



2019 Minerals Yearbook

SWITZERLAND [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF SWITZERLAND

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Although not a significant primary mineral producer on a global scale, Switzerland was globally prominent in the production and export of refined precious metals and the trading of mineral commodities, including nonfuel minerals and mineral fuels. The output of Switzerland's mineral industry included industrial minerals, such as cement, gypsum, lime, nitrogen, and salt; metals, such as refined gold and silver as well as iron and steel; and refined petroleum products. Industrial minerals production was mainly for domestic consumption (table 1).

Minerals in the National Economy

In 2019, Switzerland's real gross domestic product (GDP) increased by 1.1% compared with that of 2018. The nominal GDP was \$731.3 billion (CHF726.9 billion).¹ In 2019, the gross value added (GVA) of the mining and quarrying sector increased by 4.5% to \$953 million (0.13% of the total GVA), and that of the manufacturing sector increased by 2.6% to \$133 billion (19% of the total GVA) (Federal Statistical Office, 2020a, b).

In 2019, Switzerland's total exports were valued at \$314 billion, which was an increase of 1.0% compared with the value in 2018. Exports of semiprecious stones and precious metals were valued at \$80 billion. Switzerland's top five export partners for semiprecious stones and precious metals were the United Kingdom (which received 25% of these exports, by value), India (20%), China (11%), France (8.9%), and the Hong Kong Special Administrative Region of China (Hong Kong) (7.4%). Exports of unwrought or semimanufactured platinum-group metals (that is, iridium, osmium, palladium, rhodium, and ruthenium) were valued at \$1.95 billion. The quantity of total platinum-group metal exports was 49 metric tons (t). The value of exports of unwrought or semimanufactured silver was \$790 million. The quantity of total silver exports was 1,497 t (Federal Customs Administration, 2020).

In 2019, the value of exports of unwrought or semimanufactured gold was \$61.9 billion. The quantity of gold exports was 1,401 t. Switzerland's top five export partners for gold were the United Kingdom (which received 29% of Switzerland's gold exports, by value), India (26%), China (13%), France (6.9%), and Hong Kong (5.0%). Switzerland exported 385.7 t of gold to the United Kingdom in 2019, or 30 times more than the amount exported in 2018. These exports were primarily in the form of inflows into gold-backed exchange traded funds (ETFs) as a hedge against a global economic slowdown and the possible consequences of a potential no-deal withdrawal of the United Kingdom from the European Union. Switzerland exported 384.5 t of gold to India in 2019, which was a decrease of 4.0% compared with the amount exported to India in 2018, where higher global gold prices and a weaker

rupee relative to the Swiss franc and other global currencies decreased gold demand. Switzerland exported 180.6 t of gold to China and 73.3 t to Hong Kong in 2019, which were decreases of 58% and 67%, respectively, compared with gold exports in 2018. The decrease in exports to Hong Kong was due to the increased security concerns in Hong Kong arising from the Hong Kong protests that began in March—security concerns, that is, regarding the transport of gold in and out of the region, and also a willingness among investors to retain gold holdings in other regions (Sanderson, 2019; Swissinfo, 2019; Federal Customs Administration, 2020).

In 2019, Switzerland's total imports were valued at \$278 billion, which was an increase of 2.7% compared with the import value in 2018. Imports of semiprecious stones and precious metals were valued at \$87 billion. Switzerland's top five import partners for semiprecious stones and precious metals were the United Arab Emirates (which provided 17% of these imports, by value), the United Kingdom (8.8%), France (6.8%), the United States (6.6%), and Italy (5.4%). Imports of unwrought or semimanufactured gold were valued at \$61.0 billion. The quantity of total gold imports was 2,104 t. The value of imports of unwrought or semimanufactured platinum-group metals was \$2.19 billion. The quantity of total platinum-group metal imports was 73 t. The value of imports of unwrought or semimanufactured silver was \$430 million. The quantity of total silver imports was 684 t (Federal Customs Administration, 2020).

In 2019, exports of metals and articles thereof (including ferrous metals) were valued at \$9.37 billion. Switzerland's top five export partners for metals and articles thereof were Germany (which received 38% of these exports), France (8.1%), Italy (7.9%), the United States (7.2%), and Austria (6.6%). Exports of mineral fuels and products were valued at \$2.53 billion. Exports of ores and concentrates were minimal at 0.02% of total exports. Switzerland's top five mineral export partners were Germany (which received 39% of Switzerland's mineral commodity exports), France (20%), the Netherlands (9.4%), Belgium (7.2%), and Italy (6.2%) (Federal Customs Administration, 2020).

In 2019, imports of metals and articles thereof were valued at \$12.5 billion. Switzerland's top five import partners for metals and articles thereof were Germany (which provided 41% of these imports), Italy (13%), France (7.2%), Austria (7.0%), and China (4.8%). Imports of mineral products (defined by Harmonized System Codes 25–27) were valued at \$9.69 billion. Most of these imports were mineral fuels and products, which composed 96% of the total mineral imports, whereas imports of ores and concentrates made up only 0.11% of total imports. Switzerland's top five mineral import partners for mineral products were Italy (which provided 43% of Switzerland's mineral commodity imports), Germany (22%), France (11%), Austria (4.9%), and the United Arab Emirates (3.1%) (Federal Customs Administration, 2020).

¹Where necessary, values have been converted from Swiss francs (CHF) to U.S. dollars (US\$) at an annual average exchange rate of CHF0.994=US\$1.00 for 2019.

Production

In 2019, production of refined palladium increased by an estimated 82% compared with that of 2018. Production of kerosene decreased by 41%; other petroleum products, by an estimated 15%; diesel fuel, by 14%; refinery fuel and losses, by 10%; and refined silver and platinum, by an estimated 10% each. Data on mineral production are in table 1.

Structure of the Mineral Industry

Switzerland's mineral producers were owned privately or by the Cantons. All four leading gold refiners—Argor-Heraeus S.A., Metalor Technologies International S.A., Produits Artistiques Métaux Précieux S.A. (PAMP), and Valcambi S.A.—were headquartered in Switzerland and privately owned. Many of the world's leading mining companies and commodity trading companies (by revenue), such as Glencore plc, Gunvor Group, Trafigura Beheer, and Vitol Group, were based in Switzerland. Geneva is tied with London as Europe's largest oil trading hub; approximately one-third of the world's free oil trade is conducted through Switzerland-based commodity-trading companies. Table 2 is a list of major mineral producers in Switzerland and their facilities (table 2; Swiss Trading & Shipping Association, 2020).

Commodity Review

Metals

Gold.—Four of the world's nine largest gold refineries, by production capacity, were based in Switzerland, and approximately 64% of the total gold mined worldwide (approximately 3,273 t in 2019) was estimated to have been refined in the country. Valcambi S.A. remained the world's largest gold refinery in terms of capacity, with an annual gold-refining capacity of 1,600 metric tons per year (t/yr) (plus an additional 4,000 t/yr of other precious-metals-refining capacity); Valcambi was fully owned by Global Gold Refineries A.G. of Singapore, which in turn was fully owned by Rajesh Exports Ltd. of India. In April, United States-based Newmont Mining Corp.'s gold processing contract, which had been held by Valcambi for approximately 15 years and covered approximately 124 t/yr, went to Asahi Holdings Inc. of Japan and to Argor-Heraeus and PAMP of Switzerland. Newmont would ship the gold ore from its mines in the United States to Asahi's United States-based refinery and ship the gold ore from its mines in Peru and Ghana to Argor-Heraeus and PAMP in Switzerland. In March, Metalor Technologies was reported to be under investigation by the Superintendency of Customs and Tax Administration of Peru regarding two cases of illegal mining money laundering investigations where Peruvian companies in Madre de Dios and Lima exported gold to Metalor Technologies. Investigations began on March 28, 2018, following the seizure of 91 kilograms of gold from Minerales Del Sur, which was Metalor's principal gold ore supplier in Peru (Castilla, 2019; Mir, 2019; Rajesh Exports Ltd., 2020; World Gold Council, 2020).

Industrial Minerals

Salt.—Schweizer Salinen AG, which held a salt monopoly in Switzerland, had a total production capacity of 600,000 t/yr of salt at its mines and plants at Bex, Riburg, and Schweizerhalle, and employed 214 people. Total sales of salt amounted to 500,980 t in 2019. Drilling of two exploratory wells was carried out in Rutihard, Muttenz municipality, in 2019, which subsequently came under criticism by the local population because of perceived environmental and geological risks of the drilling and mining operation. The Rutihard property were estimated to hold approximately 4.5 million metric tons of salt valued at \$1 billion. Separate from this, the company was also seeking to extend its concession contracts with the Cantons of Aargau and Basel-Landschaft, which were set to expire in 2025 (table 2; Ecklin, 2020; Schweizer Salinen AG, 2020, p. 15, 16).

Mineral Fuels and Related Materials

Petroleum and Refined Petroleum Products.—The Cressier refinery, which had a capacity of 68,000 barrels per day and was owned by Varo Energy B.V., was the only active refinery in the country in 2019 following the suspension of operations in 2015 at the Collombey refinery owned by Tamoil (Suisse) S.A.. In 2019, Varo Energy began the installation of a new column at the crude distillation unit at the Cressier refinery, which would reduce the refinery's CO₂ emissions, enable the production of refined petroleum products that have lower sulfur content, and reduce energy consumption at the refinery. Operation of the new column was expected to start between April and June 2020 (table 2; Turner, 2019).

Outlook

In 2020, Switzerland's GDP is expected to decrease by 6.0% owing to global disruptions caused by the coronavirus disease 2019 (COVID-19) pandemic, and then to increase by 3.8% in 2021. The import, export, and production of refined gold are projected to increase considerably and to remain elevated in the short and medium terms owing to increased global demand for gold—primarily in Europe and Asia—because of global economic and political uncertainty. Decreased exports to Asian countries are likely to be temporary, as safe havens for gold shift from Hong Kong to Singapore. Gold prices, which increased substantially in 2020, are projected to return to 2019 levels by 2030. Expirations on land contracts for salt and the uncertainty and possible abandoning of the Rutihard project may further decrease domestic salt production in the future (Swissinfo, 2019; International Monetary Fund, 2020; World Bank, The, 2020).

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TABLE 1
SWITZERLAND: PRODUCTION OF MINERAL COMMODITIES¹

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

Commodity	2015	2016	2017	2018	2019	
METALS						
Gold, refinery ^c	metric tons	2,570	2,780 ^r	2,400 ^r	2,260 ^r	2,100
Iron and steel, steel:						
Raw steel		1,475	1,500	1,450	1,500 ^e	1,500
Products, semimanufactured		1,140	1,110	1,180	1,160	1,160 ^e
Platinum-group metal, refinery: ^c						
Palladium	kilograms	13,000	13,000	23,000	17,000	31,000
Platinum	do.	17,000	22,000	18,000	20,000	18,000
Silver, refinery, primary, metal ^c	metric tons	2,170 ^r	1,490 ^r	1,340 ^r	1,660 ^r	1,500
INDUSTRIAL MINERALS						
Cement, hydraulic		4,390	4,710	4,580 ^e	4,290 ^r	4,210
Gypsum, mine		320	340	330 ^e	456 ^e	460 ^e
Lime		107	96	90 ^e	96 ^e	101 ^e
Nitrogen, ammonia, N content		34 ^r	34 ^r	34 ^r	14 ^r	14
Salt		550	458	590	492	477
MINERAL FUELS AND RELATED MATERIALS						
Petroleum, refinery:						
Diesel fuel	thousand 42-gallon barrels	5,483	6,498	5,975	6,729	5,811
Distillate fuel oil	do.	5,998	6,132	6,453	6,520	5,953
Gasoline	do.	6,338	5,886	5,527	5,527	5,084
Kerosene	do.	301	341	56	39 ^r	23
Liquefied petroleum gas	do.	882	1,206	1,241	1,543 ^r	1,540 ^e
Naphtha	do.	--	--	8	132	NA
Residual fuel oil	do.	2,098	2,125	1,931	2,105	2,071
Other	do.	1,016	1,254	1,270	1,407 ^r	1,200 ^e
Refinery fuel and losses	do.	1,214	1,029	1,013	1,061	957
Total	do.	23,300	24,500	23,500	25,100 ^r	22,600

^cEstimated. ^rRevised. do. Ditto. NA Not available. -- Zero.

¹Table includes data available through September 15, 2020. 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, common clay, copper alloy, secondary aluminum, sand and gravel, and stone may have been produced, but available information was inadequate to make reliable estimates of output.

TABLE 2
SWITZERLAND: 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
Aluminum, secondary		Alu Menziken Extrusion AG (Montana Tech Components AG, 100%)	Plant at Reinach	15
Do.		Aluminium Laufen AG	Plant at Liesberg	26
Do.		Constellium Valais SA	Plant at Steg	110
Do.		do.	Plant at Chippis	70
Do.		do.	Plant at Sierre	NA
Do.		Novelis Switzerland S.A. (Hindalco Industries Ltd., 100%)	do.	130
Cement		Holcim (Schweiz) AG (LafargeHolcim Ltd., 100%)	Plants at Eclepens, Siggenthal, and Untervaz	3,300
Do.		Jura Cement Fabriken AG (CRH plc., 100%)	Plants at Corneaux and Wildegg	1,000
Do.		Ciments Vigier SA (Vicat Group, 100%)	Plant at Reuchenette	910
Copper, alloy	metric tons	Schmelzmetall AG	Refinery at Gurtellen	2,400
Gold, refined	kilograms	Argor-Heraeus S.A. (Heraeus Holding GmbH, 100%)	Refinery at Mendrisio	400,000
Do.	do.	Cendres+Métaux S.A.	Refinery at Biel-Bienne	NA
Do.	do.	Metalor Technologies International S.A. (Tanaka Holdings Co. Ltd., 100%)	Refinery at Marin	400,000 ^c
Do.	do.	Produits Artistiques Métaux Précieux S.A. (PAMP) (MKS S.A., 100%)	Refinery at Castel San Pietro	450,000
Do.	do.	PX Precinox S.A.	Refinery at La Chaux-de-Fonds	60,000
Do.	do.	Valcambi S.A. (Global Gold Refineries AG, 100%)	Refinery at Balerna	1,600,000
Iron and steel, raw steel		Stahl Gerlafingen AG (AFV Gruppo Beltrame S.p.A., 100%)	Plant at Gerlafingen	720
Do.		Swiss Steel AG (Schmolz and Bickenbach AG, 100%)	Plant at Emmenbrucke	800
Nitrogen, ammonia		Casale S.A. (Casale Holding, 100%)	Plant in Lugano	NA
Petroleum, refinery	barrels per day	Tamoil (Suisse) S.A. (Oilinvest Group, 100%)	Refinery at Collombey in the Canton of Valais	55,000 ¹
Do.	do.	Varo Energy B.V. (Carlyle International Energy Partners, 50%, and Vitol Group, 50%)	Refinery at Cressier in the Canton of Neuchatel	68,000
Platinum-group metals	kilograms	Argor-Heraeus S.A. (Heraeus Holding GmbH, 100%)	Refinery at Mendrisio	NA
Do.	do.	Metalor Technologies International S.A. (Tanaka Holdings Co. Ltd., 100%)	Refinery at Marin	NA
Do.	do.	Produits Artistiques Métaux Précieux S.A. (PAMP) (MKS S.A., 100%)	Refinery at Castel San Pietro	30,000
Do.	do.	Valcambi S.A. (Global Gold Refineries AG, 100%)	Refinery at Balerna	NA
Salt		Schweizer Salinen AG (26 Cantons of Switzerland and the Principality of Liechtenstein, 100%)	Saline mines and plants at Riburg, Mohlin; and Schweizerhalle, Pratteln	550
Do.		do.	Saline mine and plant at Bex	50
Silver, refined	kilograms	Argor-Heraeus S.A. (Heraeus Holding GmbH, 100%)	Refinery at Mendrisio	NA
Do.	do.	Metalor Technologies International S.A. (Tanaka Holdings Co. Ltd., 100%)	Refinery at Marin	NA
Do.	do.	Produits Artistiques Métaux Précieux S.A. (PAMP) (MKS S.A., 100%)	Refinery at Castel San Pietro	600,000
Do.	do.	Valcambi S.A. (Global Gold Refineries AG, 100%)	Refinery at Balerna	400,000

^cEstimated. Do., do. Ditto. NA Not available.

¹Operations suspended since 2015.