



# 2020–2021 Minerals Yearbook

---

**LEBANON [ADVANCE RELEASE]**

---

# THE MINERAL INDUSTRY OF LEBANON

By Mowafa Taib

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

In 2020, Lebanon produced cement and phosphate fertilizers and was active in the beneficiation of diamond and the production of refined gold, iron and steel products, and refined lead from imported materials. Data on mineral production are provided in table 1.

The real gross domestic product (GDP) of Lebanon was estimated to have decreased by 21.4% in 2020 compared with a decrease of 7.2% in 2019. This sharp contraction was attributed to economic, financial, and political crises, in addition to the adverse effects of the coronavirus disease 2019 (COVID-19) pandemic. In 2020, the nominal GDP of Lebanon was \$33.4 billion. The value of the industrial sector activities decreased, in real terms, by 21.8% (estimated) in 2020 compared with 17.6% in 2019. In March, the country failed to pay a \$1.2 billion Eurobond and was looking into rescheduling its debt payments and implementing a structural reform program following the installment of a new Government (Azhari, 2020; World Bank, The, 2021).

## Government Policies and Programs

The Ministry of Energy and Water is responsible for managing the country's energy and water sectors, hydrocarbon exploration, and quarrying and mining permits. The Offshore Petroleum Resources Law (law No. 132/2010) implemented a production-sharing and royalty scheme applied through exploration and production agreements between the Government and prequalified companies. The law entitles the Government to charge a royalty based on the volume of crude petroleum and natural gas produced. The contractors must pay a block fee and corporate taxes according to Lebanon's tax law. The length of the production-sharing agreement can be extended by as much as 30 years (Lebanese Petroleum Administration, 2021, p. 27; Ministry of Energy and Water, 2021).

## Production

Salt production increased by 67% (estimated) in 2020 compared with that in 2019. The increase was attributed to the apparent increase in artisanal mining in 2020, which was partly related to the increase in the country's unemployment rate, to about 13.0% in 2020 from 11.3% in 2019. Sulfuric acid production increased by 46% (estimated) in 2020 compared with that in 2019 based on a reported increase in sulfur imports. Cement production decreased by 39% in 2020 compared with a decrease of 32% in 2019; the decrease in 2020 was attributed to the slow activity in the construction sector. Production of limestone for cement decreased by 25% (estimated) in 2020 compared with that in 2019; the decrease in 2020 was due to weak demand for limestone by cement producers. Production of phosphate fertilizers, secondary lead, and phosphoric acid decreased by 19% (estimated),

15% (estimated), and 13% (estimated), respectively (table 1; Lebanese Customs Administration, 2022).

## Structure of the Mineral Industry

In 2020, mining operations in Lebanon were privately owned. The Government's role was limited to regulating mining activity and ensuring compliance with environmental protection laws. Recently, the Government became involved with establishing bidding rounds for natural gas and crude petroleum exploration and production. Table 2 is a list of major mineral industry facilities (Lebanese Petroleum Administration, 2021).

## Commodity Review

### Metals

**Gold and Lead.**—Neither gold nor lead was mined in Lebanon but there were several gold and lead refineries in the country; these refineries depended mainly on imported raw materials for their feedstock. Refined gold production decreased to 11,000 kilograms (kg) (estimated) in 2020 from 12,000 kg (estimated) in 2019. Secondary lead production decreased to 22 metric tons (t) (estimated) in 2020 from 26 t in 2019. Lebanon S.A.L., which was located at Bourj Hammud in Beirut, was the country's first large-scale gold refinery. The D12 Gold Refinery was also located in Beirut. Several other small-scale gold refineries had operated in Lebanon for decades; however, information on their production or smelting and refining capacities was not available. Arabay Trading and Industrial S.A.L. and National Ammunition Co. were the main secondary lead producers in the country (tables 1, 2; Lebanon S.A.L., 2021).

### Industrial Minerals

**Cement.**—In 2020, in addition to the Government decision to close some limestone quarries for environmental concerns related to their closeness to residential areas, cement producers in Lebanon had to deal with weak domestic demand and strong competition abroad. Thus, cement output decreased to about 2.0 million metric tons (Mt) in 2020 from 3.2 Mt (revised) in 2019 and 4.7 Mt (revised) in 2018. Cement exports increased to 181,000 t in 2020 from 46,000 t in 2019. Cement deliveries to the domestic market were about 2.0 Mt in 2020 compared with 3.2 Mt in 2019. The decrease in cement deliveries prompted producers to decrease their production to accommodate the less-than-expected demand and to look for foreign markets to export their surplus (table 1; Bank Audi S.A.L., 2021, p. 4; International Cement Review, 2021, p. 193; Lebanese Customs Administration, 20222021).

**Diamond.**—Diamond was not mined in Lebanon. However, some beneficiation activities took place in the country in 2020

from imported materials. Lebanon imported more than 1 million carats of diamond valued at \$191 million in 2020 compared with about 1.6 million carats valued at \$157 million in 2019; the country exported about 1.2 million carats valued at \$201 million in 2020 compared with 1.5 million carats valued at \$173 million in 2019. The destinations of diamond exports from Lebanon in 2020 were the United Arab Emirates (96%), Switzerland (3%), and Belgium, France, and the United States (1% combined). The sources of diamond imported by Lebanon in 2020 were the United Arab Emirates (70.5%), Belgium (19.6%), South Africa (4.2%), and the United States (0.3%) (Kimberley Process Statistics, 2020, 2021; Observatory of Economic Complexity, The, 2023).

**Phosphate Rock.**—Phosphate rock was not mined in Lebanon. Lebanon Chemicals Co. S.A.L. (LCC) was the country's sole producer and exporter of chemical fertilizers, including aluminum sulfate, mono calcium phosphate, phosphoric acid, single superphosphate, and triple superphosphate. In 2020, LCC imported 457,000 t of phosphate rock from Egypt, Morocco, and Senegal and 136,000 t of sulfur from Eastern Europe to produce 200,000 t (estimated) of phosphoric acid and 130,000 t of phosphate fertilizer and other products (tables 1, 2; Lebanon Chemicals Co. S.A.L., 2021).

### **Mineral Fuels**

**Natural Gas.**—In April 2020, the Government announced the results of the country's first venture of hydrocarbon exploration in offshore Block 4, which is located in the Levant Basin in the eastern Mediterranean Sea. The exploration, which was conducted by a consortium of Eni S.p.A. of Italy, PAO Novatek of Russia, and TotalEnergies SE of France between 2017 and 2020, found no commercially feasible volume of natural gas to develop in Block 4 (Azhari, 2020).

## **MINERAL INDUSTRY HIGHLIGHTS IN 2021**

The real GDP of Lebanon decreased by 10.5% (estimated) in 2021 compared with a decrease of 21.4% in 2020 owing to the continuation of economic, financial, and political crises and the continued effects of the COVID-19 pandemic on the country's economy. The nominal GDP of Lebanon amounted to \$22.1 billion in 2021. The industrial sector decreased by 10.5% in 2021 compared with a decrease of 21.8% in 2020 (S&P Global Market Intelligence, 2022; World Bank, The, 2022).

Refined gold and lead production increased by 9% (estimated) and 14% (estimated), respectively, in 2021 compared with that in 2020. The increase in refined gold production was attributed to the selloff of gold jewelry by locals to maintain their standard of living. Production of phosphate fertilizer and phosphoric acid increased by 15% (estimated) and 10% (estimated), respectively, in 2021 compared with that in 2020. Cement production had declined annually since 2017; it decreased to 1.8 Mt in 2021 from about 2.0 Mt in 2020 and 5.1 Mt in 2017. The sharp decrease in cement production in 2017–21 was attributed to weak construction activity in the country because of the country's economic difficulties and political unrest. Sulfuric acid production decreased by 15% (estimated) in 2021 compared with that in 2020 based on the decrease in sulfur imports (table 1; Hijazi, 2020; Bank Audi S.A.L., 2022, p. 4).

In 2021, LCC imported 531,000 t of phosphate rock from Egypt, Morocco, and Senegal compared with 457,000 t in 2020 to manufacture 220,000 t (estimated) of phosphoric acid and 150,000 t of phosphate fertilizers. The company also produced 355,000 t (estimated) of sulfuric acid in 2021 (Lebanese Customs Administration, 2022).

In June 2021, the Russian Government offered to rehabilitate the Tripoli and Zahrani petroleum refineries, which had been idle for decades, so they would be able to produce and export refined petroleum products from imported crude petroleum. In October of the same year, the Governments of Egypt and Lebanon agreed that Egypt would supply Lebanon with natural gas by way of the Arab Gas Pipeline that ran from Egypt to Lebanon through Jordan and Syria. Lebanon has been heavily dependent on hydrocarbon imports for its electricity generation and for fuel consumption by residential and industrial sectors (Middle East Monitor, 2021; Soliman, 2021).

### **Outlook**

The Lebanese real GDP is expected to decrease by 6.5% in 2022 because of the economic, financial, and political crises as well as the COVID-19 pandemic. The Government was expected to begin financial and structural reform programs with the help of international donor organizations, such as the International Monetary Fund and the World Bank in 2022. Lebanon was expected to begin importing natural gas from Egypt in 2022, which would help alleviate electricity shortages throughout the country. Production of mineral commodities, such as cement, iron and steel, and phosphate fertilizers, is expected to be dependent on the Government's ability to meet the industrial and residential demand for electricity and mineral fuels (World Bank, The, 2022).

### **References Cited**

- Azhari, Timour, 2020, Lebanon's first offshore gas drill is a huge disappointment: Al Jazeera [Doha, Qatar], April 27. (Accessed July 14, 2022, at <https://www.aljazeera.com/economy/2020/4/27/lebanons-first-offshore-gas-drill-is-a-huge-disappointment>.)
- Bank Audi S.A.L., 2021, Lebanon economic report 1st quarter 2021: Beirut, Lebanon, Bank Audi S.A.L., 13 p. (Accessed July 13, 2022, at <https://pwstg02.blob.core.windows.net/pwfiles/Library/Files/51911cfc-e841-4f36-8da8-36bf28440e43.pdf>.)
- Bank Audi S.A.L., 2022, Lebanon economic report 1st quarter 2022: Beirut, Lebanon, Bank Audi S.A.L., 13 p. (Accessed June 23, 2022, at <https://pwstg02.blob.core.windows.net/pwfiles/ContentFiles/10862PublicationFile.pdf>.)
- Hijazi, Salah, 2020, The Lebanese sell off their gold to survive: Le Commerce du Levant [Beirut, Lebanon], July 16. (Accessed June 21, 2022, at <https://www.lecommercedulevant.com/article/29937-the-lebanese-sell-off-their-gold-to-survive>.)
- International Cement Review, 2021, Lebanon, *in* The global cement report (14th ed.): Dorking, United Kingdom, Tradeship Publications Ltd., p. 193–194.
- Kimberley Process Statistics, 2020, Annual global summary—2019 production, imports, exports and KPC counts: Washington DC, Kimberley Process Statistics, [unpaginated]. (Accessed July 14, 2022, at [https://kimberleyprocessstatistics.org/static/pdfs/public\\_statistics/2019/2019GlobalSummary.pdf](https://kimberleyprocessstatistics.org/static/pdfs/public_statistics/2019/2019GlobalSummary.pdf).)
- Kimberley Process Statistics, 2021, Annual global summary—2020 production, imports, exports and KPC counts: Washington DC, Kimberley Process Statistics, [unpaginated]. (Accessed July 14, 2022, at [https://kimberleyprocessstatistics.org/static/pdfs/public\\_statistics/2020/2020GlobalSummary.pdf](https://kimberleyprocessstatistics.org/static/pdfs/public_statistics/2020/2020GlobalSummary.pdf).)

- Lebanese Customs Administration, 2022, Trade statistics: Beirut, Lebanon, Lebanese Customs Administration. (Accessed July 7, 2022, at [http://www.customs.gov.lb/Trade\\_Statistics/Yearly/Yearly\\_Statistics.aspx](http://www.customs.gov.lb/Trade_Statistics/Yearly/Yearly_Statistics.aspx).) [In Arabic.]
- Lebanese Petroleum Administration, 2021, Prequalification: Beirut, Lebanon, Lebanese Petroleum Administration, 27 p. (Accessed July 7, 2022, at <https://www.lpa.gov.lb/Library/Assets/Gallery/asdasdas/Laws/OPRL%20-%20English.pdf>.)
- Lebanon Chemicals Co. S.A.L., 2021, Presentation: Beirut, Lebanon, Lebanon Chemicals Co. S.A.L. (Accessed July 13, 2021, at <https://lebanonchemicals.com/presentation>.)
- Lebanon S.A.L., 2021, About us: Beirut, Lebanon, Lebanon S.A.L. (Accessed July 15, 2022, at <https://lebanon.com/about-us>.)
- Middle East Monitor, 2021, Lebanon—Russian delegation visits with construction projects: Middle East Monitor [Middlesex, United Kingdom], June 29. (Accessed June 8, 2022, at <https://www.middleeastmonitor.com/20210629-lebanon-russian-delegation-visits-with-construction-projects>.)
- Ministry of Energy and Water, 2021, The ministry: Beirut, Lebanon, Ministry of Energy and Water. (Accessed July 15, 2021, at <https://energyandwater.gov.lb>.)
- Observatory of Economic Complexity, The, 2023, Diamonds in Lebanon: Boston, Massachusetts, The Observatory of Economic Complexity. (Accessed May 2, 2023, at <https://oec.world/en/profile/bilateral-product/diamonds/reporter/lbn?yearExportSelector=exportYear2>.)
- S&P Global Market Intelligence, 2022, Lebanon—Economic & demographic data: New York, New York, S&P Global Market Intelligence. (Accessed June 23, 2022, at <https://www.capitaliq.spglobal.com/web/client?auth=inherit#country/countryProfile?keycountry=LB>.)
- Soliman, Mohamed, 2021, Egypt to supply Lebanon with natural gas ‘within a few weeks’—Minister: Ahram Online [Cairo, Egypt], October 5. (Accessed June 8, 2022, at <https://english.ahram.org.eg/NewsContent/3/16/426364/Business/Energy/Egypt-to-supply-Lebanon-with-natural-gas-within-a.aspx>.)
- World Bank, The, 2021, Lebanon, *in* Macro poverty outlook—Country-by-country analysis and projections for the developing world: Washington DC, The World Bank, April 21, p. 162–163. (Accessed June 20, 2022, at <https://thedocs.worldbank.org/en/doc/a3d1489dafa646ee90f5a19abd950cab-0280012021/original/9-mpo-sm21-lebanon-lbn-kcm.pdf>.)
- World Bank, The, 2022, Lebanon, *in* Macro poverty outlook—Country-by-country analysis and projections for the developing world: Washington DC, The World Bank, April 22, p. 162–163. (Accessed June 23, 2022, at <https://thedocs.worldbank.org/en/doc/0aad08f40c2fdc3d62e5531925452384-0280012022/original/9-mpo-sm22-lebanon-lbn-kcm5.pdf>.)

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

(Metric tons, gross weight, unless otherwise specified)

Commodity <sup>2</sup>		2017	2018	2019	2020	2021
<b>METALS</b>						
Gold, refinery, Au content	kilograms	8,600	8,100	12,000 <sup>e</sup>	11,000 <sup>e</sup>	12,000 <sup>e</sup>
Lead, refinery, secondary <sup>e</sup>		11,900	6,000	26,000 <sup>r</sup>	22,000	25,000
<b>INDUSTRIAL MINERALS</b>						
Cement, hydraulic	thousand metric tons	5,149 <sup>r</sup>	4,702 <sup>r</sup>	3,203 <sup>r</sup>	1,958	1,810
Fertilizers, phosphate fertilizer		187,000	200,000 <sup>r,e</sup>	160,000 <sup>r,e</sup>	130,000 <sup>e</sup>	150,000 <sup>e</sup>
Phosphate, compounds, phosphoric acid		80,000	220,000 <sup>r</sup>	230,000 <sup>r</sup>	200,000	220,000 <sup>e</sup>
Salt <sup>e</sup>		3,000	3,000	3,000	5,000	5,000
Stone, crushed, limestone, for cement <sup>e</sup>	thousand metric tons	7,000	6,000 <sup>r</sup>	4,000 <sup>r</sup>	3,000	3,000
Sulfur, compounds, sulfuric acid <sup>3</sup>		217,000	380,000	288,000 <sup>e</sup>	420,000 <sup>e</sup>	355,000 <sup>e</sup>

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

<sup>1</sup>Table includes data available through May 19, 2022. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

<sup>2</sup>In addition to the commodities listed, aluminum sulfate, diamond (beneficiation output from imported materials), granite, gravel, gypsum, marble, sand, secondary copper, steel products, and other construction materials may have been produced, but available information was inadequate to make reliable estimates of output.

<sup>3</sup>From imported sulfur.

TABLE 2  
LEBANON: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum sulfate		Lebanon Chemicals Co. S.A.L. (LCC)	Plant at Selaata, North Lebanon Governorate	22
<b>Cement:</b>				
Portland		Holcim (Liban) S.A.L. (LafargeHolcim Ltd., 54.3%, and individual investors, 45.7%)	Plant at Chekka, North Lebanon Governorate	2,800
Do.		Cimenterie Nationale S.A.L.	do.	2,600
Do.		Ciment de Sibline S.A.L. (Secil-Companhia Geral de Cale e Cimento S.A., 50.5%; Bank Med, 20%; Walid Jumblatt, 20%; private investors, 9.5%)	Plant at Sibline, Mount Lebanon Governorate	1,300
Do.		Cimenterie du Moyen-Orient S.A.L. (Seament Holding S.A.L., 100%)	Plant at Chekka, North Lebanon Governorate	500
White		Holcim (Liban) S.A.L. (LafargeHolcim Ltd., 54.3%, and individual investors, 45.7%)	do.	100
Copper, secondary	metric tons	Liban Cables S.A.L. (Nexans Group, 100%)	Plant at Nahr Ibrahim, Byblos, Mount Lebanon Governorate	10 <sup>e</sup>
Gold, refined	do.	Lebanor S.A.L.	Plant at Bourj Hammud, Beirut Governorate	10 <sup>e</sup>
Do.	do.	D12 Gold Refinery	do.	10 <sup>e</sup>
Gypsum, products		Societe Des Chaux Et Platres du Liban S.A.L.	Plant at Chekka, North Lebanon Governorate	50 <sup>e</sup>
<b>Iron and steel, steel:</b>				
Rolled		Attar Steel Co.	Plant at Taanayel, Bekaa Governorate	200
Do.		Société Industrielle Libanaise S.A.L.	Plant at Southern Matn, Mount Lebanon Governorate	NA
Pipe		Demco Steel Industries S.A.L.	do.	200
Do.		Tandem Tubes S.A.L. (Tannous Group, 100%)	Plant at Hosrayel, Mount Lebanon Governorate	NA
<b>Scrap:</b>				
Shredded		Diametal S.A.L.	Plant at Mkalles, Mount Lebanon Governorate	100
Heavy melt		do.	do.	200
Wire		Steel Wire Lebanon S.A.L. (Tannous Group)	Plant at Hosrayel, Mount Lebanon Governorate	NA
Lead, refined, secondary	metric tons	Arabay Trading and Industrial S.A.L.	Plant at Tannayel, Bekaa Governorate	25,000
Do.	do.	National Ammunition Co.	Plant at Daraya, Mount Lebanon Governorate	25,000
<b>Phosphate products:</b>				
Monocalcium phosphate		Lebanon Chemicals Co. S.A.L. (LCC)	Plant at Selaata, North Lebanon Governorate	36
Phosphoric acid		do.	do.	220
Single superphosphate		do.	do.	100
Triple superphosphate		do.	do.	300
Salt		Lebanese Salt Palace Co. S.A.R.L.	Brines at Enfeh, Koura, North Lebanon Governorate	5
Do.		Nepton Salt Co. S.A.L.	do.	1
Stone, granite and marble		Arabian Mining Habre & Co. S.A.L.	Quarries at Kahaleh, Baabda, Mount Lebanon Governorate	NA
Do.		Boustany, Mallah & Co. S.A.R.L.	Quarry at Kesserwan, Mount Lebanon Governorate	NA

See footnotes at end of table.

TABLE 2—Continued  
 LEBANON: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Stone, granite and marble—Continued	Marble & Cement Products S.A.L.	Quarry in Bekaa Governorate	NA
Do.	Société Nationale de Marbre	Quarries at Mar Elias, Btina, Mount Lebanon Governorate	NA
Do.	Wadih Tadros & Fils Co.	Quarry at Kafarchima, Mount Lebanon Governorate	NA
Sulfuric acid	Lebanon Chemicals Co. S.A.L. (LCC)	Plant at Selaata, North Lebanon Governorate	548

<sup>c</sup>Estimated. Do., do. Ditto. NA Not available.