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The Mineral Industry of Lebanon

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Lebanon is the second smallest country, in terms of area, in the Middle East and North Africa region after Bahrain. The country was not a significant supplier of minerals in 2014, but it was active in mineral trading and in beneficiation of imported copper, diamond, ferrous and nonferrous scrap metals, gold, iron and steel, and refined petroleum products. The mineral commodities produced in Lebanon included cement, fertilizer, refined lead, and salt. Most of the country's output of minerals was used locally, and the remainder was exported (table 1).

Government Policies and Programs

The country's first hydrocarbon law, Offshore Petroleum Resources Law (law 132 of August 24, 2010), was approved by the Cabinet on August 17, 2011. The law implemented a production-sharing and royalty scheme applied through exploration and production agreements between the Government and prequalified companies. In 2012, the Government created the Lebanese Petroleum Administration under the Ministry of Energy and Water to manage petroleum-related activities in the waters of the Exclusive Economic Zone (EEZ) and in Lebanon's territorial waters. The Government identified 10 oil and gas exploration blocks in the EEZ, which cover an area of 21,500 square kilometers (km^2) and all 1,200-km^2 of the buffer zone along the Mediterranean Sea coast (Mirza, 2013; Lebanese Petroleum Administration, 2015b).

Ahead of the country's first bidding round for oil and gas, the Ministry of Energy and Water prequalified 12 companies as right-holder operators and 34 companies as right-holder non-operaters. The bidding period was expected to end by January, the selection of the companies would be finalized by yearend 2014, and exploration would begin in 2017. At yearend 2014, however, no date had been announced for the opening of the country's first bidding round for 10 offshore oil and gas blocks. The delay (since 2012) was attributed to several reasons, chief among which was the country's political gridlock, which prompted the Cabinet's resignation in mid-2013, and the failure of Parliament to elect a new President to replace the President whose term ended on May 25 (Crisp, 2014, 2015; Bank Audi S.A.L., 2015, p. 3; Lebanese Petroleum Administration, 2015a).

Minerals in the National Economy

In 2014, Lebanon's gross domestic product (GDP), which amounted to $50.0 billion in 2014, increased in real terms at a rate of 2% compared with a rate of increase of 2.5% (revised) in 2013 and 2.8% (revised) in 2012. The services sector, which contributed 75.4% of the GDP, dominated the country's economy. The industrial sector's contribution to the GDP was 20.0% and that of the agricultural sector was 4.6%. The slow economic growth from 2012 to 2014 was attributed mainly to the armed conflict in neighboring Syria, which started in 2011 and continued throughout 2014. The armed conflict in Syria had the following four main effects on Lebanon and its economy: (1) increased sectarian tensions, (2) large increase in the number of refugees, (3) increased risk for foreign investors to invest in large projects in Lebanon, and (4) disruptions in the transport of merchandise to and from Lebanon's ports to other countries in the Middle East by way of Syria (Bank Audi S.A.L., 2015, p. 2, 12; International Monetary Fund, 2015).

Production

With the exception of cement and phosphate fertilizer, Lebanon's mineral production data were estimated in 2014. Cement production, which was carried out by four companies, decreased by 5% to 5.5 million metric tons (Mt) in 2014 from 5.8 Mt in 2013. Phosphate fertilizer output remained unchanged (table 1; Arab Fertilizer Association, 2015, p. 57).

Structure of the Mineral Industry

Private companies carried out the entire mineral sector's activities in Lebanon. Companies that produced cement included Ciment de Sibline S.A.L., which was majority owned by Secil-Companhia Geral de Cale e Cimento S.A. of Portugal; Cimenterie du Moyen-Orient S.A.L.; Cimenterie Nationale S.A.L. (Alsabeh Cement); and Holcim (Liban) S.A.L. and Société Libanaise des Ciments Blancs S.A.L., which were subsidiaries of Holcim Ltd. of Switzerland. Attar Steel Co., Demco Steel Industries S.A.L., Société Industrielle Libanaise S.A.L., and Tandem Tubes S.A.L produced rolled steel and steel pipes. Lebanese Salt Palace Co. S.A.R.L. and Nepton Salt Co. S.A.L., which were located at Enfeh in northern Lebanon, produced salt (table 2).

Mineral Trade

In 2014, Lebanon's exports decreased by 15% to $3.3 billion from $3.9 billion in 2013. The value of industrial exports accounted for about 92% of total exports; pearls and precious and semiprecious metals, 16.4%; metallic products, 11.3%; and chemical products, 11.5%. Lebanon's major export markets were, in terms of the value of exports, Saudi Arabia (11.4%), the United Arab Emirates (9.7%), Iraq (7.7%), Syria (7.3%), and Turkey (4.4%) (Bank Audi S.A.L., 2015, p. 4).

In 2014, the total value of Lebanon's imports decreased slightly to $20.5 billion from $21.2 billion in 2013. The value of imports of mineral products, mainly mineral fuels, accounted for 23.8% of imports compared with 24.1% in 2013; chemical products, 9.8% compared with 9.1% in 2013; and metals and metal products, 7.3% compared with 7.4% in 2013. China was Lebanon's leading source of imports, accounting for 12.1% of total imports, followed by Italy (8.0%), France (6.2%), Germany (6.1%), and the United States (6.0%) (Bank Audi S.A.L., 2015, p. 4).

In 2014, Lebanon's main mineral commodity exports were, in descending order of tonnage exported, cement, 400,000 metric tons (t); ferrous scrap, 250,000 t; phosphate fertilizers, 210,000 t; phosphoric acid, 99,000 t; aluminum scrap, 22,000 t; copper scrap, 18,000 t; and lead products, 10,000 t. The country's mineral commodity imports were, in descending order, petroleum products, 6.8 Mt; iron and steel products (from Belarus, Egypt, Russia, Turkey, and Ukraine), 1.65 Mt; phosphate rock, 609,000 t (including 348,000 t from Syria and 261,000 t from Morocco); sulfur, 156,000 t for use in phosphate fertilizer manufacturing; gypsum, 259,000 t for use in cement and plaster; marble, 162,000 t; coal (from Russia), 96,000 t; sand, 78,000 t; salt (mainly from Egypt), 65,000 t; calcite, 45,000 t; and kaolin, 32,000 t (Lebanese Customs Administration, 2015).

Commodity Review

Metals

Copper and Lead.—Lebanon's processed and refined copper exports decreased to $100 million in 2014 from $192 million in 2013. The decrease was attributed to the decline in exports to China, Japan, and the Republic of Korea (Ministry of Finance, 2015, p. 8).

Although no lead had been mined, there were at least two small-scale lead smelters in Lebanon—Arabay Trading and Industrial S.A.L. and National Ammunition Co. The combined production of secondary lead from both smelters in 2014 was 10,000 t. Diametal S.A.L. was the leading producer and exporter of aluminum and copper scrap in Lebanon. In 2014, the company had the capacity to recycle 1 million metric tons per year (Mt/yr) of scrap, including 100,000 metric tons per year (t/yr) of shredded scrap and 200,000 t/yr of heavy melted scrap (tables 1 and 2; Diametal S.A.L., 2015).

Gold.—The value of Lebanon's gold exports decreased by 34% to $366 million in 2014 from $558 million in 2013, and imports decreased by 23% to $658 million in 2014 from $852 million in 2013. The decrease was attributed to lower gold prices on world markets in 2014 compared with those of 2013. Several small-scale gold refineries had operated in Lebanon for decades; however, no information was available on the production or smelting and refining capacities for these companies. Lebanor S.A.L. was the country's first gold refinery; it was located at Burj Hammud in East Beirut. The D12 gold refinery, another gold refinery, was also located in Beirut (table 2; Lebanor S.A.L., 2015; Ministry of Finance, 2015, p. 3, 8).

Iron and Steel.—Lebanon's consumption of semifinished and finished steel products exceeded local production, which made the country reliant on imports for all its crude steel and more than one-half of its semifinished and finished steel products. Lebanon's iron and steel production included hot-rolled steel, steel pipes, and other finished steel products from imported crude steel. Steel exports, which were mainly ferrous scrap, decreased in value by 39% in 2014 compared with that of 2013. The decrease was attributed to a 38% decrease in the volume of ferrous scrap exported to Turkey. Iron and steel imports decreased by 6% in value and increased by 1% in tonnage in 2014 compared with that of 2013, when the country imported 1.5 Mt of iron and steel products. The decrease was attributed to lower iron ore prices during 2014. Imports of iron and steel from China increased by 83% in 2014, and they decreased from Egypt, Italy, Russia, and Turkey (World Steel Association, 2014; Ministry of Finance, 2015, p. 6, 8).

Industrial Minerals

Cement.—In 2014, Lebanon's cement production capacity was 7.5 Mt/yr. Alsabeh Cement was the country's leading producer of cement and held a 39% share in the domestic market with a capacity of 2.9 Mt/yr. Ciment de Sibline, which had the capacity to produce 1.3 Mt/yr of cement, produced 1.23 Mt in 2014 compared with about 1.3 Mt in 2013. Holcim produced 2.1 Mt of cement in 2012 and 2013 compared with about 2.4 Mt in 2011. Société Libanaise des Ciments Blancs S.A.L, which had the capacity to produce 100,000 t/yr of white cement, was producing at 96% of capacity in 2014 (table 2; Holcim Ltd., 2014; p. 239; Secil-Companhia Geral de Cale e Cimento S.A., 2015, p. 30).

In 2013, Holcim began processing pharmaceutical waste in its kiln after it had signed an agreement with the Ministry of Environment and the Ministry of Health, APAVE Group of France, and the Lebanese Pharmaceutical Importers Association. Local residents and environmental activists opposed incinerating pharmaceutical waste in the cement kilns because they were concerned that cement produced from the kilns might contain traces of harmful chemicals and that emissions might contain traces of arsenic trioxide (Elnashra, 2013; Holcim (Liban) S.A.L., 2013).

Moussawi Industry and General Trade S.A.R.L. (MIT) planned to build a new $200 million cement plant on a 90-hectare area in Janta, in the Bekaa Valley near the border with Syria. Local residents and the Green Line Association, which is a nongovernment organization, objected to the construction of the proposed plant. Opponents of the project cited potential health hazards from gaseous emissions resulting from burning coal to operate the kilns and from heavy traffic caused by trucks carrying raw materials to the plant and cement from the plant (Kiddie, 2015).

In December, the local authority in Zahle City revoked the permit that had been issued in October to build a new cement plant in the city. The decision was made in response to widespread opposition to building the plant because of environmental and public health concerns (Hassan, 2014).

Diamond and Gemstones.—Although no diamond or gemstones were mined in Lebanon, the country had active diamond polishing and gemstone trade industries. The value of Lebanon's rough and polished diamond exports decreased by 17% to $91 million in 2014 from $110 million (revised) in 2013, and the value of rough and polished diamond imports increased by 13% to $224 million in 2014 from $199 million (revised) in 2013. The value of exports of gemstones (other than diamond) increased to $20 million in 2014 from $11 million in 2013, and the value of imports of gemstones (other than diamond) increased to $28 million from $15 million (Ministry of Finance, 2015, p. 3, 8).

Phosphate Rock.—Selaata Chemicals Co. S.A.L. (SCC) was the country's sole producer and exporter of phosphate fertilizers. In 2014, SCC used imported phosphate rock from Morocco and Syria as well as imported sulfur from Eastern Europe to produce phosphoric acid, single and triple superphosphate fertilizer, and aluminum sulfate. The SCC plant was located in Selaata in northern Beirut on the Mediterranean Sea coast. Environmentalists and Government agencies have been concerned for several years that the SCC was discharging phosphogyspum, which is a byproduct of the wet acid treatment of phosphate rock, into the Mediterranean Sea. SCC, however, maintained that its treatment of gas emissions and liquid waste was in accordance with international environmental standards (Amreih, 2015).

Outlook

The development of Lebanon's offshore hydrocarbon resources in the Levant Basin could provide a long-term supply of crude oil and natural gas to the country. Lebanon could possibly become a net exporter of natural gas in the long term if the Government opens the first round of bidding for crude oil and natural gas offshore blocks and awards exploration and production permits. Cement production is expected to increase modestly.

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TABLE 1
LEBANON: ESTIMATED PRODUCTION OF MINERAL COMMODITIES[1, 2]

(Metric tons unless otherwise specified)

Commodity[3]		2010	2011	2012	2013	2014
METALS						
Iron and steel:						
Hot-rolled		200,000	300,000	500,000	500,000	500,000
Pipes		200,000	200,000	300,000	300,000	300,000
Lead, secondary		6,000	6,000	5,000	6,000	10,000
INDUSTRIAL MINERALS						
Cement, hydraulic[4]	thousand metric tons	5,227	5,550	5,309	5,831	5,517
Limestone, for cement	do.	7,000	7,000	7,000	7,500	7,500
Phosphate:[4, 5]						
Phosphatic fertilizers		270,000	310,000	310,000	310,000	310,000
Phosphoric acid		300,000 r	300,000 r	220,000 r	105,000 r	220,000
Salt		20,000	20,000	20,000	15,000	15,000
Sulfuric acid:						
Gross weight		600,000	600,000	600,000	500,000	600,000
S content		196,000	196,000	196,000	164,000	196,000

[r]Revised. do. Ditto.
[1]Estimated data are rounded to no more than three significant digits
[2]Table includes data available through June 30, 2015.
[3]In addition to the commodities listed, aluminum sulfate, refined copper, refined gold, granite, gravel, lime, marble, sand, and other construction materials were also produced, but quantities were not reported, and available information was inadequate to make reliable estimates of output.
[4]P_2O_5 equivalent.
[5]Reported figure.

TABLE 2
LEBANON: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum sulfate	Selaata Chemicals Company S.A.L. (SCC)	Selaata	30
Cement	Holcim (Liban) S.A.L. (Holcim Ltd., 52.00%; Mershed Baaklini, 14.98%; Seament Holding S.A.L., 7.50%; individual investors, 21.39%)	Chekka	2,100
Do.	Cimenterie Nationale S.A.L. (Alsabeh Cement)	do.	3,000
Do.	Ciment de Sibline S.A.L. (Secil-Companhia Geral de Cale e Cimento S.A., 50.5%; Bank Med, 20%; Walid Jumblatt, 20%)	Sibline	1,300
Do.	Cimenterie du Moyen-Orient S.A.L. (Seament Holding S.A.L.)	Chekka	500
Do.	Société Libanaise des Ciments Blancs S.A.L. (Holcim Ltd., 52%)	do.	100
Copper, secondary	LIiban Cables S.A.L. (Nexans Group, 100%)	Beirut	NA
Granite and marble	Arabian Mining Habre & Co. S.A.L.	Kahaleh, Baabda	NA
Do.	Wadih Tadros & Fils Co.	Kafarchima	NA
Do.	Société Nationale de Marbre	Mar Elias, Btina	NA
Do.	Marble & Cement Products S.A.L.	Bekaa	NA
Do.	Boustany, Mallah & Co. SARL	Kesrouan	NA
Gold, refining	Lebanor S.A.L.	Refinery at Burj Hammud	NA
Do.	D12 Gold Refinery	Beirut	NA
Gypsum	Societe Des Chaux et Platres du Liban S.A.L.	Chekka	50

See footnotes at end of table.

TABLE 2—Continued
LEBANON: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Iron and steel, steel:			
Rolled	Attar Steel Co.	Beirut	200
Do.	Societé Industrielle Libanaise S.A.L.	Southern Metn	NA
Pipes	Demco Steel Industries S.A.L.	do.	200
Do.	Tandem Tubes S.A.L. (Tannous Group)	Hosrayel, Jebeil	NA
Scrap:			
Shredded	Diametal S.A.L.	Mkalles	100
Heavy melt	do.	do.	200
Wire	Steel Wire Lebanon S.A.L. (Tannous Group)	Hosrayel, Jebeil	NA
Lead, secondary	National Ammunition Co.	Daraya, Kesserwan	NA
Do.	Arabay Trading and Industrial S.A.L.	Tannayel, Bekaa	NA
Phosphate fertilizer:			
Single superphosphate	Selaata Chemicals Company S.A.L. (SCC)	Selaata	100
Triple superphosphate	do.	do.	300
Phosphoric acid	do.	do.	165
Salt	Nepton Salt Co. S.A.L.	Enfeh	10
Do.	Lebanese Salt Palace Co. S.A.R.L	do.	10
Sulfuric acid	Selaata Chemicals Company S.A.L.	Selaata	600

Do., do. Ditto. NA Not available.