



2020–2021 Minerals Yearbook

CONGO (BRAZZAVILLE) [ADVANCE RELEASE]

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THE MINERAL INDUSTRY OF CONGO (BRAZZAVILLE)

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Note: In this chapter, information for 2020 is followed by information for 2021.

The economy of the Republic of the Congo, also known as Congo (Brazzaville), was based primarily on the production of crude petroleum. According to the International Monetary Fund, the real gross domestic product (GDP) decreased by 8.1% in 2020 compared with a decrease of 0.4% in 2019. The nominal GDP was \$10.3 billion in 2020 compared with \$12.8 billion in 2019. The mining sector's output decreased by approximately 44% in 2020, which resulted from the coronavirus disease 2019 (COVID-19) pandemic's negative effects on the mineral industry, most notably crude petroleum production. In 2020, production of crude petroleum accounted for about 28% (estimated) of the nominal GDP and accounted for 77% of the value of exports. Other mineral commodities produced included cement, construction materials (such as clay, sand, and stone), copper, diamond (artisanal), gold (artisanal), iron ore, lead, lime, natural gas, and zinc. Mineral resources of Congo (Brazzaville) included diamond, gold, iron ore, magnesium, peat, phosphate, polymetallic ore (containing cobalt, copper, lead, and zinc), and potash. Iron ore and polymetallic ore deposits were in landlocked areas, which would require a substantial capital investment to develop and support mining activities (table 1; International Monetary Fund, 2021a, p. 3, 26; 2022; Extractive Industries Transparency Initiative, 2022a, p. 15, 89).

Congo (Brazzaville) had been a member of the Organization of the Petroleum Exporting Countries (OPEC) since 2018 and became a participant of the Kimberley Process Certification Scheme (a program initiated by the United Nations to prevent international trade in conflict diamond) in 2003. Since the country joined the Extractive Industries Transparency Initiative (EITI) in 2004, validation reviews to evaluate implementation of the EITI standard in 2016 and 2019 found that the country was not EITI-compliant, and a third validation review was scheduled to commence in March 2022 (Extractive Industries Transparency Initiative, 2020, 2022b; Kimberley Process, 2022; Organization of the Petroleum Exporting Countries, 2022, p. 88).

Government Policies and Programs

The mineral sector is under the jurisdiction of the Ministère des Mines et de la Géologie. The Mining Code (law No. 4–2005) regulates the exploration, research, and production of solid minerals. Decree No. 2007–274 sets the conditions for the administrative supervision of the prospecting for, exploration for, and mining of minerals. Decree No. 2007–293 establishes the technical rules for the mining of minerals from quarries. The Ministère des Hydrocarbures oversees activity in the hydrocarbon sector, which is regulated by the Hydrocarbons Code (law No. 28–2016). Four decrees (Decree Nos. 2019–342 through 2019–345) set out the terms and conditions of the law, especially as they relate to procedures for awarding petroleum and natural gas extraction licenses, subcontracting,

noncompliance, and employment. The Ministère du Tourisme et de l'Environnement reviews environmental assessments of mineral development projects (Netherlands Commission for Environmental Assessment, 2019, p. 7; Central Africa Tax Guide, 2020; Centurion, 2020; Extractive Industries Transparency Initiative, 2022a, p. 42–44, 94).

Production

In 2020, Congo (Brazzaville)'s diamond production increased by 277% to 11,157 carats. In 2020, mineral commodities for which output decreased by 10% or more included natural gas, by 30%; copper, by 27%; and hydraulic cement, by 18%. Data on mineral production are provided in table 1.

Structure of the Mineral Industry

In 2020, Congo (Brazzaville) had 15 nonfuel mineral projects, including 7 that were seeking investment to commence production and 3 that were suspended in 2020. Only the following five were in production in 2020: Société Lulu de Mine's two polymetallic projects (Mpassa-Moubiri and Mindouli), which had been in production since 2017, and Société de Recherche et d'Exploitation Minière (SOREMI)'s two polymetallic projects (Boko-Songo and Yanga-Koubenza) and Société Sapro Mayoko S.A.'s iron ore project (Mayoko-Lekoumou), all of which had been in production since 2019. Production of diamond and gold was by artisanal miners. State-owned Société Nationale des Pétroles du Congo (SNPC) managed the Government's interest in petroleum production and refining and natural gas production and processing. International oil companies, such as Chevron Corp. of the United States, Eni S.p.A. of Italy, Perenco Group of the United Kingdom, and TotalEnergies SE of France, operated many of the oilfields (Extractive Industries Transparency Initiative, 2021, p. 85; 2022a, p. 92). Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Iron Ore.—In November 2020, the Government issued decrees that withdrew mining and exploration permits from three companies developing iron ore deposits in northwestern Congo (Brazzaville), citing a lack of progress in developing these deposits and failure to pay royalties. The three companies and the projects under development included Core Mining Ltd. of the United Kingdom, which held a mining permit for the Avima iron ore project; Equatorial Resources Ltd. of Australia, which held an exploration permit for the Badondo iron ore project; and Sundance Resources Ltd. of Australia, which held a mining permit for the Nabeba iron ore project. The three mining

companies planned to submit legal challenges to the decree. The Government of Congo (Brazzaville) withdrew the companies' mining permits for the three iron ore projects and subsequently awarded them to Sangha Mining Development Sasu of China on November 30 (Ignacio, 2020).

Industrial Minerals

Cement.—In 2020, cement production was estimated to be 600,000 metric tons (t), which was a decrease of 18% compared with 730,000 t (estimated) in 2019; the decrease was due primarily to a slowdown in the economy. Five companies operated cement plants with a combined capacity of more than 3 million metric tons per year (Mt/yr) of cement in 2020. In 2020, the largest plant in Congo (Brazzaville) had a capacity of 1.5 Mt/yr and was operated by the Dangote Group of Nigeria. The plant was located at Mfila in Bouenza Department. The Diamond Cement Group of Ghana operated a 700,000-metric-ton-per-year-capacity cement plant at Mindouli in Pool Department (table 1; Dangote Cement Plc., 2021; Diamond Cement Group, 2023).

Phosphate Rock.—In 2020, Kropz Plc. of the United Kingdom continued to develop the Hinda phosphate project, which was located about 37 kilometers (km) northeast of the port city of Pointe Noire in Pointe Noire Department. The project was jointly owned by Kropz through its subsidiary, Cominco Resources S.A. (90%), and the Government of Congo (Brazzaville) (10%). Kropz's focus during 2020 was on fundraising. The company planned to start construction of an open pit mine in 2021 and begin operations in 2022. A mine was expected to be developed in multiple stages and have a total capacity of 4 Mt/yr of phosphate rock; the first stage would target a production rate of 1.2 to 1.8 Mt/yr of phosphate rock. Estimated proven and probable reserves were reported to be 404.9 million metric tons (Mt) grading 11% phosphorus pentoxide. The expected life of the mine was estimated to be 60 years (Kropz Plc., 2020, p. 12–14, 20).

Potash.—In 2020, Kore Potash plc of the United Kingdom was in the process of developing the Kola and Dougou Extension (DX) deposits within its Sintoukola mining concession in Kouilo Province. Both deposits were prospective for high-grade sylvinite. In 2017, the definitive feasibility study of the Kola project reported proven and probable reserves of 152 Mt grading 32.5% potassium chloride and an estimated mine life of 33 years. In 2020, Kore Potash focused on the DX project because of the project's low capital expenditure. The prefeasibility study for the project was completed in May and resulted in estimated probable reserves of 17.7 Mt grading 41.7% potassium chloride. Kore Potash started a definitive feasibility study for the DX project in September 2020 (Kore Potash plc, 2021, p. 12, 25, 28, 35; 2023).

Mineral Fuels

Natural Gas and Crude Petroleum.—In 2020, crude petroleum production decreased by 9% to 109.8 million barrels (Mbbbl) from 120.2 Mbbbl (a record high) in 2019. There were five active rigs in Congo (Brazzaville). OPEC reported that the country's crude petroleum proven reserves were

1.81 billion barrels, which was a decrease of 7.0% from that in 2019. Congo (Brazzaville)'s refinery throughput increased by 0.3% compared with that in 2019. SNPC operated the country's only petroleum refinery at Pointe Noire, which had a production capacity of 7.7 million barrels per year (Mbbbl/yr) (21,000 barrels per day). Associated natural gas production decreased by 30.2% to 405 million cubic meters compared with that in 2019. OPEC reported that the country's natural gas proven reserves were 284 billion cubic meters, which was a decrease of 0.2% from that in 2019 (table 1; Organization of the Petroleum Exporting Countries, 2021, p. 35; 2022, p. 22, 23, 32, 35, 76).

In 2020, Eni planned to divest of its assets in Congo (Brazzaville) owing to low demand and the decreased price of petroleum caused by the COVID-19 pandemic. Another challenge for Eni was carbon emissions. The petroleum produced in Congo (Brazzaville) had a high volume of associated gas, requiring gas flaring during crude petroleum extraction. In September 2020, Eni sold 2 of its 13 permits to SNPC. These permits pertained to the onshore fields Loufika and Zingali (in which Eni held a 100% interest), which produced a combined 240,000 barrels per year. Eni also announced the intention to sell nonoperating assets, including those in Pointe-Noire Grand Fond (29.75%) and Likouala (35%). In addition, Eni obtained a 5-year extension on its Ikalou-Ikalou Sud license, which had a production capacity of 3 Mbbbl/yr. As part of the terms of the extension for the Ikalou-Ikalou Sud license, Eni was required to relinquish a 15% share to SNPC per the requirements of the 2016 Hydrocarbons Code (table 2; Africa Intelligence, 2020; Eni S.p.A., 2020, p. 56; Katsimpardi and Bostan, 2020).

MINERAL INDUSTRY HIGHLIGHTS IN 2021

In 2021, real GDP decreased by 0.6% and the nominal GDP was \$12.6 billion. In 2021, the only mineral commodity for which output increased by more than 10% was hydraulic cement (33%, estimated). Mineral commodities for which production decreased by 10% or more were diamond (by 63%) and crude petroleum (by 11%). In March 2021, SOREMI produced the first batch of zinc ingot (99.9% purity) for the first time in Congo (Brazzaville) (table 1; Asian Metal, 2021; International Monetary Fund, 2022).

Since 2017, when Sapro Mayoko S.A. commenced iron ore production, the company had been developing the Mayoko iron ore mine, the Pointe-Noire deepwater port, and an old 182-km railway track connecting the two. After the 2019 collapse of the Brumadinho dam in Minas Gerais, Brazil, which held mining waste and was operated by Vale S.A. of Brazil, demand for iron ore from Congo (Brazzaville) increased in China. In 2019, the first shipment of iron ore, which totaled 23,000 t, was delivered to China despite logistical constraints related to poor railway conditions and numerous train derailments. In 2021, Sapro Mayoko and Thelo DB of South Africa—a joint venture of Thelo Ventures (Pty) Ltd. of South Africa and Deutsche Bahn (DB) Engineering & Consulting GmbH of Germany—signed a \$1.1 billion agreement for the construction of a new 412-km rail line to connect Sapro Mayoko's mining operations in the Niari Department to an upgraded deepwater port in Pointe Noire with a capacity to transport as much as 250 Mt/yr of iron ore.

Construction was expected to take 5 years. The agreement included the rehabilitation of the 182-km-long Mbinda-Mont Mbelo line and would allow Sapro Mayoko to export as much as 2 Mt/yr of iron ore (Elion and Bouka, 2019; Burroughs, 2021; Mulyungi, 2021).

In March 2021, Avima Iron Ore Ltd. (a subsidiary of Core Mining Ltd.), which had its production license revoked in November 2020, requested the Government either to reinstate the permit or to pay \$27 billion in damages. Sundance Resources initiated the arbitration process against the Government of Congo (Brazzaville) under the rules of the International Chamber of Commerce (ICC) for \$8.8 billion in damages owing to the expropriation of the Nabeba mining permit by the Government on November 30, 2020. After Sundance Resources referred the dispute to the ICC, the company entered into negotiations with the Government (Ross, 2021; Sundance Resources Ltd., 2021, p. 1).

In 2021, Kropz optimized a production plan for the Hinda project based on an updated feasibility study. Kropz's optimized plan included increasing the target production capacity from 1 Mt/yr of phosphate rock concentrates in phase 1 to 2 Mt/yr in phase 2; changing the export route from the existing Pointe-Noire Port in phase 1 to a new port facility in phase 2; increasing the mine life to 28 years, during which time the company could produce 31 Mt/yr of ore in phase 1 and 214 Mt/yr in phase 2; switching to a contractor-operated model from an owner-operated model; and simplifying operations, including by transitioning to transporting ore by truck instead of using the current slurry pipeline infrastructure. The environmental and social impact assessment was updated according to the updated feasibility study to comply with local regulations. Kore Potash completed the DX project's definitive feasibility study in May 2021. A geologic model for the DX deposit, which incorporated all drilling information, was completed in the fourth quarter of 2021 (Kropz plc, 2021a, p. 1, 2; 2021b, p. 24; Kore Potash plc, 2022, p. 8).

In 2021, production of crude petroleum in Congo (Brazzaville) decreased by 11% to 97.5 Mbbl because of oilfield depletion. The oilfields operated by Eni held more than 50% of Congo (Brazzaville)'s crude petroleum reserves. In 2021, Eni produced 25.6 Mbbl of oil equivalent which was a decrease of 4% compared with that in 2020. Eni planned to relinquish its share in the Loango II (42.5%) and Zatchi II (55.25%) Fields to SNPC effective January 1, 2022, citing plans to rationalize its petroleum assets. Eni amended the production-sharing agreements of the Marine XII production block to help monetize the gas by using it for domestic power generation and liquefied natural gas (LNG) export, and to further the goal of zero gas flaring. The company also planned the construction of two LNG liquefaction plants that would have a total capacity of 4.5 billion cubic meters per year. The first plant was expected to come online in 2023 (table 1; Katsimpardi and Bostan, 2020; Africa Intelligence, 2021; Eni S.p.A., 2022a, p. 18; 2022b, p. 18, 19, 38).

In 2021, TotalEnergies Exploration & Production Congo produced 34 Mbbl of crude petroleum compared with 43 Mbbl produced in 2020. The decrease was attributed to the natural depletion of major oilfields, including the Moho-Bilondo Field and the Moho Nord Field. In September 2021, TotalEnergies

withdrew from the licenses of the Loango II Field (in which it had a 42.50% interest) and the Zatchi II Field (a 29.75% interest) (TotalEnergies SE, 2021, p. 79; 2022, p. 81, 91).

Outlook

The real GDP of Congo (Brazzaville) is projected to increase by 4.3% in 2022 according to the International Monetary Fund. The petroleum sector is expected to remain the cornerstone of Congo (Brazzaville)'s economy. Ramping up production at the Mayoko iron ore deposit could increase production, but doing so depends on the construction of the new railway and the upgrade of the deepwater port. Production from other iron ore deposits could be delayed because of the pending arbitration of permits that were expropriated from Core Mining, Equatorial Resources, and Sundance Resources and granted to Sangha Mining Development Sasu. Artisanal production of diamond and gold will also continue to play a role in the mineral sector. Depressed global commodity prices in recent years have slowed exploration and development of larger mineral deposits; however, as prices increase, the country is likely to begin to attract investment and to see further diversification of the national economy and a reduction in the country's dependence on petroleum (International Monetary Fund, 2021b, p. 134; 2022).

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TABLE 1
CONGO (BRAZZAVILLE): PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2017	2018	2019	2020	2021
METALS					
Copper, mine, ore, Cu content	15,400	15,875 ^r	13,607 ^r	10,000 ^e	10,000 ^e
Iron ore, mine:					
Gross weight thousand metric tons	--	40 ^e	70 ^e	70 ^e	70 ^e
Fe content do.	--	26 ^e	46 ^e	46 ^e	46 ^e
Zinc:					
Mine, Zn content ^e	4,000	4,000	5,000 ^r	5,000	5,000
Smelter, primary	--	--	--	--	5,000 ^e
INDUSTRIAL MINERALS					
Cement, hydraulic ^e thousand metric tons	1,050	700	730	600	800
Diamond, gem, natural carats	46,758	47,579	2,963	11,157	4,125
MINERAL FUELS AND RELATED MATERIALS					
Natural gas ³ thousand cubic meters	860,000	867,000	580,000	405,000	415,000
Petroleum:					
Crude thousand 42-gallon barrels	95,886	118,078	120,158	109,763	97,455
Refinery ⁴ do.	6,205	6,570	6,205	6,222	6,421

^eEstimated. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through October 31, 2022. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

²In addition to the commodities listed, crude construction materials (for example, clay, sand and gravel, and stone), gold, lead ore, lime, and limestone for cement may have been produced, but available information was inadequate to make reliable estimates of output.

³Marketed.

⁴Throughput.

TABLE 2
CONGO (BRAZZAVILLE): STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand 42-gallon barrels unless otherwise specified)

Commodity		Major operating companies and and major equity owners	Location of main facilities	Annual capacity
Cement	thousand metric tons	Ciments d'Afrique (CIMAF) [Omnium des Industries et de la Promotion Group (OIP)]	Plant at Hinda, near Point Noire, Kouilou Department	500
Do.	do.	Dangote Cement Plc (Dangote Group)	Plant at Mfila, near Madingou, Bouenza Department	1,500
Do.	do.	Diamond Cement Group	Plant at Mindouli, Pool Department	700
Do.	do.	FORSPAK International Congo S.A.R.L.	Plant at Dolisie, Niari Department	300
Do.	do.	Société Nouvelle des Ciments du Congo (SONOCC) (Société National Chinoise des Travaux des Ponts et Chaussées, 56%, and Government, 44%)	Plant at Loutete, Bouenza Department	300
Copper	do.	Société de Recherche et d'Exploitation Minière (SOREMI) (China National Gold Group Corp., 60%; Gerald Group, 30%; Government, 10%)	SOREMI Mine, Mfouati district in Bouenza Department	20
Do.	do.	Société Lulu de Mine (Shenglong International Investment Ltd., 100%)	Mpassa Mine, Mindouli, Pool Department	NA
Diamond	carats	Artisanal production	Mines located in Kouilou, Lekoumou, Likouala, Niari, and West Cuvette Departments	50,000
Gold	kilograms	do.	Mines in various locations	150
Iron ore, gross weight	thousand metric tons	Sapro Mayoko S.A.	Mayoko Mine, Niari Department	12,000
Petroleum:				
Crude		Eni Congo S.A., 90%, and Société Nationale des Pétroles du Congo (SNPC), 10%	Awa/Paloukou Field, offshore	4,000
Do.		Wing Wah Petrochemicals, 85%, and Société Nationale des Pétroles du Congo (SNPC), 15%	Banga Kayo Field, onshore	18,300
Do.		Eni Congo S.A., 50%; Société Nationale des Pétroles du Congo, 40%; Africa Oil and Gas Corp., 10%	Djambala Field, offshore	1,500
Do.		Congorep [Perenco Group, 51%, and Société Nationale des Pétroles du Congo (SNPC), 49%]	Emeraude Field, offshore	8,000
Do.		Eni Congo S.A., 58%, Société Nationale des Pétroles du Congo, 34%; Africa Oil and Gas Corp., 8%	Foukanda and Mwafi Fields, offshore	5,800
Do.		Eni Congo S.A., 85%, and Société Nationale des Pétroles du Congo (SNPC), 15%	Ikalou/Ikalou Sud Fields, offshore	3,000
Do.		Eni Congo S.A., 52%; Société Nationale des Pétroles du Congo, 38%; Africa Oil and Gas Corp., 10%	Kitina Field, offshore	15,000
Do.		TotalEnergies Exploration & Production Congo, 65%, and Eni Congo S.A., 35%	Kombi, Libondo, Likalala Fields, offshore	7,700
Do.		Eni Congo S.A., 75%, and Société Nationale des Pétroles du Congo, 25%	Kouakouala Field, onshore	NA
Do.		TotalEnergies Exploration & Production Congo, 26.75%; Chevron Overseas (Congo) Ltd., 15.75%; Cabinda Gulf Oil Co. Ltd., 15.5%; Angola Block 14 BV, 10%; Eni Congo S.A., 10%; Sonagol, 10%; Société Nationale des Pétroles du Congo (SNPC), 7.5%; Galp Energia, SGPS, S.A., 4.5%	Lianzi Field, offshore	14,600
Do.		Congorep [joint venture of Perenco Group, 51%, and Société Nationale des Pétroles du Congo (SNPC), 49%], 65%, and Eni Congo S.A., 35%	Likouala Field, offshore	5,000
Do.		Société Nationale des Pétroles du Congo (SNPC), 52.5%; Eni Congo S.A., 42.5%; Continent Congo S.A., 5%	Loango Field, offshore	6,500
Do.		Société Nationale des Pétroles du Congo (SNPC), 100%	Loufika and Zingali Fields, onshore	240
Do.		Eni Congo S.A., 83%; Tullow Oil plc, 11%; Société Nationale des Pétroles du Congo (SNPC), 6%	M'Boundi Field, onshore	20,000

See footnote at end of table.

TABLE 2—Continued
CONGO (BRAZZAVILLE): STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand 42-gallon barrels unless otherwise specified)

Commodity	Major operating companies and and major equity owners	Location of main facilities	Annual capacity	
Petroleum:—Continued				
Crude—Continued	TotalEnergies Exploration & Production Congo, 45.48%; Chevron Overseas (Congo) Ltd., 31.5%; Société Nationale des Pétroles du Congo (SNPC), 15%; Qatar Energy, 8.03%	Moho-Bilondo Field, offshore	32,000	
Do.	do.	Moho Nord Field, offshore	51,100	
Do.	Eni Congo S.A., 65%; PJSC Lukoil, 25%; Société Nationale des Pétroles du Congo (SNPC), 10%	Nene Marine and Litchendijili Fields, offshore	NA	
Do.	TotalEnergies Exploration & Production Congo, 45.48%; Chevron Overseas (Congo) Ltd., 31.5%; Société Nationale des Pétroles du Congo (SNPC), 15%; Qatar Energy 8.03%	N'kossa and Nsoko Fields, offshore	18,000	
Do.	TotalEnergies Exploration & Production Congo, 46.96%; Eni Congo S.A., 29.75%; Qatar Energy, 8.29%; Perenco Group, 7.65%; Société Nationale des Pétroles du Congo (SNPC), 7.35%	Sendji and Yanga Fields, offshore	9,500	
Do.	Perenco Group, 40%; Société Nationale des Pétroles du Congo (SNPC), 20%; Africa Oil and Gas Corp., 10%, Continent Congo S.A., 10%; National Holdings LLC (Petromal), 10%; Nor Energy AS, 10%; Petro Congo, 5%	Tchibeli, Tchibouela, and Tchendo Fields, offshore	21,000	
Do.	Perenco Group, 50%, and Société Nationale de Recherche et d'Exploration Pétrolière, 50%	Yombo Field, offshore	3,600	
Do.	Eni Congo S.A., 55.25%; Société Nationale des Pétroles du Congo (SNPC), 40.29%; Qatar Energy, 4.46%	Zatchi Field, offshore	7,600	
Refined products	Congolaise de Raffinage [Société Nationale des Pétroles du Congo (SNPC), 100%]	Pointe Noire National Oil Refinery	7,700	
Refinery production, liquefied petroleum gas	TotalEnergies Exploration & Production Congo, 53.5%; Chevron Overseas (Congo) Ltd., 31.5%; Société Nationale des Pétroles du Congo (SNPC), 15%	Nkossa refinery platform, offshore	3,000	
Zinc, Zn content:				
Mine	thousand metric tons	SOREMI (China National Gold Group Corp., 60%; Gerald Group, 30%; Government, 10%)	Mine in SOREMI, Mfouati District, Bouenza Department	11 °
Smelter	do.	do.	do.	10 °

°Estimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.