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# 2014 Minerals Yearbook

## MALTA

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# The Mineral Industry of Malta

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Malta is a small, densely populated island country that is located in the central Mediterranean Sea, 100 kilometers (km) south of Italy and 290 km north of Libya. The three inhabited islands of Malta, Gozo, and Comino host few mineral resources except for clay, limestone, and salt, and no indigenous mineral fuel resources. Despite its small size, Malta plays an important role in world trade and has the potential to become a major international energy hub owing to its geographic location between the energy-intensive, industrialized countries of Europe and the mineral fuel producers of North Africa. Offshore hydrocarbon exploration in Malta's Continental Shelf is ongoing owing to the country's proximity to operating petroleum and natural gas fields in Italy, Libya, and Tunisia; however, no petroleum resources were identified as of yearend 2014 (Entec UK Ltd., 2003, p. 1; Continental Shelf Department, 2015b; Oil Exploration Unit, 2015; U.S. Department of State, 2015, p. 3).

In 2014, Malta produced construction aggregate (soft and hard limestone) from quarries located on the islands of Gozo and Malta. Although not significant on a regional or world scale, limestone production was an integral part of Malta's economy as a supplier to the construction industry, which made up about 3.6% of gross domestic product (GDP). Salt production increased owing to the ongoing restoration of salt pans; however, output was still low compared with its pre-1980 levels. Neither clay nor sand was extracted (table 1; Entec UK Ltd., 2003, p. 1–3; Carabott, 2013; Central Bank of Malta, 2015c, p. 50).

## Minerals in the National Economy

In 2014, Malta's real GDP increased by 3.5% compared with that of 2013, and its economy continued to outperform most other European Union (EU) member states in terms of economic growth and employment. The nominal GDP in 2014 was 7.96 billion euros (EUR) ($10.15 billion[1]), which was up from EUR7.57 billion ($9.67 billion) in the previous year. The country's economic growth accelerated from 2.7% (revised) in 2013 owing to increases in private investment and consumption and Government spending. Large-scale ongoing energy projects as well as an increase in household disposable income as a result of lower electricity tariff rates contributed to domestic demand (Central Bank of Malta, 2015c, p. 43–45; European Commission, 2015a, p. 1; 2015b, p. 100; National Statistics Office, 2015a, p. 1).

The mineral sector constituted a minor component of Malta's economy, but it had important linkages with various other sectors, such as chemicals, construction, and nonmetallic manufacturing. In 2014, mining and quarrying output decreased by 22.7%, which was a downturn from the 6.1% increase recorded in 2013. The output of the energy sector decreased by 1.5% compared with a 2.0% decrease in the previous year. The mining and utilities sectors did not contribute to the growth in total gross-value added of 3.8% in 2014 compared with a 1.2% (revised) contribution in 2013. Mining and quarrying contributed 0.1% to growth in private sector employment from May 2013 to May 2014. The sector employed 303 full- and part-time workers as of May 2014 compared with 285 in May 2013 (Entec UK Ltd., 2003, p. 25; Economic Policy Department, Ministry of Finance, 2014, p. 46; Central Bank of Malta, 2015c, p. 46, 47; National Statistics Office, 2015c).

## Government Policies and Programs

The Malta Resources Authority (MRA) is responsible for the regulation of mineral and water resources in Malta under the Malta Resources Authority Act of 2001. The MRA issues licenses for mineral exploration and extraction activity subject to environmental consideration and restoration requirements and determines which minerals may be extracted on Malta's islands. The MRA also implements Malta's mineral policy of ensuring mineral supplies for use in construction and minimizing excess mineral extraction and waste. The commercial extraction of blue clay was prohibited by Policy BC1 given its importance in the protection of the country's water supply (Entec UK Ltd., 2003, p. 104; Malta Resources Authority, 2012, 2014; Chetcui Cauchi Malta, 2015).

The Oil Exploration Unit of the Continental Shelf Department, which is a unit of the Ministry for Transport and Infrastructure, is responsible for the licensing and regulation of petroleum exploration within Malta's Continental Shelf, which includes negotiating production sharing contracts (PSC) with companies. Petroleum exploration and extraction is governed by the Petroleum Production Act of 1958, last amended by Act XXVI of 2014; the Continental Shelf Act of 2014; and the EU's Directive 94/22/EC of 1994 on exploration and production of hydrocarbons (Continental Shelf Department, 2015a; Oil Exploration Unit, 2015).

In November, the Government took the initial step towards establishing Malta as an international trading hub for mineral fuels and renewable energy products. Malta Enterprise, which is the national development agency responsible for promoting international investment in the country, formed a joint venture with International Energy Group of Singapore. The joint venture planned to establish Malta as a petroleum trading hub and eventually to expand into petroleum blending and bunkering activities (Pace and Coppini, 2015, p. 127).

## Production

The major mineral commodities produced in Malta in 2014 were limestone and solar (evaporated) salt. Both were used locally, mostly in construction and lime manufacturing and food

[1]Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US$) at an average rate of EUR0.784=US$1.00 for 2014 and EUR0.783= US$1.00 for 2013.

consumption, respectively. Construction aggregate output in the form of blocks, chippings, granules, and powder decreased from 2010 through 2012, in large part owing to the slowdown in construction activity, and then increased in 2013. In 2014, total limestone output decreased by3.8% as a result of decreases in the production of both hard limestone (3.4%) and soft limestone (9.5%). Increases were recorded only in the output of soft limestone chippings, granules, and powder (72%) and hard limestone (dimension stone) (12%). Salt production was estimated to have increased due to the ongoing rehabilitation of the Salina salt pans, though from a low base (Department of Contracts, 2014; National Statistics Office, 2015c).

## Structure of the Mineral Industry

As of 2014, there were 55 active limestone quarries located on the islands of Malta and Gozo, which was down from 94 quarries reported in the Mineral Subject Plan of 2003 (of which 28 were hard limestone quarries and 66 were soft limestone quarries). The soft limestone quarries were concentrated in the Mqabba and Siggiewi areas on Malta and in Dwejra on Gozo. The hard limestone quarries were less concentrated across the country. They were located in western and southern Malta and eastern Gozo. The total area recorded for quarrying on Malta and Gozo accounted for 0.8% of the total land area, which was significant in a small and densely inhabited urban country (Entec UK Ltd., 2003, p. 1, 2, 41; National Statistics Office, 2015c).

Both soft and hard limestone quarries were privately owned and operated as individual businesses that comprised single operational units. The small-scale, private, domestic-ownership structure of quarries reflected the production structure in Malta's broader economy. Larger industrial firms operated 35 concrete batching plants and 9 tarmac plants within hard limestone quarries (table 1; Entec UK Ltd., 2003, p. 2; European Commission, 2013, p. 17).

In July 2014, Urion Holdings Malta, a subsidiary of Trafigura Beheer BV of the Netherlands, which was a leading global commodities trading and logistics company, acquired an 18% share of EMED Mining Public Ltd. of Spain, a leading mining company with copper and gold properties across Europe. Trafigura had three other subsidiaries in Malta: Trafigura Holdings, Trafigura Nat Gas, and Trafigura Maritime Ventures (Vella, 2014).

## Mineral Trade

In 2014, Malta's trade deficit increased by 47.4% to reach EUR2.6 billion ($3.3 billion). Exports of goods and services decreased by 0.2%, while imports increased by 0.1% primarily owing to increases in private and public investment. The mineral-related sectors of Malta's economy depended almost completely on imports, the reexporting of raw materials and fuels, and the storage of crude petroleum. In 2014, the increase in imports was mainly owing to the increase in imports of lubricants, mineral fuels, and related materials. Imports of these mineral commodities accounted for nearly 40% of imports and increased by 14.3% by value compared with that of 2013. Among Malta's exports, lubricants, mineral fuels, and related materials were again the leading category. Exports from this category accounted for almost 43% of merchandise exports in 2014, but decreased in value by 3.4% compared with that of 2013. The decrease in exports of these mineral commodities was the second leading contributor to the decrease in Malta's total exports in 2014 (Central Bank of Malta, 2015c, p. 43–45, 85; National Statistics Office, 2015b, p. 1).

Other EU member states continued to be Malta's principal trading partners, but their share in Malta's trade decreased. In 2014, they received 29.5% of Malta's total exports compared with 31.7% (revised) in 2013, and supplied 50.2% of its total imports in 2014 compared with 57.8% (revised) in the previous year, contracting 2.2% and 7.6%, respectively. Asian countries, in particular China, accounted for 20.6% of Malta's exports and 11.5% of its imports. Malta's exports to the United States were valued at $173 million, with a 4.4% share. Mineral commodity exports to the United States included petroleum products valued at $4.8 million; stone, sand, and cement valued at $790,000; fertilizers valued at $618,000; and iron and steel valued at $93,000. Malta's imports from the United States were valued at $969 million and had a 9.6% share, which was almost triple that of 2013. Mineral commodity imports from the United States included fuel oil valued at $828.2 million, finished metal shapes valued at $1.9 million, and iron and steel products valued at $797,000 (Central Bank of Malta, 2015a, b; 2015c, p. 85, 86; U.S. Census Bureau, 2015a, b).

## Commodity Review

### *Industrial Minerals*

**Salt.**—In 2014, Malta's salt output remained lower than that of the 1970s when it reached its peak level. Work continued on the restoration of the Salina salt pans, which had been damaged by storms and flooding in earlier decades. Salt was produced using small-scale coastal salt evaporation pans called Mediterranean Salinas that were carved out of rock, but the lack of extensive flat areas in proximity to the shoreline in Malta prevented production on an industrial scale. The Salina Bay salt pans in northern Malta had produced about 4,000 metric tons of salt annually over two harvests on an artificial island until 1979. An estimated 40 sites scattered around the islands of Gozo and Malta contained salt pans, but very few of the pans were actively harvested. The Salini Rehabilitation Project to restore, conserve, and use 35 salt pans at Salina Bay was approved in February 2011 with 75% funding support by the EU and began in December 2011. Work was originally scheduled to be completed by September 2013, but a new tender was awarded by the Department of Contracts in April 2014 for the project (Entec UK Ltd., 2003, p. 2; Malta Environment and Planning Authority, 2011; Carabott, 2013; Department of Contracts [Malta], 2014; Jung, 2014; European Network for Rural Development, 2015).

### *Mineral Fuels*

Petroleum and petroleum products accounted for almost 100% of Malta's energy supply and were wholly imported. Renewable energy sources met only about 1.0% of gross inland energy consumption in 2012 (the latest year for which data were available), which was the lowest percentage among all

28 member states of the EU (Department of Energy [European Commission], 2014, p. 156; European Commission, 2014, p. 6, 9).

**Natural Gas.**—In 2014, Malta did not produce any natural gas, but the Government took further steps towards switching domestic energy consumption from fuel oil to natural gas as a cheaper and cleaner source of energy, which would also reduce the country's dependence on imported petroleum. In March 2014, planning permits were issued for the construction of a new 215-megawatt (MW) gas-fired electricity plant and related liquefied natural gas (LNG) storage facilities at the Delimara power station. The gas facilities would also supply Enemalta's existing Delimara phase 3 plant, which would be converted to operate on natural gas. In December 2014, the Government announced that the construction of the plant by an international consortium was delayed and would now be commissioned by June 2016 instead of March 2015 as originally planned (Enemalta Corp., 2014; Gasol plc., 2014; Pace and Coppini, 2015, p. 127).

**Petroleum.**—In May 2014, Mediterranean Oil and Gas Ltd. (MOG) of the United Kingdom and Genel Energy plc. of Turkey and the United Kingdom began drilling the Hagar Qim 1 exploration well in Block 7, Area 4, south of Malta, which was the first exploration well drilled offshore Malta since 2002. In July, MOG reported that the well was plugged and abandoned with no indications of commercially exploitable hydrocarbon resources at the Eocene (rock) layer, which had been previously estimated to hold resources of 109 million barrels of oil equivalent. Genel Energy was granted a 6-month extension to its PSC in order to evaluate the results of the well and to decide whether to enter into the second exploration phase for Area 4. The company subsequently moved the Paul Romano rig from Malta to the Nour prospect on the Sidi Moussa block offshore Morocco for drilling in the latter instead (Malta Today, 2014; Rigzone, 2014; Pace and Coppini, 2015, p. 128; Subseaiq, 2015).

As of yearend 2014, Areas 2 and 7 offshore east of Malta were licensed to Heritage Oil of Jersey. Blocks 1, 2, and 3 of Area 3 north of Malta were licensed to Capricorn Malta Ltd., which was a subsidiary of Cairn Energy plc. of the United Kingdom, and Melita Exploration Company Ltd., which was a subsidiary of Rockhopper Exploration plc. of the United Kingdom, under an Exploration Study Agreement. Area 5 southwest of Malta was licensed to Ratio Malta Ltd., which was an affiliate of Ratio Oil Exploration Ltd. of Israel under an Exploration Study Agreement (Continental Shelf Department [Malta], 2015b).

## Outlook

Malta's mineral production is expected to remain modest. Limestone production from quarries is likely to remain the country's main mineral output and may increase in line with the continued growth of the residential and commercial construction industry. Salt production is expected to increase in the coming years with the completion of the Salina Bay salt pans restoration project. Malta is likely to remain a nonproducer of hydrocarbons, as recent petroleum exploration in its territorial waters in the Mediterranean Sea has not yielded commercially viable reserves. Imports and consumption of petroleum are expected to decrease further while those of natural gas should increase as the country transitions away from fuel oil to natural gas for power generation.

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TABLE 1
MALTA: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons)

| Commodity[2] | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|
| Limestone: | | | | | |
| Hardstone: | | | | | |
| Chippings, granules, and powder | 1,739,649 | 1,735,630 | 1,707,414 | 1,825,681 [r] | 1,758,664 |
| Dimension stone | 57,981 | 26,573 | 28,853 | 30,852 [r] | 34,424 |
| Total | 1,797,629 | 1,762,203 | 1,736,267 | 1,856,533 [r] | 1,793,087 |
| Softstone: | | | | | |
| Chippings, granules, and powder | 15,279 | 5,299 | 2,366 | 3,035 [r] | 5,221 |
| Dimension stone | 116,716 | 113,378 | 102,874 | 131,939 [r] | 116,929 |
| Total | 131,995 | 118,678 | 105,240 | 134,974 [r] | 122,150 |
| Grand total | 1,929,624 | 1,880,881 | 1,841,507 | 1,991,507 [r] | 1,915,237 |
| Salt, solar[e] | 1,000 | 1,000 | 1,000 | 1,000 | 1,500 |

[e]Estimated; estimated data are rounded to no more than three significant digits. [r]Revised.
[1]Table includes data available through June 5, 2015.
[2]In addition to the commodities listed, small amounts of cement, fertilizer, and plaster were produced, but available information is inadequate to make reliable estimates of output.