



2020–2021 Minerals Yearbook

YEMEN [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF YEMEN

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

Hydrocarbons were the leading sector of the economy of Yemen in 2020, accounting for three-quarters of the country's exports. According to the International Monetary Fund, the country's gross domestic product (GDP), which amounted to \$20.14 billion, decreased in real terms by 8.5% in 2020 compared with an increase of 1.4% in 2019 (International Monetary Fund, 2022).

Since 2014, a military and political conflict had been taking place in Yemen between the Houthi Group, which was supported by Iran, and the internationally recognized Government, which was supported by the Saudi Arabia-led coalition. The Houthis controlled the capital city of Sana'a and the Hodeida Port on the Red Sea. The Government was relocated temporarily to Aden. The conflict in Yemen triggered a massive exit of international oil companies (IOCs) and domestic mining companies and caused a wide range of damage to cement plants, petroleum production facilities, and infrastructure. Some of the IOCs, such as Medco Energi of Indonesia and OMV A.G. of Austria, which left Yemen in 2015, returned and resumed operations in 2018 and 2019, respectively (U.S. Energy Information Administration, 2020; Arab Industrial Development, Mining, and Standardization Organization, 2021, p. 46).

In addition to crude petroleum, natural gas, and refined petroleum products, cement was produced in the country. Data on mineral production are provided in table 1.

There was also production of several industrial minerals, such as clay, dimension stone, gypsum, and salt; however, reliable information about their production was not available. Table 2 is a list of major mineral industry facilities.

The legislative framework for the mining sector in Yemen is provided by law No. 22 of 2010 and the Mining and Quarrying Executive Regulation Decree (1) of 2012. Hydrocarbon production was carried out by state-owned oil companies and IOCs under the Ministry of Oil and Minerals' supervision. Petroleum and natural gas were produced and exported by IOCs on the basis of production-sharing agreements with the Ministry of Oil and Minerals (Ministry of Oil and Minerals, 2021).

Production

Notable decreases in the mineral production of Yemen in 2020 compared with that in 2019 included that of distillate fuel oil, which decreased by 13% (estimated); cement, by 11% (estimated); and crude petroleum (including condensate), by 10% (estimated). Production of natural gas (marketable), natural gas liquids, and refined petroleum products was unchanged in 2020 from that in 2019 (table 1).

Commodity Review

Industrial Minerals

Cement.—Since 2015, four cement plants sustained direct damage owing to military actions in Yemen; they included the Al Burh, Amran, and Bajil cement factories, which were Government-owned, and the National Cement Co. plant, which was owned by Hayel Saeed Anam Group. Thus, the country's actual cement production capacity in 2020 remained much less than the nameplate capacity of 9.3 million metric tons per year (Mt/yr) owing mainly to the Government's financial inability to rehabilitate the damaged plants and a fuel shortage in the country (table 2; Global Cement, 2015; International Cement Review, 2021, p. 362).

Mineral Fuels

Petroleum.—The proved reserves of crude petroleum in Yemen were 3.0 billion barrels and those of natural gas were 300 billion cubic meters at the end of 2020; production of crude petroleum and condensate decreased by 10% to 21.9 million barrels (Mbbbl) in 2020 from 24.5 Mbbbl in 2019. Most of the crude petroleum and natural gas production in 2020 came from the East Shabwah Field (Block 10) in Shabwah Governorate and the Masila Field (Block 14) in Hadramawt Governorate (both blocks are in the Masila Basin) by state-owned Masila Petroleum Exploration and Production Co. (PetroMasila), and from Block 18 in the Ma'rib Basin by state-owned Safer Exploration & Production Operations Co. (Safter). In 2019, Medco Energi of Indonesia became the second IOC to restart operations in Yemen after OMV A.G. of Austria, which restarted operations in 2018. Medco Energi operated the Malik Block 9, which is located between the Shabwah Basin and the Masila Basin. Crude petroleum exported from Yemen by way of the Al-Nashama petroleum port on the Arabian Sea increased to 18 Mbbbl in 2020 from 16.7 Mbbbl in 2019 and 14.2 Mbbbl in 2018. The increase, however, was less than the Government's target of 27 Mbbbl owing to delays in the construction of a pipeline in Ma'rib Governorate, which was expected to increase petroleum exports from the Ma'rib-Shabwah Basin (Ghobari, 2020; Reliefweb, 2020; U.S. Energy Information Administration, 2020; World Bank, The, 2020; BP p.l.c., 2021, p. 16, 34).

Natural Gas.—The East Shabwah and Masila Gasfields produced 300 million cubic meters of natural gas for Yemen in 2020. There was no liquefied natural gas (LNG) production or exports by Yemen LNG Co. in 2020 because the company stopped production at its LNG plant at Belhaf in Shabwah Governorate in 2015 owing to the military conflict in the country. Yemen LNG had the capacity to produce 10 Mt/yr of LNG; it was owned by TotalEnergies SE of France (which held a 39.6% interest), Hunt Oil Co. of the United States (17.2%),

SK Innovation Co. Ltd., Hyundai Corp. and Korea Gas Corp. of the Republic of Korea (21.4%, combined), and Yemen Gas Co. and Yemen General Authority for Social Security and Pensions (21.7%, combined) (tables 1, 2; TotalEnergies SE, 2019).

MINERAL INDUSTRY HIGHLIGHTS IN 2021

In 2021, the United States took several steps to end the war in Yemen, including withdrawing support of offensive military operations by the Saudi Arabia-led coalition in Yemen, reversing a policy that started in 2015 and continued through 2020. This reversal came after several years of fighting between the Iran-supported Houthis and the Saudi Arabia-led coalition, which resulted in Yemen becoming a place for one of the world's worst humanitarian disasters. The Houthis, which controlled Sana'a and most of western Yemen, were added to the U.S. Department of State's list of "Specially Designated Global Terrorists" on January 10, 2021. In February 2021, the United States revoked the group's designation as a foreign terrorist organization and removed it from the list of "Specially Designated Global Terrorists" (Foran, 2021; Hassan; 2021).

The real GDP of Yemen decreased by 2% in 2021 compared with a decrease of 8.5% in 2020. The country's economy, which was heavily dependent on hydrocarbon exports, continued to be negatively affected by the military and political conflict and the coronavirus disease (COVID-19) pandemic (International Monetary Fund, 2022).

Production of crude petroleum (including condensate) decreased by one-third in 2021 compared with that in 2020, whereas natural gas (marketable) increased by one-third. PetroMasila and Safer produced most of the crude petroleum in 2021, with only two IOCs—OMV and Medco—operating in the country that year. Crude petroleum exported by Yemen decreased to 15,000 barrels per day (bbl/d) in May from 88,000 bbl/d in February, then rebounded in June to about 90,000 bbl/d. Production of crude petroleum and natural gas liquids from OMV's Block S2 decreased by 15% in 2021 to 1.1 Mbbbl compared with that in 2020. According to the Organization of the Petroleum Exporting Countries (OPEC), Yemen had one active rig in 2019–21 compared with zero active rigs in 2017–18. Production and exports of LNG by Yemen LNG remained idle in 2021 (tables 1, 2; BP p.l.c., 2022, p. 17, 18, 29; Organization of the Petroleum Exporting Countries, 2022, p. 23; S&P Global, 2022).

According to the International Cement Review, cement production in Yemen was estimated to have increased by 6% to 1.8 million metric tons (Mt) in 2021 from 1.7 Mt in 2020. The country's cement consumption was estimated to have increased by 10% to about 2.2 Mt in 2021 from about 2.0 Mt in 2020. Most of Yemen's cement imports, which were estimated to be 1.2 Mt in 2021, came from Egypt and Saudi Arabia. The major producers of cement in 2021 were the Arabian Cement Co. Ltd., National Cement Co. (NCC), and Yemen Cement Corporation for Cement Industry and Marketing (YCC). In 2021, most cement plants continued to operate at much less than full capacity owing to sustained damage caused by military bombardment as well as fuel shortages and disruption of transportation routes (tables 1, 2; International Cement Review, 2021, p. 362).

Outlook

The economy of Yemen is expected to face continued uncertainty owing to the long-lasting effects of the ongoing military and political conflict between the Government and the Houthis. Without lasting peace and improvement in physical security in the country, it is unlikely in the foreseeable future to see the return of additional IOCs, mining companies, and other investors to resume their work to restore exploration and production to preconflict levels and develop projects that were halted in 2015 (International Monetary Fund, 2022; World Bank, The, 2022).

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TABLE 1
 YEMEN: PRODUCTION OF MINERAL COMMODITIES¹

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

Commodity ²	2017	2018	2019	2020	2021
INDUSTRIAL MINERALS					
Cement, hydraulic	1,920	1,880	1,900	1,700 ^e	1,800 ^e
MINERAL FUELS AND RELATED MATERIALS					
Natural gas, marketable million cubic meters	300 ^r	100 ^r	300 ^r	300	400
Petroleum:					
Crude, including condensate thousand 42-gallon barrels	16,060 ^r	24,455 ^r	24,455 ^r	21,900	14,600
Natural gas liquids do.	9,855	10,220 ^r	10,220	10,220	10,220
Refinery:					
Distillate fuel oil do.	927 ^r	1,033 ^r	1,161 ^r	1,007	1,000 ^e
Gasoline do.	1,248 ^r	1,467 ^r	1,537 ^r	1,613	1,600 ^e
Residual fuel oil do.	391 ^r	1,062 ^r	336 ^r	336	350 ^e
Total do.	2,670 ^r	3,560 ^r	3,030 ^r	2,960	2,950

^eEstimated. ^rRevised. do. Ditto.

¹Table includes data available through July 22, 2022. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, aggregate, basalt, clays, feldspar, gypsum, iron and steel (finished products), limestone, liquefied petroleum gas, marble, mica, pumice (scoria), salt, silica sand, talc, and zeolites may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
YEMEN: 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 ^e
Cement		Aditya Birla Group	Plant at Aden, Aden Governorate	600
Do.		Al Burh Cement Factory [Yemen Corporation for Cement Industry and Marketing (YCC) (Government), 100%]	Kilns and mills ¹ at Mafraq, Ta'izz Governorate	500
Do.		Alahya Cement Co.	Plant in Al Hudaydah Governorate	100
Do.		Amran Cement Factory [Yemen Corporation for Cement Industry and Marketing (YCC) (Government), 100%]	Kilns and mills ¹ in 'Amran Governorate	1,500
Do.		Arabian Yemen Cement Co. Ltd. (Eastern Province Cement Co., 31.5%; Al-Amoudi Group, 15%; Bagshan Group, 15%; Ali Ali Hussain Miksa, 10%; Baroom Investment Holding Co. Ltd., 10%; Saudi Binladin Group, 10%; Yemeni Group for Development of Yemen, 5%; Sara Development Co. Ltd., 3.5%)	Kilns and mills at Al-Oyoun and Al Mukalla, Hadramawt Governorate	1,400
Do.		Bajil Cement Factory [Yemen Corp. for Cement Industry and Marketing (YCC), (Government), 100%]	Kilns and mills ¹ at Bajil, near Ta'izz, Ta'izz Governorate	500
Do.		National Cement Co. (NCC) (Hayel Saeed Anam Group, 100%)	Kilns and mills ¹ at Al-Musymeer, Lahij Governorate	1,600
Do.		Tehama Cement Co.	Plant at Tehama, Al Hudaydah Governorate	180
Do.		Unity Cement Co. Ltd.	Plant in Abyan Governorate	1,800
Do.		Yemeni Saudi Cement Co. (Yamama Cement)	do.	1,400
Clay		Artisanal and small-scale miners	Quarries in Al Hudaydah, Al Jawf, Hajjah, Ibb, Lahij, Ma'rib, San'a, Shabwah, and Ta'izz Governorates	700
Gypsum		do.	Quarries in Al Hudaydah, Hadramawt, San'a, and Shabwah Governorates	200
Iron and steel, finished products		Arab Iron and Steel Corp.	Plant at Aden, Aden Governorate	100
Do.		Mukalla Iron and Steel Co.	Plant at Rayan area in Mukalla, Hadramawt Governorate	500
Do.		Yemen Steel Manufacturing Co. Ltd. (Al-Rhabi Trading Group, 100%)	Plant in Al Hudaydah Governorate	500
Natural gas:				
Associated	million cubic meters	Masila Petroleum Exploration and Production Co. (PetroMasila) (Government, 100%)	Masila Field (Block 14), Hadramawt Governorate	300
Do.	do.	do.	East Shabwah Field (Block 10), Shabwah Governorate	300
Liquefied		Yemen LNG Co. (TotalEnergies, 39.62%; Hunt Oil Co., 17.22%; Yemen Gas Co., 16.73%; SK Innovation Co. Ltd., 9.55%; Korea Gas Corp., 6.00%; Hyundai Corp., 5.88%; Yemen General Authority for Social Security and Pensions, 5.00%)	Ma'rib Field (Block 18), liquefied natural gas plant ² in Belhaf, Shabwah Governorate	10,000
Petroleum:				
Crude	thousand 42-gallon barrels	Masila Petroleum Exploration and Production Co. (PetroMasila) [(Government), 100%]	Masila Field (Block 14), Hadramawt Governorate	15,300
Do.	do.	do.	East Shabwah Field (Block 10), Shabwah Governorate	11,300

See footnotes at end of table.

TABLE 2—Continued
YEMEN: 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 ^e
Petroleum:—Continued				
Refined	thousand 42-gallon barrels	Medco Energi [Calvalley Petroleum (Cyprus) Ltd., 42.50%; Medco Yemen Malik Ltd., 21.25%; Hood Oil Ltd., 21.25%; Yemen Gas Co., 15%]	Oilfield on Malik Block 9, Sayun-Masila Basin, Hadramawt Governorate	5,000
Do.	do.	OMV A.G.	Habban Field (Block S2), Shabwah Governorate	10,000
Do.	do.	Safer Exploration & Production Operations Co. (Government, 100%)	Ma'rib Field (Block 18), Shabwah Governorate	3,650
Do.	do.	Aden Refinery Co. (Government, 100%)	Refinery at Aden, Aden Governorate	47,000
Do.	do.	Yemen Oil Refining Co. (Yemen Hunt Oil Co. and Exxon Yemen Inc., 75.5%, and Yukong Group, 24.5%)	Topping plant at Ma'rib, Ma'rib Governorate	3,650
Pumice, scoria		Artisanal and small-scale miners	Quarries in Dhamar Governorate	2,500
Do.		do.	Quarries in Dhamar, Ma'rib, and Shabwah Governorates	500
Salt:				
Crude:				
Marine		do.	Eleven saltworks in Aden Governorate	150
Rock		do.	Five salt mines near Salif	140
Refined		Aden Salt Factory (Government, 100%)	Plant at Aden, Aden Governorate	150
Do.		Salt Refining and Packing Factory (Government, 100%)	Plant at Salif, Al Hudaydah Governorate	50
Stone:				
Basalt		Artisanal and small-scale miners	Quarries in Dhamar, Hadramawt, San'a', and Ta'izz Governorates	900
Limestone		Local private companies	Quarries in Amran, Hadramawt, San'a', and Ta'izz Governorates	4,000
Do.		Naine Minerals and Resources Pte. Ltd.	Quarries in Al-Ma'abir and Yathmoon, Hadramawt Governorate	1,000
Do.		3S Minerals Pvt. Ltd	Quarries in Hadramawt Governorate	1,000
Marble		do.	Quarries in Hajjah, Ma'rib, and Ta'izz Governorates	700
Unspecified		Artisanal and small-scale miners	Quarries in Dhamar, San'a' (Mayana area), and Ta'izz Governorates	16,000

^eEstimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto.

¹Plant sustained damage owing to armed conflict in 2015 and it was in partial operation at end of 2021.

²Operations were suspended in 2015 owing to armed conflict and the continued throughout 2021.