



2019 Minerals Yearbook

SENEGAL [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF SENEGAL

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The growth rate of Senegal's real gross domestic product (GDP) was 4.4% in 2019 compared with 6.2% in 2018. In 2017 (the latest year for which data were available), the mineral sector accounted for 4.3% of the GDP's growth. Mineral commodities for which Senegal was a notable world producer in 2019 were fuller's earth, for which it ranked 3d among the world's leading producers (accounting for 3.7% of world production); zircon concentrates, 6th among world producers (4.6% of world production); rutile, 7th among world producers (1.4% of world production); ilmenite, 8th among world producers (4% of world production); and phosphate rock, 12th among world producers (1.5% of world production). Senegal's mineral sector was regulated by the Mining Code (No. 27/2016) of October 30, 2016 (table 1; International Institute for Sustainable Development, 2016, p. 7–8; United Nations Economic Commission for Africa, 2018, p. 311; Agence Nationale de la Statistique et de la Démographie, 2020, p. 2; Gambogi, 2021; Jasinski, 2021; Sangine, 2021; Simmons, 2021).

Production

In 2019, the most notable changes in Senegal's mineral production were for phosphate rock, which increased by 107% (in terms of both gross weight and P_2O_5 content) to 3,421,000 metric tons (t) in terms of gross weight and 1,160,000 t in terms of P_2O_5 content; cement, which increased by 27% to an estimated 6.9 million metric tons (Mt); and gold, which increased by 13% to 14,134 kilograms (kg). These increases were owing to the increased demand for these mineral commodities in international mineral markets. Production of attapulgite decreased to 117,000 t, or by 34%. Data on mineral production are in table 1.

Structure of the Mineral Industry

The majority of mining operations in Senegal were privately owned, although the Government held a minority participating interest in many operations. Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Gold.—Sabodala Gold Operations S.A. was jointly owned by Teranga Gold Corp. (Teranga) of Canada (90%), and the Government of Senegal (10%). Teranga mined gold from the Sabodala Mine. In 2019, Teranga produced 7,505 kg of gold at Sabodala, which was an increase from the production reported by the company in the third quarter of 2019 (Teranga Gold Corp., 2020, p. 14).

On December 9, 2019, Teranga agreed to buy a 90% interest in the Massawa gold project from joint owners Barrick Gold Corp. of Canada and Compagnie Sénégalaise de Transports Transatlantiques Afrique de l'Ouest S.A. The Government of

Senegal would own the remaining 10% percent interest in the Massawa project. Barrick Gold completed a feasibility study for the Massawa gold project in July 2019, which projected annual production of more than 200,000 troy ounces of gold during an estimated mine life of 10 years, with a capital investment of 318 million pounds sterling (or \$412 million). Teranga stated in its annual report that the Massawa deposit was one of the highest grade undeveloped open pit gold projects in Africa. The deposit is located within 30 kilometers (km) of Teranga's flagship Sabodala Mine. The company planned to process Massawa's high-grade ore at the Sabodala mill to increase the mill's productivity (Teranga Gold Corp., 2020, p. 5, 11; NS Energy, [undated]).

Several other companies explored for gold in Senegal in 2019. These companies included Bassari Resources Ltd. and Erin Resources Ltd., both of Australia; and IAMGOLD Corp., Stratex International plc., and Toro Gold Ltd. of the United Kingdom.

Titanium and Zirconium.—In 2019, the Grande Côte Mineral Sands (GCO) Mine produced 735,000 t of mineral sands concentrate (titanium ore and zircon), which the company stated was a 5% decrease from the previous year. The GCO Mine (construction completed in 2014) was operated by Tizir Ltd. (Tizir), which was owned by Eramet Group of France (50%) and Mineral Deposits Ltd. of Australia (50%). Tizir's GCO operation consisted of a single dredge mineral sands system that processed heavy mineral sands from a coastal mobile dune system that stretched more than 100 km along Senegal's coastline, about 50 km northeast of the capital city of Dakar (Bories, 2020, p. 37, Tizir Group, 2021).

Industrial Minerals

Cement.—Senegal's production of hydraulic cement increased by about 28% in 2019 to an estimated 6.9 Mt compared with 5.4 Mt in 2018. In 2019, Senegal had three cement plants. The Pout cement plant, which was owned by Dangote Cement plc of Nigeria through its subsidiary Dangote Cement Senegal S.A. and located about 29 km from Dakar, had an estimated capacity of 1.5 million metric tons per year (Mt/yr). The Rufisque cement plant, which was owned by the Vicat Group of France and located east of Dakar, had an estimated capacity of 3.5 Mt/yr. The Kirene cement plant, which was owned by Les Ciments du Sahel S.A. of Senegal and also located east of Dakar, had an estimated capacity of 2.4 Mt/yr (tables 1, 2).

Mineral Fuels

Petroleum.—Société des Pétroles du Sénégal (Petrosen) was Senegal's national petroleum company. In 2014, United Kingdom-based Cairn Energy plc had announced the discovery of petroleum in the SNE–1 exploration well, which is located within the Sangomar Deep Block about 100 km offshore Senegal. Cairn Energy, ConocoPhillips Co. of the United States,

FAR Ltd. of Australia, and Petrosen evaluated the discovery between 2015 and 2018. The tapping of eight wells during this evaluation led to the estimation of recoverable reserves of about 630 million barrels of crude petroleum. The field also contains associated and nonassociated natural gas, of which the estimated reserves amounted to 113 billion cubic meters. In addition to Cairn Energy, ConocoPhillips, FAR, and Petrosen, other companies actively engaged in both crude petroleum and natural gas exploration in Senegal in 2019 included African Petroleum Corp. Ltd. of Australia and Kosmos Energy Ltd. of the United States (Société des Pétroles du Sénégal, 2019).

Outlook

It is expected that the economy of Senegal will grow in 2020 if the demand for its agricultural products and mineral commodities continues to increase. Cement, gold, and titanium are expected to continue to be the main focus for mineral production in the country in the foreseeable future.

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TABLE 1
SENEGAL: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons, gross weight, unless otherwise specified)

Commodity ²		2015	2016	2017	2018	2019
METALS						
Gold, mine, Au content	kilograms	5,670	6,874	6,732	12,507 ^r	14,134
Lead, refinery, secondary	metric tons	1,857	3,576	3,424	3,693	3,500 ^e
Silver, refinery, primary, Ag content	kilograms	540	500	700	700 ^e	700 ^e
Titanium, mineral concentrates:						
Ilmenite and leucoxene	metric tons	427,690	416,349	492,441	530,000 ^{r, e}	520,000 ^e
Rutile	do.	5,311	9,664	9,975	9,980 ^e	10,000 ^e
Zirconium ore, zircon concentrate	do.	45,248	52,627	81,749	64,278	65,000 ^e
INDUSTRIAL MINERALS						
Cement, hydraulic		4,615	5,149	5,197	5,412	6,900 ^e
Clay, fuller's earth, attapulgitic		188	172	166	178	117
Fertilizers, calcium phosphate-based fertilizers		108	100	93	100 ^e	100 ^e
Lime		1 ^e	1	1	1 ^e	1 ^e
Phosphate rock:						
Gross weight		1,062	1,610	1,385	1,649	3,421
P ₂ O ₅ content ^c		361	547	476	560	1,160
Phosphate, compounds, phosphoric acid, P ₂ O ₅ content	metric tons	263,000	435,100	455,400	549,300	550,000 ^e
Salt		266	263	259	260 ^e	260 ^e
Stone, sand, and gravel, construction: ^c						
Sand and gravel:						
Laterite ore	metric tons	350	350	350	350	350
Sand		1,200	1,200	1,200	1,200	1,200
Stone:						
Crushed, limestone		2,000	2,000	2,000	2,000	2,000
Other, size and shape unspecified, basalt		3,800	3,800	3,800	3,800	3,800
MINERAL FUELS AND RELATED MATERIALS						
Petroleum:						
Crude	thousand 42-gallon barrels	169	24	95	95 ^e	95 ^e
Refinery	do.	8,264	7,737	10,251	10,250 ^e	10,250 ^e

^eEstimated. ^rRevised. do. Ditto.

¹Table includes data available through February 1, 2021. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

²In addition to the commodities listed, natural gas, sand and gravel, and stone may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
SENEGAL: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Basalt		Compagnie Générale d'Exploitation de Carrière (COGECA)	Quarries, Ngoundiane, Thies region	NA.
Do.		Gécamines S.A.	do.	NA.
Cement		Les Ciments du Sahel S.A.	Kirene cement plant, Kirene, east of Dakar	2,400.
Do.		Sococim Industries (Vicat Group, 100%)	Rufisque cement plant, east of Dakar	3,500.
Do.		Dangote Cement Senegal S.A. (Dangote Cement plc, 90%)	Cement plant, City of Pout, 29 kilometers from Dakar	1,500.
Clay, attapulgite		Senegal Mines SA (Sepiol SA, 51%, and Government, 49%)	Mine, 240 kilometers south of Dakar	100.
Do.		Société Senegalaise des Phosphates de Thies S.A.	Lam Lam Mine, Thies region	NA.
Gold	kilograms	Sabodala Gold Operations S.A. (Teranga Gold Corp., 90%, and Government, 10%)	Sabodala Mine, 650 kilometers east of Dakar	7,500.
Do.	do.	do.	Massawa deposit, 600 kilometers southeast of Dakar	500.
Lead, secondary	metric tons	Gravita Senegal SAU (Gravita India Ltd., 100%)	Recycling lead-acid battery plant, Dakar	3,800.
Petroleum products	thousand 42-gallon barrels per day	Société Africaine de Raffinage (Société des Petroles du Senegal, 46%; Locafrique S.A., 34%; Total S.A., 20%)	Société Africaine de Raffinage refinery, 23 kilometers from Dakar	29.
Phosphate rock		Industries Chimiques du Sénégal Group (Archean Group, Government of India, and Indian Farmers Fertilizer Cooperative Ltd., 85%, and Government of Senegal, 15%)	Taiba Mine, 100 kilometers from Dakar	2,000.
Do.		Société Senegalaise des Phosphates de Thies SA	Lam Lam Mine, Sebikhotane, and Allou-Kagne mines	NA.
Phosphoric acid		Industries Chimiques du Sénégal Group (Archean Group, Government of India, and Indian Farmers Fertiliser Cooperative Ltd., 85%, and Government of Senegal, 15%)	Darou I plant and Darou II plant, 100 kilometers from Dakar	660 P ₂ O ₅ .
Salt		Société des Salins du Sine Saloum	Salt marshes, Saloum River	270.
Titanium, mineral concentrates:				
Ilmenite and leucoxene		Tizir Ltd.(Mineral Deposits Ltd., 50%, and Eramet Group, 50%)	Grande Côte Minerals Sands Mine, 50 kilometers northeast of Dakar	575.
Rutile		do.	do.	10.
Zirconium ore, zircon concentrate		do.	do.	85.

Do., do. Ditto. NA Not available.