



# 2011 Minerals Yearbook

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## BANGLADESH

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# THE MINERAL INDUSTRY OF BANGLADESH

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Bangladesh's mineral industry was dominated by the production of cement, natural gas, petroleum, and salt. Other mineral commodities produced in the country included coal, granite, kaolin, limestone, and nitrogen. The country lacks reserves of metallic minerals but has large potential for the occurrence of natural gas. In 2010 (the most recent year for which data were available), mining accounted for 1.1% of the country's gross domestic product (GDP), and the construction sector accounted for 7.4% (Asian Development Bank, 2011, p. 1).

The Bangladesh Oil, Gas and Mineral Corp. (Petrobangla) is the Government entity that is responsible for the exploration for, production of, and transmission and distribution of natural gas in Bangladesh. Petrobangla was also in charge of the development of the country's mineral deposits that had been determined to be economically feasible, whereas exploring for minerals was the responsibility of the Geological Survey of Bangladesh (Bangladesh Oil, Gas and Mineral Corp., 2010, p. 8, 15).

In 2011, the draft of the National Coal Policy was under revision. The policy would provide guidance for the development of the coal industry and seek to establish coal as a primary fuel for power generation to ensure a reliable source of energy for the country. To promote the exploration, development, mining, and marketing of coal, the new policy proposed a waiver of corporate taxes for contractors and licensees. Other incentives included a rebate for duties and taxes applied to the import of machinery to be used for coal mining. The policy recommends competitive bidding in order for the Government to grant permits and licenses to contractors and encourages private and public joint-venture investments as well as foreign direct investment (EnergyBangla.com, 2010).

During 2010, Bangladesh, Burma, and India were involved in maritime boundary disputes regarding their respective sovereignty in the Bay of Bengal. For many years, these countries had attempted to negotiate and delimit their claims in the disputed area. On December 2009, Bangladesh and Burma accepted the jurisdiction of the International Tribunal for the Law of the Sea (ITLOS) in Germany for the settlement of the dispute concerning their maritime boundary delimitation. At the time, although accepting ITLOS jurisdiction, the countries had not agreed on a bilateral solution regarding the delimitation principle to be used, and negotiations continued between the countries. ITLOS is an independent judicial body established by the United Nations Convention on the Law of the Sea (UNCLOS) that has jurisdiction to arbitrate disputes arising out of the interpretation and application of the Law of the Sea. UNCLOS establishes a legal framework to regulate ocean space and its resources and uses. In meetings held in January 2010, Bangladesh and Burma agreed to delimit the area by combining the equidistance and equity demarcation principles. In October 2010, Burma and India reached an informal understanding to cooperate with each other on the settlement of their maritime dispute with Bangladesh (Durham University, 2010;

International Tribunal for the Law of the Sea, 2010; Priyo.com, 2010).

For several weeks in September 2011, representatives from Bangladesh and Burma met with the ITLOS for a final round of pleadings regarding the delimitation of the maritime boundary dispute between the two countries. ITLOS determined that a final judgment would be delivered by March 14, 2012. Bangladesh's border-dispute points with neighboring Burma were along the Rakhine State boundary. Although the two countries had been involved in maritime border disputes for the past few years, the bilateral trading between them was estimated to have been about \$140 million per year (Xinhuanet.com, 2011).

## Production

Data on mineral production in table 1 have been estimated for 2011.

## Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

## Commodity Review

### *Industrial Minerals*

**Cement.**—Lafarge Surma Cement Ltd., which was a joint venture of Cementos Molins S.A. of Spain and Lafarge Group of France, operated a plant located at Chhatak in the district of Sunamganj in northeastern Bangladesh. The Lafarge Surma Cement plant was the only integrated clinker and cement producer in Bangladesh. The company mined the raw material that fed the plant from its affiliate quarry at East Khasi Hills in Meghalaya State, India. Materials from the quarry were transported 17 kilometers (km) across the border from India to Bangladesh. In 2010, the Supreme Court of India suspended the mining operations in the quarry because the area had been catalogued by the Indian Government as eco-sensitive forest land with indigenous ownership. In August, the Supreme Court of India allowed Lafarge Surma to resume its mining operations in the quarry. During the year, the company produced about 885,000 metric tons (t) of cement and 485,000 t of clinker. The plant had the capacity to produce about 1.5 million metric tons per year (Mt/yr) of cement (Lafarge S.A., 2012, p. F66; Lafarge Surma Cement Ltd., 2012, p. 29).

HeidelbergCement Group of Germany through its subsidiary HeidelbergCement Bangladesh Ltd. operated two cement plants in the country. The plants were located in the Patenga area of Chittagong and the Kanchpur area of Narayanganj. During the year, the company completed the construction of an additional cement mill in the Chittagong grinding plant at a cost of about \$16 million. The new mill was expected to be in operation by January 2012 and would have a production capacity of 0.8 Mt/yr (HeidelbergCement Group, 2012a, p. 110; 2012b).

M.I. Cement Factory Ltd., which was located in the District of Munshiganj, produced a total of 719,800 t of cement in 2011 compared with about 571,400 t in 2010. During the year, the company completed an expansion project at its cement plant (4th unit), which would add a production capacity of about 3,000 metric tons per day. The 4th unit began commercial production in November. The company expected to produce about 1 Mt/yr of cement. The company planned to sell 80% of its production to the local market and to export 20% to India (Cemnet.com, 2011; M.I. Cement Factory Ltd., 2011, p. 40; 2012, p. 5).

Premier Cement Mills Ltd. of Bangladesh completed an expansion project at its Unit-2 cement plant, which began operation in January. The Unit-2 plant, which was located in the District of Munshiganj, would add a production capacity of about 0.6 Mt/yr. The company expected to increase its production capacity to 2.4 Mt/yr from 1.2 Mt/yr by late 2012 (Premier Cement Mills Ltd., 2013).

In addition, at least three companies were engaged in cement expansion projects in Bangladesh. These companies included national companies Meghna Cement Mills Ltd., Shah Cement Industries Ltd., and Holcim Bangladesh Ltd. of Switzerland.

**Stone, Crushed.**—Maddhapara Granite, which was a subsidiary of Petrobangla, was responsible for the production of granite at Petrobangla's underground mine in the District of Dinajpur. The facility had the capacity to produce about 1.65 Mt/yr of hard rock. During fiscal year 2010 (the most recent fiscal year for which data were available), which ran from July 2009 through June 2010, the Maddhapara Mine produced a total of 290,187 t of granite (Bangladesh Oil, Gas and Mineral Corp., 2010, p. 27).

### **Mineral Fuels**

**Coal.**—In June, the Government lifted the ban on the importation of coal that has sulfur content greater than 1%, which was implemented in 2009. The Government decided to extend the importation of coal from India for a period of 1 year. The coal was transported across the Sylhet portion of the Bangladesh border from Meghalaya State in neighboring India (Telegraph, The, 2011).

The Barapukuria coal mine, which was owned by Barapukuria Coal Mining Co. Ltd. (a subsidiary of Petrobangla), was the first and only operating coal mine in Bangladesh. In 2005, the company signed a management, production, and maintenance contract with China National Machinery Import and Export Corp. (CMC) and Xuzhou Coal Mining Group Co. Ltd. (XMC) of China; this contract expired in August 2010. In December 2010, the Government opened a bid round for a new contract. In October 2011, the Government awarded the new management, production and maintenance contract to CMC and XMC for the next 6 years. The Barapukuria Mine is located in the District of Dinajpur and had the capacity to produce about 1 Mt/yr of coal (Bangladesh Oil, Gas and Mineral Corp., 2010; Rahman, 2011).

**Natural Gas.**—ConocoPhillips Co. of the United States signed a production-sharing contract (PSC) with the Government and Petrobangla for the exploration of two offshore blocks in the Bay of Bengal. The blocks, Blocks DS-08-10 and DS-08-11,

are located about 280 km from Chittagong and cover a total area of about 5,158 square kilometers (km<sup>2</sup>) in water ranging in depth from 1,000 to 1,500 meters. The PSC contract was for 9 years, during which the company would conduct exploration, including 5 years of primary exploration followed by 2 years each for two extended exploration periods. During the primary exploration period the company would conduct a 973-line-km seismic survey and drill one optional exploration well. The extended exploration program would include a 500-km<sup>2</sup> three-dimensional survey and one exploration well. In December, Petrobangla approved a proposal submitted by ConocoPhillips to conduct a two-dimensional seismic survey that was expected to begin in February 2012 (ConocoPhillips Co., 2011, Energy-pedia News, 2011).

**Petroleum.**—Eastern Refinery Ltd. (a subsidiary of Bangladesh Petroleum Corp.) was Bangladesh's sole petroleum refining company. The Eastern refinery, which was located in Chittagong, produced petroleum products from imported crude oil. The company continued with its plans for what the company termed the BMRE (balancing, modernization, rehabilitation, and expansion) of the Eastern refinery at a cost of about \$1 billion. In 2010, bids were open for the funding of this expansion project. The Government received applications for the BMRE in mid-2011 and selected Foster Wheeler AG of Switzerland to lead the project; however, no further details as to when the expansion might take place were available. The proposed expansion project would increase the refinery's production capacity to 4.5 Mt/yr from 1.5 Mt/yr (Bangladesh Economic News, 2011; Independent Publications Ltd., 2011).

### **Outlook**

The Government has made investment in the country's power generation platform a priority. The building of new powerplants and gas transmission pipelines, the implementation of other infrastructure improvements, such as bridges, and other development projects taking place in Bangladesh are expected to continue to increase demand for building materials, such as cement and crushed stone, in the near future. The fast-growing infrastructure development and the increase of materials demand will most likely influence trade with neighboring countries and positively contribute to the economy of the region.

The success of the country in overcoming its energy supply shortage will be subject to the commencement of projects in the coal and gas sectors that started during the past 3 years and the granting of permits for projects proposed recently. In addition, the country is expected to be less dependent on imported industrial materials, such as cement, as projects in the development stages reach the production stage.

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TABLE 1  
BANGLADESH: ESTIMATED PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

(Metric tons unless otherwise specified)

Commodity <sup>3</sup>	2007	2008	2009	2010	2011	
Cement, hydraulic <sup>4</sup>	5,100,000	5,000,000	5,000,000	5,000,000	5,000,000	
Clays, kaolin <sup>4</sup>	8,600	8,500	8,500	8,500	8,500	
Coal, bituminous <sup>4</sup>	678,000 <sup>5</sup>	857,648 <sup>r,5</sup>	730,866 <sup>r,5</sup>	666,635 <sup>r,5</sup>	700,000	
Gas, natural, marketed <sup>4,6</sup>	million cubic meters	17,014 <sup>5</sup>	18,511 <sup>r,5</sup>	19,919 <sup>r,5</sup>	20,075 <sup>r,5</sup>	20,100
Iron and steel, metal, steel products <sup>4</sup>	60,000	60,000	60,000	60,000	60,000	
Nitrogen, N content of urea, ammonia, ammonium sulfate	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	
Petroleum:						
Crude	thousand 42-gallon barrels	1,800	1,800	1,800	1,800	1,800
Refinery products	do.	9,400	9,500	9,500	9,500	9,500
Salt, marine <sup>4</sup>	360,000	1,368,323 <sup>r,5</sup>	1,388,557 <sup>r,5</sup>	1,409,239 <sup>r,5</sup>	1,410,000	
Stone, crushed:						
Granite	258,516 <sup>5</sup>	267,434 <sup>5</sup>	290,187 <sup>r,5</sup>	300,000 <sup>r</sup>	300,000	
Limestone	70,000	70,000	70,000	70,000	70,000	

<sup>1</sup>Revised. do. Ditto.

<sup>2</sup>Estimated data are rounded to no more than three significant digits.

<sup>3</sup>Table includes data available through January 10, 2013.

<sup>4</sup>In addition to the commodities listed, crude construction materials, such as sand and gravel and other varieties of stone, presumably are produced, but available information is inadequate to make reliable estimates of output.

<sup>5</sup>Data are for fiscal year ending June 30 of following year.

<sup>6</sup>Reported figure.

<sup>7</sup>Gross production is not reported; the quantity vented, flared, or reinjected is believed to be negligible.

TABLE 2  
BANGLADESH: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity <sup>e</sup>
Cement		Bangladesh Oil, Gas and Mineral Corp. (Petrobangla)	Chittagong	1,000.
Do.		do.	Sylhet	1,100.
Do.		Cemex Cement Bangladesh Ltd.	Mahmudnagar	600.
Do.		HeidelbergCement Bangladesh Ltd.	Chittagong and Narayangonj (near the capital Dhaka)	2,000.
Do.		Holcim (Bangladesh) Ltd.	Bagerhat and Narayangonj	1,300.
Do.		Lafarge Surma Cement Ltd. (Lafarge Group and Cementos Molins S.A.)	Chhatak, Sunamganj	1,500 (1,150 clinker).
Do.		Meghna Cement Mills Ltd. (an enterprise of the Bashundhara Group of Bangladesh)	Mongla Port Industrial Zone and Pashur River Bank facility	1,000.
Do.		Premier Cement Mills Ltd.	Muktarpul and Munshiganj	1,460.
Do.		Shah Cement Industries Ltd.	Dhaka	1,860.
Do.		Unique Cement Industries Ltd.	Chittagong, Dhaka, and Sylhet	1,440.
Do.		Various	18 additional facilities	5,240.
Coal		Barapukuria Coal Mining Co. Ltd. (BCMCL) [Bangladesh Oil, Gas and Mineral Corp. (Petrobangla), 100%]	Barapukuria	1,000.
Fertilizer		Bangladesh Chemical Fertilizer Corp.	Auganish	560.
Do.		do.	Fenchugani	100.
Do.		do.	Ghorasai	600.
Gas, natural	million cubic meters per day	Bangladesh Gas Fields Co. Ltd. (BGFCL) [Bangladesh Oil, Gas, and Mineral Corp. (Petrobangla), 100%]	Bakhrabad, Habiganj, Kamta, Meghna, Narsingdi, and Titas	22.
Do.	do.	Bangladesh Petroleum Exploration and Production Co. Ltd. (BAPEX) [Bangladesh Oil, Gas and Mineral Corp. (Petrobangla), 100%]	Fenchuganj and Saldanadi	2.
Do.	do.	Santos International Holdings Pty. Ltd.	Sangu (offshore)	3.
Do.	do.	Chevron Corp.	Bibiyana	19.8.
Do.	do.	do.	Jalalabad	3.9.
Do.	do.	do.	Maulavi Bazar	1.6.
Do.	do.	Niko Resources Ltd.	Bibiyana and Feni	6.
Do.	do.	Sylhet Gas Fields Ltd. (SGFL) [Bangladesh Oil, Gas and Mineral Corp. (Petrobangla), 100%]	Beanibazar, Haripur, Kailashtila, and Rashidpur	5.
Do.	do.	Tullow Oil plc, 30%	Bangora field	3.4.
Petroleum:				
Crude	42-gallon barrels per day	Santos International Holdings Pty. Ltd.	Sangu	30,000.
Refined	do.	Eastern Refinery Ltd.	Chittagong	34,000.
Steel, crude		Bangladesh Steel and Engineering Corp.	do.	20.
Stone, crushed, granite		Maddhapara Granite Mining Co. Ltd. [Bangladesh Oil, Gas and Mineral Corp. (Petrobangla)]	Maddhapara, District of Dinajpur	1,650 (hard rock).

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto.