel products, those of refined petroleum were valued at \$94.0 billion; and petroleum gas and hydrocarbons, \$507 million. Major exported nonferrous metals and articles thereof included aluminum, which had an export value of \$10.0 billion [and a total exported quantity of unwrought aluminum of 2.59 million metric tons (Mt)]; copper, \$1.63 billion [unwrought, 63,569 metric tons (t)]; zinc, \$1.36 billion (unwrought, 340,233 t); and lead, \$475 million (unwrought, 193,644 t). Exports of ferrous metals and articles thereof included 515,225 t of pig iron valued at \$369 million and 1.03 Mt of direct-reduced iron (DRI) valued at \$457 million. Exports of precious and semiprecious stones and metals were valued at \$39.3 billion and included 226 million carats of diamond valued at \$24.0 billion (table 3; Directorate General of Commercial Intelligence and Statistics, 2023).

In 2022, India's total imports were valued at \$720 billion. Imports of mineral commodities were valued at \$402 billion. Of this amount, imports of mineral fuels and fuel products were valued at \$260 billion; ferrous metals and articles thereof, \$21.5 billion; nonferrous metals and articles thereof, \$20.2 billion; and ores and concentrates, \$5.77 billion. Of the imports of mineral fuels and fuel products, those of petroleum gas and hydrocarbons were valued at \$32.1 billion; crude petroleum, \$23.0 billion; and refined petroleum, \$11.4 billion. Major imported nonferrous metals and articles thereof included copper, which had an import value of \$7.56 billion (unwrought, 145,257 t); aluminum, \$7.23 billion (unwrought, 257,900 t); nickel, \$1.23 billion (unwrought, 33,610 t); zinc, \$864 million (unwrought, 160,035 t); and lead, \$763 million (unwrought, 257,916 t). Imports of precious and semiprecious stones and metals were valued at \$78.1 billion [unwrought gold, 706,750 kilograms (kg) valued at \$36.6 billion] (table 4; Directorate General of Commercial Intelligence and Statistics, 2023).

In 2022, there were some notable changes in exports of selected mineral commodities. Among metals, exports of zinc ores and concentrates increased by 42 times to 35,457 t; DRI, by 54% to 1.03 Mt; and alumina, by 23% to 1.81 Mt. Exports of bauxite decreased by 52% to 192,763 t; copper ores and concentrates, by 28% to 30,527 t; titanium ores and concentrates, by 22% to 163,260 t; and iron ore, by 18% to 16.2 Mt. Among industrial minerals, exports of cement and clinker decreased by 52% to 998,697 t; iron oxide pigments (ocher), by 35% to 2,317 t; and granite, by 22% to 9.74 Mt. Among mineral fuels, exports of coal (bituminous) increased to 139,564 t from 141 t in 2021 (table 3).

In 2022, there were some notable changes in imports of selected mineral commodities. Among metals, imports of cobalt hydroxide increased by 21 times to 549 t; gold ores and concentrates, by 133% to 1,478 t; copper ores and concentrates, by 29% to 1.13 Mt; and bauxite, by 23% to 3.87 Mt. Imports of nickel ores and concentrates decreased by 81% to 20,000 kg; iron ore, by 63% to 2.04 Mt; chromium ores and concentrates, by 44% to 141,821 t; unwrought gold, by 33% to 706,750 kg; and manganese ore and concentrates, by 10% to 6.28 Mt. Among industrial minerals, imports of cement and clinker decreased by 25% to 1.85 Mt. Among mineral fuels, imports of coal (anthracite) increased by 28% to 2.19 Mt. Imports of coal (bituminous) decreased by 46% to 5.20 Mt (table 4).

## Commodity Review

### Metals

**Bauxite and Alumina, and Aluminum.**—In August, the Adani Group announced plans to invest \$5.2 billion to construct an alumina refinery with a capacity of 4 million metric tons per year (Mt/yr) and a captive powerplant with a capacity of 175 megawatts (MW) per year in Kashipur, Rayagada District, Odisha. The refinery would be the first aluminum-related production site for Adani. The company set up a wholly owned subsidiary named Mundra Aluminium Ltd. in December 2021 that would oversee operations. The proposed refinery was expected to generate employment for more than 7,750 people. As of 2022, Adani had no bauxite mine concessions in Odisha, so it would need to participate in the mine auction process to establish a bauxite mine as feedstock for the alumina refinery or establish long-term supply partnerships with existing bauxite mining companies in the area (Bisoyi, 2022; Economic Times, The, 2022b).

In March, Hindalco Industries Ltd. outlined its 5-year plan for investing a total of \$2.43 billion in its aluminum business in India, as well as a separate \$459 million in specialty alumina projects. Of this investment, confirmed and ongoing projects consisted of (1) a \$135 million expansion of the company's Aditya and Mahan smelters to increase the company's aluminum production capacity by 50,000 t/yr in total; these expansions were scheduled to be completed by fiscal year (FY) 2024 (the fiscal year runs from April 1 of the preceding year through March 31 of the year stated); and (2) a \$40 million expansion of Hindalco's Koraput refinery in Odisha (operated through its wholly owned subsidiary Utkal Alumina International Ltd.) to increase the company's alumina production capacity by 350,000 t/yr, which was scheduled to be completed by FY2024. Projects under appraisal included an \$850 million expansion of the company's alumina production capacity by establishing a 1 Mt/yr-capacity alumina refinery in Odisha, which was scheduled to be completed by FY2026; and a \$685 million expansion of the Aditya and Mahan smelters to increase the company's aluminum production capacity by an additional 180,000 t/yr in total, which was scheduled to be completed by FY2026 (Construction World, 2022; Hindalco Industries Ltd., 2022, p. 29).

**Copper.**—In June, Adani announced plans to invest \$775 million to build a copper refining plant in Gujarat, through its subsidiary Kutch Copper Ltd., which Adani acquired in

March 2021 to expand its copper business. With a planned capacity of 1 Mt/yr, the refinery would be the largest copper refinery in India. Production was scheduled to begin in the first half of 2024 (Burgos, 2022; Zachariah, 2022).

In September, Hindustan Copper Ltd. announced plans to invest \$44.5 million to increase copper ore production to 12.2 Mt/yr by FY2029, with additional plans to increase production to 20.2 Mt/yr following the completion of this initial expansion. Of the \$44.5 million investment, \$31.8 million would be invested in the expansion of the Malanjkhand Copper Complex Mines to a capacity of 5.0 Mt/yr. Other plans included the development of a new underground mine at the Singhum Copper Belt of the Indian Copper Complex Mines, and the reopening of the Rakha Mine in Jharkhand, which had been closed in 2001–02 for operational reasons, and which had a peak capacity of 3 Mt/yr (Economic Times, The, 2022d; Hindu BusinessLine, 2022).

**Iron and Steel.**—In 2022, India produced 42.3 Mt of DRI, which made India the first-ranked producer worldwide and accounted for 34% of the world total. India also produced 125 Mt of raw steel in 2022, which accounted for 7% of the world total. Raw steel capacity in India in FY2022 was 154 Mt and had increased at an annual growth rate of 3.7% since FY2018, when capacity was 138 Mt (table 1; Ministry of Steel, 2022; World Steel Association, 2023, p. 2; Tuck, 2024a).

In November, JSW Steel announced plans to expand its raw steel production capacity to 50 Mt/yr from 27 Mt/yr by 2030. The company was planning to accomplish this increase through the expansion of greenfield and brownfield projects. Additionally, the company was planning to bid for the plant owned by Rashtriya Ispat Nigam Ltd. (which had an annual raw steel capacity of 7.3 Mt) and the Nagarnar steel plant (10 Mt) owned by NMDC (table 2; Business Standard, 2022b; Economic Times, The, 2022e).

**Iron Ore.**—In 2022, India produced 252 Mt of iron ore. Of this amount, 136 Mt was produced in Odisha, which was the leading State in iron ore production in the country. Production in Odisha was forecast to increase to 209 Mt/yr by FY2025, and capacity was expected to increase to 283 Mt/yr by FY2026, of which 112 Mt/yr would be for SOEs, and 107 Mt/yr would be for private companies. Among SOEs, OMC, which had the largest capacity of iron ore production in Odisha, planned to expand the capacity of its Guali Mine to 30 Mt/yr; its Jiling Longalota Mine to 10 Mt/yr; and its Banspani, Khandbandh, and Mahaparbat (Unchabali) Mines by 3 Mt/yr in total. Among private companies, JSW Steel Co. Ltd. planned to expand the capacity of its Narayanposhi and the Nuagaon Mines to 20 Mt/yr each (SteelMint, 2022; Indian Bureau of Mines, 2023a, p. 10; 2023b, p. 10; 2023c, p. 10).

In December, the Goa State government completed the first phase of its iron ore mining concessions auctioning program following the termination of its 88 mining leases by the Supreme Court in 2018 because of mining lease violations. Four companies won bids for iron ore extraction. Vedanta Ltd. won the bid for the Bicholim-Mulgao mining concession in North Goa, which had 84 Mt of reserves. Salgaocar Shipping Co. Pvt. Ltd. won the bid for the Shirigao-Mayem mining concession in North Goa, which had 24 Mt of reserves.

Sociedade De Fomento Industries Pvt. Ltd. won the bid for the Kalay Mines mining concession in South Goa, which had 16.7 Mt of reserves. Rajaram Bandekar Pvt. Ltd. won the bid for the Monte-de-Sirigao mining concession in North Goa, which had 10 Mt of reserves (Banerjee, 2018; Economic Times, The, 2022c).

In August, National Mineral Development Corp. Ltd. (NMDC) announced that the company planned to produce 46 Mt of iron ore in FY2023 compared with 42.2 Mt in FY2022. Its expansion project at the Bacheli Complex in Chhattisgarh was expected to be completed by FY2022, which would add approximately 2.5 Mt/yr of capacity; though yearend 2022, there was no further information available. In June, the company's lease for the Kumaraswamy Mine was renewed by the government of Karnataka State for another 20 years. Following this approval, in November, NMDC also announced its plans to invest \$115 million during the next 2 to 3 years to expand the capacity of its Kumaraswamy Mine to 10 Mt/yr from 7 Mt/yr, with environmental clearance for its capacity increase approved by the Government until 2042. In August, the Supreme Court raised the ceiling limit for iron ore mining in Ballari District, where the Kumaraswamy Mine is located, to 35 Mt/yr from 28 Mt/yr (Business Standard, 2022b; Economic Times, The, 2022f).

In August, the Adani Group announced plans to invest \$2.03 billion to build an iron ore beneficiation plant with an iron ore capacity of 30 Mt/yr in Deojhar, Keonjhar District, a dewatering-filtration and pellet plant in Dhamra, Bhadrak District, and a slurry pipeline between the two plants for iron ore concentrate slurry, all in the State of Odisha. This investment was expected to create jobs for 1,600 people (Chaliawala, 2022; Economic Times, The, 2022b).

**Zinc.**—In 2022, India produced 832,000 t of zinc ore (Zn content) and 838,000 t of refined zinc. Zinc in India was produced exclusively by Hindustan Zinc Ltd. (HZL), of which Vedanta had a 64.9% ownership share, and the Government had a 29.6% ownership share. In May, the divestment of the Government's 29.6% stake in HZL was approved, at a cost of \$4.83 billion to be paid to the Government. Of this stake, five percentage points were approved for purchase by Vedanta, which increased Vedanta's ownership of HZL to 69.9%. HZL and Vedanta were also considering an amendment of the terms of the agreement so that Vedanta could purchase the Government's entire stake, which would increase Vedanta's ownership of HZL to 94.5% (table 1; Economic Times, The, 2022a).

## Industrial Minerals

**Cement.**—In 2022, India produced 380 Mt of cement, which made India the second-ranked producer worldwide. Annual cement capacity in India was estimated to be 633 Mt. Of the total capacity, 98% was privately owned. The top 20 companies accounted for approximately 70% of total cement production in the country, and both production and domestic consumption of cement grew at an annual growth rate of 5.7% from FY2016 to FY2022 (table 1; India Brand Equity Foundation, 2022; Hatfield, 2024).

In December, Dalmia Cement (Bharat) Ltd. (DCBL) announced its planned acquisition of the cement, clinker, and powerplant assets of Jaiprakash Associates Ltd. (JAL), which was a wholly owned subsidiary of the Jaypee Group,

as well as its associate companies, at a cost of \$721 million, following debt repayment obligations by JAL. As of yearend 2022, the acquisition was not yet completed. The total assets being acquired included 9.4 Mt/yr of cement production capacity, 6.7 Mt/yr of clinker production capacity, and 280 MW of thermal powerplant capacity. These assets are all located in the States of Chhattisgarh, Madhya Pradesh, and Uttar Pradesh. DCBL announced that the acquisition would help realize its goals of reaching a cement capacity of 75 Mt/yr by FY2027 and 110 to 130 Mt/yr by FY2031. Announcement of this acquisition, which would result in the complete withdrawal from the cement business by JAL, followed JAL's announcement in October of its intent to divest from the cement business. JAL had previously sold 2 Mt/yr of cement production capacity to DCBL in 2015 (table 2; Business Standard, 2022a; Thomson Reuters, 2022a; Bhalla, 2023).

In September, Adani completed its acquisitions of Holcim Ltd.'s 63.1% and 55.5% shares of ACC Ltd. and Ambuja Cements Ltd., respectively, at a total price of \$6.4 billion. These acquisitions were the first entry of Adani into the cement business in India, where Adani would have a cement production capacity of 77.7 Mt/yr, making the company the second-ranked cement producer in India (table 2; Holcim Ltd., 2022; Mint, 2022; Thomson Reuters, 2022b).

In June, UltraTech Cement Ltd., which had the capacity to produce 127 Mt/yr of cement and was the leading cement producer in India, announced an investment of \$1.64 billion in the construction of new facilities and the expansion of existing plants. The investment would increase the company's cement production capacity to 159.25 Mt/yr by FY2025 (Thomson Reuters, 2022b).

### Minerals Fuels and Related Materials

**Uranium.**—In July, the Government discovered 15,631 t of uranium ore resources in the State of Rajasthan at five different sites: 8,813 t in Rohil, 3,570 t in Jahaz, 1,086 t in West Rohil, and 1,002 t in Geratiyon ki Dhani, all in Sikar District; as well as 1,160 t in Udaipur District. The Government was planning to set up an exploratory mining center in Sikar District, and Uranium Corp. Ltd. of India (UCIL) started preproject activities necessary to acquire statutory clearances. With the discovery of these deposits, as of 2022, there was a total of 382,675 t of uranium ore resources across 47 locations in the country. In 2022, UCIL was mining at seven sites in the State of Jharkhand and one site in the State of Andhra Pradesh. With increased domestic supply in recent years, India had not been reliant on imported uranium since 2021 (table 4; Economic Times, The, 2022g).

### Reserves and Resources

As of 2022, India's estimated share of world reserves of chromite was 14%; ilmenite, 12%; rutile, 10%; rare earths, 6%; iron ore (Fe content), 4%; and graphite, 3%. In 2022, the Geological Survey of India announced its FY2020 exploration of copper and gold deposits in the Adash Block, located in the Deogarh District, Odisha. Indicated resources included 6.67 Mt of copper (at an average grade of 0.67% Cu) and 0.90 Mt of gold (0.97 ppm Au) (Ministry of Mines, 2024; Schulte, 2024;

Stewart, 2024; Tuck, 2024b). Table 5 is a list of mineral reserves in India in 2021 (the latest year for which data were available).

### Outlook

According to the International Monetary Fund (2023), India's real GDP was projected to increase between 6.2% and 6.3% per year until at least 2028. India's mineral industry will likely continue to develop in concert with the strong ongoing economic growth of the country. Although Government oversight in mining is high, such as the requirements for explicit approval from the Government for mining rights and capacity increases, legislation has been passed allowing for more private involvement, and divestment and privatization of SOEs are likely to continue at an increased pace in the future. The expansion of large conglomerates in the mineral industry is likely to continue in the future, as can be seen by Adani's acquisition of cement companies and its entry into the aluminum and iron ore industries. India's entry into multilateral economic frameworks, such as the IPEF, is an indication of the country's interest in securing critical mineral supply chains, but its rejection of certain aspects, particularly the trade pillar of the IPEF, indicates the country's desire to maintain its strategic and regulatory autonomy in future trade aspects.

Iron ore production is likely to expand in the near and medium terms as a result of Adani's expansion into Odisha and the finalization of mining block auctions in Goa, following the suspension of mining leases in Goa in 2018. Cement production and production capacity are expected to show robust growth in the near and medium terms, given Adani's expansion into the industry and the plans for capacity increases by major cement producers in the country, such as UltraTech Cement Ltd. Uranium production is expected to continue to increase as UCIL increases its number of uranium mines, which will likely ensure a domestic supply of uranium for the country.

### References Cited

- Agarwal, R., Arbatli-Saxegaard, E., Fisher, L., Han, X., 2022, India's state-owned enterprises: Washington, DC, International Monetary Fund, August, 33 p. (Accessed May 14, 2024, at <https://www.imf.org/-/media/Files/Publications/WP/2022/English/wpiea2022165-print-pdf.ashx>.)
- Apodaca, L.E., 2024, Nitrogen (fixed)—Ammonia: U.S Geological Survey Mineral Commodity Summaries 2024, p. 128–129.
- Banerjee, Srestha, 2018, SC cancels mining leases in Goa, slams state government, environment ministry for favoring miners: New Delhi, India, DownToEarth, February 7. (Accessed March 23, 2024, at <https://www.downtoearth.org.in/news/mining/sc-cancels-mining-in-iron-ore-leases-in-goa-sets-aside-hc-order-which-allowed-renewal-of-mining-licenses-59648>.)
- Bhalla, Mohit, 2023, Dalmia Bharat's deal to buy Jaypee's cement assets hits a legal hurdle: The Economic Times [Mumbai, India], September 14. (Accessed March 23, 2024, at <https://economictimes.indiatimes.com/industry/indl-goods/svs/cement/dalmia-bharats-deal-to-buy-jaypees-cement-assets-hits-a-legal-hurdle/articleshow/103643975.cms?from=mdr>.)
- Bisoyi, S.K., 2022, Odisha—Adani Group to set Rs 41,000-crore alumina refinery in Kashipur: The Times of India [Mumbai, India], August 11. (Accessed January 3, 2024, at <https://timesofindia.indiatimes.com/city/bhubaneswar/odisha-adani-group-to-set-up-rs-41000-crore-alumina-refinery-in-kashipur/articleshow/93490549.cms>.)
- Bolen, W.P., 2024, Salt: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 150–151.
- Brioche, A.S., 2024, Talc and pyrophyllite: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 174–175.

Burgos, J., 2022, Asia's richest man, Gautam Adani, raises \$775 million to build India's largest copper refinery: Forbes [Jersey City, New Jersey], June 27. (Accessed January 7, 2024, at <https://www.forbes.com/sites/jonathanburgos/2022/06/27/asias-richest-man-gautam-adani-raises-775-million-to-build-indias-largest-copper-refinery/?sh=6b60ac6848ce>.)

Business Standard, 2022a, Dalmia Bharat to acquire cement assets of Jaypee Group at Rs 5,666 crore: Business Standard [New Delhi, India], December 12. (Accessed January 8, 2024, at [https://www.business-standard.com/article/companies/dalmia-bharat-to-acquire-cement-assets-of-jaypee-group-at-rs-5-666-crore-122121200654\\_1.html](https://www.business-standard.com/article/companies/dalmia-bharat-to-acquire-cement-assets-of-jaypee-group-at-rs-5-666-crore-122121200654_1.html).)

Business Standard, 2022b, NMDC targets to achieve 46 MT of iron ore production this fiscal year: Business Standard New Delhi, India], August 13. (Accessed January 7, 2024, at [https://www.business-standard.com/article/companies/nmdc-targets-to-achieve-46-mt-of-iron-ore-production-this-fiscal-year-122081300211\\_1.html](https://www.business-standard.com/article/companies/nmdc-targets-to-achieve-46-mt-of-iron-ore-production-this-fiscal-year-122081300211_1.html).)

Chaliawala, N., 2022, Adani to enter alumina and iron ore businesses in Odisha, invest Rs 57,575 crore: The Economic Times [Mumbai, India], August 11. (Accessed January 8, 2024, at <https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/adani-to-enter-alumina-and-iron-ore-businesses-in-odisha-invest-rs-57575-crore/articleshow/93505890.cms>.)

Construction World, 2022, Hindalco Industries to invest \$7.2 bn on aluminum business expansion: Mumbai, India, Construction World, April 4. (Accessed January 3, 2024, at <https://www.constructionworld.in/steel-news/hindalco-industries-to-invest-7-2-bn-on-aluminum-business-expansion/33533>.)

Cordier, D.J., 2024, Rare earths: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 144–145.

Directorate General of Commercial Intelligence and Statistics, 2023, System on India's monthly trade (Harmonized Classification of commodities): New Delhi, India, Ministry of Commerce and Industry, November 16. (Accessed November 18, 2023, at <https://tradestat.commerce.gov.in/meidb/default.asp>.)

Economic Times, The, 2022a, Cabinet clears sale of govt's 29.58% stake in Hindustan Zinc valued at Rs 38,000 crore: The Economic Times [Mumbai, India], May 26. (Accessed January 8, 2024, at <https://economictimes.indiatimes.com/news/economy/policy/ccea-clears-sale-of-governments-29-5-stake-in-hzls-valued-at-rs-38000-crore/articleshow/91793473.cms>.)

Economic Times, The, 2022b, Gautam Adani plans \$5.2 billion alumina mill in growing metal ambitions: The Economic Times [Mumbai, India], August 12. (Accessed January 3, 2024, at <https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/gautam-adani-plans-5-2-billion-alumina-mill-in-growing-metal-ambitions/articleshow/93495379.cms>.)

Economic Times, The, 2022c, Goa government completes first phase of auction of iron ore mining blocks: The Economic Times [Mumbai, India], December 22. (Accessed January 7, 2024, at <https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/goa-government-completes-first-phase-of-auction-of-iron-ore-mining-blocks/articleshow/96421040.cms>.)

Economic Times, The, 2022d, Hindustan Copper to ramp up copper output to 12.2 MTPA by FY29: The Economic Times [Mumbai, India], September 11. (Accessed January 7, 2024, at <https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/hindustan-copper-to-ramp-up-copper-output-to-12-2-mtpa-by-fy29/articleshow/94130344.cms>.)

Economic Times, The, 2022e, JSW Steel aims at 50MT capacity by 2030: The Economic Times [Mumbai, India], November 3. (Accessed January 7, 2024, at <https://infra.economictimes.indiatimes.com/news/construction/jsw-steel-aims-at-50mt-capacity-by-2030/95268929>.)

Economic Times, The, 2022f, NMDC to spend Rs 900 cr to increase iron ore production from Kumaraswamy Mines: The Economic Times [Mumbai, India], November 20. (Accessed March 23, 2024, at <https://economictimes.indiatimes.com/industry/indl-goods/svs/metals-mining/nmdc-to-spend-rs-900-cr-to-increase-iron-ore-production-from-kumaraswamy-mines/articleshow/95635744.cms?from=mdr>.)

Economic Times, The, 2022g, Over 15,000 tonnes uranium ore deposits in Rajasthan—Centre: The Economic Times [Mumbai, India], July 27. (Accessed January 8, 2024, at <https://economictimes.indiatimes.com/news/india/over-15000-tonnes-uranium-ore-deposits-in-rajasthan-centre/articleshow/93162052.cms>.)

Gambogi, Joseph, 2024, Titanium mineral concentrates: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 188–189.

Hatfield, A.K., 2024, Cement: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 54–55.

Hindalco Industries Ltd., 2022, Investor day: Mumbai, India, Hindalco Industries Ltd., March 30, 55 p. (Accessed January 3, 2024, at <https://www.hindalco.com/upload/pdf/hindalco-investors-day-presentation-2022-30-march-2022.pdf>.)

Hindu BusinessLine, 2022, Hindustan Copper to ramp up production at Malanjkhanda mine by next fiscal: Kolkata, India, Hindu BusinessLine, November 18. (Accessed January 7, 2024, at <http://web.archive.org/web/20221118122226/https://www.thehindubusinessline.com/markets/commodities/hindustan-copper-to-ramp-up-production-at-malanjkhand-mine-next-fiscal/article66153018.ece>.)

Holcim Ltd., 2022, Adani Group to acquire Holcim's India business: Zug, Switzerland, Holcim Ltd., May 15. (Accessed January 8, 2024, at <https://www.holcim.com/media/media-releases/holcim-india-business-acquired>.)

India Brand Equity Foundation, 2022, Indian cement industry analysis: New Delhi, India, India Brand Equity Foundation, December. (Accessed May 15, 2024, at <https://web.archive.org/web/20230202181634/https://www.ibef.org/industry/cement-presentation>.)

Indian Bureau of Mines, 2023a, Monthly statistics of mineral production, December 2022: Nagpur, India, Indian Mineral Yearbook, v. 54, no. 12, December, 34 p. (Accessed January 8, 2024, at [https://ibm.gov.in/writereaddata/files/1699360798654a301eb743dMSMP\\_December\\_2022.pdf](https://ibm.gov.in/writereaddata/files/1699360798654a301eb743dMSMP_December_2022.pdf).)

Indian Bureau of Mines, 2023b, Monthly statistics of mineral production, February 2022: Nagpur, India, Indian Mineral Yearbook, v. 54, no. 2, February, 35 p. (Accessed January 8, 2024, at [https://ibm.gov.in/writereaddata/files/09092022105908MSMP%20Feb\\_%202022.pdf](https://ibm.gov.in/writereaddata/files/09092022105908MSMP%20Feb_%202022.pdf).)

Indian Bureau of Mines, 2023c, Monthly statistics of mineral production, March 2022: Nagpur, India, Indian Mineral Yearbook, v. 54, no. 3, March, 53 p. (Accessed January 8, 2024, at [https://ibm.gov.in/writereaddata/files/1681803787643e4a0bc1284MSMP\\_March\\_2022\\_FINAL\\_REV.pdf](https://ibm.gov.in/writereaddata/files/1681803787643e4a0bc1284MSMP_March_2022_FINAL_REV.pdf).)

International Labour Office, 2024, India employment report 2024—Youth employment, education and skills: Geneva, Switzerland, International Labour Office, 2024, 307 p. (Accessed May 14, 2024, at [https://web.archive.org/web/20240511045055/https://webapps.ilo.org/wcmsp5/groups/public/-/asia/-/ro-bangkok/-/sro-new\\_deli/documents/publication/wcms\\_921154.pdf](https://web.archive.org/web/20240511045055/https://webapps.ilo.org/wcmsp5/groups/public/-/asia/-/ro-bangkok/-/sro-new_deli/documents/publication/wcms_921154.pdf).)

International Monetary Fund, 2023, World economic outlook—Navigating global divergences: Washington, DC, International Monetary Fund, October 10. (Accessed January 8, 2024, via <https://www.imf.org/en/Publications/WEO/Issues/2023/10/10/world-economic-outlook-october-2023>.)

Krishna, Tanya, 2022, Privatisation is the way forward to regulate coal industry hit by price hike, shortages, say experts: Financial Express [Noida, Uttar Pradesh, India], January 26. (Accessed November 19, 2023, at <https://www.financialexpress.com/business/industry-privatisation-is-the-way-forward-to-regulate-coal-industry-hit-by-price-hike-shortages-say-experts-2416161/>.)

Londono, Vanessa, 2024, Feldspar and nepheline syenite: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 70–71.

McRae, M.E., 2024, Barite: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 40–41.

Merrill, A.M., 2024a, Bauxite and alumina: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 42–43.

Merrill, A.M., 2024b, Aluminum: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 32–33.

Ministry of Mines, 2024, List of 194 G2/G3 reports handed over to state government by GSI since 2015: New Delhi, India, Ministry of Mines. (Accessed May 15, 2024, at <https://mines.gov.in/webportal/content/gtwogthree>.)

Ministry of Statistics & Programme Implementation, 2021, Press note on provisional estimates of national income 2020–21 and quarterly estimates of gross domestic product for the fourth quarter (Q4) of 2020–21: New Delhi, India, Ministry of Statistics & Programme Implementation, May 31, 10 p. (Accessed November 19, 2023, at [https://mospi.gov.in/sites/default/files/press\\_release/Press%20Note\\_31-05-2021.pdf](https://mospi.gov.in/sites/default/files/press_release/Press%20Note_31-05-2021.pdf).)

Ministry of Statistics & Programme Implementation, 2023, Press note on provisional estimates of national income 2022–23 and quarterly estimates of gross domestic product for the fourth quarter (Q4) of 2022–23: New Delhi, India, Ministry of Statistics & Programme Implementation, May 31, 9 p. (Accessed November 19, 2023, at [https://mospi.gov.in/sites/default/files/press\\_release/PressNoteQ4\\_FY2022-23\\_31may23.pdf](https://mospi.gov.in/sites/default/files/press_release/PressNoteQ4_FY2022-23_31may23.pdf).)

Ministry of Steel, 2022, Make in India: New Delhi, India, Ministry of Steel, September 16. (Accessed May 15, 2024, at <https://steel.gov.in/en/make-india>.)

Mint, 2022, Adani Group now the 2nd largest cement player as acquisition of Ambuja Cements, ACC completes: New Delhi, India, HT Media Group, September 16. (Accessed January 8, 2024, at <https://www.livemint.com/companies/news/adani-group-now-the-2nd-largest-cement-player-as-acquisition-of-ambuja-cements-acc-completes-11663329343722.html>.)

Nandi, Shreya, 2023, IPEF trade pillar—India doubts benefits amid SE Asian scepticism: Business Standard Pvt. Ltd. [New Delhi, India], November 22. (Accessed May 15, 2024, at [https://www.business-standard.com/economy/news/benefits-of-being-part-of-ipef-negotiations-insignificant-say-officials-123112200892\\_1.html](https://www.business-standard.com/economy/news/benefits-of-being-part-of-ipef-negotiations-insignificant-say-officials-123112200892_1.html).)

PRS Legislative Research, 2023, The mines and minerals (development and regulation) amendment bill, 2016: [prssindia.org/billtrack/the-mines-and-minerals-development-and-regulation-amendment-bill-2016-4228/](http://www.prssindia.org/billtrack/the-mines-and-minerals-development-and-regulation-amendment-bill-2016-4228/).)

Sangine, E.S., 2024, Wollastonite: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 196–197.

Schulte, R.F., 2024, Chromium: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 58–59.

Simmons, K.J., 2024, Clays: U.S. Geological Survey Mineral Commodity Summaries 2024, p. 60–61.

SteelMint, 2022, India—Odisha's iron ore production to rise sharply to 142 mnt in FY'22—OMC Director: Chhattisgarh, India, BigMint Technologies Pvt. Ltd., March 9. (Accessed January 8, 2024, at <https://www.steelmint.com/insights/india-odishas-iron-ore-production-to-rise-sharply-to-142-mnt-in-fy22-omc-director-290758>.)

Stewart, A.A., 2024, Graphite (natural): U.S Geological Survey Mineral Commodity Summaries 2024, p. 84–85.

Sudarsan, V., Gajjala, K., and Chaudhary, A., 2024, Mining 2024—India: London, United Kingdom, Chambers and Partners, January 25. (Accessed January 5, 2025, at <https://practiceguides.chambers.com/practice-guides/mining-2024/india>.)

Thomson Reuters, 2022a, Dalmia Bharat unit to buy Jaiprakash cement, power assets for \$687 mln: Thomson Reuters, December 12. (Accessed January 8, 2024, at <https://www.reuters.com/markets/deals/dalmia-bharat-unit-buy-jaiprakash-cement-power-assets-687-mln-2022-12-12/>.)

Thomson Reuters, 2022b, India's UltraTech Cement pledges \$1.66 bln for expansion to fight rising competition: Thomson Reuters, June 2. (Accessed January 8, 2024, at <https://www.reuters.com/business/indias-ultratech-cement-pledges-166-bln-expansion-fight-rising-competition-2022-06-02/>.)

Times of India, The, 2016, Mines and Minerals Bill passed by Parliament: The Times of India [Mumbai, India], May 2. (Accessed November 19, 2023, at <https://timesofindia.indiatimes.com/city/delhi/Mines-and-Minerals-Bill-passed-by-Parliament/articleshow/52079758.cms>.)

Klochko, Kateryna 2024, Lead: U.S Geological Survey Mineral Commodity Summaries 2024, p. 106–107.

Tolcin, A.C., 2024, Zinc: U.S Geological Survey Mineral Commodity Summaries 2024, p. 202–203.

Tuck, Candice, 2024a, Iron and steel: U.S Geological Survey Mineral Commodity Summaries 2024, p. 94–95.

Tuck, Candice, 2024b, Iron ore: U.S Geological Survey Mineral Commodity Summaries 2024, p. 100–101.

White House, The, 2022, Fact sheet—In Asia, President Biden and a dozen Indo-Pacific partners launch the Indo-Pacific Economic Framework for Prosperity: Washington, DC, White House press release, May 23. (Accessed May 15, 2024, at <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/23/fact-sheet-in-asia-president-biden-and-a-dozen-indo-pacific-partners-launch-the-indo-pacific-economic-framework-for-prosperity/>.)

World Bank, The, 2022, Overview of state ownership in the global minerals industry: Washington, DC, The World Bank, 51 p. (Accessed May 14, 2024, at <https://documents1.worldbank.org/curated/en/339551468340825224/pdf/828480NWP0Extr00Box379875B00PUBLIC0.pdf>.)

World Bank, The, 2024, GDP (current US\$): Washington DC, The World Bank. (Accessed May 13, 2024, at <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=IN>.)

World Steel Association, 2023, Preliminary 2022 figures, March 2023: Brussels, Belgium, World Steel Association, March, 12 p.

Zachariah, R., 2022, Adani to foray into copper, ties up Rs 6,000 crore loan for plant: The Times of India [Mumbai, India], June 27. (Accessed January 7, 2024, at <https://timesofindia.indiatimes.com/business/india-business/adani-to-foray-into-copper-ties-up-6k-cr-loan-for-plant/articleshow/92480558.cms?from=mdr>.)

TABLE 1  
INDIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>2</sup>		2018	2019	2020	2021	2022
	METALS					
Aluminum:						
Bauxite	thousand metric tons	23,229	22,321	19,988	22,136	23,843
Alumina, Al <sub>2</sub> O <sub>3</sub> content	do.	6,510 <sup>r</sup>	6,690	6,590 <sup>r</sup>	7,146 <sup>r</sup>	7,590
Metal, primary	do.	3,584 <sup>r</sup>	3,524 <sup>r</sup>	3,431 <sup>r</sup>	3,962 <sup>r</sup>	4,064
Chromium, mine, chromite	do.	4,076	4,139	2,402	4,249	3,470
Cobalt, refinery, metal and salts, Co content		100	NA	NA	NA	NA
Copper:						
Mine, concentrate, Cu content		35,300	29,200	24,000 <sup>r</sup>	27,800 <sup>r</sup>	25,200 <sup>e</sup>
Smelter:						
Primary		481,500	342,300	243,200	363,000	398,400
Secondary		10,000	2,000	--	--	--
Total		492,000	344,000	243,000	363,000	398,000
Refinery:						
Primary		536,075 <sup>r</sup>	419,779 <sup>r</sup>	333,542	488,061 <sup>r</sup>	494,305
Secondary		10,000	2,000	--	--	--
Total		546,000 <sup>r</sup>	422,000 <sup>r</sup>	334,000 <sup>r</sup>	488,000 <sup>r</sup>	494,000
Ferroalloys:						
Ferroaluminum		3,221	1,962	1,101	1,278	851
Ferromanganese		537,000	542,000	567,000 <sup>r</sup>	943,000 <sup>r</sup>	965,000
Ferromolybdenum		1,086	631	403	442	575
Ferrosilicomagnesium		18,436	15,445	9,652	15,537 <sup>r</sup>	16,789
Ferrosilicon		90,000	93,000 <sup>e</sup>	90,000 <sup>e</sup>	90,000 <sup>e</sup>	90,000 <sup>e</sup>
Ferrotitanium		125	92	115	457	378
Ferrovanadium		1,150	587	662	779	917
Silicomanganese		2,133,000	1,889,000	1,770,000	2,276,000	2,568,000
Total		2,780,000	2,540,000 <sup>e</sup>	2,440,000	3,330,000 <sup>r, e</sup>	3,640,000 <sup>e</sup>
Gold:						
Mine, ore:						
Gross weight		562,681	594,858	450,611 <sup>r</sup>	486,377	572,009
Au content	kilograms	1,554	1,896	1,225 <sup>r</sup>	1,219 <sup>r</sup>	1,358
Refinery, bullion	do.	12,274	10,286	6,640 <sup>r</sup>	8,975 <sup>r</sup>	11,919
Iron ore, mine:						
Gross weight	thousand metric tons	204,091	232,755 <sup>r</sup>	203,835 <sup>r</sup>	249,475 <sup>r</sup>	252,317
Fe content <sup>e</sup>	do.	127,000	144,000 <sup>r</sup>	126,000	155,000	156,000
Iron and steel:						
Direct-reduced iron	do.	34,213	36,818	33,593	39,068	42,283
Pig iron	do.	72,610	74,156	67,782	77,849	79,888
Steel:						
Raw steel	do.	109,272	111,351	100,256	118,234	125,337
Products:						
Finished	do.	127,094	112,236	91,302	110,886 <sup>r</sup>	120,038
Semimanufactured	do.	88,857	109,631	100,122	117,714 <sup>r</sup>	125,078
Lead:						
Mine, Pb content		192,496	202,974	197,527	219,117 <sup>r</sup>	211,844
Refinery:						
Primary		195,055	184,901	200,000	202,968 <sup>r</sup>	189,785
Secondary		688,000	737,000	620,000	860,000	760,000
Total		883,000	922,000	820,000	1,060,000 <sup>r</sup>	950,000
Manganese, mine, ores and concentrate:						
Gross weight	thousand metric tons	3,924	3,134	1,809 <sup>r</sup>	1,759 <sup>r</sup>	2,543
Mn content	do.	1,224	962	548 <sup>r</sup>	495 <sup>r</sup>	721
Rare earths, monazite concentrate: <sup>e</sup>						
Gross weight		5,000	5,000	5,000	5,000	5,000
Rare-earth-oxide equivalent		2,900	2,900	2,900	2,900	2,900
Selenium, Se content <sup>e</sup>	kilograms	14,000 <sup>r</sup>	14,000 <sup>r</sup>	14,000	14,000	14,000

See footnotes at end of table.

TABLE 1—Continued  
INDIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>2</sup>		2018	2019	2020	2021	2022
METALS—Continued						
Silver:						
Smelter	kilograms	730,462 <sup>r</sup>	703,046 <sup>r</sup>	708,308 <sup>r</sup>	749,533 <sup>r</sup>	718,598
Refinery		730	703	155 <sup>r</sup>	750 <sup>r</sup>	719
Tin, mine, concentrate		18	20	13	19	49
Titanium, mineral concentrate: <sup>e</sup>						
Ilmenite and leucoxene		290,000	310,000 <sup>r</sup>	350,000 <sup>r</sup>	350,000 <sup>r</sup>	350,000
Rutile		12,000	13,000	13,000 <sup>r</sup>	13,000	13,000
Zinc:						
Mine, Zn content <sup>c</sup>		750,000	720,000	731,000	785,000 <sup>r</sup>	832,000
Refinery:						
Primary		727,693	691,030	692,075 <sup>r</sup>	759,887 <sup>r</sup>	816,963
Secondary, remelt <sup>c</sup>		18,100 <sup>r</sup>	21,000	17,900 <sup>r</sup>	19,400 <sup>r</sup>	21,000
Total <sup>f</sup>		746,000 <sup>r</sup>	712,000	710,000 <sup>r</sup>	779,000 <sup>r</sup>	838,000
Zirconium, zircon <sup>e</sup>		11,000 <sup>r</sup>	15,000 <sup>r</sup>	16,000 <sup>r</sup>	16,000	16,000
INDUSTRIAL MINERALS						
Abrasives, garnet	thousand metric tons	162	9 <sup>r</sup>	1	12	12
Barite <sup>e</sup>	do.	2,390	2,100	1,600	1,600	2,700
Bromine, elemental		2,266	2,813	2,779 <sup>r</sup>	3,513 <sup>r</sup>	6,959
Cement, hydraulic <sup>c</sup>	thousand metric tons	310,000	334,000	290,000	350,000	380,000
Clay:						
Ball clay	do.	4,140	4,530	4,500 <sup>e</sup>	4,500 <sup>e</sup>	4,500 <sup>e</sup>
Bentonite <sup>e</sup>	do.	3,500 <sup>r</sup>	3,700 <sup>r</sup>	3,700 <sup>r</sup>	3,700 <sup>r</sup>	3,700
Fire clay	do.	972	528	530 <sup>e</sup>	530 <sup>e</sup>	530 <sup>e</sup>
Fuller's earth <sup>e</sup>	do.	753	619	730	730	730
Kaolin: <sup>e</sup>						
Crude	do.	8,900	8,300	8,300	8,300	8,300
Processed	do.	74	74	74	73	73
Diamond:						
Gem	thousand carats	11 <sup>e</sup>	10 <sup>e</sup>	6 <sup>e</sup>	--	--
Industrial	do.	29 <sup>e</sup>	27 <sup>e</sup>	16 <sup>e</sup>	--	--
Feldspar		8,486,262	6,173,287	4,800,000 <sup>r, e</sup>	6,400,000 <sup>r, e</sup>	6,500,000 <sup>e</sup>
Fluorspar, metallurgical grade		1,270	1,424	917	1,421 <sup>r</sup>	988
Graphite: <sup>e</sup>						
Amorphous		800	800	600	700	700
Crystalline flake		7,100	7,200	5,400	6,300	10,300
Gypsum, mine <sup>e</sup>	thousand metric tons	2,530	4,250	4,300	4,300	4,300
Iron oxide pigments, natural, ocher		2,365,850	3,280,956	2,940,000	3,000,000 <sup>e</sup>	3,100,000 <sup>e</sup>
Kyanite and related minerals:						
Kyanite		5,827	2,681	4,941	8,586	5,507
Sillimanite		78,388	19,496	15,549	3,265	1,828
Lime <sup>e</sup>	thousand metric tons	16,000	16,000	15,000	16,000	16,000
Magnesite		172,947	106,379	75,590	110,021	112,892
Mica: <sup>e</sup>						
Crude	thousand metric tons	1	1	1	1	1
Scrap and waste	do.	15	15	15	16	14
Total	do.	16	16	16	17	15
Nitrogen, ammonia, N content	do.	11,900	12,200	12,200	12,100	13,700
Phosphate rock, including apatite:						
Gross weight	do.	1,423	1,484	1,407	1,363	1,778
P <sub>2</sub> O <sub>5</sub> content, 25% P <sub>2</sub> O <sub>5</sub>	do.	360	370	350 <sup>e</sup>	340 <sup>e</sup>	440 <sup>e</sup>

See footnotes at end of table.

TABLE 1—Continued  
INDIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>2</sup>		2018	2019	2020	2021	2022
INDUSTRIAL MINERALS—Continued						
Salt	thousand metric tons	30,000 <sup>r, e</sup>	30,033 <sup>r</sup>	30,000 <sup>r, e</sup>	26,564 <sup>r</sup>	26,599
Stone:						
Crushed:						
Calcite <sup>e</sup>		71,000	30,000 <sup>r</sup>	30,000	30,000	30,000
Chalk <sup>e</sup>		118,000	120,000	120,000	120,000	120,000
Dolomite	thousand metric tons	5,172	4,000 <sup>e</sup>	4,000 <sup>e</sup>	4,000 <sup>e</sup>	4,000 <sup>e</sup>
Limestone	do.	371,377	366,596	334,252	395,008	401,566
Size and shape unspecified, dunite		80,000 <sup>e</sup>	NA <sup>r</sup>	NA	NA	NA
Sulfur, byproduct, petroleum and fertilizer, S content		892,821	875,579	762,029	840,754	926,270
Talc and related minerals:						
Pyrophyllite		40,870	24,910 <sup>r</sup>	33,812 <sup>r</sup>	30,000 <sup>r, e</sup>	30,000 <sup>e</sup>
Soapstone and steatite		1,567,055	1,595,353	1,693,376 <sup>r</sup>	1,600,000 <sup>e</sup>	1,600,000 <sup>e</sup>
Vermiculite		5,159	2,232	1,560	3,486	2,091
Wollastonite		148,379	170,401	102,209	110,778	104,294
MINERAL FUELS AND RELATED MATERIALS						
Coal:						
Bituminous	thousand metric tons	716,051	523,484	720,597	766,536	863,450
Lignite	do.	46,032	40,279	37,366	44,673	47,395
Total	do.	762,000	564,000	758,000	811,000	911,000
Natural gas:						
Gross	million cubic meters	31,776	31,153 <sup>r</sup>	27,569	32,360 <sup>r</sup>	31,363
Marketable	do.	27,500	26,900	23,800	28,500	29,800
Petroleum:						
Crude	thousand 42-gallon barrels	254,000	297,000	226,000	219,000 <sup>r</sup>	215,000 <sup>e</sup>
Refinery <sup>e</sup>	do.	1,880,000 <sup>r</sup>	1,870,000 <sup>r</sup>	1,640,000 <sup>r</sup>	1,750,000 <sup>r</sup>	1,860,000
Uranium, mine, U content		423	308	400	615	600 <sup>e</sup>

<sup>e</sup>Estimated. <sup>r</sup>Revised. <sup>d</sup>o. Ditto. <sup>NA</sup> Not available. <sup>--</sup> Zero.

<sup>1</sup>Table includes data available through December 13, 2023. All data are reported unless otherwise noted. Totals and estimated data are rounded to three significant digits; may not add to totals shown.

<sup>2</sup>In addition to the commodities listed, boron, cadmium, corundum, gemstones (aquamarine, emerald, ruby, and spinel), granite, sand and gravel (construction, industrial), soda ash (synthetic), and sulfur (byproduct, metallurgy) may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina	Bharat Aluminium Co. Ltd. (Vedanta Ltd., 51%, and Government, 49%)	Korba I and II refineries, Chhattisgarh	200
Do.	Hindalco Industries Ltd. (Aditya Birla Group, 35%; foreign institutions, 30%; domestic institutions, 27%; others, 8%)	Belagavi refinery, Karnataka	350
Do.	do.	Muri refinery, Jharkhand	575
Do.	do.	Renukoot refinery, Uttar Pradesh	900
Do.	Madras Aluminium Co. Ltd. (Vedanta Ltd., 100%)	Mettur refinery, Tamil Nadu	80
Do.	National Aluminium Co. Ltd. (Government, 51.28%)	Damanjodi refinery, Odisha	2,275
Do.	Utkal Alumina International Ltd. (Hindalco Industries Ltd., 100%)	Koraput refinery, Odisha	2,270
Do.	Vedanta Aluminium Ltd. (Vedanta Ltd., 100%)	Lanjigarh refinery, Kalahandi, Odisha	2,000
Aluminum	Bharat Aluminium Co. Ltd. (Vedanta Ltd., 51%, and Government, 49%)	Korba I refinery, Chhattisgarh	245
Do.	do.	Korba II refinery, Chhattisgarh	345
Do.	Hindalco Industries Ltd. (Aditya Birla Group, 35%; foreign institutions, 30%; domestic institutions, 27%; others, 8%)	Aditya smelter, Sambalpur, Odisha	720
Do.	do.	Hirakud smelter, Odisha	360
Do.	do.	Mahan smelter, Bargawan, Madhya Pradesh	360
Do.	do.	Renukoot smelter, Uttar Pradesh	472
Do.	Madras Aluminium Co. Ltd. (Vedanta Ltd., 100%)	Mettur smelter, Tamil Nadu	40
Do.	National Aluminium Co. Ltd. (Government, 51.28%)	Angul smelter, Odisha	460
Do.	Vedanta Aluminium Ltd. (Vedanta Ltd., 100%)	Jharsuguda I smelter, Odisha	550
Do.	do.	Jharsuguda II smelter, Odisha	1,200
Barite	Andhra Pradesh Mineral Development Corp. Ltd. (Andhra Pradesh State government, 100%)	Mangampeta Mine, Andhra Pradesh	3,000
Do.	IBC Ltd. (Government, 100%)	Mines in Kadapa District, Andhra Pradesh	NA
Do.	Ramadas Minerals Pvt. Ltd. (privately owned, 100%)	Mines in Nellore District, Andhra Pradesh	NA
Do.	Sudarsan Barytes Co.	Mine in Nellore District, Andhra Pradesh	NA
Do.	Viswabharati Mining Corp. Ltd.	Mine in Khammam District, Telangana	NA
Bauxite	Ashapura Minechem Ltd. (Ashapura Group, 100%)	Jamangar and Rata-Talab Mines, Raigarh, Gujarat	NA
Do.	do.	Mines in Dapoli and Shrivardhan, Maharashtra	NA
Do.	Bharat Aluminium Co. Ltd. (Vedanta Ltd., 51%, and Government, 49%)	Mainpat Mine, Chhattisgarh	750
Do.	do.	Bodai Daldali (Kawardha) Mine, Chhattisgarh	1,250
Do.	Bombay Minerals Ltd. (Ashapura Group, 100%)	Asota Mewasa Mine, Gujarat	NA
Do.	Gujarat Mineral Development Corp. (Gujarat State government, 75%, and public and institutional investors, 25%)	Mines in Gadhsisa and Mevasa Mine in Devbhumi Dwarka	NA
Do.	Hindalco Industries Ltd. (Aditya Birla Group, 35%; foreign institutions, 30%; domestic institutions, 27%; others, 8%)	Amtipani Chirodih Mine in Lohardaga District, Jharkhand	450
Do.	do.	Amtipani Mine in Lohardaga District, Jharkhand	150
Do.	do.	Bhusar Mine in Lohardaga District, Jharkhand	280
Do.	do.	Binarla Mine in Lohardaga District, Jharkhand	300
Do.	do.	Gurdari Mine in Lohardaga District, Jharkhand	325
Do.	do.	Hisri New Mine in Lohardaga District, Jharkhand	100
Do.	do.	Jalim & Sanai Mine in Lohardaga District, Jharkhand	50
Do.	do.	Kudag Mine in Balrampur-Ramanujganj District, Chhattisgarh	60

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
Bauxite—Continued		Hindalco Industries Ltd. (Aditya Birla Group, 35%; foreign institutions, 30%; domestic institutions, 27%; others, 8%)	Kujam I Mine in Lohardaga District, Jharkhand	150
Do.	do.		Kujam II Mine in Lohardaga District, Jharkhand	150
Do.	do.		Samri Mine in Balrampur-Ramanujganj District, Chhattisgarh	500
Do.	do.		Shrendag Mine in Lohardaga District, Jharkhand	260
Do.	do.		Tatijharia Mine in Balrampur-Ramanujganj District, Chhattisgarh	400
Do.	Madras Aluminium Co. Ltd. (Vedanta Ltd., 100%)		Kolli Mine in Namakkal District, Tamil Nad	NA
Do.	do.		Yercaud Mine in Salem District, Tamil Nad	NA
Do.	Minerals & Minerals Ltd. (Hindalco Industries Ltd., 100%)		Pakhar Mines in Lohardaga District, Jharkhand	340
Do.	National Aluminium Co. Ltd. (Government, 51.28%)		Mines in Panchpatmali Hills, Damanjodi, Koraput District, Odisha	7,500
Do.	Odisha Mining Corp. Ltd. (Odisha State government, 100%)		Kodingamali Mine, Koraput District, Odisha	3,000
Do.	Orient Ceratech Ltd. (Bombay Minerals Ltd., 31.76%; Cura Global Holdings Ltd., 23.73%; others, 44.51%)		Avariyar-I, Varada-IV, and Rata-Talab Mines, Gujarat	NA
Do.	Panditrao Mines and Minerals Pvt. Ltd.		Minche Budruk Mine, Kolhapur District, Maharashtra	NA
Do.	Prabhudas Vithaldas		Kenedy Virpur Mine, Gujarat	840
Do.	do.		Mota Asota Mine, Gujarat	1,010
Do.	Utkal Alumina International Ltd. (Hindalco Industries Ltd., 100%)		Baphlimali Mine, Rayagada District, Odisha	8,500
Boron	Borax Morarji Ltd.		Ambernath refinery, Maharashtra	24
Bromine	metric tons	Hindustan Salt Ltd. (Government, 100%)	Plant in Kharaghoda, Gujarat	900
Do.	do.	Jagannath Halogen Pvt. Ltd. (Jagannath Salt Group)	do.	750
Do.	do.	Satyesh Brinechem Pvt. Ltd.	Plant in Greater Rann, Kutch, Gujarat	21
Cadmium	metric tons	Hindustan Zinc Ltd. (HZL) (Vedanta Ltd., 64.9%, and Government, 29.6%)	Chanderiya smelter, Rajasthan	468
Do.	do.	do.	Debari smelter, Rajasthan	250
Cement		ACC Ltd. (Adani Group, 100%)	Bargarh plant, Odisha	2,500
Do.	do.		Chaibasa plant in Singhbhum, Jharkhand	1,200
Do.	do.		Chanda plant in Chandrapur, Maharashtra	3,800
Do.	do.		Damodar plant in Purulia, West Bengal	700
Do.	do.		Gagal I & II plants in Bilaspur, Himachal Pradesh	4,400
Do.	do.		Jamul plant in Durg, Chhattisgarh	3,000
Do.	do.		Kudithini plant in Bellary, Karnataka	3,000
Do.	do.		Kymore plant in Katni, Madhya Pradesh	2,720
Do.	do.		Lakheri plant in Bundi, Rajasthan	1,500
Do.	do.		Madukkarai plant in Coimbatore, Tamil Nad	1,000
Do.	do.		Sindri plant in Dhanbad, Jharkhand	3,000
Do.	do.		Thondebhavi plant in Chikballapur, Karnatal	1,660
Do.	do.		Tikaria plant in Sultanpur, Uttar Pradesh	2,640
Do.	do.		Wadi I & II plants in Wadi, Karnataka	5,450
Do.	Adhunik Cement Ltd. (Dalmia Bharat Ltd., 100%)		Plant in Jaintia Hills, Meghalaya	1,500
Do.	Alsthom Industries Ltd. (Dalmia Bharat Ltd., 100%)		Plant in Marigaon District, Assam	532
Do.	Ambuja Cements Ltd. (Adani Group, 100%)		Ambujanagar I & II plants in Junagadh District, Gujarat	5,700
Do.	do.		Bhatapara plant in Raipur District, Chhattisgarh	3,500
Do.	do.		Bhatinda plant in Bhatinda District, Punjab	1,200
Do.	do.		Dadri plant in Gautam Buddha Nagar District, Uttar Pradesh	1,500

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement—Continued	Ambuja Cements Ltd. (Adani Group, 100%)	Darlaghat plant in Solan District, Himachal Pradesh	6,800
Do.	do.	Farakka plant in Murshidabad District, West Bengal	1,250
Do.	do.	Magdalla plant in Surat District, Gujarat	1,560
Do.	do.	Maratha plant in Chandrapur District, Maharashtra	4,750
Do.	do.	Marwar plant in Nagaur District, Rajasthan	1,800
Do.	do.	Nalagarh plant in Solan District, Himachal Pradesh	1,500
Do.	do.	Rabriyawas plant in Pali District, Rajasthan	3,600
Do.	do.	Rauri plant in Rauri District, Himachal Pradesh	1,600
Do.	do.	Roorkee plant in Haridwar District, Uttarakhand	1,000
Do.	do.	Ropar plant in Ropar District, Punjab	3,000
Do.	do.	Sankrail plant in Howrah, West Bengal	2,400
Do.	Amrit Cement Ltd.	Plant in Jaintia Hills, Meghalaya	900
Do.	Andhra Cements Ltd. (Jaypee Group, 100%)	Durga Cement Works, Andhra Pradesh	2,310
Do.	do.	Vishaka Cement Works, Andhra Pradesh	540
Do.	Anjani Portland Cement Ltd. (Chettinad Cement Corp. Pvt. Ltd., 75%)	Anjani Cement Works, Nalgonda District, Telangana	1,160
Do.	Asian Concrete and Cement Pvt. Ltd. (ACC Ltd., 45%)	Plant in Nalagarh District, Himachal Pradesh	1,400
Do.	Asian Fine Cement Pvt. Ltd. (Asian Concrete and Cement Pvt. Ltd., 100%)	Plant in Rajpura District, Punjab	1,200
Do.	Bharathi Cement Corp. Pvt. Ltd. (Vicat S.A., 51%)	Kadapa plant, Andhra Pradesh	5,000
Do.	Bhavya Cement Pvt. Ltd. (Anjani Portland Cement Ltd., 99%)	Bhavya plant, Guntur, Andhra Pradesh	1,400
Do.	Bhilai Jaypee Cement Ltd. (Jaypee Group, 100%)	Plant in Bhilai, Durg District, Chhattisgarh <sup>1</sup>	2,200
Do.	Binani Cement Ltd. (Braj Binani Group)	Sikar plant, Rajasthan	6,000
Do.	Birla Corp. Ltd. (M.P. Birla Group, 100%)	Chanderia plant in Chittorgarh District, Rajasthan	4,000
Do.	do.	Durgapur plant in Bardhaman District, West Bengal	2,300
Do.	do.	Raebareli plant in Raebareli District, Uttar Pradesh	1,300
Do.	do.	Satna plant in Satna District, Madhya Pradesh	2,200
Do.	BMM Cement Ltd. (Sagar Group, 100%)	Antapur plant, Andhra Pradesh	1,000
Do.	Burnpur Cement Ltd.	Asansol plant in Burdwan District, West Bengal	300
Do.	do.	Patratu plant in Ramgarh District, Jharkhand	300
Do.	Calcom Cement India Ltd. (Dalmia Bharat Ltd., 100%)	Plant in Nagaon District, Assam	1,400
Do.	Cement Corp. of India Ltd. (Government, 100%)	Bokajan plant in Karbi District, Assam	200
Do.	do.	Rajban plant in Sirmaur District, Himachal Pradesh	250
Do.	do.	Tandur plant in Rangareddy District, Telangana	1,000
Do.	Century Textiles and Industries Ltd. (UltraTech Cement Ltd., 100%)	Plant in Chandrapur District, Maharashtra	6,000
Do.	do.	Plant in Murshidabad District, West Bengal	1,500
Do.	do.	Plant in Raipur District, Chhattisgarh	2,400
Do.	do.	Plant in Satna District, Madhya Pradesh	4,200
Do.	Chettinad Cement Corp. Ltd. (Chettinad Group, 100%)	Ariyalur plant in Ariyalur District, Tamil Nadu	5,500
Do.	do.	Dacheppalli plant in Guntur District, Andhra Pradesh	3,500
Do.	do.	Kallur plant in Gulbarga District, Karnataka	2,500

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement—Continued	Chettinad Cement Corp. Ltd. (Chettinad Group, 100%)	Karikkali plant in Dindigul District, Tamil Nadu	4,500
Do.	do.	Puliyur plant in Karur District, Tamil Nadu	1,700
Do.	do.	Solapur plant in Solapur District, Maharashtra	1,000
Do.	Dalmia Cement (Bharat) Ltd. (Dalmia Bharat Ltd., 100%)	Ariyalur plant in Ariyalur District, Tamil Nadu	3,400
Do.	do.	Belagavi plant in Belagavi District, Karnataka	4,000
Do.	do.	Bokaro plant in Bokaro District, Jharkhand	2,100
Do.	do.	Dalmiapuram plant in Trichy District, Tamil Nadu	3,400
Do.	do.	JP Super Cement Plant, Uttar Pradesh	5,300
Do.	do.	Kadapa plant in Kadapa District, Andhra Pradesh	4,000
Do.	do.	Rajganpur plant in Sundargarh District, Odisha	6,250
Do.	Deccan Cements Ltd.	Nalgonda plant, Telangana	1,800
Do.	Dhandapani Cement Ltd.	Plant in Manachanallur District, Tamil Nadu	20
Do.	ECO Cement Ltd.	Plant in Bhabhua District, Bihar	60
Do.	Green Valliey Industries Ltd. (GNG Group)	Plant in Jaintia Hills, Meghalaya	1,000
Do.	Grey Gold Cements Ltd.	Plant in Nalgonda District, Telangana	50
Do.	Gujarat Jaypee Cement & Infrastructure Ltd. (joint venture between Jaiprakash Associates Ltd. and Gujarat Mineral Development Corp. Ltd.)	Plant in Kutch District, Gujarat	2,400
Do.	Gujarat Sidhee Cement Ltd. (Mehta Group, 100%)	Junagadh plant, Gujarat	1,200
Do.	HeidelbergCement India Ltd. (Heidelberg Materials, 100%)	Ammasandra plant in Tumkur District, Karnataka	510
Do.	do.	Imlai plant in Damoh District, Madhya Pradesh	3,000
Do.	do.	Jhansi plant in Jhansi District, Uttar Pradesh	2,700
Do.	Hemadri Cement Ltd. (SRMPR Construction Pvt. Ltd., 40.8%, and SRM TRP Properties and Investments Pvt. Ltd., 22.4%)	Vedadri plant, Andhra Pradesh	190
Do.	Hi-Bond Cement Ltd.	Patidad plant in Gondal District, Gujarat	1,500
Do.	Hills Cement Co. Ltd.	Plant in Jaintia Hills, Meghalaya	490
Do.	India Cements Co. Ltd.	Banswara plant in Banswara District, Rajasthan	1,500
Do.	do.	Chilamkur plant in Kadapa District, Andhra Pradesh	1,460
Do.	do.	Davaloi plant in Ariyalur District, Tamil Nadu	1,850
Do.	do.	Malkapur plant in Rangareddy District, Telangana	2,400
Do.	do.	Parli plant in Beed District, Maharashtra	1,100
Do.	do.	Sankaridurg plant in Salem District, Tamil Nadu	860
Do.	do.	Sankarnagar plant in Tirunelveli District, Tamil Nadu	2,050
Do.	do.	Vallur plant in Chennai District, Tamil Nadu	1,100
Do.	do.	Vishnupuram plant in Nalgonda District, Telangana	2,500
Do.	do.	Yerraguntha plant in Kadapa District, Andhra Pradesh	730
Do.	Jaiprakash Associates Ltd. (Jaypee Group, 100%)	Chunar plant in Mirzapur District, Uttar Pradesh	2,500
Do.	do.	Churk plant in Mirzapur District, Uttar Pradesh	1,000

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement—Continued	Jaiprakash Associates Ltd. (Jaypee Group, 100%)	Rewa plant in Rewa District, Madhya Pradesh	1,700
Do.	Jaykaycem (Central) Ltd. (JK Cement Ltd., 100%)	Plant in Hamirpur District, Uttar Pradesh	2,000
Do.	do.	Plant in Panna District, Madhya Pradesh	2,000
Do.	Jaypee Cement Corp. Ltd. (Jaypee Group, 100%)	Plant in Shahabad District, Karnataka	1,200
Do.	JK Cement Ltd.	Balasinor plant in Mahisagar District, Gujarat	700
Do.	do.	Gotan plant in Nagaur District, Rajasthan	880
Do.	do.	Jharli plant in Jhajjar District, Haryana	1,500
Do.	do.	Mangrol plant in Junagadh District, Gujarat	1,000
Do.	do.	Muddapur plant in Bagalkot District, Rajasthan	3,000
Do.	do.	Nimbahera plant in Chittorgarh District, Rajasthan	1,000
Do.	do.	Plant in Aligarh District, Uttar Pradesh	1,500
Do.	do.	Plant in Katni District, Madhya Pradesh	2,000
Do.	JK Lakshmi Cement Ltd. (JK Organization)	Durg plant in Durg District, Chhattisgarh	2,700
Do.	do.	Jhajjar plant in Jhajjar District, Haryana	1,300
Do.	do.	Kalol plant in Gandhinagar District, Gujarat	800
Do.	do.	Plant in Cuttack District, Odisha	800
Do.	do.	Sirohi plant in Sirohi District, Rajasthan	4,700
Do.	do.	Surat plant in Surat District, Gujarat	1,400
Do.	JSW Cement Ltd.	Dolvi plant in Raigad District, Maharashtra	4,500
Do.	do.	Jaipur plant in Kalinganagar District, Odisha	1,500
Do.	do.	Nandyal plant in Kurnool District, Andhra Pradesh	4,200
Do.	do.	Salboni plant in Paschim Medinipur District, West Bengal	3,600
Do.	do.	Vijayanagar plant in Bellary District, Karnataka	4,000
Do.	JUD Cements Ltd. (UD Group)	Plant in Jaintia Hills, Meghalaya	500
Do.	Kakatiya Cement Sugar & Industries Ltd.	Kakatiya plant, Telangana	297
Do.	Kalburgi Cement Pvt. Ltd. (Vicat S.A., 100%)	Gulbarga plant, Karnataka	3,500
Do.	Kalyanpur Cements Ltd. (Dalmia Bharat Ltd., 100%)	Banjari plant in Kalyanpur District, Bihar	1,100
Do.	Kanodia Cement Pvt. Ltd. (Kanodia Group, 100%)	Plant in Amethi District, Uttar Pradesh	1,500
Do.	do.	Plant in Bulandshahr District, Uttar Pradesh	600
Do.	Kanodia Infratech Ltd. (Kanodia Group, 100%)	Plant in Bhabhua District, Bihar	2,200
Do.	KCP Ltd.	Macherla plant in Palnadu District, Andhra Pradesh	800
Do.	do.	Muktyala plant in Krishna District, Andhra Pradesh	3,520
Do.	Keerthi Industries Ltd.	Plant in Nalgonda District, Telangana	594
Do.	Kesoram Industries Ltd. (B.K. Birla Group)	Kesoram plant in Karimnagar District, Telangana	1,500
Do.	do.	Vasavadatta plant in Kalaburagi District, Karnataka	8,650
Do.	Khyber Industries Pvt. Ltd.	Plant in Srinagar District, Jammu and Kashmir	330
Do.	KJS Cement Ltd.	Plant in Satna District, Madhya Pradesh	3,500
Do.	Malabar Cements Ltd.	Cherthala plant in Alappuzha District, Kerala	200
Do.	do.	Walayar plant in Palakkad District, Kerala	660
Do.	Mangalam Cement Ltd.	Plant in Aligarh District, Uttar Pradesh	750
Do.	do.	Plant in Morak District, Rajasthan	3,650
Do.	Meghalaya Cements Ltd.	Plant in Jaintia Hills, Meghalaya	858
Do.	Murli Industries Ltd. (Dalmia Bharat Ltd., 90%)	Plant in Chandrapur District, Maharashtra	3,000
Do.	My Home Industries Ltd. (joint venture of My Home Group and CRH plc)	Mellacheruvu plant in Nalgonda District, Telangana	3,200

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement—Continued	My Home Industries Ltd. (joint venture of My Home Group and CRH plc)	Mulakalapalli plant in Visakhapatnam District, Andhra Pradesh	2,000
Do.	do.	Ottapidaram plant in Thoothukudi District, Tamil Nadu	1,500
Do.	do.	Plant in Kurnool District, Andhra Pradesh	3,200
Do.	NCL Industries Ltd.	Kondapalli plant in Krishna District, Andhra Pradesh	1,000
Do.	do.	Simhapuri plant in Suryapet District, Telangana	1,700
Do.	Nu Vista Ltd. (Nirma Group, 100%)	Bhabhua plant in Kaimur District, Bihar	1,300
Do.	do.	Jajpur plant in Jajpur District, Odisha	2,000
Do.	do.	Panagarh plant in Purba Bardhaman District, West Bengal	2,000
Do.	do.	Risda plant in Baloda Bazar District, Chhattisgarh	3,000
Do.	Nuvoco Vistas Corp. Ltd. (Nirma Group, 100%)	Arasmeta plant in Janjgir-Champa District, Chhattisgarh	1,800
Do.	do.	Bhiwani plant in Bhiwani District, Haryana	1,590
Do.	do.	Chittorgarh plant in Nimbahera District, Chhattisgarh	2,600
Do.	do.	Jojobera plant in East Singhbhum District, Jharkhand	4,600
Do.	do.	Mejia plant in Bankura District, West Bengal	1,650
Do.	do.	Nimbol plant in Beawar District, Rajasthan	2,280
Do.	do.	Sonadih plant in Baloda Bazar-Bhatapara District, Chhattisgarh	1,000
Do.	OCL India Ltd. (Dalmia Bharat Ltd., 100%)	Godapisal plant in Paschim Medinpur District, West Bengal	4,000
Do.	do.	Kapilas plant in Cuttack District, Odisha	1,700
Do.	do.	Rajganpur plant in Sundargarh District, Odisha	6,500
Do.	Orient Cement (CK Birla Group, 100%)	Chittapur plant in Kalaburagi District, Karnataka	3,000
Do.	do.	Devapur plant in Adilabad District, Telangana	3,000
Do.	do.	Nashirabad plant in Jalgaon District, Maharashtra	2,000
Do.	Panyam Cements & Mineral Industries Ltd.	Plant in Kurnool District, Andhra Pradesh	531
Do.	Parasakti Cement Industries Ltd.	Plant in Guntur District, Andhra Pradesh	1,600
Do.	Penna Cement Industries Ltd.	Boyareddypalli plant in Anantapur District, Andhra Pradesh	2,000
Do.	do.	Ganeshpahad plant in Nalgonda District, Telangana	1,200
Do.	do.	Krishnapatnam Port plant in Nellore District, Andhra Pradesh	2,000
Do.	do.	Patas plant in Pune District, Maharashtra	1,000
Do.	do.	Talaricheruvu plant in Anantapur District, Andhra Pradesh	1,800
Do.	do.	Tandur plant in Rangareddy District, Telangana	2,000
Do.	Prism Johnson Ltd. (Rajan Raheja Group, 74.87%)	Plant in Satna District, Madhya Pradesh	5,600
Do.	Rain Cements Ltd. (Rain Industries Ltd., 100%)	Plant in Kurnool District, Andhra Pradesh	2,770
Do.	do.	Plant in Nalgonda District, Telangana	1,500
Do.	Ramco Cements Ltd. (Ramco Group, 100%)	Alathiyur plant in Ariyalur District, Tamil Nadu	3,050
Do.	do.	Ariyalur plant in Ariyalur District, Tamil Nadu	3,500

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement—Continued	Ramco Cements Ltd. (Ramco Group, 100%)	Chengalpattu plant in Kanchipuram District, Tamil Nadu	500
Do.	do.	Haridaspur plant in Jajpur District, Odisha	900
Do.	do.	Jayanthipuram plant in Krishna District, Andhra Pradesh	3,650
Do.	do.	Kalavatala plant in Nandyal District, Andhra Pradesh	1,500
Do.	do.	Kolaghat plant in Purba Medinpur District, West Bengal	1,950
Do.	do.	Mathodu plant in Chitradurga District, Karnataka	450
Do.	do.	Ramasamy Raja Nagar plant in Virudhunagar District, Tamil Nadu	3,000
Do.	do.	Valapady plant in Salem District, Tamil Nadu	1,600
Do.	do.	Vizag plant in Visakhapatnam District, Andhra Pradesh	2,000
Do.	Reliance Cement Co. Pvt. Ltd. (Birla Corp. Ltd., 100%)	Butibori plant in Nagpur District, Maharashtra	500
Do.	do.	Kundanganj plant in Raebareli District, Uttar Pradesh	2,000
Do.	do.	Maihar plant in Satna District, Madhya Pradesh	3,000
Do.	Sagar Cements Ltd. (Sagar Group, 100%)	Bayyavaram plant, Andhra Pradesh	1,400
Do.	do.	Dachepalli plant, Andhra Pradesh	1,800
Do.	do.	Gudipadu plant, Andhra Pradesh	1,250
Do.	do.	Jajpur plant, Jajpur District, Odisha	1,500
Do.	do.	Jeerabad plant, Madhya Pradesh	1,000
Do.	do.	Mattampally plant, Telangana	3,000
Do.	do.	Visakhapatnam plant, Andhra Pradesh	800
Do.	Sanghi Industries Ltd.	Plant in Kachchh District, Gujarat	6,100
Do.	Saurashtra Cement Ltd. (Mehta Group, 100%)	Porbandar plant, Gujarat	1,300
Do.	Shiva Cement Ltd. (JSW Cement Ltd., 59.32%)	Kutra plant in Sundargarh District, Odisha	200
Do.	Shree Cement Ltd.	Beawar plant in Ajmer District, Rajasthan	3,600
Do.	do.	Burudih plant in Saraikela-Kharsawan District, Jharkhand	4,000
Do.	do.	Jobner plant in Jaipur District, Rajasthan	1,500
Do.	do.	Khushkhera plant in Alwar District, Rajasthan	3,500
Do.	do.	Kodla plant in Kalaburagi District, Karnataka	4,000
Do.	do.	Laksar (Roorkee) plant in Haridwar District, Uttarakhand	1,800
Do.	do.	Plant in Aurangabad District, Bihar	4,900
Do.	do.	Plant in Baloda Bazar District, Chhattisgarh	4,000
Do.	do.	Plant in Bulandshahr District, Uttar Pradesh	3,000
Do.	do.	Plant in Cuttack District, Odisha	3,000
Do.	do.	Plant in Panipat District, Haryana	2,500
Do.	do.	Plant in Pune District, Maharashtra	3,000
Do.	do.	Ras plant in Pali District, Rajasthan	4,000
Do.	do.	Suratgarh plant in Sri Ganganagar District, Rajasthan	3,600
Do.	Shree Digvijay Cement Co. Ltd.	Plant in Sikka District, Gujarat	3,000
Do.	Shriram Cement Ltd. (DCM Shriram Ltd.)	Shriram Cement Works in Kota District, Rajasthan	400
Do.	Sri Chakra Cements Ltd.	Annamarajupet plant in Vizianagaram District, Andhra Pradesh	260
Do.	do.	Narasimhapuri plant in Guntur District, Andhra Pradesh	310

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement—Continued	Star Cement	Lumshnong plant in Jaintia Hills District, Meghalaya	1,670
Do.	do.	Mohitnagar plant in Jalpaiguri District, West Bengal	2,000
Do.	do.	Sonapur plant in Subarnapur District, Odisha	2,000
Do.	Tamilnadu Cements Corp. Ltd. (Tamil Nadu State government, 100%)	Alankulam plant in Virudhunagar District, Tamil Nadu	400
Do.	do.	Ariyalur I plant in Ariyalur District, Tamil Nadu	500
Do.	do.	Ariyalur II plant in Ariyalur District, Tamil Nadu	1,000
Do.	Tamil Nadu Newsprint & Papers Ltd.	Kagithapuram plant in Karur District, Tamil Nadu	330
Do.	Tata Chemicals Ltd.	Plant in Mithapur District, Gujarat	500
Do.	Udaipur Cement Works Ltd. (JK Lakshmi Cement Ltd., 72.54%)	Dabok plant in Udaipur District, Rajasthan	2,200
Do.	UltraTech Cement Ltd.	Aditya plant in Chittorgarh District, Rajasthan	8,000
Do.	do.	Aligarh plant in Kasimpur District, Uttar Pradesh	1,300
Do.	do.	Arakkonam plant in Vellore District, Tamil Nadu	1,100
Do.	do.	Awarpur plant in Chandrapur District, Maharashtra	6,000
Do.	do.	Baga plant in Solan District, Himachal Pradesh	2,540
Do.	do.	Bagheri plant in Solan District, Himachal Pradesh	2,000
Do.	do.	Balaji plant in Krishna District, Andhra Pradesh	5,000
Do.	do.	Bara plant in Prayagraj District, Uttar Pradesh	4,000
Do.	do.	Bela plant in Rewa District, Madhya Pradesh	2,600
Do.	do.	Dadri plant in Gautam Buddha Nagar District, Uttar Pradesh	1,300
Do.	do.	Dalla plant in Sonbhadra District, Uttar Pradesh	1,800
Do.	do.	Dankuni plant in Hooghly District, West Bengal	1,600
Do.	do.	Dhar (Manawar) plant in Dhar District, Madhya Pradesh	3,550
Do.	do.	Ginigera plant in Koppal District, Karnataka	1,300
Do.	do.	Gujararat Cement Works in Amreli District, Gujarat	6,400
Do.	do.	Hirmi plant in Baloda Bazar-Bhatapara District, Chhattisgarh	2,750
Do.	do.	Hotgi plant in Solapur District, Maharashtra	4,000
Do.	do.	Jafrabad plant in Amreli District, Gujarat	1,500
Do.	do.	Jaitaran (Pali) plant in Beawar District, Rajasthan	1,900
Do.	do.	Jharli plant in Jhajjar District, Haryana	1,600
Do.	do.	Jharsuguda plant in Jharsuguda District, Odisha	2,600
Do.	do.	Kotputli plant in Jaipur District, Rajasthan	4,400
Do.	do.	Magdalla plant in Surat District, Gujarat	750

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement—Continued	UltraTech Cement Ltd.	Patliputra plant in Patna District, Bihar	2,500
Do.	do.	Plant in Anantapur District, Andhra Pradesh	9,000
Do.	do.	Plant in Bathinda District, Punjab	1,750
Do.	do.	Plant in Dhule District, Maharashtra	1,800
Do.	do.	Plant in Jodhpur, Rajasthan	680
Do.	do.	Plant in Nagpur District, Maharashtra	2,000
Do.	do.	Plant in Panipat District, Haryana	1,300
Do.	do.	Plant in Ratnagiri District, Maharashtra	480
Do.	do.	Plant in Sidhi District, Madhya Pradesh	3,500
Do.	do.	Rajashree plant in Kalaburagi District, Karnataka	6,100
Do.	do.	Rawan plant in Baloda Bazar-Bhatapara District, Chhattisgarh	3,300
Do.	do.	Reddipalayam plant in Ariyalur District, Tamil Nadu	1,400
Do.	do.	Roorkee plant in Haridwar District, Uttarakhand	1,100
Do.	do.	Sewagram plant in Kachchh District, Gujarat	2,400
Do.	do.	Sikandrabad plant in Bulandshahr District, Uttar Pradesh	1,000
Do.	do.	Tanda (Ayodhya) plant in Ambedkar Nagar District, Uttar Pradesh	1,000
Do.	do.	Vikram plant in Neemuch District, Madhya Pradesh	6,700
Do.	do.	Wanakbori plant in Kheda District, Gujarat	2,400
Do.	do.	West Bengal Cement Works in Burdwan District, West Bengal	1,400
Do.	UltraTech Nathdwara Cement Ltd. (UltraTech Cement Ltd., 100%)	Nathdwara plant in Sirohi District, Rajasthan	4,850
Do.	do.	Neem Ka Thana plant in Sikar District, Rajasthan	1,400
Do.	Vijay Cements Ltd.	Plant in Trichy District, Tamil Nadu	270
Do.	Vinay Cement Ltd.	Vinay plant in Dima Hasao District, Assam	1,000
Do.	Wonder Cement Ltd. (R.K. Group)	Nimbahera plant in Chittorgarh District, Rajasthan	8,000
Do.	do.	Plant in Aligarh District, Uttar Pradesh	2,000
Do.	do.	Plant in Bhadnawar District, Madhya Pradesh	2,000
Do.	do.	Plant in Dhule District, Maharashtra	2,000
Do.	do.	Plant in Jhajjar District, Haryana	2,500
Do.	Zuari Cement Ltd. (Heidelberg Materials, 100%)	Chennai plant in Thiruvallur District, Tamil Nadu	1,000
Do.	do.	Plant in Solapur District, Maharashtra	950
Do.	do.	Sitapuram plant in West Godavari District, Andhra Pradesh	1,500
Do.	do.	Yerraguntla plant in Krishnagar District, West Bengal	4,600
Chromite	Balasore Alloys Ltd.	Kaliapani Mine, Sukinda Valley, Jajpur District, Odisha	600
Do.	Ferro Alloys Corp. Ltd.	Ostapal Mine in Jajpur District, Odisha	240
Do.	do.	Kalarangiatta Mine in Jajpur District, Odisha	15
Do.	Indian Metals & Ferro Alloys Ltd.	Mahagiri Mine in Jajpur District, Odisha	600
Do.	do.	Sukinda Mine in Jajpur District, Odisha	370
Do.	Jindal Stainless Ltd.	Kaliapani Mine in Jajpur District, Odisha	100
Do.	Misrilall Mines Pvt. Ltd. (Misrilall Jain Group, 100%)	Saruabil Mine in Jajpur District, Odisha	350

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Chromite—Continued	Odisha Mining Corp. Ltd. (Odisha State government, 100%)	South Kaliapani Mine in Jajpur District, Odisha	1,400
Do.	do.	Sukrangi Mine in Jajpur District, Odisha	300
Do.	Tata Steel Mining Ltd. (Tata Steel Ltd., 100%)	Kamarda Mine in Jajpur District, Odisha	300
Do.	do.	Saruabil Mine in Jajpur District, Odisha	1,000
Do.	do.	Sukinda Mine in Jajpur District, Odisha	650
Clay:			
Ball clay	Bikaner Ceramics Pvt. Ltd.	Mine in Kolayat, Rajasthan	75
Do.	Sampat Lal Daga Group	Mine in Bikaner, Rajasthan	NA
Bentonite	Ashapura International Ltd. (Ashapura Minechem Ltd., 100%)	Mines in Kachchh District, Gujarat	350
Do.	Gimpex Ltd.	Mine in Chennai	NA
Do.	Gujarat Mineral Development Corp. Ltd.	Mine in Surkha, Bhavnagar District, Gujarat	750
Do.	Vijaylaxmi Group of Industries	Mine in West Rajasthan	NA
Fire clay	Parijat Mining Industries (India) Pvt. Ltd.	Mine in Latehar, Jharkhand	10
Do.	Sampat Lal Daga Group	Mine in Kotri, Bikaner, Rajasthan	35
Do.	Sunder Lal Daga	Mine in Golari, Bikaner, Rajasthan	30
Kaolin	Gopalbhai Savanghai Dangar	Mine in Dagala, Gujarat	115
Do.	Shree Ram Kaolin (Shree Ram Group)	Mine in Kachchh District, Gujarat	NA
Coal	Bharat Aluminium Co. Ltd. (Vedanta Ltd., 51%, and Government, 49%)	Chotia Mine, Chhattisgarh	1,000
Do.	Bharat Coking Coal Ltd. [Coal India Ltd. (Government, 100%)]	Cluster 2 in Dhanbad District, Jharkhand	15,550
Do.	do.	Cluster 3 in Dhanbad District, Jharkhand	3,600
Do.	do.	Cluster 4 in Dhanbad District, Jharkhand	2,850
Do.	do.	Cluster 5 in Dhanbad District, Jharkhand	4,850
Do.	do.	Cluster 6 in Dhanbad District, Jharkhand	5,870
Do.	do.	Cluster 7 in Dhanbad District, Jharkhand	5,000
Do.	do.	Cluster 8 in Dhanbad District, Jharkhand	5,600
Do.	do.	Cluster 9 in Dhanbad District, Jharkhand	6,550
Do.	do.	Cluster 10 in Dhanbad District, Jharkhand	2,289
Do.	do.	Cluster 11 in Dhanbad District, Jharkhand	5,000
Do.	do.	Cluster 13 in Dhanbad District, Jharkhand	500
Do.	do.	Cluster 14 in Dhanbad District, Jharkhand	400
Do.	do.	Cluster 15 in Dhanbad District, Jharkhand	325
Do.	do.	Cluster 16 in Dhanbad District, Jharkhand	1,500
Do.	Central Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	East Bokaro coalfield, Jharkhand	7,500
Do.	do.	Giridih coalfield, Jharkhand	NA
Do.	do.	Hutar coalfield, Jharkhand	NA
Do.	do.	North Karanpura coalfield, Jharkhand	77,740
Do.	do.	Ramgarh coalfield, Jharkhand	3,000
Do.	do.	South Karanpura coalfield, Jharkhand	11,728
Do.	do.	West Bokaro coalfield, Jharkhand	6,500
Do.	Eastern Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Cluster 1 in Dhanbad District, Jharkhand	2,700
Do.	do.	Cluster 3 in Paschim Bardhaman District, West Bengal	3,970
Do.	do.	Cluster 4 in Burdwan District, West Bengal	2,800
Do.	do.	Cluster 5 in Purulia District, West Bengal	485
Do.	do.	Cluster 6 in Paschim Bardhaman District and Purulia District, West Bengal	1,453
Do.	do.	Cluster 7 in Paschim Bardhaman District, West Bengal	740
Do.	do.	Cluster 8 in Paschim Bardhaman District, West Bengal	2,750
Do.	do.	Cluster 10 in Paschim Bardhaman District, West Bengal	7,700

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Coal—Continued	Eastern Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Cluster 11 in Paschim Bardhaman District, West Bengal	9,000
Do.	do.	Cluster 12 in Paschim Bardhaman District, West Bengal	27,160
Do.	Gujarat Mineral Development Corp. (Gujarat State government, 75%, and public and institutional investors, 25%)	Bhavnagar Mine, Gujarat	3,200
Do.	do.	Mata-No-Madh Mine, Gujarat	2,850
Do.	do.	Rajpardi Mine, Gujarat	920
Do.	do.	Tadkeshwar Mine, Gujarat	1,270
Do.	do.	Umarsar Mine, Gujarat	1,360
Do.	Hindalco Industries Ltd. (Aditya Birla Group, 35%; foreign institutions, 30%; domestic institutions, 27%; others, 8%)	Gare Palma IV/4 Mine in Chhattisgarh	1,000
Do.	do.	Gare Palma IV/5 Mine in Chhattisgarh	1,000
Do.	do.	Kathautia Mine, Jharkhand	800
Do.	Mahanadi Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Ib Valley coalfield, Odisha	61,830
Do.	do.	Talcher coalfield in Angul District, Odisha	95,000
Do.	Neyveli Lignite Corp. Ltd. (Government, 100%)	Barsingsar Mine in Bikaner District, Rajasthan	2,100
Do.	do.	Neyveli I Mine in Cuddalore District, Tamil Nadu	10,500
Do.	do.	Neyveli IA Mine in Cuddalore District, Tamil Nadu	3,000
Do.	do.	Neyveli II Mine in Cuddalore District, Tamil Nadu	15,000
Do.	North Eastern Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Makum coal mines in Tinsukia District, Assam	1,000
Do.	Northern Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Amlohri Mine in Sidhi District, Madhya Pradesh	15,000
Do.	do.	Dudhichua Mine in Sonbhadra District, Uttar Pradesh	17,680
Do.	do.	Kakri Mine in Sonbhadra District, Uttar Pradesh	3,000
Do.	do.	Khadia Mine in Sonbhadra District, Uttar Pradesh, and Sidhi District, Madhya Pradesh	14,000
Do.	do.	Krishnashila Mine in Sonbhadra District, Uttar Pradesh	7,500
Do.	do.	Nigahi Mine in Singrauli District, Madhya Pradesh	22,500
Do.	do.	Singrauli coalfield in Singrauli District, Madhya Pradesh, and Sonbhadra District, Uttar Pradesh	70,000
Do.	Rajasthan Rajya Vidyal Utpadan Nigam Ltd. (Rajasthan State government, 100%)	Paras East and Kanta Basan Mines in Korba District, Chhattisgarh	15,000
Do.	Singareni Collieries Co. Ltd. [Andhra Pradesh State government, 50%, and Coal India Ltd. (Government), 50%]	Adilabad District, Telangana: Abbapur Mine	600
Do.	do.	Bellampalli II Mine	500
Do.	do.	Kasipet Mine	650
Do.	do.	Khairagura Mine	3,750
Do.	do.	Bhadradri Kothagudem District, Telangana: Goutham Khani Mine	2,000
Do.	do.	Jawahar Khani 5 Mine	2,500
Do.	do.	Koyagudem Mine	2,000
Do.	do.	Manguru Mines	9,750
Do.	do.	Prakasham Khani Mines	5,020
Do.	do.	Venkatesh Khani 7 Mine	843

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Coal—Continued	Singareni Collieries Co. Ltd. [Andhra Pradesh State government, 50%, and Coal India Ltd. (Government), 50%]	Jayashankar Bhupalpally District, Telangana: Kakatiya Khani Mines	6,332
Do.	do.	Karimnagar District, Telangana: Godavari Khani 1, 2, and 5 Mines	1,540
Do.	do.	Khammam District, Telangana: Jalagam Vengala Rao II Mine	5,000
Do.	do.	Kistaram Mine	2,000
Do.	do.	Kondapuram Mine	540
Do.	do.	Mancherial District, Telangana: IK 1A Mine	230
Do.	do.	Kalyani Khani Mine	1,750
Do.	do.	KK Mines	2,024
Do.	do.	Ramakrishnapur Mines	5,370
Do.	do.	Ravindra Khani Mines	2,851
Do.	do.	Shanthi Khani Mine	2,500
Do.	do.	Srirampur Mines	3,800
Do.	do.	Peddapally District, Telangana: Adriyala Mine	3,140
Do.	do.	Godavari Khani 7, 10, and 11A Mines	2,418
Do.	do.	Medipalli Mine	1,080
Do.	do.	Peddampet Mine	1,459
Do.	do.	Ramagundam Mines	12,800
Do.	do.	Vakilpalli Mine	450
Do.	South Eastern Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Mines in Korba District, Chhattisgarh: Bagdeva Mine	760
Do.	do.	Balgi Mine	360
Do.	do.	Dhelwadih Mine	420
Do.	do.	Dipka Mine	35,000
Do.	do.	Gevra Mine	49,000
Do.	do.	Hasdeo-Arand Mine	5,000
Do.	do.	Kartali Mine	2,500
Do.	do.	Korba Mine	4,000
Do.	do.	Kurasia Mine	500
Do.	do.	Kusmunda Mine	62,500
Do.	do.	Laxman Mine	3,000
Do.	do.	Manikpur Mine	5,250
Do.	do.	Rajgamar Mine	450
Do.	do.	Rani Atari Mine	480
Do.	do.	Singhali Mine	420
Do.	do.	Surakachhar Mine	210
Do.	do.	Vijay Mine	500
Do.	do.	Mines in Korba District, Chhattisgarh: Chirimiri Mine	2,000
Do.	do.	Churcha Mine	2,100
Do.	do.	Haldibari Mine	420
Do.	do.	Jhagrakand Mine	33
Do.	do.	Jhilmili Mine	500
Do.	do.	Katkona Mine	360
Do.	do.	NCPH Mine	1,200
Do.	do.	Pandavapara Mine	500

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Coal—Continued	South Eastern Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Mines in Raigarh District, Chhattisgarh:	
		Baroud Mine	3,500
Do.	do.	Bijari Mine	2,250
Do.	do.	Chhal Mine	3,500
Do.	do.	Durgapur Mine	3,000
Do.	do.	Jampali Mine	3,500
Do.	do.	Karwahi Mine	1,200
Do.	do.	Mand-Raigarh Mine	6,000
		Mines in Surajpur District, Chhattisgarh:	
Do.	do.	Balrampur Mine	840
Do.	do.	Bhatgaon Mine	2,060
Do.	do.	Gayatri Mine	300
Do.	do.	Jhilimili Mine	3,000
Do.	do.	Kalyani and Shivani Mines	780
Do.	do.	Mahamaya Mine	480
Do.	do.	Mahan Mine	170
Do.	do.	Mahan-II Mine	1,000
Do.	do.	Nawapara Mine	180
Do.	do.	Rehar Mine	310
Do.	do.	Shiwani Mine	310
		Mines in Anuppur District, Madhya Pradesh:	
Do.	do.	Amadand Mine	2,150
Do.	do.	Bartarai Mine	465
Do.	do.	Behraband Mine	600
Do.	do.	Bhadra Mine	400
Do.	do.	Bijuri Mine	600
Do.	do.	Jamuna Mine	516
Do.	do.	Meera Mine	375
Do.	do.	Sheetaldhara-Kapildhara Mine	3,000
		Mines in Shahdol District, Madhya Pradesh:	
Do.	do.	Baiga Mine	300
Do.	do.	Bangwar Mine	650
Do.	do.	Batura Mine	3,680
Do.	do.	Dhanpuri-Amlai Mine	4,970
Do.	do.	Karkati Mine	925
Do.	do.	Rajnagar Mine	2,550
Do.	do.	Sharda Mine	850
Do.	do.	Kulharia Nala Mine	700
		Mines in Umaria District, Madhya Pradesh:	
Do.	do.	Kanchan Mine	750
Do.	do.	Nowrozabad Mine	450
Do.	do.	Pinoura Mine	160
Do.	do.	Piparia Mine	240
Do.	do.	Umaria Mine	350
Do.	do.	Vindhya Mine	705
Do.	Tata Steel Ltd. (Tata Group, 100%)	West Bokaro Mine in Jharkhand	1,900
	Western Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Mines in Betul District, Madhya Pradesh:	
Do.		Chhatarpur-I Mine	370
Do.	do.	Pathakhera Mine	3,000
Do.	do.	Sarni Mine	130
Do.	do.	Shobhapur Mine	170
Do.	do.	Tawa Mine	600

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Coal—Continued	Western Coalfields Ltd. [Coal India Ltd. (Government, 100%)]	Mines in Chhindwara District, Madhya Pradesh:	
		Ghorawani-I Mine	200
Do.	do.	Ghorawani-II Mine	440
Do.	do.	Jamuniya Mine	828
Do.	do.	Mahadevpuri Mine	100
Do.	do.	Mathani Mine	120
Do.	do.	Mohan Mine	440
Do.	do.	Naheriya Mine	330
Do.	do.	New Sethia Mine	400
Do.	do.	Pench-Kanhan Mine	4,000
Do.	do.	Tandsi Mine	180
Do.	do.	Vishnupuri Mine	100
		Mines in Chandrapur District, Maharashtra:	
Do.	do.	Ballarpur Mine	720
Do.	do.	Bhatadi Mine	1,465
Do.	do.	Dhuptala Mine	1,750
Do.	do.	D. Rayatwari Mine	160
Do.	do.	Durgapur Mine	2,300
Do.	do.	Durgapur-II Mine	3,000
Do.	do.	Gouri Mine	600
Do.	do.	New Majri Mine	1,200
Do.	do.	New Majri-II Mine	2,500
Do.	do.	Padmapur Mine	2,500
Do.	do.	Pauni Mine	900
Do.	do.	Pauni-II Mine	3,250
Do.	do.	Pengagna Mine	4,500
Do.	do.	Sasti Mine	2,500
Do.	do.	Yekona I & II Mine	3,400
		Mines in Nagpur District, Maharashtra:	
Do.	do.	Bhanegaon Mine	750
Do.	do.	Dinesh (Makardhokra-III) Mine	4,140
Do.	do.	Gokul Mine	1,875
Do.	do.	Gondegaon Mine	3,500
Do.	do.	Inder-Kamptee Mine	3,200
Do.	do.	Makardhokra-I Mine	2,000
Do.	do.	Makardhokra-II Mine	1,500
Do.	do.	Nagpur-Umrer Mine	8,000
Do.	do.	Saoner Mine	2,000
Do.	do.	Silewara Mine	120
Do.	do.	Singhori Mine	1,200
		Mines in Yavatmal District, Maharashtra:	
Do.	do.	Ghonsa Mine	600
Do.	do.	Junad Mine	600
Do.	do.	Kolar Pimpri Mine	1,500
Do.	do.	Kolgaon Mine	400
Do.	do.	Mugoli-Nirguda Mine	4,380
Do.	do.	Naigaon Mine	800
Do.	do.	Niljai Mine	3,500
Do.	do.	Rajur-Bhandewada Mine	210
Do.	do.	Ukni Mine	3,500

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
Copper:				
Ore, gross weight	Hindustan Copper Ltd. (HCL) (Government, 100%)		Indian Copper Complex Mines, Ghatsila District, Jharkhand	290
Do.	do.		Malanjkhand Copper Complex Mines, Balaghat District, Madhya Pradesh	2,600
Do.	do.		Khetri Copper Complex Mines, Khetrinagar, Rajasthan	1,200
Metal	Hindalco Industries Ltd. (Aditya Birla Group, 35%; foreign institutions, 30%; domestic institutions, 27%; others, 8%)		Birla Copper Complex smelter, Dahej, Gujarat	500
Do.	Hindustan Copper Ltd. (HCL) (Government, 100%)		Indian Copper Complex smelter-refinery, Ghatsila District, Jharkhand	19
Do.	do.		Khetri Copper Complex smelter-refinery, Khetrinagar District, Rajasthan	31
Do.	do.		Taloja copper refinery, Maharashtra	60
Do.	Sterlite Copper (Vedanta Ltd., 100%)		Tuticorin smelter, Tamil Nadu <sup>2</sup>	400
Do.	do.		Silvassa refinery, Gujarat	250
Diamond thousand carats	National Mineral Development Corp. Ltd. (Government, 100%)		Mahgawan Mine, Panna, Madhya Pradesh	84
Ferroalloys:				
Ferrochrome	Balasore Alloys Ltd.		Balasore plant in Balasore District, Odisha	145
Do.	do.		Sukinda plant in Jajpur District, Odisha	16
Do.	Ferro Alloys Corp. Ltd.		Plant in Bhadrak District, Odisha	81
Do.	Indian Metals & Ferro Alloys Ltd.		Choudwar plant in Cuttack District, Odisha and Therubali plant in Rayagada District, Odisha	284
Do.	Tata Steel Mining Ltd. (Tata Steel Ltd., 100%)		Athagarh plant in Cuttack District, Odisha	55
Do.	do.		Gopalpur plant in Ganjam District, Odisha	55
Ferromanganese	Steel Authority of India Ltd. (Government, 100%)		Chandrapur Ferro Alloy Plant, Maharashtra	90
Silicomanganese	do.		do.	70
Fluorite	Maharashtra State Mining Corp. Ltd.		Dongargaon Mine, Chandrapur District, Maharashtra	1
Garnet	AKD Gem Garnet Mines		Kodukota Mine, Bhilwara, Rajasthan	NA
Do.	Ansari Brothers Garnet Works		Rajmahal Mine, Tonk, Rajasthan	NA
Do.	Indian Rare Earths Ltd. [Department of Atomic Energy, (Government), 100%]		Orrisa Sands Complex, Ganjam, Odisha	20
Do.	do.		Manavalakurichi Mine, Kanniaykumari, Tamil Nadu	10
Do.	Trimex Sands Pvt. Ltd. (Trimex Group)		Sirkurman deposit, Srikakulam, Andhra Pradesh	60
Do.	do.		Bhavanapadu mineral sands deposit, Andhra Pradesh	50
Do.	V. V. Mineral Ltd.		Thoothukudi Mine, Tamil Nadu	NA
Gold:				
Ore, gross weight	Hutti Gold Mines Co.		Hira-Buddini Mine, Karnataka	73
Do.	do.		Hutti Mine, Karnataka	560
Do.	Mahmohan Mineral Industries Pvt. Ltd.		Kunderkocha Mine, Jharkhand	NA
Metal kilograms	ABANS Jewels Pvt. Ltd. (privately owned, 100%)		Refinery in Rudrapur, Uttarakhand	NA
Do.	do. Agnis Bullion House LLP		Refinery in Gurgaon, southwest of New Delhi	NA
Do.	do. AJ Gold & Silver Refinery Inc.		Refinery in Hamirpur, Himachal Pradesh	150
Do.	do. Altim Metals Pvt. Ltd. (privately owned, 100%)		Refinery in Udhampur, Jammu and Kashmir	26
Do.	do. Augmont Enterprises Pvt. Ltd.		Refinery in Rudrapur, Uttarakhand	NA
Do.	do. AUPTAG Refinery Pvt. Ltd.		Refinery in Mumbai, Maharashtra	NA
Do.	do. Bangalore Refinery Pvt. Ltd.		Refinery in Bangalore, Karnataka	30
Do.	do. Bright Metal Refiners		Refinery in Udhampur, Jammu and Kashmir	30

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Gold:—Continued			
Metal—kilograms	Chemmanur Gold Refinery Pvt. Ltd.	Refinery in Ernakulam, Kerala	30
Continued			
Do.	do. CGR Metalloys Pvt. Ltd.	do.	NA
Do.	do. do.	Refinery in Kalamassery, Ernakulam District, Kerala	NA
Do.	do. do.	Refinery in MG Road, Ernakulam District, Kerala	NA
Do.	do. Diamond Forever International	Refinery in Udhampur, Jammu and Kashmir	35
Do.	do. Edelweiss Metals Ltd. (Edelweiss Financial Services Inc.)	Refinery in Ahmedabad, Gujarat	70
Do.	do. Emerald Jewel Industry India Ltd.	Refinery in Coimbatore, Tamil Nadu	40
Do.	do. Golden Star Trading Pvt. Ltd.	Refinery in Chennai, Tamil Nadu	NA
Do.	do. Goldfarb Industries Pvt. Ltd.	Refinery in Sanand, Gujarat	NA
Do.	do. Gujarat Gold Centre (GGC) Pvt. Ltd.	Refinery in Ahmedabad, Gujarat	30
Do.	do. Harshini Maple Leafs	Refinery in Chennai, Tamil Nadu	NA
Do.	do. Hindustan Platinum Pvt. Ltd.	Refinery in Navi, Mumbai	NA
Do.	do. Indian Government Mint (unit of Security of Printing and Mining Corporation India Ltd.)	Refinery in Alipore, Kolkata	NA
Do.	do. do.	Refinery in Mumbai, Maharashtra	NA
Do.	do. do.	Refinery in Hyderabad, Telangana	40
Do.	do. do.	Refinery in Noida, Uttar Pradesh	NA
Do.	do. Infinium Precious Resources Pvt. Ltd.	Refinery in Mumbai, Maharashtra	NA
Do.	do. Jalan and Company	Refinery in Chandni Chowk, New Delhi	30
Do.	do. Khandwala Finstock Pvt. Ltd	do.	40
Do.	do. Kundan Care Products Ltd.	Refinery in Hareswar, Uttarakhand	30
Do.	do. Kundan Refinery Pvt. Ltd.	Refinery at Gurugram, southwest of New Delhi	NA
Do.	do. Lalithaa Jewelry Mart Pvt. Ltd.	Refinery in Chennai, Tamil Nadu	NA
Do.	do. M.D. Overseas Ltd.	Refinery in Rudrapur, Uttarakhand	30
Do.	do. do.	Refinery in Alwar, Rajasthan	NA
Do.	do. MMTC-PAMP India Pvt. Ltd. (joint venture MMTC Ltd. and PAMP SA)	Refinery in Mewat, Haryana	150
Do.	do. Narrondass Manordass Precious Metals Refinery	Refinery in Mumbai, Maharashtra	NA
Do.	do. National India Bullion Refinery	do.	30
Do.	do. National Refinery Pvt. Ltd.	do.	30
Do.	do. OMGL Refinery LLP	Refinery in Rudrapur, Uttarakhand	NA
Do.	do. Onkar Jewellers Pvt. Ltd.	Refinery in Sonipat, Haryana	NA
Do.	do. Orelia Refineries Pvt. Ltd.	Refinery in Solan, Himachal Pradesh	40
Do.	do. Paraj Exim	Refinery in Rudrapur, Uttarakhand	NA
Do.	do. Parekh Platinum Ltd.	Refinery in Mumbai, Maharashtra	30
Do.	do. Quality Assay and Hallmarking Centre Pvt. Ltd.	Refinery in Kannur, Kerala	NA
Do.	do. Rajesh Exports Ltd.	Refinery in Rudrapur, Uttarakhand	NA
Do.	do. RG Refineries Pvt. Ltd.	do.	NA
Do.	do. R.K. Jewels	Refinery in Rohtak, Haryana	NA
Do.	do. Salasar Synthetics Pvt. Ltd.	Refinery in Sideul, Uttarakhand	NA
Do.	do. Shirpur Gold Refinery Ltd. (Zee Gold DMCC)	Refinery in Shirpur, Dhule, Maharashtra	217
Do.	do. Shree Ambica Touch	Refinery in Ahmedabad, Gujarat	NA
Do.	do. Siddheshwar Refinery	Refinery in Mumbai, Maharashtra	NA
Do.	do. Sonigara Jewellers Pvt. Ltd.	Refinery in Pune, Maharashtra	NA
Do.	do. Sovereign Metals Ltd. (Edelweiss Financial Services Inc.)	Refinery in Ahmedabad, Gujarat	NA
Do.	do. Sunanda Polymers	Refinery in Solan, Himachal Pradesh	NA
Do.	do. Tasha Gold Private Ltd.	Refinery in Nagar, Uttar Pradesh	NA
Do.	do. Titan Co. Ltd.	Refinery in Krishnagiri, Tamil Nadu	NA
Do.	do. Yash Oro India Pvt. Ltd.	Refinery in Hyderabad, Telangana	NA

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
<b>Gold:—Continued</b>				
Metal—	kilograms	Zaveri & Co. Pvt. Ltd.	Refinery in Ahmedabad, Gujarat	30
<b>Continued</b>				
Do.	do.	do.	Refinery in Rudrapur, Uttarakhand	30
Graphite		Agrawal Graphite & Carbon Products Pvt. Ltd.	Mine in Belpara District, Odisha	15
Do.		Krishna Kumar Poddar	Mine in Murma, Jharkhand	60
Do.		Tamil Nadu Minerals Ltd.	Mines in Pudupatti, Kumariapatti, and Senthil Udayanathapuram villages, Sivaganga District, Tamil Nadu	60
Gypsum		FCI Aravali Gypsum and Minerals India Ltd.	Mohangarh group of mines, Bikaner group of mines, Suratgarh group of mines, Ramsinghpur group of mines, Rajasthan	1,100
Iron ore, Fe content		Jindal Steel & Power Ltd. (Jindal Group, 60.41%; foreign investors, 23.18%; and others, 16.41%)	Kasia Mine, Odisha	7,500
Do.	do.		Tensa Mine, Odisha	3,110
Do.		JSW Steel Co. Ltd.	Narayanposhi Mine, Odisha	6,000
Do.	do.		Nuagaon Mine, Odisha	5,620
Do.		M.S.P.L. Ltd. (Baldota Group, 100%)	Vyasanakere Mine, Hospet, Karnataka	1,800
Do.		National Mineral Development Corp. Ltd. (Government, 100%)	Bailadila Mines, Bacheli Complex, Chhattisgarh	7,000
Do.	do.		Bailadila Mines, Kirandul Complex, Chhattisgarh	5,500
Do.	do.		Donimalai Mines, Karnataka	7,000
Do.	do.		Kumaraswamy Mine, Karnataka	7,000
Do.		Odisha Mining Corp. Ltd. (Odisha State government, 100%)	Banspani Mine, Keonjhar District, Odisha	1,000
Do.	do.		Daitari Mines, Keonjhar District, Odisha	3,000
Do.	do.		Gandhamardan Block A and B Mines, Keonjhar District, Odisha	4,000
Do.	do.		Guali Mine, Keonjhar District, Odisha	5,720
Do.	do.		Jiling Longalota Mine, Keonjhar District, Odisha	5,700
Do.	do.		Khandbandh Mine, Keonjhar District, Odisha	1,000
Do.	do.		Kolha-Roida Mine, Keonjhar District, Odisha	3,000
Do.	do.		Kurmitar Mine, Sundargarh District, Odisha	2,400
Do.	do.		Mahaparbat (Unchabali) Mine, Keonjhar District, Odisha	1,000
Do.	do.		Tiringpahar Mine, Keonjhar District, Odisha	80
Do.		Patnaik Minerals Pvt. Ltd.	Jaribahal Mine, Odisha	630
Do.		Ramgad Minerals and Mining Ltd. (M.S.P.L. Ltd., 100%)	Iyli and Gurunath Mines, Kerala	50
Do.		Rungta Sons Pvt. Ltd.	Sanindpur Mine, Odisha	2,800
Do.		Serajuddin & Co.	Balda Mines, Odisha	15,500
Do.		Sesa Iron Ore (Vedanta Group, 68.1%)	Mines in Goa <sup>3</sup>	5,500
Do.	do.		Mines in Karnataka	4,500
Do.		Steel Authority of India Ltd. (Government, 100%)	Kiriburu, Gua, Meghahatuburu, and Manoharpur Mines, Jharkhand	17,000
Do.	do.		Barsua-Taldih-Kalta Mines, Odisha	6,000
Do.	do.		Bolani Mining Complex, Odisha	8,400
Do.		Tata Steel Long Products Ltd. (Tata Group, 100%)	Vijay-II Mine, Jharkhand	2,500
Do.		Tata Steel Ltd. (Tata Group, 100%)	Joda East Mine, Odisha	12,000
Do.	do.		Katamatii Mine, Odisha	8,000
Do.	do.		Khandbondi Mine, Odisha	8,000
Do.	do.		Noamundi Mine, Jharkhand	10,000
Do.		Vedanta Ltd.	Nadidih Mine, Odisha	5,100

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Iron and steel:			
Direct-reduced iron	Aarti Sponge & Power Ltd.	Plant in Raipur, Chhattisgarh	90
Do.	Aarti Steels Ltd.	Plants in Ludhiana, Punjab, and Cuttack, Odisha	320
Do.	Action Ispat & Power Pvt. Ltd.	Plants in Marakuta and Pandaripathar, Jharsuguda, Odisha	250
Do.	Adhunik Metaliks Ltd.	Plant in Chandrihariharpur, Sundargarh, Odisha	500
Do.	Agarwal Sponge & Energy Pvt. Ltd.	Plant in Bellary, Karnataka	90
Do.	Agni Steels Pvt. Ltd.	Plant in Erode District, Tamil Nadu	36
Do.	Akshara Industries Ltd.	Plant in Thiruvallur District, Tamil Nadu	60
Do.	Alliance Integrated Metaliks Ltd.	Plant in Bemta, Raipur, Chhattisgarh	500
Do.	Amalgam Steel & Power Ltd.	Plant in Seraikela-Kharsawan District, Jharkhand	210
Do.	Ambey Iron Pvt. Ltd.	Plant in Solapur, Maharashtra	45
Do.	Ambey Metallic Pvt. Ltd.	Plant in Panjim, Goa	30
Do.	Anindita Steels Ltd.	Plant in Rabodh, Jharkhand	120
Do.	Anjani Steel Ltd.	Plant in Ujalpur, Raigarh, Chhattisgarh	110
Do.	Aparant Iron & Steel Pvt. Ltd.	Plant in Sanguem, Goa	160
Do.	API Ispat Powertech Pvt. Ltd.	Plant in IGC Siltara, Raipur, Chhattisgarh	210
Do.	ArcelorMittal Nippon Steel India Ltd. (ArcelorMittal S.A., 60%, and Nippon Steel Corp., 40%)	Plant in Hazira, Gujarat	6,800
Do.	Arya Iron & Steel Co. Pvt. Ltd.	Plant in Keonjhar, Odisha	100
Do.	Aryavrata Steel Pvt. Ltd.	Plant in Paschim Medinipur, West Bengal	36
Do.	Balajiswamy Premium Steels Pvt. Ltd.	Plant in Bellary, Karnataka	20
Do.	Beekay Steel & Power Ltd.	Plant in Uliburu, Barbil, Odisha	120
Do.	Bellary Ispat Pvt. Ltd.	Plant in Bellary, Karnataka	20
Do.	Bihar Sponge Iron Ltd. (Umesh Modi Group, 100%)	Plant in Umesh Nagar, Chandil, Jharkhand	210
Do.	Brahmaputra Metallics Ltd.	Plant in Ramgarh, Jharkhand	105
Do.	Crackers India (Alloys) Ltd.	Plant in Gobardhanpur, West Bengal	60
Do.	Dhanlaxmi Sponge Iron Ltd. (SRJ Peety Steels Pvt. Ltd.)	Plant in Jalna District, Maharashtra	60
Do.	Divyajyoti Steels Ltd.	Plant in Taranagar, Rajasthan	30
Do.	Electrosteel Castings Ltd.	Plant in Haldia, West Bengal	70
Do.	Electrotherm (India) Ltd.	Plant in Kachchh District, Gujarat	180
Do.	Essar Steel Ltd. (Essar Global Fund Ltd., 100%)	Plant in Hazira, Gujarat	6,800
Do.	Gallant Metal Ltd.	Plant in Kachchh District, Gujarat	374
Do.	Ganesh Sponge Pvt. Ltd.	Plant in Angul District, Odisha	90
Do.	Gayatri Metals Pvt. Ltd.	Plant in Bellary, Karnataka	30
Do.	Godawari Power & Ispat Ltd.	Plant in Raipur, Chhattisgarh	594
Do.	Hospet Ispat Pvt. Ltd.	Plant in Bellary, Karnataka	60
Do.	Hothur Ispat Pvt. Ltd.	do.	90
Do.	IDCOL Kalinga Iron Works Ltd. (Industrial Development Corp. of Odisha Ltd., 100%)	Plant in Barbil, Odisha	180
Do.	Jai Balaji Industries Ltd.	Plant in Durgapur, West Bengal	445
Do.	Jai Durga Iron Pvt. Ltd.	Plant in Koderma District, Jharkhand	36
Do.	Janki Corp. Ltd.	Plant in Bellary, Karnataka	180
Do.	Jayaswal Neco Industries Ltd.	Plant in Raipur, Chhattisgarh	270
Do.	Jay Iron & Steels Ltd.	Plant in Rourkela, Odisha	60
Do.	Jindal Steel & Power Ltd. (Jindal Group, 60.41%; foreign investors, 23.18%; and others, 16.41%)	Plant in Raigarh, Chhattisgarh	1,320
Do.	JSW Ispat Special Steel Products Ltd. (Aion Investments Pvt. Ltd., 76.9%, and JSW Steel Co. Ltd., 23.1%)	Plant in Raigarh, Chhattisgarh	800
Do.	JSW Steel Ltd.	Plant in Geetapuram, Maharashtra	1,600
Do.	do.	Plant in Salav, Maharashtra	900
Do.	Kalyani Steels Ltd.	Plant in Hospet, Karnataka	500

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Iron and steel:—Continued			
Direct-reduced iron—	Lloyds Metals & Engineers Ltd.	Plant in Chandrapur District, Maharashtra	270
Continued			
Do.	Maruti Ispat & Energy Pvt. Ltd.	Plant in Kurnool District, Andhra Pradesh	60
Do.	MGM Steels Ltd.	Plant in Dhenkanal District, Odisha	100
Do.	Mineral Steel & Power Pvt. Ltd.	Plant in Bellary, Karnataka	120
Do.	MSP Sponge Iron Ltd.	Plant in Keonjhar District, Odisha	54
Do.	Nalwa Steel & Power Ltd.	Plant in Raigarh, Chhattisgarh	200
Do.	New Metaliks Ltd.	Plant in Durgapur, West Bengal	175
Do.	Orissa Sponge Iron & Steel Ltd.	Plant in Keonjhar, Odisha	250
Do.	Ramsarup Lohh Udyog	Plant in Kharagpur, West Bengal	182
Do.	Rangineni Steel Pvt. Ltd.	Plant in Bellary, Karnataka	25
Do.	Rashmi Ispat Ltd.	Plant in Paschim Medinipur District, West Bengal	60
Do.	Rathi Steel & Metal Pvt. Ltd.	Plant in Sambalpur District, Odisha	160
Do.	Rayen Steels Pvt. Ltd.	Plant in Bellary, Karnataka	60
Do.	Sathavahana Ispat Ltd.	Plant in Haresamudram, Andhra Pradesh	210
Do.	Shreeyam Power & Steel Industries Ltd.	Plant in Kachchh District, Gujarat	155
Do.	Shri Barjang Power & Ispat Ltd.	Plant in Raipur, Chhattisgarh	610
Do.	SKS Ispat & Power Ltd.	do.	270
Do.	SLR Steels Ltd.	Plant in Hospet, Karnataka	300
Do.	Sova Ispat Ltd.	Plant in Bankura District, West Bengal	180
Do.	Steel Authority of India Ltd. (Government, 100%)	IISCO steel plant, West Bengal	250
Do.	do.	Bhilai plant in Chhattisgarh; Bokaro plant in Jharkhand; Durgapur plant in West Bengal; Rourkela plant in Odisha	24,000
Do.	Sunvik Steels Pvt. Ltd.	Plant in Tunmakuru, Karnataka	90
Do.	Suraj Products Ltd.	Plant in Sundargarh, Odisha	45
Do.	Surendra Mining Industries Pvt. Ltd.	do.	60
Do.	Tata Steel BSL Ltd. (Tata Group, 100%)	Meramandali plant in Dhenkanal, Odisha	1,500
Do.	Tata Steel Long Products Ltd. (Tata Group, 100%)	Plant in Jamshedpur, Jharkhand	500
Do.	do.	Plant in Keonjhar, Odisha	390
Do.	Vandana Global Ltd.	Plant in Raipur, Chhattisgarh	230
Do.	Vinayak Steels Ltd.	Plant in Hiriyur, Karnataka	33
Do.	VISA Steel Ltd.	Plant in Kalinganagar, Odisha	300
Raw steel	ArcelorMittal Nippon Steel India Ltd. (ArcelorMittal S.A., 60%, and Nippon Steel Corp., 40%)	Plant in Hazira, Gujarat	9,600
Do.	Bhushan Power & Steel Ltd. (JSW Steel Co. Ltd., 83.3%)	Plant in Jharsuguda, Odisha	3,500
Do.	Jindal Steel & Power Ltd. (Jindal Group, 60.41%; foreign investors, 23.18%; and others, 16.41%)	Angul plant, Odisha	6,000
Do.	do.	Raigarh plant, Chhattisgarh	3,600
Do.	JSW Ispat Special Steel Products Ltd. (Aion Investments Pvt. Ltd., 76.9%, and JSW Steel Co. Ltd., 23.1%)	Plants in Raigarh and Raipur, Chhattisgarh	1,200
Do.	JSW Steel Co. Ltd.	Dolvi works, Maharashtra	10,000
Do.	do.	Salem steel plant, Tamil Nadu	1,000
Do.	do.	Vijayanagar works, Karnataka	12,000
Do.	National Mineral Development Corp. Ltd. (Government, 100%)	Nagarnar steel plant, Chhattisgarh	3,000
Do.	Rashtriya Ispat Nigam Ltd. (Steel Authority of India Ltd., 100%)	Steel plant in Andhra Pradesh	7,300
Do.	Steel Authority of India Ltd. (Government, 100%)	Alloy steel plant, West Bengal	230
Do.	do.	Bhilai steel plant, Chhattisgarh	7,000
Do.	do.	Bokaro steel plant, Jharkhand	4,650
Do.	do.	Durgapur steel plant, West Bengal	2,200
Do.	do.	IISCO steel plant, West Bengal	2,500
Do.	do.	Rourkela steel plant, Odisha	4,200
Do.	do.	Visvesvaraya iron and steel plant, Karnataka	216

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Iron and steel:—Continued			
Raw steel—Continued	Tata Steel Long Products Ltd. (Tata Group, 100%)	Gamharia steel plant, Jharkhand	1,000
Do.	Tata Steel Ltd. (Tata Group, 100%)	Jamshedpur plant, Jharkhand	11,000
Do.	do.	Kalinganagar plant, Odisha	3,000
Do.	do.	Meramandali plant, Odisha	5,600
Do.	do.	NINL Kalinganagar plant, Odisha	1,000
Steel products	JSW Steel Co. Ltd.	Dolvi works, Maharashtra	3,000
Do.	do.	Vijayanagar works, Karnataka	950
Do.	Rashtriya Ispat Nigam Ltd. (Steel Authority of India Ltd., 100%)	Visakhapatnam steel plant, Andhra Pradesh	6,300
Do.	Steel Authority of India Ltd. (Government, 100%)	Bhilai steel plant, Chhattisgarh	3,100
Do.	do.	Durgapur plant, West Bengal	2,100
Do.	do.	IISCO steel plant, West Bengal	430
Do.	do.	Rourkela steel plant, Odisha	1,700
Do.	do.	Salem steel plant, Tamil Nadu	340
Do.	Tata Steel Long Products Ltd. (Tata Group, 100%)	Steel plant in Jamshedpur, Jharkhand	1,000
Kyanite	Bihar State Mineral Development Corp. Ltd. (Bihar State government, 100%)	Mine in Singhbhum District, Bihar	10
Do.	Maharashtra Mineral Corp. Ltd.	Navargaon-Chowa Mine, Maharashtra	10
Do.	Pavri Kyanite Mines Co.	Pavri Kyanite Mine (Jamdi), Maharashtra	NA
Lead:			
Mine, Pb content	Hindustan Zinc Ltd. (HZL) (Vedanta Ltd., 64.9%, and Government, 29.6%)	Kayad Mine, Rajasthan	27
Do.	do.	Rajpura-Dariba Mine, Rajasthan	29
Do.	do.	Rampura-Agucha Mine, Rajasthan	166
Do.	do.	Sindesar-Khurd Mine, Rajasthan	162
Do.	do.	Zawar Mine, Rajasthan	108
Metal	do.	Chanderiya smelter, Rajasthan	85
Do.	do.	Dariba Smelting Complex, Rajasthan	120
Magnesite	Dalmia Magnesite Corp.	Mine in Tamil Nadu	NA
Do.	Steel Authority of India Ltd. (Government, 100%)	Mine in Salem, Tamil Nadu	150
Do.	Tamil Nadu Magnesite Ltd. (Tamil Nadu State government, 100%)	do.	150
Manganese, ore, gross weight	JK Minerals	Mine in Balaghat, Madhya Pradesh	NA
Do.	JSW Steel Co. Ltd.	Narayanposhi Mine, Odisha	36
Do.	do.	Narayanpura Mine, Karnataka	NA
Do.	Mangilall Rungta Pvt. Ltd.	Mine in Keonjhar, Odisha	19
Do.	MOIL Ltd. (Government, 100%)	Balaghat Mine, Madhya Pradesh	310
Do.	do.	Beldongri Mine, Maharashtra	NA
Do.	do.	Chikla Mine, Maharashtra	150
Do.	do.	Dongri-Buzurg Mine, Maharashtra	NA
Do.	do.	Gumgaon Mine, Maharashtra	60
Do.	do.	Kandri Mine, Maharashtra	NA
Do.	do.	Munsar Mine, Maharashtra	55
Do.	do.	Parsoda Mine, Maharashtra	NA
Do.	do.	Sitapatore Mine, Madhya Pradesh	NA
Do.	do.	Tirodi Mine, Madhya Pradesh	NA
Do.	do.	Ukwa Mine, Madhya Pradesh	55
Do.	Mysore Minerals Ltd.	Karya Mine, Karnataka	NA
Do.	Odisha Mining Corp. Ltd. (Odisha State government, 100%)	Kolha-Roida Mine, Keonjhar District, Odisha	240
Do.	Orissa Manganese & Minerals Pvt. Ltd. (Adhunik Group, 100%)	Mines in Barbil, Odisha	3,500
Do.	Orissa Mineral Development Co. Ltd. (Bird Group)	Mines in Keonjhar District, Odisha	NA
Do.	Radhika Metals & Minerals Pvt. Ltd.	Mines in Vizianagaram District, Andhra Pradesh	NA

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Manganese, ore, gross weight— Continued	Rungta Mines Pvt. Ltd.	Mine in Sundargarh District, Odisha	3
Do.	Sandur Manganese and Iron Ores Ltd.	Mines in Bellary District, Karnataka	580
Do.	Tata Steel Ltd. (Tata Group, 100%)	Bamebari Mine in Keonjhar District, Odisha	832
Do.	do.	Joda West Mine in Keonjhar District, Odisha	180
Do.	do.	Khondbond Mine in Keonjhar District, Odisha	100
Do.	do.	Tiringpahar Mine in Keonjhar District, Odisha	850
Mica	Privately owned	Mine in Nellore, Andhra Pradesh	NA
Do.	Micafab India Pvt. Ltd.	Sydapuram Mandal Mine, Andhra Pradesh	1
Do.	Premier Mica Co.	Rjupalem Mine, Andhra Pradesh	NA
Petroleum, refined thousand 42-gallon barrels per day	Bharat Petroleum Corp. Ltd. (Oil and Natural Gas Corp., 67%, and private interests, 33%)	Mahul refinery, Mumbai, Maharashtra	135
Do.	do. Essar Oil Ltd.	Vadinar refinery, Gujarat	245
Do.	do. do.	Visakhapatnam refinery, Andhra Pradesh	90
Do.	do. Hindustan Petroleum Corp. Ltd. (Oil and Natural Gas Corp., 51%, and private interests, 49%)	Madras refinery, Tamil Nadu	110
Do.	do. Indian Oil Corp. (Oil and Natural Gas Corp., 91%, and private interests, 9%)	Mathura refinery, Uttar Pradesh	400
Do.	do. Kochi Refineries Ltd. (Oil and Natural Gas Corp., 55%, and private interests, 45%)	Ambalamugal refinery, Kerala	67
Do.	do. do.	Haldia refinery, West Bengal	61
Do.	do. Madras Refineries Ltd. (Oil and Natural Gas Corp., 52%, and private interests, 48%)	Madras refinery, Tamil Nadu	131
Do.	do. Reliance Industries Ltd.	Jamnagar refinery, Gujarat	668
Do.	do. do.	Koyali refinery, Gujarat	185
Phosphate rock, gross weight	Hindustan Zinc Ltd. (HZL) (Vedanta Ltd., 64.9%, and Government, 29.6%)	Maton Mine, Rajasthan	NA
Do.	Madhya Pradesh State Mining Corp. Ltd. (Madhya Pradesh State government, 100%)	Hirapur (Maddeora) and Khatamba Mines, Madhya Pradesh	NA
Do.	do.	Hirapur Mine (Tigoda), Madhya Pradesh	NA
Do.	do.	Jhabua Mine, Madhya Pradesh	NA
Do.	Pyrites Phosphates and Chemicals Ltd.	Durmala and Maldeota underground Mines, Uttarakhand	NA
Do.	Rajasthan State Mineral Development Corp. Ltd. (Rajasthan State government, 100%)	Jamarkotra, Badgaon, Dakankotra, Kanpur, Kharbaria-ka-Guda, and Sallopat Mines, Rajasthan	1,500
Rare earths, monazite	metric tons Indian Rare Earths Ltd. [Department of Atomic Energy (Government), 100%]	Mine in Manavalakurichi, Tamil Nadu	6,000
Do.	do. do.	Chavara Mine, Kollam District, Kerala	211
Do.	do. Kerala Minerals and Metals Ltd. (Kerala State government, 100%)	Kollam Mine, Kerala	240
Salt	Dev Salt Pvt. Ltd.	Mine in Morbi, Gujarat	1,200
Do.	Hindustan Salt Ltd.	Mine at Mandi District, Himachal Pradesh	4,800
Do.	Satyesh Brinechem Pvt. Ltd.	Plant in Greater Rann, Kutch, Gujarat	3,000
Sillimanite	Indian Rare Earths Ltd. [Department of Atomic Energy (Government), 100%]	Chavara Mine, Kollam District, Kerala	10
Do.	do.	Manavalakurichi Mine in Kanniaykumari, Tamil Nadu	9
Do.	do.	Orrisa Sands Complex, Ganjam, Odisha	13
Do.	Kerala Minerals and Metals Ltd. (Kerala State government, 100%)	Chavara Mine, Kollam District, Kerala	66

See footnotes at end of table.

TABLE 2—Continued  
INDIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2022

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
Sillimanite—Continued	Trimex Sands Pvt. Ltd. (Trimex Group)		Bhavanapadu deposit, Andhra Pradesh	50
Do.	do.		Sirkurman deposit, Srikakulam, Andhra Pradesh	50
Do.	V. V. Mineral Ltd.		Thoothukudi Mine, Tamil Nadu	NA
Silver, metal metric tons	Hindustan Zinc Ltd. (HZL) (Vedanta Ltd., 64.9%, and Government, 29.6%)		Smelter in Chavara, Kerala	600
Do.	do. do.		Chanderiya smelter, Rajasthan	168
Do.	Hutti Gold Mines Co.		Hutti refinery, Karnataka	560
Do.	do. do.		Hira-Buddini refinery, Karnataka	33
Titanium, ilmenite-rutile ore	Beach Minerals Co. Pvt. Ltd.		Mine in Kuttam, Chennai, Tamil Nadu	150
Do.	Indian Rare Earths Ltd. [Department of Atomic Energy (Government), 100%]		Manavalakurichi Mine, Kanniaykumari, Tamil Nadu	94
Titanium, ilmenite-rutile ore	do.		Orrisa Sands Complex, Ganjam, Odisha	230
Do.	do.		Chavara Mine, Kollam District, Kerala	211
Do.	Kerala Minerals and Metals Ltd. (Kerala State government, 100%)		do.	66
Do.	Trimex Sands Pvt. Ltd. (Trimex Group)		Bhavanapadu deposit, Andhra Pradesh	308
Do.	do.		Sirkurman deposit, Srikakulam, Andhra Pradesh	206
Do.	V. V. Mineral Ltd.		Thoothukudi Mine, Tamil Nadu	500
Do.	V.V. Titanium Pigments Pvt. Ltd.		do.	18
Uranium, ore, U content metric tons	Uranium Corp. Ltd. of India [Department of Atomic Energy (Government, 100%)]		Jaduguda, Narwapahar, Bagjata, Bhatin, Banduhurang, Turamdih and Mohuldih Mines, Jharkhand, and Tummalppalle Mine, Andhra Pradesh	650
Wollastonite	Renu Atre		Ramawas Mine, Ajmer District, Rajasthan	NA
Do.	Wolkem Industries Ltd. (100% private)		Belka, Khera, and Beawar Mines, Udaipur District, Rajasthan	170
Zinc:				
Mine, Zn content	Hindustan Zinc Ltd. (HZL) (Vedanta Ltd., 64.9%, and Government, 29.6%)		Kayad Mine, Rajasthan	45
Do.	do.		Rajpura-Dariba Mine, Rajasthan	49
Do.	do.		Rampura-Agucha Mine, Rajasthan	271
Do.	do.		Sindesar-Khurd Mine, Rajasthan	278
Do.	do.		Zawar Mine, Rajasthan	181
Metal	do.		Chanderiya smelter, Rajasthan	558
Do.	do.		Dariba Smelting Complex, Rajasthan	240
Do.	do.		Debari smelter, Rajasthan	92
Zircon	Indian Rare Earths Ltd. [Department of Atomic Energy (Government), 100%]		Mine in Chavara, Kollam District, Kerala	18
Do.	do.		Manavalakurichi Mine, Kanniaykumari, Tamil Nadu	10
Do.	do.		Orrisa Sands Complex, Ganjam, Odisha	5
Do.	Kerala Minerals and Metals Ltd. (Kerala State government, 100%)		Mine in Chavara, Kollam District, Kerala	66
Do.	Trimex Sands Pvt. Ltd. (Trimex Group)		Bhavanapadu deposit, Andhra Pradesh	50
Do.	do.		Sirkurman deposit, Srikakulam, Andhra Pradesh	3
Do.	V. V. Mineral Ltd.		Thoothukudi Mine, Tamil Nadu	NA

Do. do. Ditto. NA Not available.

<sup>1</sup>Operations at the plant were put on care-and-maintenance status in May 2022 because of nonavailability of working capital.

<sup>2</sup>The smelter remained closed throughout 2022.

<sup>3</sup>Operations at the mines have been suspended since February 2018 owing to the Supreme Court decision in 2018 to terminate the Goa State Government's 88 iron ore mining leases.

TABLE 3  
INDIA: EXPORTS OF SELECTED MINERAL COMMODITIES

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>1</sup>	2018	2019	2020	2021	2022
METALS					
Aluminum:					
Alumina	1,420,848 <sup>r</sup>	1,363,610 <sup>r</sup>	1,265,838 <sup>r</sup>	1,472,324 <sup>r</sup>	1,813,949
Bars and rods	26,405	18,108	16,925	34,920	43,332
Bauxite	1,094,253 <sup>r</sup>	1,039,175 <sup>r</sup>	207,803	399,597	192,763
Foil	19,529	24,356	25,437	33,436	49,467
Metal and alloys, unwrought	1,917,905	1,961,853	2,262,012	2,685,596	2,585,307
Plates, sheets and strip	85,387	86,121	58,091	93,644	54,007
Powder	3,768	3,638	3,289	4,378	3,683
Scrap	5,813	5,945	5,374	9,717	9,251
Tube and pipe	15,894	15,877	7,225	16,564	14,669
Wire	34,944	63,148	113,842	129,204	139,487
Antimony:					
Antimony oxide	444	495	652	826	668
Unwrought	2,266	2,165	1,958	2,267	1,579
Bismuth, refined, including articles	3,340	290	950	12,010	18,040
Chromium, ores and concentrate	39,071	45,306	5,611	3,608	1,903
Cobalt:					
Hydroxide	5,490	--	23,060	12,160	7,310
Matte, lump, powder	61	41	153	937	2,193
Oxide	102	18	21	45	13
Copper:					
Metal and alloys, unwrought	128,836	47,048	91,913	158,842	63,569
Matte	12,396	6,274	12,418	12,902	9,696
Ores and concentrate	108,123 <sup>r</sup>	286,749 <sup>r</sup>	76,045 <sup>r</sup>	42,307 <sup>r</sup>	30,527
Plates, sheets and strip	3,961	4,467	3,265	5,788	10,892
Powder	678	1,015	739	382	185
Scrap	5,846	11,460	7,496	16,318	18,143
Tube and pipe	9,427	8,126	9,241	11,823	13,135
Unrefined anode	2	10	1,091	5,185	1
Ferroalloys:					
Ferrocerium	874	612	485	297	529
Ferrochromium	814,445	816,969	692,874	765,936	698,752
Ferromanganese	276,757	267,285	281,775	592,547	569,634
Ferromolybdenum	348	157	224	385	703
Ferronickel	20	330	76,520	1,630	740
Ferroniobium	7	66	11	21	19
Ferrosilicon	27,901	20,449	10,561	17,476	28,967
Ferrotungsten and ferrosilic tungsten	2,340	680	1,010	1,280	3,100
Ferrovanadium	463	551	303	173	116
Silicochromium	150	3,150	15,040	38,770	1,059,480
Silicomanganese	791,369	704,397	694,429	1,023,275	1,232,414
Gold, unwrought	kilograms	10	2,080	4,180	100
Iron and steel:					
Bars and rods, hot-rolled	713,459	730,265	850,196	1,981,276	822,310
Direct-reduced iron	671,460	871,961	618,491	666,728	1,028,026
Pig iron	321,961	277,302	428,015	904,231	515,225
Scrap	7,832	10,172	24,844	13,985	12,733
Shapes and sections	145,005	137,749	139,766	191,682	227,142
Tube and pipe	1,293,655	1,263,358	1,038,696	1,234,457	1,355,049
Wire	124,695	124,222	117,978	174,912	165,365
Iron ore	18,276,980	31,217,070	52,207,800	19,827,725	16,185,195
Lead:					
Ores and concentrate	37	4	8	8	144
Unwrought	178,862	181,355	166,949	200,466	193,644

See footnotes at end of table.

TABLE 3—Continued  
INDIA: EXPORTS OF SELECTED MINERAL COMMODITIES

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>1</sup>		2018	2019	2020	2021	2022
METALS—Continued						
Lithium:						
Carbonate		642	419	311	462	490
Oxide and hydroxide		144	149	171	400	171
Rare-earth compounds:						
Cerium oxide	kilograms	538,640	386,230	22,700	140	140
Cerium compounds	do.	458,860	781,810	1,811,540	2,632,390	3,020,240
Other oxide	do.	564,740	706,330	159,100	10	30
Other mixed compounds	do.	335,530	347,040	906,570	1,132,750	1,202,830
Rare-earth metals (scandium and yttrium)	do.	12,960	8,020	1,830	4,350	11,020
Manganese, ores and concentrate		185,818	364,068	151,670	165,516	30,692
Molybdenum, ores and concentrate	kilograms	5,700	3,000	23,000	22,140	350
Nickel:						
Ores and concentrate		11	39	--	20	--
Plates, sheets, strip and foil		88	167	109	261	155
Powder		41	66	18	29	45
Scrap		1,289	1,391	572	1,723	1,722
Unwrought		341	45	41	70	3,622
Platinum-group metals, refined:						
Palladium	kilograms	--	350	40	60	20
Platinum	do.	310	200	30	110	130
Rhodium	do.	--	10	10	90	10
Selenium		54	25	19	61	117
Silver:						
Powder	kilograms	190	90	990	2,210	2,140
Semimanufactures	do.	33,020	34,080	216,820	436,180	91,930
Unwrought	do.	20	80	30	54,960	350
Tin:						
Scrap	do.	3,210	150	2,440	840	160
Semimanufactures		134	122	161	237	156
Unwrought		421	542	428	469	282
Titanium:						
Ores and concentrate		415,758	233,795	254,740	209,218	163,260
Oxide		43,487	41,205	29,338	44,275	38,500
Scrap		306	199	151	27	65
Unwrought		4	7	3	2	3
Zinc:						
Ores and concentrate		2,316	501	450	822	35,457
Oxide and peroxide		17,653	13,804	24,209	25,506	21,079
Plates, sheets, strip and foil		3,836	3,113	3,831	3,653	3,462
Powder		1	249	101	527	602
Scrap	kilograms	120,940	130,460	80,380	5,230	90
Unwrought		217,000	186,790	288,019	255,316	340,233
Zirconium, ores and concentrate	kilograms	184,050	10,350	610	500	--
INDUSTRIAL MINERALS						
Arsenic		14	18	29	27	29
Barite		2,247,140 <sup>r</sup>	1,902,990	1,459,810	1,461,841 <sup>r</sup>	2,491,368
Bromine		5,032	5,929	6,863	12,057	13,261
Calcite		39,364	36,219	25,711	26,144	26,483
Cement and clinker		6,597,388	3,247,861	2,775,936	2,093,667	998,697
Clay:						
Bentonite		1,693,255	1,690,644	1,513,583	1,561,943	1,475,940
Fire clay		5,875	4,270	5,843	4,601	6,949
Kaolinite		379,445	520,193	247,578	351,043	476,455
Vermiculite		443	647	834	1,019	1,171
Diamond	million carats	327 <sup>r</sup>	248 <sup>r</sup>	165 <sup>r</sup>	272 <sup>r</sup>	226

See footnotes at end of table.

TABLE 3—Continued  
INDIA: EXPORTS OF SELECTED MINERAL COMMODITIES

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>1</sup>	2018	2019	2020	2021	2022
INDUSTRIAL MINERALS—Continued					
Dolomite	78,833	88,919	88,745	104,390	90,012
Feldspar	659,547	638,002	684,594	730,801	697,419
Granite	9,856,459	9,992,553	11,106,316	12,565,397	9,743,185
Graphite, natural	451 <sup>r</sup>	459	792 <sup>r</sup>	765	2,104
Gypsum	195,132 <sup>r</sup>	164,201 <sup>r</sup>	167,073 <sup>r</sup>	233,502 <sup>r</sup>	213,989
Iodine	223	302	149	115	127
Iron oxide pigments, natural, ocher	2,363	1,360	3,041	3,565	2,317
Limestone	3,624,140	3,922,216	2,964,293	12,431,274	3,012,234
Magnesite, crude	373	86	174	384	402
Nitrogen, ammonia	17,588	18,633	18,612	18,708	16,321
Quartzite	123,266	163,532	103,439	84,547	143,262
Salt, unspecified	12,838,975	13,022,013	10,069,082	8,534,621	13,261,331
Sulfur	513,839	663,840	926,848	990,167	1,507,234
Talc and pyrophyllite	257,991	254,925	242,766	334,040	352,840
Wollastonite	12,900	14,848	13,219	12,977	12,365
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Anthracite	4	12	10	1,903	4,514
Bituminous	--	--	1	141	139,564
Other, including briquettes, ovoids, and similar solid fuels	1,595	1,108	977	648,771	1,229,870
Coke, semicoke	112	135	86	1,106,807	544,711
Liquefied petroleum gas	451,267	490,876	469,762	559,615	544,551
Petroleum, refinery products	million 42-gallon barrels	584 <sup>r</sup>	568 <sup>r</sup>	390 <sup>r</sup>	705 <sup>r</sup>
					758

<sup>r</sup>Revised. do. Ditto. -- Zero.

<sup>1</sup>All values in kilograms were reported to the nearest 10 kilograms.

Source: Directorate General of Commercial Intelligence and Statistics, 2023, Trade statistics—Export import data bank (annual); Global Trade Tracker, 2023; Indian Minerals Yearbook 2019–22.

TABLE 4  
INDIA: IMPORTS OF SELECTED MINERAL COMMODITIES

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>1</sup>	2018	2019	2020	2021	2022
<b>METALS</b>					
Aluminum:					
Alumina	2,780,002 <sup>r</sup>	2,375,713 <sup>r</sup>	1,927,772 <sup>r</sup>	2,568,100 <sup>r</sup>	2,508,841
Bars and rods	38,808	42,381	32,706	45,110	44,234
Bauxite	1,943,302 <sup>r</sup>	2,084,641 <sup>r</sup>	2,997,146 <sup>r</sup>	3,145,105 <sup>r</sup>	3,872,236
Foil	165,309	187,298	152,076	168,167	194,256
Metal and alloys, unwrought	332,782	267,065	240,872	240,743	257,900
Plates, sheets, and strip	240,503	173,912	99,984	158,355	189,955
Powder	3,902	4,353	3,913	1,973	2,291
Scrap	1,296,278	1,349,481	1,285,966	1,648,860	1,753,338
Tube and pipe	11,688	10,629	9,917	13,415	14,279
Wire	85,428	73,486	41,272	31,701	6,507
Antimony:					
Antimony oxide	3,324	4,097	3,790	4,561	4,934
Ore and concentrate	7,614	7,496	5,761	5,079	6,456
Unwrought	1,277	1,445	1,143	1,309	1,203
Bismuth, refined	kilograms	257,070	223,870	261,050	249,700
Chromium, ores and concentrate		154,048	134,306	144,122	252,950
Cobalt:					
Hydroxide	24	39	58	25	549
Mattes, lump, powder	683	1,160	620	894	838
Oxide	119	232	181	212	182
Copper:					
Metal and alloys, unwrought	87,673	144,301	154,350	146,967	145,257
Mattes	408	--	3	78	1,014
Ores and concentrate	1,050,938 <sup>r</sup>	772,073 <sup>r</sup>	544,478 <sup>r</sup>	873,438 <sup>r</sup>	1,129,405
Plates, sheets and strip	24,759	21,541	16,186	19,456	20,039
Powder	1,381	2,121	1,995	1,184	1,036
Scrap	195,236	249,569	228,449	250,044	274,832
Tube and pipe	57,878	73,185	51,798	67,113	88,153
Unrefined anodes	128,431	124,641	159,675	187,042	227,257
Ferroalloys:					
Ferrocerium	kilograms	18,210	--	210	30
Ferrochromium		31,699	28,485	38,192	44,753
Ferromanganese		118,701	113,879	64,163	49,334
Fermolybdenum		2,147	2,391	2,847	2,715
Ferronickel		102,570	123,362	39,228	216,272
Ferroniobium		3,171	2,897	2,426	4,147
Ferrosilicon		209,466	220,776	191,883	205,884
Ferrotungsten and ferrosilic tungsten		27	5	10	5
Ferrovanadium		848	443	439	970
Silicochromium		1	64	0	100
Silicomanganese		2,939	6,785	6,862	24,050
Gold:					
Ores and concentrate	kilograms	--	270	20	633,150
Semimanufactures	do.	3,010	1,930	1,880	9,560
Unwrought	do.	941,990	834,440	428,230	1,058,100
Iron and steel:					
Bars and rods, hot-rolled		279,973	352,203	153,202	116,218
Direct-reduced iron		57,741	63,609	57,076	50,615
Pig iron		19,528	19,907	10,476	16,064
Scrap		6,331,517	7,053,633	5,477,472	5,135,809
Shapes and sections		37,515	48,226	36,507	20,181
Tube and pipe		922,772	922,618	583,070	581,390
Wire		305,785	247,239	199,436	251,781
Iron ore		15,889,900	2,129,020	778,390 <sup>r</sup>	5,494,684 <sup>r</sup>
					2,042,630

See footnotes at end of table.

TABLE 4—Continued  
INDIA: IMPORTS OF SELECTED MINERAL COMMODITIES

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>1</sup>	2018	2019	2020	2021	2022
METALS—Continued					
Lead:					
Ores and concentrate	1,279	2,520	5,866	5,507	5,576
Unwrought	266,122	233,935	246,380	231,758	257,916
Lithium:					
Carbonates	1,656	1,298	1,090	1,124	1,211
Oxide and hydroxide	1,984	1,928	1,856	2,757	1,331
Manganese, ores and concentrate	3,786,237	3,523,759	3,974,597	6,948,457	6,284,837
Molybdenum, ores and concentrate	10,529	8,376	7,948	10,325	9,873
Nickel:					
Ores and concentrate	kilograms	--	300	36,960	106,420
Plates, sheets, strip and foil		1,783	3,641	4,093	3,791
Powder		294	299	287	487
Scrap		2,066	3,796	3,412	3,465
Unwrought		36,635	32,808	30,162	37,218
Platinum-group metals, refined:					
Palladium	kilograms	1,500	960	940	490
Platinum	do.	1,970	1,720	3,070	2,910
Rhodium	do.	600	140	140	90
Rare-earth compounds:					
Cerium oxide		105	104	148	163
Cerium compounds		214	317	471	546
Other oxide		5	11	3	25
Other mixed compounds		1,110	845	476	713
Rare-earth metals (scandium and yttrium)		648	556	419	808
Selenium	kilograms	373,410	467,850	690,620	595,820
Silver:					
Powder	do.	3,480	5,080	6,240	30,170
Semimanufactures	do.	553,500	401,420	1,532,710	2,518,740
Unwrought	do.	6,958,130	5,567,890	417,800	254,470
Tin:					
Semimanufactures		292	244	226	278
Unwrought		11,586	10,760	9,861	10,765
Titanium:					
Ores and concentrate		117,620	146,744	87,525	115,131
Oxide		15,072	16,463	12,847	14,614
Scrap		3,606	4,834	5,282	5,695
Unwrought		618	432	625	781
Zinc:					
Ores and concentrate		823	700	90	1,187
Oxide and peroxide		5,154	5,743	5,215	5,659
Plates, sheets, strip and foil		1,142	1,594	1,222	1,380
Powder		2,170	2,209	1,658	2,165
Scrap		89,607	86,695	46,041	74,207
Unwrought		185,677	159,570	137,399	149,967
Zirconium, ores and concentrate		85,290	57,141	55,545	102,943
INDUSTRIAL MINERALS					
Arsenic		690	771	620	767
Barite		12,508	14,654 <sup>r</sup>	10,988	15,278 <sup>r</sup>
Bromine		5,306	6,680	10,047	11,432
Calcite		66,041	73,657	64,304	47,514
Cement and clinker		2,605,657	2,133,793	2,000,602	2,480,580

See footnotes at end of table.

TABLE 4—Continued  
INDIA: IMPORTS OF SELECTED MINERAL COMMODITIES

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>1</sup>	2018	2019	2020	2021	2022
INDUSTRIAL MINERALS—Continued					
Clay:					
Bentonite	57,497	70,950	75,544	132,858	127,303
Fire clay	947	2,345	2,090	861	1,438
Kaolinite	212,388	248,266	216,332	243,852	214,031
Vermiculite	589	323	618	970	2,098
Diamond	million carats	866 <sup>r</sup>	805 <sup>r</sup>	572 <sup>r</sup>	888 <sup>r</sup>
Dolomite	5,565,395	5,573,752	3,890,711	4,964,913	5,539,240
Feldspar	262,552	258,228	219,780	290,194	287,067
Granite	55,531	81,624	35,688	32,630	36,140
Graphite, natural	43,103 <sup>r</sup>	45,003	38,649 <sup>r</sup>	49,154	52,170
Gypsum	6,137,025 <sup>r</sup>	5,497,077 <sup>r</sup>	5,187,762 <sup>r</sup>	5,692,533 <sup>r</sup>	5,884,195
Iodine	4,027	4,247	3,202	3,382	3,751
Limestone	22,845,591	25,275,058	23,016,829	25,778,020	28,162,167
Magnesite, crude	132,457	74,609	54,481	83,314	68,103
Nitrogen, ammonia	2,592,118	2,691,033	2,437,435	2,437,844	2,235,275
Quartzite	1,396	434	516	5,792	4,527
Salt, unspecified	100,399	68,989	119,446	91,167	99,281
Sulfur	1,275,274	1,381,648	1,337,519	1,801,712	1,542,299
Talc and pyrophyllite	5,753	6,533	5,662	9,926	9,382
Wollastonite	24,754	23,088	21,475	30,933	38,070
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Anthracite	1,722	1,899	1,994	1,719,711	2,194,348
Bituminous	17,770	29,066	19,001	9,558,464	5,196,517
Other, including briquettes, ovoids, and similar solid fuels	thousand metric tons	207,867	218,353	197,257	149,401
Coke, semicoke	5,184	3,250	2,568	1,879,418	3,274,917
Liquefied petroleum gas	36,092,907	38,068,153	42,208,386	42,205,782	38,903,943
Petroleum:					
Crude	million 42-gallon barrels	1,649 <sup>r</sup>	1,614 <sup>r</sup>	1,443 <sup>r</sup>	1,549 <sup>r</sup>
Refinery products	do.	37 <sup>r</sup>	72 <sup>r</sup>	110 <sup>r</sup>	113 <sup>r</sup>
Uranium, ores and concentrate		6,449	2,973	2,382	--

<sup>r</sup>Revised. do. Ditto. -- Zero.

<sup>1</sup>All values in kilograms were reported to the nearest 10 kilograms.

Source: Directorate General of Commercial Intelligence and Statistics, 2023, Trade statistics—Export import data bank (annual); Global Trade Tracker, 2023; Indian Minerals Yearbook 2019–22.

TABLE 5  
INDIA: ESTIMATED RESERVES OF MAJOR MINERAL COMMODITIES IN 2021<sup>1,2</sup>

(Thousand metric tons unless otherwise specified)

Commodity	Reserves
Apatite	30
Barite (all grades)	51,000
Bauxite	650,000
Calcite	3,400
Chalk	5,100
Chromite ore (all grades)	79,000
Clay:	
Ball clay	50,000
Bentonite	15,000
Fireclay	27,000
Fuller's earth	3,900
Kaolin	230,000
Coal, lignite	150,000,000
Copper:	
Crude ore	164,000
Cu content	2,200
Corundum	metric tons 200
Diamond	thousand carats 850
Diaspore	7,900
Dolomite	680,000
Dunite	13,000
Feldspar (all grades)	320,000
Fluorite	404
Garnet	8,600
Gold:	
Crude ore	24,000
Au content	kilograms 93,000
Graphite	8,600
Gypsum	37,000
Iron ore:	
Crude ore	6,400,000
Fe content	4,000,000
Iron oxide pigmetites, ochre	37,000
Kyanite and related minerals:	
Kyanite	850
Sillimanite	6,500
Lead and zinc ore	100,000
Lead, Pb content	2,000
Limestone	19,000,000
Magnesite	66,000
Manganese ore	75,000
Mica	114
Monazite	13,000
Phosphate rock	31,000
Quartzite	83,000
Silica	648,000
Salt (rock)	4,000,000
Sillimanite	8,000
Silver:	
Crude ore	170,000
Ag content	metric tons 8,000
Talc	106,000
Tin:	
Ore	2
Sn content	metric tons 974

See footnotes at end of table.

TABLE 5—Continued  
INDIA: ESTIMATED RESERVES OF MAJOR MINERAL COMMODITIES IN 2021<sup>1,2</sup>

(Thousand metric tons unless otherwise specified)

Commodity	Reserves
Titanium minerals:	
Ilmenite	85,000
Rutile	7,400
Vermiculite	1,600
Wollastonite	2,700
Zinc, Zn content	7,000
Zircon	3,400

<sup>1</sup>The total reserves of major mineral commodities includes proven and probable reserves. Values are for 2021, which is the latest year for which data were available.

<sup>2</sup>Data have been rounded to no more than three significant digits.

Source: Indian Bureau of Mines, 2022, Statistical profiles of minerals.