



# 2014 Minerals Yearbook

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ITALY

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# THE MINERAL INDUSTRY OF ITALY

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Italy's gross domestic product (GDP), measured at market prices, was \$2.14 trillion in 2014 compared with \$2.13 trillion (revised) in 2013, and the country's GDP increased by 0.4% compared with that of the previous year. For 2014, the country reported an employment rate of 55.7% and an inflation rate of 0.2%. The country's budget deficit for 2014 amounted to 3% of the GDP and its national debt was equivalent to 132.1% of the GDP, making Italy the second-most indebted country in the European Union (EU), after Greece. Italy, however, ranked fourth in the EU in terms of the amount of its GDP, following Germany, the United Kingdom, and France. The output value of Italy's entire industrial sector accounted for 23.5% of the GDP in 2014 (U.S. Central Intelligence Agency, 2015; World Bank, The, 2015).

The mineral industry in Italy had transitioned from being an important producer of raw materials to a manufacturer and processor of metals and steel, construction and industrial products, and industrial minerals and aggregates. Industrial minerals, however, were still important to the mineral industry of the country, particularly the production of construction materials, mineral manufacturing components, and stone. Italy was the 11th-ranked crude steel producer and the 14th-ranked manufacturer of cement in the world, as measured by tonnage of production. Italy had ceased mining for metals, and the raw materials necessary for its metal refining industry were imported or obtained from secondary scrap recovery. Italy produced principally cement, clays, gypsum, lime, limestone, salt, sand and gravel, silica sand, and talc. Natural gas and crude oil and petroleum refinery products continued to be important mineral commodities for the country. In 2014, the production of crude oil in Italy increased by 4% and that of natural gas decreased by 8% in terms of volume compared with production in 2013. The amount of natural gas produced from offshore fields, mostly from the Adriatic Sea, was almost double that produced inland. The production of crude oil took place mostly inland, specifically in the Regions of Basilicata and Sicilia, rather than offshore. Despite the availability of domestically produced gas and crude oil, Italy was not energy self-sufficient, and the country relied on energy imports to satisfy its domestic energy consumption (tables 1, 2; Cembureau, 2014b, p. 7; 2015, p. 13; Ministero dello Sviluppo Economico, 2015, p. 29–30; World Steel Association, 2015, p. 9).

## Minerals in the National Economy

In terms of value, the services sector in Italy accounted for the largest share of the GDP in 2014, or \$1.4 trillion.<sup>1</sup> The total value of manufacturing, mining, quarrying, and other industrial production amounted to \$342.6 billion, of which manufacturing

amounted to \$292.7 billion. Construction sector output was valued at \$86.5 billion. Gross salaries in the industrial and mining and quarrying (including hydrocarbon extraction) sectors amounted to \$142.2 billion, and gross salaries in the manufacturing sector amounted to \$128.7 billion (Italian National Institute of Statistics, 2015b, 424–426).

As reported by the Italian National Institute of Statistics in 2014, the output of the mining and mineral-manufacturing sector decreased by 2.9% compared with that of 2013; that of the oil-refining and coke-producing sector decreased by 5.6%, and that of the metallurgical and metal-manufacturing sector increased by 0.1%. Since 2010, the output of the mining and mineral-manufacturing sector had decreased by 8.3%, that of the oil-refining and coke-producing sector had decreased by 24.3%, and that of the metallurgical and metal-manufacturing sector had decreased by 4.8% (Italian National Institute of Statistics, 2015b, p. 571, 576).

According to the Italian National Institute of Statistics, there were 2,336 companies in the mining and quarrying sector, of which 1,850 had 9 employees or less. The Institute reported that a total of 32,813 people worked in the sector, however, and that of that amount, the vast majority (27,331) worked for companies with 10 or more workers (Italian National Institute of Statistics, 2015a, p. 27).

## Government Policies and Programs

The Government played a significant role in the economy through regulation of ownership of large financial and industrial companies; privatizations and regulatory reform in accordance with EU directives, however, had reduced that role in recent years. Italy's basic mining legislation is Mining Law No. 1443 of July 29, 1927, which gives subsoil ownership of minerals to the state. The reimbursement of the state by mining concessionaires is regulated by law No. 752 of June 10, 1982. Quarrying operations are regulated by law No. 44 of September 1982.

All petroleum and gas upstream activities are supervised by the Ufficio Nazionale Minerario per gli Idrocarburi e la Geotermia [National Office for Mining, Hydrocarbons, and Geothermal Resources] (UNMIG), which operates within the Ministero dello Sviluppo Economico [Ministry of Economic Development]. After various organizational changes, the eight divisions that compose the UNMIG now all operate within the Directorate General for Energy and Mineral Resources. By Presidential decree, in 2007, the Committee for Hydrocarbons and Mineral Resources (CIRM) was set up to carry out the UNMIG's duties. The committee performs technical advisory tasks related to hydrocarbons, mineral royalties, and mining, (Ministero dello Sviluppo Economico, 2010).

<sup>1</sup>Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average rate of EUR0.7489=US\$1.00 for 2014 and EUR0.73=US\$1.00 for 2013.

## Production

In 2014, the mineral commodities with the largest increases in production, in terms of tonnage, were gypsum (production increased by 186%), slate (121%), primary refined lead (67%), and refined copper (61%). Also, the production of common clay increased by 26% and that of sandstone and zinc metal increased by 24% each. In 2014, the mineral commodities with the largest decreases in production, in terms of tonnage, were salt (production decreased by 48%) and ball clay (44%). Also, production of crushed and broken stone decreased by 31%; silica sand, by 28%; and dolomite, by 4% (table 1).

## Structure of the Mineral Industry

The Italian Government had ultimate control of Italy's mineral industry. Mineral resources, by law, are the property of the state, but private and mixed public and private entities were the principal owners of Italy's mineral industry. Significant companies with operations in Italy were Glencore plc of Switzerland (which had a lead refinery at San Gavino); IMI FABI S.p.A. (talc mine at Orani); Italcementi S.p.A. (major plants in Calusco, Collefero, and Monselice); Lucchini S.p.A. (produced pig iron at its plant in Trieste); the Riva Group (several steelmaking plants, of which the most significant was the steelworks in Taranto); and the petroleum and hydrocarbons company Eni S.p.A. (oilfields offshore Sicily and in the Adriatic Sea, and onshore in the Po River Valley) (table 2).

## Mineral Trade

In 2014, Italy exported a total of \$532.6 billion in goods and services, which was an increase of 2.2% compared with that of the previous year, and imported a total of \$476.6 billion, which was a decrease of 1.1% compared with that of the previous year. This was a net increase in exports of \$56.0 billion, or an increase of 0.6% compared with exports in 2013.

Italy's exports in 2014 accounted for 2.8% of all world exports, making Italy the eighth-ranked exporter in the world in terms of the value of its exports. Italy's imports accounted for 2.4% of all imports in the world, making it the 12th-ranked importer in the world in terms of the value of its imports. Italy exported \$292.2 billion worth of goods and services to the EU, or 54.9% of all its exports. Italy imported \$272.3 billion from EU countries, or 57.1% of all its imports. Italy's principal export trade partners within the EU were Germany, which received exports from Italy valued at \$67.0 billion, or 12.6% of Italy's total exports; France, \$56.1 billion (10.5%); the United Kingdom, \$28.0 billion (5.2%); Spain, \$24.1 billion (4.5%); and Belgium, \$17.6 billion (3.3%). Italy's principal export partners outside the EU were the United States, which received exports from Italy valued at \$39.7 billion, or 7.5% of Italy's total exports; Switzerland, \$25.4 billion (4.8%); and China, \$14.0 billion (2.6%). Italy's principal import trade partners within the EU were Germany, which supplied Italy with imports valued at \$72.6 billion, or 15.2% of Italy's total imports; France, \$41.1 billion (8.6%); the Netherlands, \$27.8 billion (5.8%); Spain, \$23.0 billion (4.8%); and Belgium, \$20.1 billion (4.2%).

Italy's principal import partners outside the EU were China, which supplied Italy with imports valued at \$33.5 billion, or 7.0% of Italy's imports; Russia, \$23.1 billion (4.8%); and the United States, \$16.7 billion (3.5%) (Ministero dello Sviluppo Economico, 2015).

Italy exported a total of \$1.6 billion worth of mining and quarrying products in 2014, which was about the same as in 2013. Italy imported \$64.0 billion, which was a 19.6% decrease compared with imports in 2013 (Italian National Institute of Statistics, 2014, p. 26).

Italy accounted for 11.1% of all imports and 9.7% of all exports of mineral fuels, lubricants, and related materials from the EU to countries outside the EU. Italy also accounted for 11.4% of imports and 6.7% of exports of raw materials from the EU. Italy traded mostly with its EU partners, as 70.1% of all Italy's exports went to EU members and 66.3% of its imports came from EU members (European Commission, 2014a–e; U.S. Census Bureau, 2015).

## Commodity Review

### Metals

**Aluminum and Bauxite and Alumina.**—In August, Alcoa Inc. of the United States announced that it intended to permanently close its Portovesme primary aluminum smelter, which had been curtailed since 2012. The company stated that the closure would reduce Alcoa's global smelting capacity by 150,000 metric tons per year to a total of 3.6 million metric tons per year. Originally, the Portovesme smelter had been curtailed because it was one of the highest cost smelters that Alcoa operated and because the company estimated that it had limited prospects for becoming competitive. Alcoa stated that total restructuring charges for the third quarter of 2014 as a result of the closure were expected to be between \$170 million and \$180 million (Alcoa Inc., 2014).

**Iron and Steel.**—In November, Italy's second largest steelmaker, Lucchini, stated that it would ask the Government to allow it to sell its complex in Piombino, Tuscany, to conglomerate Cevital Group of Algeria. Although the company had received two binding offers for its core assets, one from Cevital and one from Indian steelmaker JSW Steel, Lucchini chose Cevital's offer as being the most attractive, stating that the Algerian company had said that it would retain all personnel currently working at the plant. In December, Italy's Ministry of Economic Development authorized the sale of the Lucchini steel complex, stating that this transaction would entail an investment of \$534 million and that Cevital would immediately rehire all 1,860 workers that had previously been employed at the plant. The Ministry indicated that Cevital's plan for Piombino included the construction of a fourth rolling mill and the construction of two electric furnaces, of which the first was planned to be completed within 18 months and the second was planned to be completed within 2 years so that the plant could resume full-cycle production. Lucchini had been placed under special administration since late 2012 after being declared insolvent in an effort to avoid job losses. Lucchini had been purchased by Russian steelmaker Severstal in 2005 from the Lucchini family

and had failed to remain profitable in the context of falling steel prices and difficult economic conditions (SteelOrbis.com, 2014a, b).

**Lead and Zinc.**—Glencore remained the country's principal processor (smelter and refinery) of lead and zinc; the company operated a plant at Portovesme, Sardinia. Glencore stated in its 2014 preliminary results that the Portovesme facility had increased production owing to the commissioning of the solvent-extraction plant during 2013. The company also stated that lead production also had increased owing to the restart of Portovesme's lead plant in late 2013 (Glencore plc, 2015, p. 24).

### *Industrial Minerals*

**Cement.**—Italcementi S.p.A. announced in June that it would purchase the remaining outstanding shares of Société des Ciments Français, and would absorb the company completely and delist it from the Paris stock exchange. This delisting took place on July 15, officially completing the acquisition of Société des Ciments Français by Italcementi. The company stated that it was looking at its options, as the cement market was seeming to consolidate. Italcementi was the fourth-ranked producer of cement in the world after LafargeHolcim of Switzerland, HeidelbergCement of Germany, and CEMEX S.A. of Mexico (Global Cement, 2014).

Italian cement consumption decreased by 8% in 2014 compared with that of 2013. The decrease was generally experienced in the civil engineering works sector as well as in the nonresidential and residential construction sectors. The reduction was a reflection of the prevailing economic conditions of the country in 2014, and Cembureau expected that this trend would probably continue and that cement consumption would continue to decrease in the future (Cembureau, 2015, p. 19).

### **Outlook**

Italy is one of the largest EU members in terms of population and the size of its industrial sector; however, the economic conditions that have affected the country since 2008 continue to affect its mineral and industrial production sectors. Unemployment and a sizable public debt have reduced the capacity of national consumption to support the manufacturing and construction sectors in Italy, and the country will likely continue to rely on exports to strengthen its manufacturing industry. The manufacturing industry will continue to rely on imported and recycled primary mineral materials, particularly copper. The country is also likely to continue to rely on major imports of mineral fuels, despite potential increases in domestic mineral fuels production. Economic reforms and austerity programs will continue and, as such, it is likely that these measures will curtail future increases in domestic consumption.

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TABLE 1  
ITALY: PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

(Metric tons unless otherwise specified)

Commodity	2010	2011	2012	2013	2014
<b>METALS</b>					
<b>Aluminum:</b>					
<b>Metal:</b>					
Primary	168,000	141,000	110,000	--	--
Secondary <sup>3</sup>	1,246,236	1,049,101	1,002,814	1,061,603	1,000,000 <sup>e</sup>
Total	1,414,236	1,190,101	1,112,814	1,061,603	1,000,000 <sup>e</sup>
Copper, metal, refined, all kinds <sup>e</sup>	1,800	7,600	7,700	4,900	7,900
<b>Iron and steel, metal:</b>					
Pig iron	8,555	9,838	9,424	6,935	6,371
Steel, crude	25,750	28,735	27,257	24,058	23,714
<b>Lead:</b>					
Mine output, Pb content <sup>e</sup>	800	800	--	--	--
<b>Metal, refined:</b>					
Primary	--	--	--	30,000	50,000
Secondary	150,000	149,500	138,400	151,000 <sup>r</sup>	160,000
Total	150,000	149,500	138,400	181,000	210,000
Zinc, metal, primary	104,700	110,200	97,200	111,000	138,000
<b>INDUSTRIAL MINERALS</b>					
Bromine <sup>e</sup>	300	300	--	--	--
Cement, hydraulic	34,408	33,120	26,200	22,000	21,400
<b>Clays, crude:</b>					
Common clay	5,900	4,750	3,777	4,212	5,297
Bentonite	111	102	144	103	100 <sup>e</sup>
Refractory, excluding kaolinic earth	844 <sup>e</sup>	844 <sup>e</sup>	878	870	870 <sup>e</sup>
Ball clay	612	638	746	696	387
Gypsum	4,441	5,939	2,563	2,994	8,551
Lime, hydrated, hydraulic, and quicklime <sup>e</sup>	5,800	5,800	5,800	3,640	3,600
Nitrogen, N content of ammonia <sup>e</sup>	460	460	590 <sup>r</sup>	570 <sup>r</sup>	570
Pigments, mineral, iron oxides, natural	117	112 <sup>e</sup>	118 <sup>e</sup>	137 <sup>e</sup>	130 <sup>e</sup>
Salt	4,006	2,912	3,098	2,879	1,501
Sand and gravel	150,996	164,844	123,049	102,381	73,690
Silica sand	17,656	16,369	13,946	13,870	11,602
<b>Stone:</b>					
<b>Calcareous:</b>					
Alabaster <sup>e</sup>	7,000	7,000	7,000	2,912	2,900
Chalk <sup>e</sup>	200	200	200	790	719
Dolomite	1,572	1,139	1,069	751	723
Limestone for lime and cement	38,440	37,269	28,524	24,706	26,297
Marble and travertine, crude	5,500	3,516	3,348	2,819	3,014
Crushed and broken <sup>4</sup>	80,336	76,793	74,169	63,782	44,143
Granite	1,614	1,585	1,734	1,160	1,001
Sandstone	497	440	281	270	336
Slate	55	61	44	43	95
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Asphalt and bituminous rock, natural	1,454	2,169	2,100 <sup>e</sup>	1,158	1,140
Gas, natural	8,296	8,438	8,608	7,731 <sup>r</sup>	7,136
<b>Petroleum:</b>					
Crude	35,040	36,201	36,865	37,157	38,690
Refinery products	688,646	653,533	617,543	549,690 <sup>r</sup>	550,000

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>r</sup>Revised. do. Ditto. -- Zero.

<sup>1</sup>Table includes data available through January 7, 2016.

<sup>2</sup>In addition to the commodities listed, Italy produced a number of other metals, alloys, and industrial minerals, such as barite, coke, diatomite, feldspar, ferromanganese, ferrosilicon, fuller's earth, kaolin, magnesite, perlite, pozzolan, pumice, silicomanganese, soda ash, sodium sulfate, sulfur, and talc, but actual output was not regularly reported, and available information was inadequate to make reliable estimates of output.

<sup>3</sup>Unwrought aluminum alloys in secondary form.

<sup>4</sup>Output of limestone and serpentine for dimension stone is included with "Stone: Crushed and broken."



TABLE 2  
ITALY: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Barite	Bariosarda S.p.A. (Ente Mineraria Sarda)	Barega and Mont 'Ega Mines on Sardinia	100
Do.	Edem S.p.A. (Government)	Mines at Val di Castello, Lucca	20
Do.	Edemsarda S.p.A. (Soc. Imprese Industriali)	Mines at Su Benatzu, Sto. Stefano, and Peppixeddu, Sardinia	20
Do.	Società Mineraria Baritina S.p.A.	Mines at Marigolek, Monte Elto, and Primaluna, near Milan	20
Bauxite	Sardabauxiti S.p.A. (Cogein S.p.A., 40%; Comtec S.p.A., 40%; Icofin Co., 20%)	Mine at Olmedo, Sardinia	350
Bentonite	Industria Chimica Carlo Laviosa S.p.A.	Mines and plant on Sardinia and a plant near Pisa	250
Cement	11 companies, of which the largest are:		
Do.	Italcementi S.p.A. (Italcementi Group)	18 plants, of which the largest are Calusco, Monselice, and Collefero	15,000
Do.	Buzzi Unicem Group	11 plants, of which the largest are Guidonia, Lugagnano, Morano, Piacenza, S'Arcangelo di Romagna, and Settimello	9,000
Do.	Cementerie del Tirreno S.p.A.	6 plants at Arquasta Scivia, Livorno, Maddaloni, Napoli, Spoleto, and Taranto	5,300
Coal, lignite	Ente Nazionale per l'Energia Electrica	Surface mine at Santa Barbara (closed)	1,000
Copper:			
Refined	Simar S.p.A. (Cordifin S.p.A.)	Refinery at Porto Marghera	60
Refined, secondary	KME Italy S.A. (KME Group S.p.A.)	Refinery at Fornaci di Barga and Scivina	24
Do.	Sitindustrie S.p.A.	Refinery at Pieve Vergonte	22
Feldspar	At least 5 companies, of which the largest are:	Locations:	1,500
Do.	Maffei S.p.A.	Surface mines at Pinzolo and Campiglia	(200)
Do.	do.	Underground mine at Vipiteno	(300)
Do.	Miniera di Fragne S.p.A.	Surface mine at Alagna Valsesia	(60)
Do.	Sabbie Silicee Fossanova S.P.A.	Surface mine at Fossanova	(30)
Gypsum	Fassa S.r.l.	Plant at Moncalvo, Asti	90
Iron	Altiforni e Ferriere di Servola S.p.A. (Lucchini S.p.A.)	Pig iron and coke plant at Trieste	500
Lead, metal	Glencore plc.	Refinery at San Gavino, Sardinia	100
Do.		Kivcet smelter and Imperial smelter at Porto Vesme, Sardinia	85
Lime	Unicale S.p.A.	Plants in Lombardia Region	500
Magnesium, metal	Societa Italiana Magnesio S.p.A.	Plant at Bolzano	8
Marble	A number of companies, of which the largest include:	Locations:	2,000
Do.	Mineraria Marittima Srl	Quarries in the Carrara and Massa areas	(500)
Do.	Industria dei Marmi Vicentini S.p.A.	do.	(300)
Do.	Figaia S.p.A.	do.	(100)
Nitrogen, N content of ammonia	Hydro Agri S.p.A.	Plant at Ferrara	410
Petroleum:			
Crude	Eni S.p.A.	Oilfields offshore Sicily and in the Adriatic Sea and onshore in Po River Valley	90
Refined	thousand 42-gallon barrels per day	Various companies	About 14 refineries
Potash, ore	Industria Sali Otassici e Affini per Aziono S.p.A.	Underground mines at Corvillo, Pasquasia, and Racalmuto, Sicily.	1,300
Do.	Sta. Italiana Sali Alcalini S.p.A. (Italkali)	Underground mines at Casteltermini and Pasquasia, Sicily	700

See footnotes at end of table.

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

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Pumice	Pumex S.p.A.	Quarries on Lipari Island, north of Sicily	600
Do.	Sta. Siciliana per l'Industria ed il Commercio della Pomice di Lipari S.p.A. (Italpomice S.p.A.)	do.	200
Pyrite	Nuova Solmine S.p.A.	Underground mines at Campiano and Niccioleta	900
Salt, rock	Sta Italiana Sali Alcalini S.p.A. (Italkali)	Underground mines at Petralia, Racalmuto, and Realmonte, Sicily	4,000
Do.	Solvay S.p.A.	Underground mines at Buriano, Ponteginori, and Querceto, Tuscany	2,000
Steel	Ilva S.p.A. (Riva Group)	5 steel plants, the largest of which is Taranto (1,500)	4,000
Do.	Riva Acciaio S.p.A. (Riva Group)	7 steel plants	7,000
Do.	Cevital S.A.	Steel plant in Piombino	2,500
Do.	Acciaierie e Ferriere Vicentine Beltrame S.p.A. (AFV-Beltrame S.p.A.)	Steel plant at Vicenza	1,000
Talc	Luzenac Val Chisone S.p.A.	Mines at Pinerolo, near Turin, and an open pit mine at Orani, Sardinia	120
Do.	IMI FABI S.p.A.	Mine at Orani, Sardinia	20
Zinc, metal	Glencore plc.	Plant at Porto Vesme, Sardinia	140
Do.	Pertulosa Sud S.p.A.	Plant at Crotone, Calabria	100
Do., do. Ditto.			