

# 2017–2018 Minerals Yearbook

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## GUYANA

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# THE MINERAL INDUSTRY OF GUYANA

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**Note: In this chapter, information for 2017 is followed by information for 2018.**

In 2017, Guyana's nominal gross domestic product (GDP) was estimated to be \$3.6 billion compared with \$3.5 billion (revised) in 2016. In 2017, the country produced metals and industrial minerals, including bauxite, common sand, crushed stone, diamond, gold, and loam. The Guyana Geology and Mines Commission (GGMC) reported that the country also has occurrences of other minerals, such as chromite, copper, iron ore, mica, peat, phosphate rock, quartz, rare earths, tin, and others (table 1; Vieira, 2014a–c; Bank of Guyana, 2018, p. 11; International Monetary Fund, 2018).

## Minerals in the National Economy

Guyana's real GDP in 2017 was estimated to have increased by 2.1% to \$1.97 billion<sup>1</sup> from \$1.93 billion in 2016. The value added of the mining and quarrying sector was estimated to be \$270.2 million in 2017, which was a decrease of 8.8% compared with the value added of \$296.4 million in 2016. The overall contribution of the mining sector to real GDP was 13.7% in 2017 compared with 15.4% in 2016 (table 1; Bank of Guyana, 2018, p. 10–13, 145).

The value of Guyana's export receipts increased by \$1.5 million to about \$1.44 billion in 2017 from \$1.43 billion in 2016. The leading mineral commodity exports were, in order of value, gold, which was valued at \$817.5 million compared with \$830.7 million in 2016, and bauxite, which was valued at \$102.3 million compared with \$92.1 million in 2016. The decrease in the value of gold exports was attributed to a decrease in the volume of exports. The increase in the value of bauxite shipments was attributed to an 18.4% increase in export prices. In 2017, exports of nonmonetary gold to the United States were valued at about \$178 million compared with \$297 million in 2016, and exports of bauxite to the United States were valued at \$30 million compared with \$24 million in 2016 (Bank of Guyana, 2018, p. 16–17; U.S. Census Bureau, 2018b).

Guyana's total imports were valued at about \$1.63 billion in 2017 compared with about \$1.47 billion (revised) in 2016; the increase was owing to higher imports of capital goods, particularly mining machinery, for which imports increased by 71%. Other relevant increases were recorded for intermediate goods, and consumption goods. Imports of fuels and lubricants were valued at about \$395 million compared with \$345 million in 2016. The value of mining equipment imports increased to \$59.4 million from \$34.7 million in 2016. Guyana's imports of petroleum products (other) from the United States increased

to \$13.1 million from \$10.1 million in 2016 (Bank of Guyana, 2018, p. 18; U.S. Census Bureau, 2018a).

## Government Policies and Programs

The GGMC is the Government agency in Guyana responsible for overseeing the activities of the mining sector. The agency was created in 1979 and is composed of five technical divisions: environmental, geological services, land management, mines, and petroleum. The general functions of the GGMC are to enforce the provisions of mining licenses, permits, and concessions as well as of prospecting licenses (for large-scale operations), prospecting permits (for medium- and small-scale operations), and quarry licenses; to collect rentals, fees, and charges that are payable under the law; and to act as a national repository for all information relating to geology and mineral resources. Large-scale mining permits cover areas of greater than 1,200 acres, medium-scale permits cover areas from 150 to 1,200 acres, and small-scale permits cover areas of less than 150 acres. The Environmental Division coordinates, promotes, and oversees mineral processing and environmentally sound mining techniques. The Geological Services Division undertakes geological fieldwork to investigate the geology and mineral resources and compiles geological reports. The Land Management Division performs cartographic and GIS work and mineral property management. It also processes and grants licenses and permits for the medium- and large-scale mineral sector and maintains an updated database of mineral licenses. The Mines Division regulates the mining sector in accordance with the Mining Act of 1989. The Petroleum Division regulates all activities in the crude petroleum industry; provides economic, environmental, and technical advice; and supports competitiveness and efficiency in the petroleum sector. In Guyana, all mineral rights are owned by the state (Guyana Geology & Mines Commission, 2018a, b).

## Production

In 2017, production of loam increased to 73,911 metric tons (t) from 51,054 t in 2016, or by 116.7%. The increase in loam production was most likely owing to an increase in the demand for construction materials as a result of the reported 11.4% growth of the construction sector in 2017. Diamond production decreased by 62.7% to 52,161 carats from 139,890 carats in 2016. Diamond output decreased owing to weak domestic and international demand and an increase in labor and operational costs. Gold production decreased by 8.3% to 20,334 kilograms (kg) from 22,168 kg in 2016. Gold production was affected by the reduction in output from small- and medium-scale miners (table 1; Bank of Guyana, 2018, p. 10–12).

<sup>1</sup>Where necessary, values have been converted from Guyanese dollars (GYD) to U.S. dollars (US\$) at an annual average exchange rate of GYD 208.5=US\$1.00 for 2018, GYD 206.5=US\$1.00 for 2017, and GYD 206.5=US\$1.00 for 2016.

## Structure of the Mineral Industry

Table 2 is a list of the major mineral industry facilities in Guyana.

## Commodity Review

### Metals

**Bauxite and Alumina.**—The Bauxite Company of Guyana Inc. (BCGI) was a leading bauxite producer in Guyana. United Company RUSAL plc (RUSAL) of Russia owned a 90% stake in BCGI, and the remaining 10% was owned by the Government. RUSAL produced bauxite at the Kurubuka Mine in the Upper Demerara-Berbice Region. As of December 31, BCGI's total bauxite resources were estimated to be about 84.7 million metric tons (Mt) (of which measured resources were 1.1 Mt, indicated resources were 39.4 Mt, and inferred resources were 44.2 Mt). The company had the capacity to produce 1.7 million metric tons per year of bauxite and had a capacity utilization rate of 61% in 2017. Production of bauxite at BCGI decreased by 4.6% to about 1.04 Mt in 2017 from about 1.09 Mt in 2016 (table 2; United Company RUSAL plc, 2018, p. 24–26, 57).

The Bosai Minerals Group Company Ltd. of China produced bauxite in Guyana at the Omai bauxite mine. The mine was located near Linden on the Demerara River and had the capacity to produce 700,000 metric tons per year of bauxite. The company estimated Omai's bauxite reserves to be about 200 Mt (table 2; Bosai Minerals Group Company Ltd., [undated]).

In 2017, the Government of Guyana announced that First Bauxite Corp. (FBX) would begin construction of the Bonasika bauxite project in 2018. The project, which would be located in the Cuyuni-Mazaruni Region, had an investment cost of \$50 million and was expected to commence production in 2019 (Department of Public Information of the Government of Guyana, 2017).

**Gold.**—Guyana Goldfields Inc. (GGI), which was a junior mineral company based in Canada, produced gold at its Aurora Mine located in the Cuyuni-Mazaruni Region. In 2017, the mine increased production to 4,992 kg of gold, which was up from the 4,715 kg of gold produced in 2016. The mine, which reached commercial production in January 2016, was expected to produce approximately 117,000 kg of gold during a mine life of 16 years (Guyana Goldfields Inc., 2018, p. 6–7, 15).

Troy Resources Ltd. of Australia, which was a junior mineral company, began production in January 2016 at its Karouni gold mine located in the Essequibo Region. In 2017, the mine produced 1,743 kg of gold. As of June 30, 2017, total proven and probable reserves were 2.9 Mt at an average grade of 2.22 grams per metric ton gold (Troy Resources Ltd., 2017, p. 1, 8, 23).

### Mineral Fuels

**Natural Gas and Petroleum.**—In 2017, Exxon Mobil Corp. announced that its majority-owned subsidiary in Guyana, Esso Exploration and Production Guyana Ltd., had made the sixth offshore petroleum discovery in the offshore Stabroek Block. The finding added to the portfolio of previous discoveries

at Liza, Liza Deep, Payara, Snoek, and Turbot, which are catalogued as collectively containing about 3.2 billion barrels of recoverable oil equivalent. The Stabroek Block was located approximately 193 km offshore Guyana and comprises a 26,806-square-kilometer area. In June, the company announced plans for the first phase of the development of the Liza prospect, which would include a floating production, storage, and offloading vessel with a designed capacity to produce 120,000 barrels per day of crude petroleum. Production was expected to commence in 2020 (Exxon Mobil Corp., 2018, p. 42; OilNow, 2018).

Since the initial petroleum discovery in the Stabroek Block in 2015, a territorial dispute reemerged between Guyana and Venezuela regarding the rights to operate the block. Venezuela's President issued a decree in May 2015 that laid claim to a large part of western Guyana and its territorial waters; the decree effectively challenged a ruling that dates back to the 19th century by an arbitral tribunal that favored the British government. In 2017, the United Nations Secretary appointed a mediator to resolve the dispute and highlighted that the International Court of Justice may have to play a role in settling the dispute (Jamaica Observer, 2017).

## MINERAL INDUSTRY HIGHLIGHTS IN 2018

Guyana's real GDP in 2018 was estimated to be \$2.03 billion compared with \$1.97 billion in 2017, which was an increase of 4.1%. The expansion of the economy in 2018 was owing to the increase in the production of bauxite, in addition to the growth in agricultural, construction, fishing, forestry, manufacturing, and services activities. Also, commodity prices were favorable and investment expenditures increased in 2018. Total investment expenditure in Guyana represented about 43% of the country's GDP. The value of the mining and quarrying sector was estimated to be \$275.3 million in 2018 compared with \$270.2 million in 2017, which was an increase of about 3%. The overall contribution of the mining sector to real GDP was 13.6% in 2018. The construction sector grew by 11% and contributed 11.7% to the GDP (table 1; Bank of Guyana, 2019, p. 9, 13, 119, 150).

In 2018, increases in production were reported for sand (by 287%), loam (45%), bauxite (30%), crushed stone (23%), and diamond (19%). The increased production of loam, sand, and crushed stone was most likely owing to the higher demand for construction materials as a result of the 11% reported growth in the construction sector. Another factor was the increase in the construction of residential housing as a result of higher investments in that sector during the year. According to the Bank of Guyana, the increase in bauxite production was owing mainly to the increased demand for the commodity. Diamond production increased to 62,111 carats; factors that contributed to the increase in production for this commodity included higher demand and an increase in the international price for diamond. Production of gold decreased by 6% to 19,069 kg from 20,334 kg in 2017 owing mainly to decreased production by small- and medium-scale miners and to heavy rainfall, which affected mining operations (table 1; Bank of Guyana, 2019, p. 10–11).

In May, the GGMC quarry monitoring unit conducted several field visits to the country's sand and stone quarries. The visits focused on the monitoring of quarry operations for compliance with safety and environmental mining regulations as well as with the payment of royalties to the Government. The GGMC reported that about 75% of sand quarries and 53% of stone quarries complied with royalty payments. Penalties for companies breaching these regulations included the cessation of operations, possible fines, and (or) court proceedings. At the end of the monitoring session, the GGMC recommended that quarries operated by Durban Quarries Inc. and one sandpit located in Bartica be told to cease operations for not meeting regulation requirements (Gordon, 2018).

In June 2018, FBX of the United States announced the commencement of the construction of the Bonasika bauxite project under its subsidiary Guyana Industrial Minerals Inc. The project was expected to be commissioned in late 2019; it would be the third bauxite mine in the country. The projected cost of the project was \$50 million and included the development of the mine site, a processing plant, and other facilities. FBX had started feasibility work at Bonasika in 2008 and had conducted production trials for the project in 2015 (Rhodius, 2018; Valenzuela, 2019).

## Outlook

Guyana's economic growth in the short term is expected to be positive. According to the Bank of Guyana, the economy was projected to grow by about 4% in 2019, and the mining and quarrying sector was forecasted to grow by 3% as a result of expected increases in the production of bauxite and gold. The construction and manufacturing industries are projected to grow as well. Offshore hydrocarbon exploration in Guyana is expected to increase following the sixth discovery in the Stabroek Block in 2017. It is further expected that Guyana could become a petroleum-producing country by 2020 (Bank of Guyana, 2019, p. 15; Exxon Mobil Corp., 2018, p. 42).

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

(Metric tons, gross weight, unless otherwise specified)

Commodity		2014	2015	2016	2017	2018
METALS						
Bauxite, dry basis	thousand metric tons	1,602	1,498	1,480 <sup>r</sup>	1,481	1,924
Gold, mine, Au content	kilograms	12,053	14,029	22,168	20,334	19,069
INDUSTRIAL MINERALS						
Cement, hydraulic <sup>c</sup>		2,000	100,000	400,000	400,000	410,000
Diamond, gem, unspecified	carats	99,950	118,451	139,890	52,161	62,111
Stone, sand, and gravel:						
Sand and gravel, common sand		4,169,387	1,669,379	1,687,602 <sup>r</sup>	1,674,490	6,473,844
Stone:						
Crushed, other, unspecified		840,074	425,577 <sup>r</sup>	517,770 <sup>r</sup>	538,937	661,646
Other, size and shape unspecified, loam		100,800	100,800 <sup>r</sup>	23,565 <sup>r</sup>	51,054	73,911

<sup>c</sup>Estimated. <sup>r</sup>Revised.

<sup>1</sup>Table includes data available through August 27, 2019. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

TABLE 2  
GUYANA: STRUCTURE OF THE MINERAL INDUSTRY IN 2018

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Bauxite		Bauxite Company of Guyana Inc. (BCGI) (United Company RUSAL plc, 90%, and Government, 10%)	Kurubuka Mine, Upper Demerara-Berbice Region	1,700
Do.		Bosai Minerals Group Guyana Inc. (Bosai Minerals Group Company Ltd., 70%, and Government, 30%)	Omai Mine and processing plant located near Linden on the Demerara River about 100 kilometers south of Georgetown	700
Cement		Caricom Cement Company Inc.	Everton plant, East Berbice	500
Diamond	carats	Artisanal mining operations	Various locations	NA
Do.	do.	Excel Minerals Inc.	Georgetown	NA
Do.	do.	Pure Diamond Inc.	do.	NA
Gold and precious stones	kilograms	Artisanal mining operations	Various locations	NA
Do.	do.	Ensurge Inc.	Gold tailings recovery facility, Cuyuni-Mazaruni Region	NA
Do.	do.	Guyana Goldfields Inc. (GGI)	Aurora Mine, Cuyuni-Mazaruni Region	7,000
Do.	do.	Troy Resources Ltd.	Karouni Mine, Essequibo Region	2,000
Gravel		Baracara Quarries Inc.	Quarry near Bartica, Mazaruni-Potaro District	100
Silica sand		Various companies	Various sand pits located in Bartica, Berbice, Essequibo Coast, Essequibo River, and Linden-Soesdyke Highway	NA
Stone		do.	Seven stone quarries located in Bartica, East Berbice, and Demerara	NA
Do.		BK Quarries Inc (BK International Inc.)	Tiperu Quarry, Mazaruni River	3,650
Do.		Toolsie Persaud Ltd.	St. Mary's quarry, Essequibo River	NA
Do.		Baracara Quarries Inc.	Big Hope quarry, Mazaruni River	NA
Do.		Durban Quarries Inc.	Quarry, <sup>1</sup> Mazaruni River	NA

Do., do. Ditto. NA Not available.

<sup>1</sup>On care-and-maintenance status in 2018.