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The Mineral Industries of Europe and Central Eurasia

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The region of Europe and Central Eurasia as defined in this volume encompasses territory that extends from the Atlantic coast of Europe to the Pacific coast of the Russian Federation. It includes the British Isles, Iceland, and Greenland (a self-governing part of the Kingdom of Denmark).

The European Union (EU) is a supranational entity that at yearend 2012 comprised the following 27 countries: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom. The euro (€) operates as a single currency for countries within the EU that have fulfilled the stated requirements of the European Central Bank (located in Frankfurt, Germany) for inclusion in the euro area. As of January 1, 2013, the EU countries that were part of the euro area were Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. Kosovo and Montenegro officially adopted the euro as their sole currency without an agreement with the euro area and therefore they did not have euro issuing rights in 2012 (European Commission, 2014a, b).

Other countries that were candidates to join the EU were Iceland, Macedonia, Montenegro, Serbia, and Turkey (although no date was given for expected accession, as they were all still in the negotiation stage). Albania, Bosnia and Herzegovina, and Kosovo (under UN Security Council Resolution 1244) were considered potential candidate countries and were expected to start negotiations for EU candidate country status (European Commission, 2014a).

The Commonwealth of Independent States (CIS) was founded in 1991 by several Republics of the former Soviet Union and later was extended to include all the former Soviet Republics except the Baltic States of Estonia, Latvia, and Lithuania. The countries that made up the CIS in 2012 were Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. Georgia withdrew from the CIS in 2008. The CIS does not have supranational powers, and all member countries have equal standing under international law. Although the member countries had pledged to work on economic integration, few actual measures have been taken to make the CIS a functioning integrated economic bloc similar to that of the EU. Some member states of the CIS, however, established the Eurasian Economic Community with the goal of creating a full-fledged common market (Korrespondent.net, 2008).

A Customs Union agreement among Belarus, Kazakhstan, and Russia went into effect on January 1, 2010. According to this agreement, the countries form a joint customs territory where no customs duties or other economic restrictions on the movement of goods between the three countries apply. Each of the members of the Customs Union applies the same customs rates and trade regulations for goods traded with countries outside of the Customs Union. The members of the Customs Union were projected to save more than $400 billion by 2015 owing to reduced shipping times. Armenia, Kyrgyzstan, and Tajikistan expressed their interest in joining the Customs Union in the future but, as of the end of 2012, no decisions had been made (International Centre for Trade and Sustainable Development, 2010).

Starting on January 1, 2012, the Customs Union among the three countries was transformed into a Common Economic Space (CES), which was the next step in the Eurasian integration process. The CES agreement removed barriers to the movement of goods, capital, and labor between the three countries. It also included coordinated principles of business regulation and coordination of macroeconomic and monetary policies, although it did not imply the introduction of a common currency. The Eurasian Economic Commission, which was a new supranational body, was expected to govern the integration processes within the CES framework and had the right to make decisions that would become mandatory for all three states. In 2012, the CES court in Minsk, Belarus, which was to resolve economic disputes between member states as well as between individual economic agents, started operations. The complete package of CES integration documents included 17 international treaties and was signed in November 2011 in Moscow. The ultimate goal of the integration among the CES members is creation of a Eurasian Economic Union (an organization similar to the EU), which was planned for 2015 (Utro.ru, 2012).

The European Free Trade Association (EFTA), which is an alternative entity to the EU in Western Europe, comprised Iceland, Liechtenstein, Norway, and Switzerland. The agreement on the European Economic Area (EEA), which had been in force since 1994, brings all 27 EU members and 3 of the EFTA members (Iceland, Liechtenstein, and Norway) into a single internal market. The EEA provides for the free movement of goods, services, persons, and capital among the 30 EEA states. Switzerland was not part of the EEA but had a bilateral agreement with the EU that addresses the same issues covered by the EEA (European Free Trade Association, 2014).

The 49 countries in the Europe and Central Eurasia region encompass an area of 29.4 million square kilometers, which is about three times larger than that of the United States; 17.1 million square kilometers of the area is accounted for by Russia. In 2012, the 49 countries had a total population of 822 million. The EU population as of January 1, 2013, was

505.7 million, which was about 60% larger than that of the United States. The total gross domestic product (GDP) based on purchasing power parity of the 49 countries in the region was about $20.6 trillion, and the weighted average per capita GDP was $25,000; the per capita GDP ranged from $2,219 in Tajikistan to $84,450 in Luxembourg (tables 1, 2).

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- Finland—Geological Survey of Finland;
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- Iceland—Statistics Iceland;
- Latvia—Central Statistical Bureau of Latvia;
- Lithuania—Statistics Lithuania;
- Moldova—National Bureau of Statistics of the Republic of Moldova;
- Montenegro—Statistical Office of the Republic of Montenegro;
- Poland—Central Statistical Office;
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- Ukraine—State Statistics Committee.

General Economic Conditions

Growth in the Europe and Central Eurasia region decelerated considerably in 2012 after relatively strong growth in 2011. All economies in the region had to deal with challenging external conditions, including the euro area's recession and debt problems, volatile global financial markets, and a slowing global economy. Although the economy of the region as a whole had average growth of 1.1%, the economies of a number of countries in the region grew at a much faster rate in 2012, including that of Turkmenistan (which expanded by 11.0%), Uzbekistan (8.0%), Tajikistan (7.5%), Armenia (7.2%), Georgia (6.5%), Latvia (5.8%), and Kazakhstan (5.0%) (International Monetary Fund, 2013; World Bank, The, 2013).

Uranium production in the region of Europe and Central Eurasia accounted for 51.6% of the world's production of this mineral commodity (measured in U_3O_8 content); lignite coal, 49.9%; and titanium metal, 48.2%. The region's output of potash (K_2O equivalent) accounted for 43.7% of world production; secondary aluminum, 41.6%; refined palladium, 38.8%; nickel metal, 36.3%; refined platinum, 32.1%; ammonia (N content), 24.4%; secondary lead, 24.1%; and secondary copper, 23.5%. The region also produced 20.4% of the world's output of primary aluminum, 19.4% of the world's output of primary copper, and 18.3% of the world's output of crude steel. The region was practically self-sufficient in the production of construction materials and remained among the world's leading producers of natural gas (34.0% of world production). Russia accounted for 26.8% of total natural diamond (gemstone and industrial) production in the world (table 4). The region was a leading crude oil producer and had significant coal reserves.

The EU countries were substantial participants in the world mineral economy and occupied an important role mostly as processors and consumers of most major mineral commodities. In Central Eurasia, however, mining of several mineral commodities remained economically important and made significant contributions to the GDPs and export revenues of the countries that produced them. In 2012, Central Eurasia remained a major world supplier of mined and processed minerals, and the consumption of these commodities in the region had increased in the past few years. The countries of Central and Eastern Europe and the CIS produced mineral commodities mainly for export, and the output of mineral commodities in these countries was significantly influenced by economic conditions in the rest of the world. China and the EU were especially significant markets for mineral products from Central and Eastern Europe and the CIS. As economies began to show signs of recovering from the global economic crisis that began in 2008, consumption of mineral commodities increased and drove the recovery of production in the region.

In the CIS, Russia and Kazakhstan were the two leading producers of mineral commodities. In Russia, mining and quarrying contributed $179 billion (10.9%) to the total value added in the economy in 2012. Mineral products made up 71.4% of the total value of Russian exports, and crude oil alone contributed 34.4% to the total value of exports. Petroleum products, natural gas, and ferrous metals accounted for 19.7%, 11.8%, and 4.8%, respectively, of the total value of Russia's exports (Federal State Statistics Service of the Russian Federation, 2013a, b).

Russia, which accounted for about 80% of the territory of the CIS, was by far the largest country in the CIS in terms of both population and territory, and it was the leading mineral producer. Many other CIS countries also were significant producers and processors of minerals. In 2012, Russia ranked among the top world producers or was a significant regional producer of such

mineral commodities as aluminum, antimony, arsenic, asbestos, barite, bauxite, boron, cadmium, cement, coal, cobalt, copper, diamond, diatomite, fluorspar, gallium, gemstones, germanium, gold, graphite, gypsum, indium, iodine, iron ore, lead, lime, magnesium compounds and metals, mica (flake, scrap, and sheet), molybdenum, natural gas, nickel, nitrogen, palladium, peat, petroleum, phosphate rock, pig iron, platinum, potash, rhenium, selenium, silicon, steel, sulfur, tellurium, titanium sponge, tungsten, uranium, vanadium, and vermiculite.

In Kazakhstan, total industrial production was valued at $113 billion, of which $68.7 billion (60.8%) was from mining and $13.1 billion (12%) was from metallurgy (including $4.8 billion from ferrous metallurgy). Extraction of crude petroleum alone contributed $57.9 billion to the country's GDP. Overall, extractive industries contributed 34% to the country's GDP and metallurgy contributed another 6.4% to the GDP. Kazakhstan was a leading producer of uranium (37% of the world's production), the second-ranked producer of chromium (16%), the fourth-ranked producer of titanium sponge (11%) and magnesium metal (3%), and the fifth-ranked producer of rhenium (6%). The country was also a significant producer of bauxite, cadmium, copper, gallium, and zinc (Agency of Statistics of the Republic of Kazakhstan, 2013).

Ukraine was a significant producer of such mineral products as ferroalloys, iron ore, manganese ore, pig iron, steel, and titanium raw materials. Other CIS countries were significant world or regional producers of one or more mineral commodities, including Armenia (molybdenum), Azerbaijan (petroleum), Belarus (potash), Kyrgyzstan (antimony metal and mercury metal), Tajikistan (antimony ore), Turkmenistan (natural gas), and Uzbekistan (gold and uranium). All the CIS countries produced a number of other mineral commodities.

The EU was mostly dependent on imported mineral raw materials for metals, industrial minerals, and fuel minerals. The import dependence for many metal ores was 100% [including for antimony, cobalt, ilmenite, molybdenum, niobium, platinum-group metals (PGMs), rare-earth metals, rutile, tantalum, and vanadium], and the EU was from 70% to 90% import dependent for most other metallic ores. The EU's dependence on imports of metallic mineral raw materials (such as concentrates, ores, and scrap) and obtaining sources of energy for its metal refining and processing industries were key concerns for the EU's mineral industry (European Commission, 2008).

As a major world mineral processing and consuming area, the EU remained a significant determinant of world demand for nearly all mineral commodities. Its mineral processing and manufacturing industries accounted for a significant share of the world production of semimanufactured and fabricated ferrous and nonferrous metals. In 2012, Germany was still the EU's dominant smelter and refiner of most metals. With a high per capita income and standard of living, the EU was one of the world's major consumers of mineral fuels and of mineral products in consumer goods.

Legislation

In September, the President of Kyrgyzstan signed into law a new mining code that was adopted by the country's Parliament in June. The new code is intended to improve the investment climate in the country and it sets fees that mining companies are obligated to pay to the central and local governments for their use of the country's natural resources. The main principles of the new code are protection of investment as a form of private property, noninvolvement of local and national authorities in management decisions of private enterprises, and provision of exclusive rights for the transition of licenses from exploration to mining. The new code also describes how mining contributes to socioeconomic development of localities, outlines the "social packet" to be included in the application for exploration and mining licenses, and establishes renewal fees for extending licenses (Knews.kg, 2012).

In July, Romania's Zeta Petroleum plc announced that a new energy and gas law (law No.123/2012) had been published in the Romanian official Gazette No. 485, dated July 16, 2012. The main objective of this law is to put into Romanian law the provisions of the European Commission's third energy package concerning rules for the internal market in natural gas. The new law provides a calendar for the elimination of regulated prices for end users. These regulated prices ended on December 1, 2012, for nonresidential customers and was to end on July 1, 2013, for residential customers (Zeta Petroleum plc, 2012).

Several changes in the law focused on the provisions concerning exploration. In Greenland, legislation setting the framework for foreign exploration and mining in the country was passed and became law in 2012. The new law defines what is to be classified as a large-scale project and regulates the minimum salary levels for foreign workers (Creamer Media's Mining Weekly, 2012). According to Statistics Greenland, the number of exploration licenses granted in Greenland had increased to 75 in 2011 from 33 in 2005 (North of 60 Mining News, 2012).

A new tax law was ratified in Poland in 2012 that would tax copper and silver based on the mass of the extracted commodity and would be evaluated monthly. The maximum tax rate for the extraction of copper was 16,000 Polish zlotys (PLN), or US$5,000 per metric ton, and the maximum tax rate for the extraction of silver was PLN2,100 (US$660) per kilogram (U.S. Library of Congress, 2012).

In 2012, new export duties were imposed in Kazakhstan and Russia (Deloitte Development LLC, 2012). According to the March 2013 Fraser Institute survey, the top 10 destinations for mineral exploration based on favorable Government mineral policies in 2012 included Finland, Ireland, Norway, and Sweden. Finland, Greenland, and Sweden were included in the Fraser Institute 2012 survey of the top 10 destinations for mineral exploration based on their prospecting potential (assuming the regulations and land use restrictions that were in place in 2012) (Wilson, McMahon, and Cervantes, 2013).

Exploration

Information on exploration activities for Europe and Central Eurasia based on data provided by USGS compilations and economic data reported in U.S. nominal dollars by the SNL Metals Economics Group (SNL-MEG) has been included in a grouping of data for projects in mainland Asia, the CIS,

Europe, and the Middle East. As reported by SNL-MEG, the mineral exploration budget for this composite region increased by about 28% to about $3.1 billion in 2012 from the $2.4 billion in 2011. The exploration budget for Russia was reported to have increased to about $610 million in 2012 from about $337 million in 2011, and to account for about 3 percent of the world's exploration budget in 2012. These figures for exploration activity in Russia do not include activity conducted by Government-controlled entities (SNL Metals Economics Group, 2012).

In terms of the number of exploration sites, the greatest amount of exploration in Europe and Central Eurasia took place primarily in Kazakhstan, Russia, and Scandinavia (particularly Finland and Sweden). On the basis of exploration site data compiled by the USGS, Russia accounted for about 24% of the sites actively being explored in this regional grouping in 2012, Sweden accounted for about 9%, Finland accounted for about 8%, and Greenland and Kazakhstan each accounted for about 7%. The remaining 45% took place in 22 other countries located in the CIS and the EU. Exploration activity in the CIS focused primarily on gold (65%), copper (12%), iron and silver (6% each), potash (4%), rare earths (3%), and other minerals (4%). European mineral exploration focused primarily on gold (38%), nonferrous base metals (32%), iron ore (6%), rare-earth elements (4%), and uranium (3%); the remaining 17% of the exploration activity focused on 11 other mineral commodities.

Commodity Overview

This report includes mineral commodity outlook tables. In tables 5 through 20, estimates for the production of major mineral commodities for 2015 and beyond have been based upon supply-side assumptions, such as announced plans for increased production/new capacity construction and bankable feasibility studies. The outlook tables in this summary chapter show historic and projected production trends; therefore, no indication is made about whether the data are estimated or reported, and revisions are not identified. Data on individual mineral commodities in the tables in the individual country chapters are labeled to indicate estimates and revisions. The outlook segments of the mineral commodity tables are based on projected trends that could affect current (2012) producing facilities and on planned new facilities that operating companies, consortia, or Governments have projected to come online within the indicated timeframes. Forward-looking information, which includes estimates of future production, exploration and mine development, cost of capital projects, and timing of the start of operations, is subject to a variety of risks and uncertainties that could cause actual events or results to differ significantly from expected outcomes. Projects listed in the following section are presented as an indication of industry plans and are not a USGS prediction of what will take place.

Metals

Bauxite and Alumina and Aluminum.—In 2012, Russia and Kazakhstan produced the majority of bauxite output in the region, accounting for 5.7 million metric tons (Mt) and 5.2 Mt, respectively. By 2019, bauxite production was likely to increase slightly in both Russia and Kazakhstan to projected output levels of 6.0 million metric tons per year (Mt/yr) and 5.5 Mt/yr, respectively. In 2012, Russia was the leading source of alumina in Europe and Central Eurasia with annual production of 2.7 Mt. Ireland ranked second with 1.9 Mt and was followed by Kazakhstan and Spain (1.5 Mt each), and Ukraine (1.4 Mt) (tables 4, 5).

In 2012, Russia, which was the leading individual producer of primary and secondary aluminum in Europe and Central Eurasia, produced 3.9 Mt. The next-ranked producers in the region were Norway (2.05 Mt), Italy (1.11 Mt), and Germany (1.05 Mt). The projected output of primary and secondary aluminum in Russia was expected to remain unchanged through 2019. Production capacity was expected to be increased in Italy to 1.4 Mt/yr by 2019, but it was not expected to change significantly in Germany and Norway (tables 4, 6).

United Company RUSAL (RUSAL) of Russia was the world's leading producer of aluminum. RUSAL operated 14 smelters in Russia and Europe (12 in Russia, 1 in Ukraine, and 1 in Sweden). In 2012, RUSAL produced 12.37 Mt of bauxite, 7.48 Mt of alumina, and 4.17 Mt of aluminum at its facilities worldwide. Because of low aluminum prices in 2012, RUSAL was involved in cost-cutting activities and was devising a plan to divert aluminum production to its Eastern Division (where energy prices were lower) from its Western Division (where energy was more expensive). Instead, the plants in the Western Division were to focus on production of aluminum ferroalloys and flat ingots, which were much less energy-intensive to produce.

Cobalt.—The Europe and Central Eurasia region produced 26.2% of the world's total production of refined cobalt in 2012. According to the Cobalt Development Institute, Finland produced 10,547 metric tons (t) and was the second-ranked producer of refined cobalt in the world after China. The only producer in Finland was the OM Group of the United States. Umicore N.V. of Belgium (4,200 t) was the world's fourth-ranked producer and Xstrata of Switzerland at its operations in Norway (2,969 t) was the world's sixth-ranked producer. Other cobalt producers in the region were OAO GMK Norilsk Nickel (Nornickel) in Russia, which produced 2,186 t, and Eramet S.A. of France, which produced 326 t (table 7; Cobalt Development Institute, 2013, p. 3).

Copper.—In 2012, Russia was the region's leading producer of both mined copper and refined copper. Russia's mine production of copper was projected to increase to 1,000,000 metric tons per year (t/yr) by 2019 from 883,000 t in 2012. Other leading producers of mined copper in the region in 2012 were Poland (479,000 t), Kazakhstan (419,000 t), Bulgaria (108,000 t), and Uzbekistan (96,000 t). Russia's production of refined copper was 875,000 in 2012 and was projected to stay at about the same level through 2019. Other leading producers of refined copper in the region in 2012 were Germany (686,000 t), Poland (566,000 t), Belgium (380,000 t), and Kazakhstan (367,000 t). Production in Kazakhstan was projected to increase to 410,000 t/yr by 2019, and production in Belgium, Germany, and Poland was expected to remain at about the same level (tables 8, 9).

Russia had three leading vertically integrated copper producing companies— Nornickel, OAO Ural'skaya

Gorno-Metallurgicheskaya Kompaniya (UGMK), and ZAO Russkaya Mednaya Kompaniya (RMK). In 2012, RMK was building two new mines in Chelyabinskaya Oblast' in the South Urals and expected to commission them in late 2013 and 2014. When at full capacity, the two new mines were expected to produce 44 Mt/yr of copper ore. Metalloinvest Holding and State Corporation Gostechnologii continued to build a mine at the Udokan deposit in Zabaikal'skiy Kray. The mine was expected to start producing in 2014 and to reach projected capacity of 36 Mt/yr of copper ore by 2016.

Kazakhmys plc was the dominant producer of copper ore and metals in Kazakhstan. The company produced 306,100 t of copper contained in concentrate and 294,400 t of refined copper cathodes, which accounted for about 73% of the copper in concentrate and 89% of the refined copper produced in Kazakhstan in 2011, respectively. The average copper grade of crude ore produced by Kazakhmys decreased to 1.01% from 1.09% in 2010, resulting in a 6% decrease in the copper content of ore production despite a 1.5% increase in crude ore production. Ore grades were expected to continue to decrease, but Kazakhmys planned to partially offset this decrease by increasing crude ore production volumes. New mines at the Aktogai and the Bozshakol deposits were expected to open in 2015 and to produce, together, about 200,000 t/yr of copper in concentrate during the first 10 years of the life of the mines (Kazakhmys plc, 2013).

KGHM Polska Miedz S.A. was the only producer of mined copper and primary copper metal in Poland. In 2012, KGHM produced about 427,000 t of copper in concentrate and 566,000 t of electrolytically refined copper. The average copper content at the company's mines had been decreasing in recent years and was 1.59% in 2012. KGHM tried to maintain refined copper production by increasing the amounts of mined ore and by using increasing amounts of purchased copper scrap and imported copper concentrates.

Uzbekistan produced an estimated 96,000 t of refined copper in 2012. The only copper producer in Uzbekistan was the Almalyk mining and metallurgical complex (Almalyk GMK), which was located in Toshkent Voliyati. The company had mining, beneficiation, and metallurgical facilities. Copper ore was mined from the Kalmakyr and the Sary-Cheku deposits; a new deposit, Dal'nee, which is similar in ore structure to Kalmakyr, was to serve as a replacement as the first two deposits become depleted. In 2012, Almalyk completed reconstruction and expansion of the Kalmakyr Mine, which was expected to increase the mine capacity to 31.5 Mt/yr of ore. The Almalyk GMK was also planning to start developing the Dal'nee deposit in 2014.

Gold.—In 2012, Europe and Central Eurasia accounted for about 15% of world gold production; the majority of gold produced in the region came from Central Eurasia. The principal producers, by volume, were Russia, which produced about 217,800 kilograms (kg) of primary gold, followed by Uzbekistan (93,000 kg), Kazakhstan (about 39,900 kg), Finland (about 10,800 kg), and Kyrgyzstan (about 10,300 kg). Russia's production of gold is projected to increase to 240,000 kilograms per year (kg/yr) by 2019, and that of Uzbekistan and Kazakhstan is projected to increase to 110,000 kg/yr and 54,000 kg/yr, respectively. Russia, Uzbekistan, and Kazakhstan are projected to remain the principal producers of gold in the Europe and Central Eurasia region for the foreseeable future (table 10).

In 2012, Russia produced a total 226.3 t of gold, which included 217.8 t of primary mine production. The primary mine production in 2012 constituted a 9.1% increase compared with the output in 2011. As of 2012, Russia had 26 large gold mining companies which together produced about 80% of all the gold produced in the country, and the rest of gold was mined by about 400 smaller scale producers. In 2012, the leading gold-producing regions in Russia were Krasnoyarskiy Kray (44.0 t), Amurskaya Oblast' (29.3 t), Sakha Republic (Yakutiya) (21.2 t), Magadanskaya Oblast' (19.7 t), Irkutskaya Oblast' (19.0 t), and Chukotskiy Avtonomnyy Okrug (18.0 t). The leading producers of gold in 2012 were OAO Polyus Zoloto (48.8 t), Petropavlovsk plc (22.1 t), OAO Polymetall (15.2 t), and Kinross Gold Corp. (14.5 t). By the end of 2013, two new mining and beneficiation plants in Magadanskaya Oblast'—one at the Natalkinskoe deposit and one at the Pavlik deposit—were expected to become operational. The combined gold production of the two plants at full capacity was projected to reach 55 t/yr.

In 2012, Uzbekistan produced an estimated 96 t of gold. The main gold producer in Uzbekistan was the Navoi mining and metallurgical complex (Navoi GMK), which was responsible for more than 80% of Uzbekistan's gold production. The resources of the Navoi GMK included 13 deposits that made up about 85% of all gold resources of Uzbekistan. The largest deposit, Muruntau (located in the central Qizilqum region), contains gold quartz ores and was mined by an open pit method. The Navoi GMK included four metallurgical plants in Navoiy, Uchkuduk, Zarafzhan, and Zarmitan. In 2012, the Navoi GMK was planning to complete construction of a new gold mining complex that would use bioleaching technology and produce 20 t/yr of gold when it reaches its full capacity. Other renovation and expansion projects at the Navoi GMK in 2012 included modernization of heap-leaching facilities at the Muruntau Mine and a series of improvements at the Zarmitan plant. Other gold producers in Uzbekistan included the Almalyk GMK and Amantaytau Goldfields, which was a joint venture of the Uzbekistan's State Committee for Geology, the Navoi GMK, and Oxus Gold plc. of the United Kingdom. In 2012, the Almalyk GMK started construction of three new mines—the Samarchuk Mine, the Kairagach Mine, and the Uzun Mine, all located in Toshkent Viloyati.

The leading producers of gold in Kazakhstan were Kazzinc JSC and Kazakhmys plc, which accounted for 17,400 kg and about 4,000 kg, respectively, or 43.6% and 10%, respectively, of Kazakhstan's total gold production in 2012. Kazakhmys' substantial Bozshakol copper development project was reported to contain gold and could be a significant new source of production.

In 2012, Kyrgyzstan produced 10,333 kg of gold, which was a 44.6% decrease compared with the 2011 production level. The largest of the operating mines was the Kumtor gold mine, which is located about 350 kilometers (km) southeast of Bishkek. The Kumtor Mine was operated by Centerra Gold Inc. of Canada. In 2012, Centerra produced only 9.8 t of gold content compared with 18.1 t in 2011. The reason for the sharp reduction in output

was an unexpected movement of ice from a glacier into the mine's open pit. Centerra expected production in 2013 to return to the level of about 18,000 kg/yr. In 2012, the Kumtor Mine contributed 5.5% to the GDP of Kyrgyzstan and 18.9% to the total industrial production of the country.

Dragon Mining Ltd. of Australia and Elgin Mining Inc. of Canada, which merged with Gold-Ore Resources Ltd. in May, had gold mines located in the Skelleftea mining district of Sweden. This district had been the focus of exploration for gold-rich polymetallic deposits since the mid-1920s. Dragon Mining's Svartliden Mine is located 700 km north of Stockholm, and Elgin's Bjorkdal Mine is located 750 km north of Stockholm. An updated measured and indicated mineral resource estimate for the Bjorkdal Mine's open pit and underground mine of 30,295 kg of gold was released in February (Elgin Mining, 2012; Gold-Ore Resources Ltd., 2012; Dragon Mining Ltd., 2013).

Boliden is the other main producer of gold in Sweden. Its polymetallic mines have an estimated capacity of about 2,000 kg/yr of gold. Its major operations were the Aitik Mine, which was principally a copper-producing mine, and the operations at the Boliden and Garpenberg sites (table 10; Boliden AB, 2013, p. 19).

In Romania, Gabriel Resources Ltd. reported proven reserves of 5.9 million troy ounces (180 t) of gold and 32.6 million troy ounces (1,010 t) of silver, and probable reserves of 4.2 million troy ounces (130 t) of gold and 15 million troy ounces (470 t) of silver at its Rosia Montana project. The company estimated that the project could produce an average of 511,000 troy ounces per year of gold during a 16-year mine life and could make Romania a significant European gold producer. The company also reported that 62.45% of the people consulted in a referendum vote were in favor of resuming the mining operations at the Rosia Montana project. The referendum had been initiated by 35 local mayors and conducted on December 9, 2012. The referendum was advisory in nature and did not have the power to enforce or bind the Government to any particular action (Gabriel Resources Ltd., 2012a, b).

Carpathian Gold Inc. of Canada (a junior mine developer) reported that it would account for about 7.2 million troy ounces (220 t) of gold and 635,000 t of copper in contained metal in its final prefeasibility study of the Rovina Valley project. Rovina's measured and indicated resources were estimated to be 406 Mt at grades of 0.55 gram per metric ton gold and 0.16% copper. Carpathian stated that, compared to a 2008 resource estimate, the copper grade decreased by 11%, and the gold grade, by 12% (Keen, 2012).

Iron and Steel.—Europe and Central Eurasia produced about 18.3% of the world's crude steel output, which was a slight decrease compared with that of 2011, and it produced 15.8% of the pig iron and direct-reduced iron output in 2012, which was a slightly higher share of the world production than in 2011. Russia was the leading producer of crude steel in the region; its output in 2012 was 70.4 Mt, which was a 3.4% increase compared with that of 2011. Germany was the second-ranked producer, by volume, with production of 42.7 Mt (a decrease of 3.6%) followed by Ukraine, 32.4 Mt (a decrease of 8.2%), and Italy, 27.3 Mt (a decrease of 22.3%).

Russia's production capacity was projected to increase to 74 Mt/yr by 2019. The production volume in Ukraine was expected to increase to 34 Mt/yr by 2019, and in Italy, to 32 Mt/yr. Germany's production was projected to decrease to 43 Mt/yr by 2019 (tables 4, 12).

According to the World Steel Association, in 2012, Ukraine was the third-ranked net exporter of steel in the world; it exported about 22.3 Mt of steel, which was about 69% of the country's total steel production. Ukraine was the 10th-ranked producer of steel, by volume, in the world. Metinvest Holding was the leading producer of crude steel in Ukraine and accounted for 41% of production. The iron and steel industry in Ukraine had the advantage of large domestic sources of iron ore, but it was dependent on export markets for product sales, and it operated inefficiently owing to a need for technical modernization.

Russia was the world's fifth-ranked producer of steel and the fourth-ranked net exporter; it exported 19.8 Mt in 2012, which was 28.1% of its total production. Germany was the 7th-ranked producer of steel in the world and the 11th-ranked net exporter in the world; it exported 3.1 Mt, or 7.2% of its total production. Italy was the 11th-ranked crude steel producer in the world in 2012, and it was the 8th-ranked net exporter; it exported 4.3 Mt, or 15.6% of its total production. Russia's apparent consumption of steel in 2012 increased by 2.2% to 41.8 Mt, and that of Italy, Ukraine, and Germany decreased by 18.1%, 9%, and 7.6%, respectively (World Steel Association, 2014).

Russia produced 52.9 Mt of pig iron in 2012, which was 29.2% of the total produced in Europe and Central Eurasia and 4.6% of the total world production. Germany produced 28.3 Mt, which was 15.6% of the total produced in Europe and Central Eurasia and 2.4% of total world production, and Ukraine produced 28.9 Mt, which was 16% of the total produced in Europe and Central Eurasia and 2.43% of total world production (World Steel Association, 2014).

Iron Ore.—Europe and Central Eurasia produced 10.3% of the world's iron ore in 2012; Russia produced 61.4 Mt (measured in Fe content); Ukraine produced 45.1 Mt; Sweden, 17.2 Mt; and Kazakhstan, 14.3 Mt. Russia's production was expected to increase to 64 Mt/yr by 2019; Ukraine's, to 46 Mt/yr; Sweden's, to 18,000 Mt/yr; and Kazakhstan's, to 14.7 Mt/yr (table 11).

Sweden's LKAB's Kiruna Mine was the world's largest underground iron ore mine in terms of volume; it has an ore body that is 4 km long and 80 meters wide and reaches to a depth of about 2 km. LKAB announced that it had been granted an environmental permit for a new open pit mine located at Gruvberget. This would be LKAB's first new iron ore mine in 50 years. Production at the new Gruvberget Mine was expected to be 2 Mt/yr. The ore body contains both hematite and magnetite (table 11; Luossavaara-Kiirunavaara AB, 2012a, b).

Lead and Zinc.—Europe and Central Eurasia produced about 10.2% of the world's production of mine output of zinc and about 21.8% of the world's zinc metal output in 2012. Kazakhstan and Ireland were the leading producers of zinc ore (zinc content) and produced 369,700 t and 337,500 t, respectively. Other significant zinc ore (zinc content) producers were Sweden (188,300 t); Russia (179,800 t); and Poland (89,000 t).

The principal producers of primary and secondary zinc in Europe and Central Eurasia in 2012 were Spain, which produced 490,000 t; Kazakhstan, 319,000 t; Finland, 314,742 t; Belgium, 290,000 t; Russia, 260,000 t; and the Netherlands, 257,000 t (table 4).

Europe and Central Eurasia produced about 7.2% of the world's production of mine output of lead and about 12.4% of primary lead metal production. Russia, Sweden, and Poland were the principal producers of mined lead, accounting for 93,000 t, 64,000 t and 58,000 t, respectively. Other producers of note were Ireland (47,000 t) and Kazakhstan (38,000 t). The United Kingdom was the principal producer of primary lead metal in the Europe and Central Eurasia region with an estimated production volume of 157,000 t, followed by Germany (134,000 t), Kazakhstan (88,000 t), Russia (85,000 t), and Sweden (62,000 t) (table 4).

Boliden Tara Mine's operation in Navan, Co. Meath, Ireland, which was the leading zinc mine in Europe, produced about 170,000 t of zinc and about 35,000 t of lead in 2012. Since the mine began its operations in 1977, production had totaled 80.7 Mt grading an average of 8.2% zinc and 1.9% lead. The mine's Joint Ore Reserves Committee (JORC)-classified ore reserves (proven and probable) were 14 Mt grading 7.2% zinc and 1.7% lead. The mine employed 718 people in 2012 (Boliden AB, 2013, p. 89, 117; Department of Communications, Energy and Natural Resources, 2013, p. 1). Galmoy Mines Ltd. (a subsidiary of Lundin Mining Corp. of Canada) ceased its underground mining operations at its mine in Galmoy in October 2012. The total mine production for 2012 amounted to 142,000 t of ore grading 14% zinc and 2.4% lead. The ore was processed at the Lisheen Mine operations located in Co. Kilkenny (Department of Communications, Energy and Natural Resources, 2013, p. 1; Lundin Mining Corp., 2013). Vedanta Resources Plc. (the owner of the Lisheen Mine) reported that it had produced 1.4 Mt of ore grading 11% zinc and 1.95% lead. The company also produced 321,000 t of zinc concentrates containing 53.3% zinc and 41,000 t of lead concentrates containing 60.3% lead. Since mining operations were started at Lisheen in 1999, a total of 19.72 Mt of ore grading an average of 11.8% zinc and 2% lead had been mined (Department of Communications, Energy and Natural Resources, 2013, p. 1).

In September 2011, Poland's Ministry of the Treasury had posted an invitation for bids for the purchase of shares of Zaklady Gorniczo-Hutnicze (ZGH) "Boleslaw" S.A. (ZGH Boleslaw), which was Poland's only producer of lead and zinc ore and the country's leading producer of refined zinc. The plant is located in the Bukowno region of Poland and had an estimated capacity of about 110,000 t/yr of zinc and 30,000 t/yr of lead. ArcelorMittal held 33.77% share of Stalprodukt S.A., and in November, Stalprodukt acquired an 86.92% share of ZGH Boleslaw (Ministry of the Treasury of the Republic of Poland, 2011; Thomson Reuters, 2012; Stalprodukt S.A., 2013a, p.14, 2013b).

In 2012, Russia had two large zinc deposits (the Kholodninskoe and the Ozyornoe), which are located in the Republic of Buryatiya. In Russia, more than 60% of the zinc produced was used for the production of galvanized steel, mainly for the automobile and construction industries.

Nickel.—In 2012, Europe and Central Eurasia accounted for 10.8% of the world's mined nickel and 36.3% of the world's refined nickel production. Production of the region's mine output of nickel was largely the result of Russian mining activity, and refined nickel production took place mainly in Russia and Western Europe. Russia accounted for about 70.2% of nickel mine output and 52.0% of nickel refinery production in the region in 2012. Other countries, most notably Finland and Greece, also mined nickel ore, but in smaller amounts. Production of refined nickel was more diversified across countries. Russia produced 258,000 t in 2012, and Norway, the United Kingdom, and Finland produced 92,000 t, 46,000 t, and 34,000 t, respectively (tables 4, 13).

Russia was one of the world's leading nickel mining countries in 2012, accounting for about 8% of the world's mined nickel. Nornickel was Russia's leading nickel producer and the world's leading nickel mining company; the company produced 8.9% of the world's mined nickel from its worldwide operations. Nornickel's operations in Russia were located on the Kola Peninsula in the northwest of the country and in the Norilsk region on the Taymyr Peninsula in East Siberia. Nornickel also owned assets in other countries; in particular, mines in Australia and Botswana and the Harjavalta smelter in Finland. In 2012, because of low prices on the world market, the company was considering reducing its investments and even halting the processing of ores mined on the Kola Peninsula by 2015, if the nickel prices remained low.

Finland's Talvivaara nickel mine was the largest nickel mine in Europe; it operated at two polymetallic deposits—the Kolmisoppi and the Kuusilampi—which are located about 30 km from Sotkamo. Based on estimated proven reserves, the deposit could produce about 2.5% of the world's nickel during its projected 24-year operating life. Talvivaara's bioheap-leach project was planned to produce nickel from an open pit operation with cobalt, copper, and zinc as byproducts. In 2012, Talvivaara reported production of 12,916 t of nickel, which was a 20% decrease compared with output in 2011 and much lower than the capacity of between 25,000 t/yr and 30,000 t/yr that was expected to be reached in 2012 (Mining Technology, 2008; Talvivaara Mining Co., 2012, p. 8).

Platinum-Group Metals.—Within the region of Europe and Central Eurasia, almost all mining for platinum-group metals (PGMs) took place in Russia, although small amounts of PGMs were also mined in Finland, Poland, and Serbia. Russia and South Africa were the world's leading PGM ore producers; Russia was the world's leading producer of palladium, accounting for 82,400 kg, or 38.8% of the world's production. It also produced 30,200 kg of platinum (tables 4, 14, 15).

The leading PGM producer in Russia was Nornickel, whose Zapolyarnyi division was mining three large PGM deposits in Krasnoyarskiy Kray—the Norilsk-1, the Oktyabr'skoye, and the Talnakhskoye deposits. Another division within Nornickel, Kol'skaya GMK, was mining several deposits in Murmanskaya Oblast'—the Kotsel'vaara-Kammikivi, the Semiletka, the Zapolyarnoye, and the Zhdanovskoye deposits. Altogether, Nornickel produced almost all the palladium and about 75% of the platinum output in Russia. Another platinum producer in Russia, Chernogorskaya Gornorudnaya Kompaniya (ChGRK),

was planning to start mining the Chernogorskoye deposit of nonferrous and precious metals in 2013. The company was expected to reach its production capacity of about 15,000 t/yr of copper, 8,000 t/yr of nickel, 12.5 t/yr of palladium, and 6 t/yr of platinum by 2016.

Silver.—Europe and Central Eurasia produced about 4.6% of the world's production of mine output of silver in 2012. Russia was the principal silver producer, with an output of 1,679 t of silver content, which was about 40% of the total production of silver in Europe and Central Eurasia. Poland, which produced 1,149 t, was the second-ranked producer of silver, by volume, followed by Kazakhstan, which a produced 963 t. Other relevant producers were Sweden, which produced 309 t, and Finland, which produced 128 t (table 4).

Tin.—Europe and Central Eurasia produced only 0.1% of the total world production of mined tin and only 0.2% of the world production of tin metal, respectively. Russia and Portugal were the only producers of mined tin, and Russia was the only producer of tin metal in the region. Russia was at the lowest tin production point since 2010 and was trying to revive its tin industry. It was expected that, by 2019, mined tin production would increase to 3,000 t/yr from 100 t in 2012 and tin metal production would increase to 3,000 t/yr from 700 t in 2012. Data on tin mine and metal production and projections for future production are in tables 4, 16, and 17.

Titanium.—Europe and Central Eurasia produced about 4.2% of the world's production of ilmenite (which is an ore mineral of titanium) and about 48.2% of world titanium metal sponge output in 2012. Ukraine was the leading producer of ilmenite; it produced about 146,000 t of TiO_2 in 2012. Kazakhstan was a distant second, having produced 15,000 t of TiO_2. Russia was the leading producer of titanium sponge, with production of 42,000 t; Kazakhstan and Ukraine produced 21,000 t and an estimated 8,500 t, respectively (table 4).

The titanium industry in Ukraine consisted of ilmenite and rutile concentrate production, titanium sponge production at the Government-owned Zaporozhye Titanium & Magnesium Complex (ZTMK), and titanium ingot production by a small number of producers that had a combined capacity of 12,000 t/yr of titanium ingots. The dominant producers of ilmenite and rutile ores and concentrate were the Irshansk mining and beneficiation complex (GOK) and the Volnogorsk State Mining-Metals Complex. In addition, there was considerable activity in new projects involving production of mined titanium. Velta LLC began production of ilmenite from the Birzulovskoye deposit in Kirovograd Oblast' in December 2011 and was planning to open the second phase of mine production in the end of 2012. In January, the Government decided to privatize ZTMK, and, as of December, Tolexis Trading Ltd., which was part of the DF Group of Ukraine, had won the tender and acquired 49% of the shares of the titanium sponge producer.

The main producer of titanium sponge in Russia was OAO VSMPO-Avisma, which produced titanium sponge at its titanium and magnesium complex in Permskiy Kray. The raw material for the titanium production was imported, mostly from Ukraine. VSMPO-Avisma supplied titanium mill products to the world's leading aircraft manufacturers. In 2012, VSMPO-Avisma acquired 75% of the shares of Limpeza Ltd. of Cyprus (owner of the Demurinskiy GOK, which mined the Volchanskiy deposit containing alluvial titanium and zirconium in Ukraine). It was reported that VSMPO-Avisma was planning to build a beneficiation plant next to the Demurinskiy GOK.

Industrial Minerals

Cement.—Europe and Central Eurasia produced about 7.7% of the world's production of hydraulic cement. Russia was the largest producer, in terms of volume, at 61.7 Mt, followed by Germany (32.4 Mt), Italy (26.2 Mt), and Spain (20 Mt). According to Cembureau, production in the 27 country members of the European Union decreased, on average, by 20%. Production in Spain and Italy (the countries with the most significant reduction in output) decreased by 39.5% and 20.8%, respectively. In Italy, the decrease was owing mostly to a slowdown in construction, including a decrease in residential construction of 6.3% and a decrease in civil engineering projects and nonresidential construction of 19.7%. In Spain, the decrease in the construction sector continued a 4-year trend. In 2012, the estimated decrease was 34% compared with that of the previous year and included decreased production in all construction sectors. The value of civil engineering projects decreased by 56%; nonresidential construction, by 23%; and residential construction, by 21%. Because of Spain's economic conditions, the construction sector is highly unlikely to register any increases in production in the coming year, and production in the construction sector was also likely to decrease further. The production decreases were observed in all areas of the EU, including in Eastern Europe, where production in the Czech Republic decreased by 16%, and that in Poland, by 10% (table 4; Cembureau, 2013).

Diamond.—Russia was the world's leading diamond producer and the only significant diamond mining country in Europe and Central Eurasia. Almost all Russia's output of diamond was mined by the Joint Stock Company ALROSA (ALROSA) of Russia, which had its main operation in Sakha Republic (Yakutiya) in Eastern Siberia. ALROSA was one of the world's leading companies in the field of diamond exploration, diamond mining, sales of rough diamond, and diamond processing, and the company accounted for 97% of Russia's diamond production. Russia's share of global natural, gemstone, and industrial diamond production was 26.8% in 2012. Data on historic and projected diamond production are in table 18.

According to the Antwerp World Diamond Centre, the city of Antwerp was the center of the world's open rough diamond market. The city of Antwerp has 1,850 diamond companies and 4,500 diamond dealers, and about 10,000 people work in the industry in the city. In 2012, Belgium's exports of polished diamond decreased sharply—by 18.91% in terms of volume, and by 17.63% in terms of value, to $997,878,263. The average price per carat of exported diamond was $1,866 in December 2012 (Antwerp World Diamond Centre, 2013a, b).

Lithium.—Portugal was the only lithium producer in the region. In 2012, lithium production in Portugal decreased to 20,700 t from 40,110 t in 2010. It was expected that, by 2015, lithium production would return to its 2010 level, and, by 2019, would increase to about 44,000 t/yr (table 19).

Potash.—In 2012, Europe and Central Eurasia produced 15.4 Mt of potash (in K_2O equivalent), or 43.7% of the world's production. Russia was the leading regional potash producer in 2012, with output of 5.6 Mt; it was followed by Belarus (4.8 Mt) and Germany (3.8 Mt) (table 4). In 2012, world prices of potash decreased and led to sluggish sales as well as to a slowdown in expansions in the industry.

OAO Uralkali (Uralkali) of Russia was the world's second-ranked producer of potash. In 2012, Uralkali reduced its production of potash by 14.4% to 5.6 Mt in potassium dioxide equivalent. On average, only about 80% of the capacity of Uralkali's mines was used. After completing the expansion of the Berezniki-4 Mine, Uralkali increased its annual capacity to 13 Mt/yr of potassium chloride. In addition to Uralkali, several other potash projects were underway. OOO Verkhnekamskaya Potash Co. was preparing the Talitskiy sector of the Verkhnekamskoye potash deposit for production, which was expected to begin in 2016. OAO MHK Eurokhim was continuing to build a mine at the Gremyachinskoye deposit, which was to start producing potassium chloride in 2014.

OAO Belaruskali of Belarus was one of the world's leading producers of potash mineral fertilizers, and it had a 15% share of the world market. In 2012, the production of potash in Belarus decreased to about 4.8 Mt, or by 9.8%. In 2012, only 55.7% of the produced potash was exported compared with the 88.5% in 2011. Despite the slowdown, Belaruskali continued with expansion of its production facilities. In July, Belaruskali started operations in the Beryozovskiy section of the deposit and increased its annual capacity to 10.3 Mt/yr of potassium chloride. By 2015, the company was planning to increase its production capacity to 11 Mt/yr of potassium chloride.

Mineral Fuels and Related Materials

Coal.—In 2012, Europe and Central Eurasia accounted for 49.9% of the world's lignite production, 9.8% of the world's bituminous coal production, and 5.4% of the world's anthracite production. In Central Eurasia, Kazakhstan, Russia, and Ukraine were the leading coal producers, and within the EU, Germany and Poland were the leading coal producers. A number of other countries throughout the region also mined coal (tables 4, 20).

The dynamics of coal consumption and production among the EU member countries and the CIS countries demonstrates the different priorities of those countries. Countries in the CIS (for example, Kyrgyzstan, Tajikistan, and Ukraine) made concerted efforts to switch their energy-intensive enterprises to coal from natural gas, in part because natural gas is more costly and entails regular conflicts with Russia, which was the main supplier of the natural gas in the region. The EU countries, on the other hand, had been trying to reduce coal production and consumption during the previous decade. By 2012, however, this trend was reversed. Coal consumption in Europe was 707 Mt in 2010 and increased to 762 Mt in 2011 and 784 Mt in 2012. The reason for the shift was that recent developments in the shale gas industry have led to record low prices for natural gas in the United States and, at the same time, reduced the demand for American coal. The oversupply of coal on world markets, in turn, put downward pressure on coal prices in Europe. One more important factor is that the prices of carbon permits issued by the EU Emissions Trading Scheme (EU ETS) had also dropped and made the combined price (the sum of the price of coal and the price of a carbon permit) of using coal for electricity generation affordable. The drop of the EU ETS emissions prices came about because, during the Great Recession (the common term for the general economic decline observed in the world markets in the end of the first decade of the 21st century), production declined and the companies were able to accumulate significant amounts of emissiond permits that they did not need when the production was low. Many analysts think that the effect of the 2012 substitution from cleaner natural gas to dirtier coal is a random deviation from the general course toward greater use of renewable energy. They expect that, in the near future, coal consumption will continue to decrease compared with consumption of natural gas and renewable energy (Birnbaum, 2013).

Russia ranked sixth in the world in the total amount of coal mined following China, the United States, India, Indonesia, and Australia, and produced 366 Mt/yr. In 2011, the Russian Federation adopted a new program for development of the coal industry through 2030. The goal of the program was to increase Russia's coal production to 450 Mt/yr in 2030 from 334.8 Mt in 2011. The more detailed goals included an increase in the share of Eastern Siberia in coal production, a 100% increase in the production of coking coal, and a 150% increase in coal exports (tables 4, 20; U.S. Energy Information Administration, 2013).

Ukraine was among the world's leading coal mining countries. According to the BP Statistical Review of World Energy, proven resources of coal in Ukraine were 33,900 Mt, or about 4% of the world's reserves (BP p.l.c., 2013, p. 30). In 2012, Ukraine produced 85.7 Mt of coal, which was a 4.6% increase compared with production in 2011. The country was the fourth-ranked coal producer in Europe after Russia, Germany, and Poland. Despite the increases in production, about 80% of all coal mines in Ukraine operated at a loss. Ukrainian coal was unable to compete with the coal from Germany either on price or quality. In 2012, the Government mandated that heating plants in the country switch from natural gas, which was imported from Russia, to domestic coal as their energy source. Many residents and environmental activists were concerned that the switch could significantly worsen the environmental situation in the country.

Natural Gas.—In 2012, Europe and Central Eurasia contributed 34.0% of the world's production of natural gas. Russia was the leading producer in the region and the second-ranked producer in the world with 2012 production of 655 billion cubic meters; it was followed by Norway (106.7 billion cubic meters), the Netherlands (80.8 billion cubic meters), Turkmenistan (69 billion cubic meters), Uzbekistan (62.9 billion cubic meters), and the United Kingdom (an estimated 57 billion cubic meters). Russia was the world's second-ranked (after the United States) natural gas producer and the leading exporter; it had the world's largest natural gas reserves (47.6 trillion cubic meters), which was about 24% of the world's total natural gas reserves. Many countries in the Europe and Central Eurasia region produced natural gas, but generally not in large volumes. Norway, the Netherlands,

and the United Kingdom, in order of volume, were significant regional producers of natural gas in Europe; Turkmenistan and Uzbekistan were notable regional natural gas producers in the CIS (table 4; U.S. Energy Information Administration, 2012).

Almost 90% of Russia's natural gas was produced in the Ndym-Pur-Taz (NPT) region in northern West Siberia (the region's name was derived from the names of three rivers that border it). The NPT region hosts three massive Russian gasfields (the Medvezh'ye, the Urengoy, and the Yamburg), which had been the country's main producers and had supplied about 70% of the country's gas production. These three fields were in decline, however, as reserves were being depleted. To keep up with the growth in the Russian economy and the country's long-term export commitments to Europe to increase gas output, Russia was expected to have to incur greater costs to develop fields further north and to the east in an even more difficult physical environment than in the NPT region. A main target for future development would be the Yamal Peninsula, where large reserves were discovered in several fields. The newly developed Zapolyarnoye field on the Yamal Peninsula was a major contributor to replacing decreasing production from large older fields where reserves were more than 50% depleted.

OAO Gazprom, which was Russia's leading gas producer, projected that between 2008 and 2030, Russia would increase natural gas output to between 885 billion and 940 billion cubic meters per year. Most of the increases in natural gas output were projected to come from independent gas companies in Russia, such as Itera, Northgaz, and Novatek, which, although blocked from the export market, had found a niche supplying the domestic market.

Petroleum.—In 2012, Europe and Central Eurasia produced 5.9 billion barrels (Gbbl), or 20.7% of total world production of petroleum. Russia was the leading oil producer in the region and a top exporting nation; in 2012, it produced 3.6 Gbbl of crude oil, or 61% of the total regional output. Other significant producers were Norway, which produced 694 million barrels (Mbbl); Kazakhstan (576 Mbbl); the United Kingdom (368 Mbbl), and Azerbaijan (321 Mbbl). Azerbaijan was engaged in major oil development projects offshore in the Caspian Sea, and Kazakhstan was engaged in major projects both onshore and offshore.

In May in the United Kingdom, Maersk Oil UK Ltd. (Maersk) signed an agreement with Noble Energy Inc. for the purchase of 30% of its interest in the Maersk-operated Dumbarton and Lochranza fields. Maersk reported that this agreement also included the control of the Global Producer III floating production, storage, and offloading installation in the United Kingdom's central North Sea. With this investment, Maersk would hold a 100% interest in the Dumbarton and the Lochranza fields. Maersk stated that it had paid Noble Energy $127 million for the assets. The Dumbarton and the Lochranza fields produced a combined output of about 20,000 barrels per day of oil equivalent in 2012(Maersk Oil Ltd., 2012).

According to the BP Statistical Review of World Energy, at the end of 2012, Russia's proven reserves of petroleum were 87,200 Mbbl (BP p.l.c., 2013, p. 6). For the coming decade, Russian oil production was projected to increase at an annual rate of between 1.5% and 2.5% owing in part to increased oil output from Sakhalin Island. This increase would be coupled with a slowdown in growth from the major mature oilfields in West Siberia, a number of which had passed peak production. New fields that were under development were expected to account for almost all Russia's increase in annual oil output in the next 5 years and would probably produce more than one-half of the country's oil in 2020.

In 2012, crude petroleum was produced in Russia by nine vertically integrated oil and gas companies, the largest four of which were LUKOIL Group, OAO NK Rosneft', OAO Surgutneftegaz, and TNK–BP Holding. The country had 28 large refineries and more than 200 small ones; the total refining capacity of the country was 290 Mt/yr of petroleum. More than 90% of the refining capacity belonged to the vertically integrated companies. Beginning in 2013, Russian law bans automotive gasoline for which the environmental requirements are below the Euro-3 standard.

Uranium.—In 2012, Central Eurasia accounted for 51.6% of the world's uranium production. Kazakhstan was the leading uranium producer in the world, and its production volume amounted to 24,648 t (U_3O_8 content). The next-ranked producers in the region were Russia (3,348 t); Uzbekistan (3,190 t); Kyrgyzstan (an estimated 2,150 t), and Ukraine (1,132 t). Uranium mining took place in several other countries in the region (the Czech Republic, Germany, and Romania), but in smaller quantities (table 4).

In 2012, Kazakhstan remained the leading producer of mined uranium, having produced 36.5% of the world's output. Kazakhstan had no nuclear powerplants, and all uranium production was exported. Within the past 9 years, Kazakhstan rapidly increased investment in its uranium industry, and the country's production of uranium oxide increased to 24,648 t in 2012 from 3,300 t in 2003. AO NAK Kazatomprom (the leading Government-owned producer) mined 11,900 t of uranium, or about 20% of the world's production. The leadership of Kazatomprom stated that the country could increase its uranium production to 30,000 t/yr within the next 3 years (World Nuclear Association, 2013).

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TABLE 1
EUROPE AND CENTRAL EURASIA: AREA AND POPULATION IN 2012

Country	Area[1] (square kilometers)	Estimated population[2] (thousands)
Albania	28,748	3,200
Armenia	29,743	3,000
Austria	83,871	8,400
Azerbaijan	86,600	9,300
Belarus	207,600	9,500
Belgium	30,528	11,100
Bosnia and Herzegovina	51,197	3,800
Bulgaria	110,879	7,300
Croatia	56,594	4,300
Cyprus	9,251	1,100
Czech Republic	78,867	10,500
Denmark, including Greenland	2,209,180	5,700
Estonia	45,228	1,300
Finland	338,145	5,400
France	551,500	65,700
Georgia	69,700	4,500
Germany	357,022	80,400
Greece	131,957	11,100
Hungary	93,028	9,900
Iceland	103,000	300
Ireland	70,273	4,600
Italy	301,340	59,500
Kazakhstan	2,724,900	16,800
Kosovo	10,887	1,800
Kyrgyzstan	199,951	5,600
Latvia	64,589	2,000
Lithuania	65,300	3,000
Luxembourg	2,586	500
Macedonia	25,713	2,100
Malta	316	400
Moldova	33,851	3,600
Montenegro	13,812	600
Netherlands	41,543	16,800
Norway	323,802	5,000
Poland	312,685	38,500
Portugal	92,090	10,500
Romania	238,391	20,100
Russia	17,098,242	143,500
Serbia	77,474	7,200
Slovakia	49,035	5,400
Slovenia	20,273	2,100
Spain	505,370	46,800
Sweden	450,295	9,500
Switzerland	41,277	8,000
Tajikistan	143,100	8,000
Turkmenistan	488,100	5,200
Ukraine	603,550	45,600
United Kingdom	243,610	63,600
Uzbekistan	447,400	29,800
Regional total	29,362,393	821,900
World total	510,072,000	7,046,368

[1]Source: U.S. Central Intelligence Agency, The World Factbook 2013.

[2]Source: The World Bank, 2013 World Development Indicators Database.

TABLE 2

EUROPE AND CENTRAL EURASIA: GROSS DOMESTIC PRODUCT[1, 2]

Country	Gross domestic product in 2012 based on purchasing power parity		Real gross domestic product growth rate (percentage)		
	Gross value (million dollars)	Per capita (dollars)	2010	2011	2012
Albania	26,110	8,159	3.5	2.0	1.3
Armenia	19,649	6,550	2.1	4.4	7.2
Austria	359,021	42,741	2.1	3.1	0.8
Azerbaijan	96,768	10,405	5.0	0.0	2.2
Belarus	146,745	15,447	7.6	5.3	1.5
Belgium	420,307	37,865	2.1	1.9	-0.2
Bosnia and Herzegovina	31,909	8,397	0.7	1.7	-0.7
Bulgaria	103,816	14,221	0.2	1.7	0.8
Croatia	78,400	18,233	-1.2	0.0	-0.2
Cyprus	23,613	21,466	1.0	0.5	-2.4
Czech Republic	286,952	27,329	2.3	1.7	-1.2
Denmark, including Greenland	210,147	36,868	1.7	1.1	-1.6
Estonia	29,088	22,375	3.1	7.6	3.2
Finland	197,476	36,570	3.6	2.9	-0.2
France	2,254,067	34,308	1.4	1.7	0.0
Georgia	26,670	5,927	6.4	6.7	6.5
Germany	3,197,069	39,765	3.6	3.1	0.9
Greece	276,879	24,944	-4.4	-6.7	-6.4
Hungary	195,630	19,761	1.2	1.7	-1.7
Iceland	12,831	42,770	-3.5	3.1	1.6
Ireland	192,223	41,788	-0.4	0.7	0.9
Italy	1,832,916	30,805	1.3	0.4	-2.4
Kazakhstan	231,787	13,797	7.3	7.5	5.0
Kosovo	13,369	7,427	4.0	5.0	2.1
Kyrgyzstan	13,279	2,371	-1.4	5.7	-0.9
Latvia	37,272	18,636	-0.3	5.5	5.8
Lithuania	65,014	21,671	1.3	5.9	3.6
Luxembourg	42,225	84,450	3.5	1.0	0.1
Macedonia	21,861	10,410	1.8	3.0	-0.3
Malta	11,260	28,150	3.1	2.1	0.8
Moldova	12,156	3,377	6.9	6.4	-0.8
Montenegro	7,340	12,233	1.1	2.5	0.0
Netherlands	706,955	42,081	1.6	1.3	-0.9
Norway	277,152	55,430	0.3	1.7	3.0
Poland	800,934	20,803	3.8	4.4	2.0
Portugal	246,523	23,478	1.3	-1.5	-3.1
Romania	273,411	13,603	-1.3	2.5	0.3
Russia	2,513,299	17,514	4.0	4.3	3.4
Serbia	78,721	10,933	1.0	1.8	-1.8
Slovakia	131,893	24,425	4.0	3.3	2.0
Slovenia	57,955	27,598	1.2	-0.2	-2.3
Spain	1,410,628	30,142	-0.1	0.7	-1.4
Sweden	392,956	41,364	5.7	4.0	1.2
Switzerland	363,421	45,428	2.7	1.9	1.0
Tajikistan	17,749	2,219	6.5	7.4	7.5
Turkmenistan	48,948	9,413	9.2	14.7	11.0
Ukraine	335,172	7,350	4.2	5.2	0.2
United Kingdom	2,336,295	36,734	1.4	0.7	0.2
Uzbekistan	104,694	3,513	8.5	8.3	8.0
Regional total	20,570,555	25,028 [3]	2.3 [3]	2.2 [3]	1.1 [3]
World total	83,193,418	12,154 [3]	5.1 [3]	3.9 [3]	3.2 [3]

[1]Source: International Monetary Fund, World Economic Outlook Database, April 2013.

[2]Gross domestic product (GDP) listed may differ from that reported in individual country chapters owing to differences in source or date of reporting.

[3]Weighted average.

TABLE 3
SELECTED SIGNIFICANT EXPLORATION ACTIVITIES IN EUROPE AND CENTRAL EURASIA IN 2012

Country	Type[1]	Site	Commodity[2]	Company	Resource notes[3,4]
Azerbaijan	P	Gedabek	Au, Cu, Ag	Anglo Asian Mining plc.	744,000 oz Au, 60,000 t Cu, 6.2 Moz Ag (R)
Portugal	P	Neves-Corvo	Cu, Zn, Pb, Ag	Lundin Mining Corp.	815,000 t Cu, 1.9 Mt Zn, 454 kt Pb, 82 Moz Ag (R)

[1]Exploration at producing (P) site.

[2]Abbreviations used in this table for commodities are as follows: Ag, silver; Au, gold; Cu, copper; Pb, lead; Zn, zinc.

[3]Abbreviations used in this table for units of measurement are as follows: oz, troy ounces; Moz, million troy ounces; Mt, million metric tons; t, metric tons.

[4]Based on 2012 data reported from various sources. R—proven + probable. Resource data not verified by the U.S. Geological Survey.

TABLE 4

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

	Metals								
	Aluminum				Antimony, mine output, metal content	Chromite, mine output, gross weight	Copper		
			Metal					Metal, refined	
Country	Alumina	Bauxite	Primary[3]	Secondary	(metric tons)		Mine output, metal content	Primary[3]	Secondary
Albania[e]	--	--	--	--	--	330	5	--	--
Armenia	--	--	--	--	--	--	41	--	--
Austria	--	--	--	373 [e]	--	--	--	--	114 [p]
Azerbaijan	15 [e]	--	55 [e]	--	--	--	1	--	--
Belarus	--	--	--	--	--	--	--	--	--
Belgium	--	--	--	NA	--	--	--	380 [e]	--
Bosnia and Herzegovina	202	800	126 [e]	--	--	--	--	--	--
Bulgaria	--	--	--	--	--	--	108 [e]	226	--
Croatia	--	--	--	--	--	--	--	--	--
Cyprus	--	--	--	--	--	--	--	4	--
Czech Republic	--	--	--	50 [e]	--	--	--	--	--
Denmark-Greenland	--	--	--	25 [e]	--	--	--	--	--
Estonia	--	--	--	--	--	--	--	--	--
Finland	--	--	--	20	--	(4)	NA	148 [e]	--
France	430 [e]	69	349	184	--	--	--	--	--
Georgia	--	--	--	--	--	--	7 [e]	--	--
Germany	967	--	410	635	--	--	--	390 [p]	296 [p]
Greece	784	1,816	165	--	--	1 [e]	--	--	--
Hungary	150 [e]	255	--	150	--	--	--	--	--
Iceland	--	--	803	--	--	--	--	--	--
Ireland	1,927	--	--	--	--	--	--	--	--
Italy	--	--	110	1,003	--	--	--	8 [e]	--
Kazakhstan	1,510	5,170	249	--	865	3,590	419	367	--
Kosovo	--	--	--	--	--	2	--	--	--
Kyrgyzstan	--	--	--	--	1,200 [e]	--	--	--	--
Latvia	--	--	--	--	--	--	--	--	--
Lithuania	--	--	--	--	--	--	--	--	--
Luxembourg	--	--	--	--	--	--	--	--	--
Macedonia	--	--	--	--	--	--	10 [e]	2	--
Malta	--	--	--	--	--	--	--	--	--
Moldova	--	--	--	--	--	--	--	--	--
Montenegro	--	--	90 [e]	--	--	--	--	--	--
Netherlands	--	--	110	--	--	--	--	--	--
Norway[e]	--	--	1,800	250	--	--	--	36	--
Poland	--	--	--	11 [e]	--	--	479	566	--
Portugal[p]	--	--	--	18 [e]	--	--	74	--	--

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

	Metals								
	Aluminum				Antimony, mine output, metal content	Chromite, mine output, gross weight	Copper		
			Metal				Mine output, metal content	Metal, refined	
Country	Alumina	Bauxite	Primary[3]	Secondary	(metric tons)			Primary[3]	Secondary
Romania	450	--	252	13	--	--	8 e	--	--
Russia	2,719	5,700	3,924	--	7,300 e	670 e	883 e	621	254
Serbia[e]	--	--	--	--	--	--	42	32	2
Slovakia	--	--	181	--	--	--	--	--	--
Slovenia[e]	--	--	40	15	--	--	--	--	--
Spain[e]	1,500	--	408	243	--	--	75	255 e	35 e
Sweden	--	--	129	30 e	--	--	82	179	40 e
Switzerland[e]	--	--	--	(4)	--	--	--	--	--
Tajikistan	--	--	273	--	4,700 e	--	--	--	--
Turkmenistan[e]	--	--	--	--	--	--	--	--	--
Ukraine	1,429	--	15	90 e	--	--	--	--	15 e
United Kingdom	--	--	60	300 e	--	--	--	--	--
Uzbekistan	--	--	--	NA	--	--	96	96	--
Total, Europe and Central Eurasia	12,100	13,800	9,550	3,410	14,100	4,590	2,280	3,320	711
Share of world total	12.7%	5.4%	20.4%	41.6%	7.6%	14.7%	13.6%	19.4%	23.5%
United States	4,390	NA	2,070	--	--	--	1,170	962	39
Share of world total	4.6%	NA	4.4%	--	--	--	7.0%	5.6%	1.3%
World total	95,000	256,000	46,800	8,200	185,000	31,200	16,800	17,100	3,030

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

Country	Metals—Continued								
		Iron and steel			Lead				
	Gold, mine output (kilograms)	Iron ore, mine output, metal content	Pig iron and direct-reduced iron	Steel, crude	Mine output, metal content	Metal, refined		Manganese ore, mine output, metal content	Mercury, mine output, metal content (metric tons)
						Primary[3]	Secondary		
Albania	--	--	--	500 e	--	--	--	--	--
Armenia	2,896	--	--	--	--	--	--	--	--
Austria	--	686 e	5,751	7,421	--	--	25	--	--
Azerbaijan	1,563	114 e	--	268	--	--	--	--	--
Belarus	--	--	--	2,869	--	--	--	--	--
Belgium	--	--	4,072	7,386	--	--	88	--	--
Bosnia and Herzegovina	--	872 e	750	700	4 e	--	3 e	--	--
Bulgaria[e]	5,200	--	--	632 [5]	12	68	--	11	--
Croatia	--	--	--	109 e	--	--	--	--	--
Cyprus[e]	--	--	--	--	--	--	--	--	--
Czech Republic	--	--	3,936	5,072	--	--	30 e	--	--
Denmark-Greenland	2,800 e	--	--	--	--	--	--	--	--
Estonia	--	--	--	--	--	--	8	--	--
Finland	10,814	--	12 e	3,759	--	--	--	--	--
France	--	--	9,532	15,609	--	--	75 e	--	--
Georgia[e]	2,300	--	--	--	NA	--	--	110	--
Germany	--	47	27,608	42,661	--	134 e	290 e	--	--
Greece[e]	--	550	--	2,000	18	--	10	--	--
Hungary	--	--	1,229	1,543	--	--	--	13 e	--
Iceland	--	--	--	--	--	--	--	--	--
Ireland	--	--	--	--	47	--	18 e	--	--
Italy	--	--	9,424	27,257	--	--	138	--	--
Kazakhstan	39,903	14,326	2,707	2,610	38	88	--	390 e	--
Kosovo	--	--	--	--	5	--	--	--	--
Kyrgyzstan	10,333	--	--	--	--	--	--	--	75
Latvia	--	--	--	800 e	--	--	--	--	--
Lithuania	--	--	--	--	--	--	--	--	--
Luxembourg	--	--	--	2,232	--	--	--	--	--
Macedonia	--	--	--	216	34	--	--	--	--
Malta	--	--	--	--	--	--	--	--	--
Moldova	--	--	--	317	--	--	--	--	--
Montenegro	--	--	--	45	--	--	--	--	--
Netherlands	--	--	5,909	6,867	--	--	17 e	--	--
Norway	--	3,421	--	600 e	--	--	--	--	--
Poland	916	--	3,944	8,539	58 e	19 e	121 e	--	--
Portugal[e, p]	--	10	100	1,400	--	--	3	--	--

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

	Metals—Continued								
		Iron and steel			Lead				
						Metal, refined			
Country	Gold, mine output (kilograms)	Iron ore, mine output, metal content	Pig iron and direct-reduced iron	Steel, crude	Mine output, metal content	Primary[3]	Secondary	Manganese ore, mine output, metal content	Mercury, mine output, metal content (metric tons)
Romania[e]	--	--	3,417 [5]	3,811 [5]	--	7 [5]	3	--	--
Russia[e]	217,800 [5]	61,400	55,700	70,400 [5]	93	85	--	33	50
Serbia	900	--	312	345	2 [e]	--	1 [e]	--	--
Slovakia	546	--	3,519	4,403	--	--	--	--	--
Slovenia	--	--	--	632	--	--	10 [e]	--	--
Spain[p]	3,600	--	3,570	15,600	--	--	125 [e]	--	--
Sweden	6,015	17,186	5,253	4,326	64	62 [e]	44 [e]	--	--
Switzerland	--	--	--	1,400 [e]	--	--	3	--	--
Tajikistan	2,401	--	--	--	1 [e]	--	--	--	32 [e]
Turkmenistan	--	--	--	--	--	--	--	--	--
Ukraine	--	45,100 [e]	28,514	32,394	--	--	14 [e]	396 [e]	--
United Kingdom	--	--	7,183	9,579	(4) [e]	157 [e]	155 [e]	--	--
Uzbekistan	93,000 [e]	--	--	736	--	--	--	--	--
Total, Europe and Central Eurasia	401,000	144,000	182,000	285,000	375	620	1,180	952	157
Share of world total	14.8%	10.3%	15.8%	18.3%	7.2%	12.4%	24.1%	6.1%	10.3%
United States	235,000	33,500	32,100	88,700	345	111	1,110	--	NA
Share of world total	8.7%	2.4%	2.8%	5.7%	6.6%	2.2%	22.7%	--	NA
World total	2,700,000	1,440,000	155,000	1,560,000	5,200	4,980	4,900	15,600	1,520

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

	Metals—Continued								
	Nickel		Platinum-group metals, refined, primary and secondary (kilograms)		Silver, mine output, metal content	Tin (metric tons)		Titanium (metric tons)	
Country	Mine output, metal content	Refinery products, metal content	Palladium	Platinum	(metric tons)	Mine output, metal content	Metal, primary[3]	Ilmenite, TiO_2 content	Metal sponge, metal content
Albania	3 [e]	--	--	--	--	--	--	--	--
Armenia	--	--	--	--	22	--	--	--	--
Austria	--	1 [e]	--	--	--	--	--	--	--
Azerbaijan	--	--	--	--	1	--	--	--	--
Belarus	--	--	--	--	--	--	--	--	--
Belgium[e]	--	--	--	--	--	--	--	--	--
Bosnia and Herzegovina	--	--	--	--	--	--	--	--	--
Bulgaria	--	--	--	--	55 [e]	--	--	--	--
Croatia	--	--	--	--	--	--	--	--	--
Cyprus[e]	--	--	--	--	--	--	--	--	--
Czech Republic	--	--	--	--	--	--	--	--	--
Denmark-Greenland[e]	--	--	--	--	--	--	--	--	--
Estonia	--	--	--	--	--	--	--	--	--
Finland	80 [e]	46	--	830 [e]	128	--	--	--	--
France	--	15	--	--	--	--	--	--	--
Georgia	--	--	--	--	1 [e]	--	--	--	--
Germany	--	--	26,114	16,670	--	--	--	--	--
Greece[e]	14	19 [5]	--	--	32	--	--	--	--
Hungary	--	--	--	--	--	--	--	--	--
Iceland	--	--	--	--	--	--	--	--	--
Ireland	--	--	--	--	6 [e]	--	--	--	--
Italy	--	--	--	--	--	--	--	--	--
Kazakhstan[e]	(4)	--	--	--	963 [5]	--	--	15,000	21,000
Kosovo	4	--	--	--	--	--	--	--	--
Kyrgyzstan	--	--	--	--	--	--	--	--	--
Latvia[e]	--	--	--	--	--	--	--	--	--
Lithuania	--	--	--	--	--	--	--	--	--
Luxembourg	--	--	--	--	--	--	--	--	--
Macedonia	--	19	--	--	--	--	--	--	--
Malta	--	--	--	--	--	--	--	--	--
Moldova	--	--	--	--	--	--	--	--	--
Montenegro	--	--	--	--	--	--	--	--	--
Netherlands[e]	--	--	--	--	--	--	--	--	--
Norway[e]	(4)	92 [5]	--	--	--	--	--	400	--
Poland[e]	--	--	15	25	1,149 [5]	--	--	--	--
Portugal[p]	--	--	--	--	27	42	--	--	--

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

	Metals—Continued								
	Nickel		Platinum-group metals, refined, primary and secondary (kilograms)		Silver,	Tin (metric tons)		Titanium (metric tons)	
Country	Mine output, metal content	Refinery products, metal content	Palladium	Platinum	mine output, metal content (metric tons)	Mine output, metal content	Metal, primary[3]	Ilmenite, TiO_2 content	Metal sponge, metal content
Romania	--	--	--	--	--	--	--	--	--
Russia	255	258	82,400	30,200	1,679	100 e	500 e	--	42,000
Serbia	--	--	22	3	5	--	--	--	--
Slovakia	--	--	--	--	(4)	--	--	--	--
Slovenia	--	--	--	--	--	--	--	--	--
Spain	6	--	--	--	4 e	--	--	--	--
Sweden	--	--	--	--	309	--	--	--	--
Switzerland	--	--	--	--	--	--	--	--	--
Tajikistan	--	--	--	--	2	--	--	--	--
Turkmenistan	--	--	--	--	--	--	--	--	--
Ukraine	--	12 e	--	--	--	--	--	145,640	8,500 e
United Kingdom	--	34	--	--	--	--	--	--	--
Uzbekistan	--	--	--	--	60 e	--	--	--	--
Total, Europe and Central Eurasia	363	496	109,000	47,700	4,440	142	500	161,000	71,500
Share of world total	10.8%	36.3%	38.8%	32.1%	4.6%	0.1%	0.2%	4.2%	48.2%
United States	--	--	12,400	3,700	1,060	--	--	167,000	--
Share of world total	--	--	4.4%	2.5%	1.1%	--	--	4.4%	--
World total	3,360	1,370	280,000	149,000	97,200	273,000	305,000	3,830,000	148,000

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

	Metals—Continued			Industrial minerals					
		Zinc (metric tons)							
Country	Tungsten, mine output, metal content (metric tons)	Mine output, metal content	Metal, primary and secondary	Ammonia, N content	Cement, hydraulic	Diamond, natural, gemstones and industrial (thousand carats)	Phosphate rock, P_2O_5 content	Potash, K_2O equivalent	Salt
Albania	--	--	--	--	2,000 e	--	--	--	NA
Armenia	--	10,700	--	--	438	--	--	--	38
Austria	625 e	--	--	400 e	4,455	--	--	--	1,064
Azerbaijan	--	--	--	--	1,966	--	--	--	5
Belarus	--	--	--	815	4,906	--	--	4,840	1,700 e
Belgium[e]	--	--	290,000	830	6,800	--	--	--	--
Bosnia and Herzegovina	--	7,000 e	--	--	846	--	--	--	862
Bulgaria	--	12,116	72,000	320 e	1,900 e	--	--	--	2,100
Croatia	--	--	--	350 e	1,244	--	--	--	18
Cyprus	--	--	--	--	1,080	--	--	--	--
Czech Republic	--	--	--	200 e	3,650 e	--	--	--	--
Denmark-Greenland	--	--	--	--	16 e	--	--	--	600 e
Estonia	--	--	--	--	450 e	--	--	--	--
Finland[e]	--	51,467 [5]	314,742 [5]	72	1,300	--	307	--	--
France	--	--	161,000	2,644	18,000	--	--	--	5,457
Georgia[e]	--	NA	--	150	870	--	--	--	29
Germany	--	--	169,000 e	2,823	32,432	--	--	3,767	14,445
Greece	--	41,824	--	130 e	11,000 e	--	--	--	192
Hungary	--	--	--	300 e	1,900 e	--	--	--	--
Iceland	--	--	--	--	146	--	--	--	NA
Ireland	--	337,500	--	--	2,200 e	--	--	--	--
Italy	--	--	97	2,365	26,200	--	--	--	3,098
Kazakhstan	--	369,700	319,900	--	7,800 e	--	350 e	--	464
Kosovo	--	3,800	--	--	600 e	--	--	--	--
Kyrgyzstan	--	--	--	--	900 e	--	--	--	1 e
Latvia	--	--	--	--	--	--	--	--	--
Lithuania	--	--	--	918	1,015	--	--	--	--
Luxembourg	--	--	--	--	1,217	--	--	--	--
Macedonia	--	28,000 e	--	--	683	--	--	--	--
Malta	--	--	--	--	--	--	--	--	6 e
Moldova	--	--	--	--	1,500 e	--	--	--	--
Montenegro	--	--	--	--	--	--	--	--	12 e
Netherlands[e]	--	--	257,000	NA	2,700	--	--	--	NA
Norway	--	--	152,647	320	1,700 e	--	--	--	--
Poland[e]	--	89,000	161,000	2,100	15,919 [5]	--	--	--	3,916 [5]
Portugal[p]	763	30,008	--	244 e	7,200 e	--	--	--	520

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

	Metals—Continued			Industrial minerals					
		Zinc (metric tons)							
Country	Tungsten, mine output, metal content (metric tons)	Mine output, metal content	Metal, primary and secondary	Ammonia, N content	Cement, hydraulic	Diamond, natural, gemstones and industrial (thousand carats)	Phosphate rock, P_2O_5 content	Potash, K_2O equivalent	Salt
Romania	--	--	300	115 [e]	8,082	--	--	--	2,240 [e]
Serbia	--	NA	--	130 [e]	1,831	--	--	--	17
Slovakia	--	--	--	486	2,915	--	--	--	--
Slovenia	--	--	--	--	1,200 [e]	--	--	--	6
Spain	--	--	490,000 [e]	--	20,000 [p]	--	--	436 [e]	4,385
Sweden	--	188,300	--	--	3,000 [e]	--	--	--	--
Switzerland	--	--	--	30 [e]	4,467	--	--	--	528
Tajikistan	--	--	--	--	232	--	--	--	28
Turkmenistan[e]	--	--	--	280	1,900	--	--	--	220
Ukraine	--	--	--	4,160 [e]	9,801	--	--	--	6,189
United Kingdom[e]	--	--	--	1,100	8,500 [r]	--	--	770	6,000
Uzbekistan[e]	--	--	61,100	1,300	6,800	--	187	(4) [5]	--
Total, Europe and Central Eurasia	4,410	1,350,000	2,710,000	32,900	295,000	34,900	5,340	15,400	56,000
Share of world total	6.0%	10.2%	21.8%	24.4%	7.7%	26.8%	8.2%	43.7%	20.7%
United States	--	738,000	261,000	8,730	74,900	--	8,590	900	37,200
Share of world total	--	5.6%	2.1%	6.5%	2.0%	--	13.2%	2.6%	13.8%
World total	73,800	13,300,000	12,400,000	135,000	3,810,000	130,000	65,200	35,200	270,000

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

Country	Mineral fuels and related materials					
	Coal			Natural gas, dry (million cubic meters)	Petroleum, crude (thousand 42-gallon barrels)	Uranium, U_3O_8 content (metric tons)
	Anthracite	Bituminous	Lignite			
Albania[e]	--	--	1	8	5,900	--
Armenia	--	--	--	--	--	--
Austria	--	--	--	1,729	5,896	--
Azerbaijan	--	--	--	17,242	320,667	--
Belarus	--	--	--	218	1,660	--
Belgium[e]	--	--	--	--	--	--
Bosnia and Herzegovina	--	--	12,312	--	--	--
Bulgaria[e]	--	2,314	32,000	396 [5]	170	--
Croatia	--	--	--	2,013	4,479	--
Cyprus	--	--	--	--	--	--
Czech Republic	--	10,796	43,710	204	1,020	262 [e]
Denmark-Greenland	--	--	--	9,000 [e]	75,701	--
Estonia	--	--	--	--	--	--
Finland	--	--	--	--	--	--
France	--	--	--	1,100 [e]	5,949	--
Georgia[e]	--	240	--	8	364	--
Germany	1,792	8,978	185,432	10,660	19,200	59 [e]
Greece	--	--	62,335	--	662	--
Hungary	--	--	9,297	2,280	4,410 [e]	--
Iceland	--	--	--	--	--	--
Ireland	--	--	--	350 [e]	--	--
Italy	--	--	--	8,400 [e]	36,865	--
Kazakhstan	--	107,911	7,748	40,129	576,200	24,648
Kosovo	--	--	8,028	--	--	--
Kyrgyzstan	--	133	1,051	19	657	2,150 [e]
Latvia	--	--	--	--	--	--
Lithuania	--	--	--	--	822 [e]	--
Luxembourg	--	--	--	--	--	--
Macedonia	--	--	7,310	--	--	--
Malta	--	--	--	--	--	--
Moldova	--	--	--	--	--	--
Montenegro	--	--	2,000 [e]	--	--	--
Netherlands	--	--	--	80,787	8,212	--
Norway	--	1,583	--	106,710 [6]	694,230	--
Poland	--	79,855	64,280	5,782	5,000	--
Portugal[p]	--	--	--	--	1,725	--
Romania[e]	--	--	33,500	10,933 [5]	31,000	88

See footnotes at end of table.

TABLE 4—Continued

EUROPE AND CENTRAL EURASIA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2012[1, 2]

(Thousand metric tons unless otherwise specified)

	Mineral fuels and related materials					
	Coal			Natural gas, dry (million	Petroleum, crude (thousand	Uranium, U_3O_8 content
Country	Anthracite	Bituminous	Lignite	cubic meters)	42-gallon barrels)	(metric tons)
Russia	11,400	276,500	78,100	655,000	3,615,000	3,348
Slovakia	--	--	2,292	110	105	--
Slovenia	--	--	4,321	2	2	--
Spain	4,073	2,252	--	44 [p]	323	--
Sweden	--	--	--	--	--	--
Switzerland	--	--	--	--	--	--
Tajikistan	--	412	--	11	87	--
Turkmenistan	--	--	--	69,000 [e]	79,915	--
Ukraine	20,763	64,600	200 [e]	19,318	24,110	1,132 [e]
United Kingdom	1,101	15,687	--	57,000 [e]	368,139	--
Uzbekistan	--	253	3,600	62,911	23,067	3,190
Total, Europe and Central Eurasia	39,100	572,000	596,000	1,160,000	5,920,000	34,900
Share of world total	5.4%	9.8%	49.9%	34.0%	20.7%	51.6%
United States	2,150	848,000	71,600	717,000	2,370,000	1,880
Share of world total	0.3%	14.6%	6.0%	21.0%	8.3%	2.8%
World total	731,000	5,820,000	1,190,000	3,420,000	28,600,000	67,600

[e]Estimated; estimated data, U.S. data, and world totals are rounded to no more than three significant digits; may not add to totals shown. [p]Preliminary. NA Not available.
-- Zero or zero percent.

[1]Some of the individual entries in this table may differ from those that appear in individual country production tables elsewhere in this volume owing to the inclusion in this table received at a later date.

[2]Totals may not add due to independent rounding. Table includes data available as of May 7, 2014.

[3]Primary production also includes undifferentiated (primary and secondary) production for some countries listed.

[4]Less than ½ unit.

[5]Reported figure.

[6]Reported as total methane sales.

TABLE 5

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED BAUXITE MINE PRODUCTION, 2005–2019[1]

(Thousand metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Albania	--	--	--	--	--	--
Bosnia and Herzegovina	1,032	844	800	900	900	900
Greece	2,441		1,816	1,900	2,000	2,000
Hungary	535	365	255	250	250	250
Italy	300	--	--	--	--	--
Kazakhstan	4,815	5,310	5,170	5,300	5,400	5,500
Montenegro	672	61	--	--	--	--
Romania	--	--	--	--	--	--
Russia	5,000	5,688	5,700	5,800	5,900	6,000
Total	14,800	12,300	13,700	14,200	14,500	14,700

[e]Estimated. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 6

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PRIMARY AND SECONDARY ALUMINUM METAL PRODUCTION, 2005–2019[1]

(Thousand metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Austria	150	375	373	400	450	450
Azerbaijan	32	--	55	70	75	80
Bosnia and Herzegovina	131	118	126	160	160	160
Bulgaria	5	12	--	--	--	--
Czech Republic	30	40	50	50	50	50
Denmark-Greenland	20	25	25	25	25	25
Finland	34	21	20	20	20	20
France	664	540	533	530	540	540
Germany	1,366	1,014	1,045	1,000	1,000	1,000
Greece	163	137	165	140	140	140
Hungary	82	234	150	150	150	150
Iceland	273	826	803	800	800	800
Italy	1,314	1,414	1,112	1,300	1,400	1,400
Kazakhstan	--	226	249	250	255	260
Macedonia	4	--	--	--	--	--
Montenegro	117	82	90	90	90	90
Netherlands	391	300	300	300	300	300
Norway	1,376	1,060	1,070	1,100	1,100	1,100
Poland	66	16	11	11	11	11
Portugal	18	18	18	18	18	18
Romania	246	258	265	280	280	280
Russia	3,647	3,947	3,924	4,000	4,000	4,000
Serbia	(2)	2	--	--	--	--
Slovakia	162	163		160	160	160
Slovenia	139	58		58	58	58
Spain	637	651	651	650	650	650
Sweden	133	104	159	160	160	160
Switzerland	238	25	--	--	--	--
Tajikistan	380	349	273	320	350	350
Ukraine	244	155	105	100	100	100
United Kingdom	574	498	360	300	300	300
Uzbekistan	3	--	--	--	--	--
Total	12,600	12,700	11,900	12,400	12,600	12,700

[e]Estimated. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

[2]Less than 1/2 unit.

TABLE 7

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED COBALT MINE PRODUCTION, 2005–2019[1]

(Co content in metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Finland	6,158	9,413	10,547	12,000	12,000	12,000
Kazakhstan	--	--	--	--	--	--
Russia	6,300	6,200	6,300	6,300	6,400	6,400
Total	12,500	15,600	16,800	18,300	18,400	18,400

[e]Estimated. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 8

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED COPPER MINE PRODUCTION, 2005–2019[1]

(Cu content in thousand metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Albania	2	2	5	5	5	5
Armenia	19	31	41	70	90	110
Azerbaijan	--	[2]	1	2	3	6
Bulgaria	112	105	108	100	100	100
Finland	16	15	NA	16	16	16
Georgia	10	7	7	7	8	8
Kazakhstan	402	381	419	440	450	460
Macedonia	22	8	10	10	10	10
Poland	512	481	479	480	480	480
Portugal	90	74	74	76	80	85
Romania	15	5	7	7	7	7
Russia	700	703	883	900	950	1,000
Serbia	27	28	41	50	60	60
Spain	5	46	75	80	85	90
Sweden	98	77	82	85	85	85
Uzbekistan	104	90	96	100	105	110
Total	2,130	2,050	2,330	2,430	2,530	2,600

[e]Estimated. -- Zero. NA Not available.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

[2]Less than 1/2 unit.

TABLE 9
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED REFINED COPPER METAL PRODUCTION
(PRIMARY AND SECONDARY), 2005–2019[1]

(Thousand metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Armenia	10	8	10	10	11	11
Austria	72	114	114	110	110	110
Belgium	383	381	380	380	380	380
Bulgaria	61	215	226	230	230	230
Cyprus	--	3	4	4	4	4
Czech Republic	--	--	--	--	--	--
Finland	125	146	148	150	150	150
Germany	638	704	686	700	700	700
Hungary	--	--	--	--	--	--
Italy	32	2	8	7	7	7
Kazakhstan	418	323	367	390	400	410
Macedonia	--	--	2	2	2	2
Norway	39	3	36	36	35	34
Poland	560	547	566	570	570	570
Romania	21	4	--	--	--	--
Russia	958	830	875	890	900	900
Serbia	27	22	35	40	50	50
Slovakia	--	46	49	50	50	50
Spain	302	270	270	270	270	270
Sweden	222	191	219	220	230	240
Ukraine	25	20	15	15	15	15
Uzbekistan	104	90	96	98	99	100
Total	4,000	3,920	4,110	4,170	4,210	4,230

[e]Estimated. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 10
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED GOLD MINE PRODUCTION, 2005–2019[1]

(Kilograms)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Armenia	1,400	974	2,896	3,300	3,400	3,500
Azerbaijan	--	1,900	1,563	2,000	2,500	3,000
Bulgaria	3,868	3,300	5,200	6,000	8,000	9,000
Denmark-Greenland	1,000	1,600	2,800	3,000	3,000	4,000
Finland	3,747	7,628	10,814	11,000	11,000	11,000
France	1,500	1,500	--	--	--	--
Georgia	1,620	2,000	2,300	2,300	2,350	2,400
Kazakhstan	17,875	30,272	39,903	45,000	50,000	54,000
Kyrgyzstan	16,751	18,072	10,333	18,000	18,000	18,000
Macedonia	400	--	--	--	--	--
Poland	510	776	916	900	900	900
Romania	400	400	--	--	--	--
Russia	164,186	189,000	217,800	230,000	235,000	240,000
Serbia	650	700	1,000	1,000	1,000	1,000
Slovakia	109	534	546	550	600	600
Spain	3,400	3,500	3,600	3,700	3,800	3,800
Sweden	6,600	6,242	6,015	6,300	6,300	6,300
Tajikistan	1,927	2,049	2,401	2,700	2,900	3,100
Ukraine	180	--	--	--	--	--
Uzbekistan	84,210	90,000	93,000	100,000	105,000	110,000
Total	310,000	360,000	401,000	436,000	454,000	471,000

[e]Estimated. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 11
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED BENEFICIATED IRON ORE PRODUCTION (MINE OUTPUT), 2005–2019[1]

(Fe content in thousand metric tons)

Country	Average iron content	2005	2010	2012	2015[e]	2017[e]	2019[e]
Austria	32%	665	662	686	700	700	700
Azerbaijan	57%	4	33	114	130	140	150
Bosnia and Herzegovina	42%	702	588	872	900	900	900
Bulgaria	50%	--	--	--	--	--	--
Czech Republic	29%	--	--	--	--	--	--
Germany[2]	11%	38	41	47	45	45	45
Greece	38%	575	560	550	500	500	400
Kazakhstan	57%	11,100	13,800	14,326	14,500	14,600	14,700
Norway	62%	420	3,105	3,200	3,200	3,000	3,000
Portugal	36%	12	14	14	14	14	14
Romania	52%	69	--	--	--	--	--
Russia	59%	56,100	56,600	61,400	62,000	63,000	64,000
Slovakia	34%	182	--	--	--	--	--
Spain	38%	--	--	--	--	--	--
Sweden	60%	15,300	16,750	17,186	18,000	18,000	18,000
Ukraine	55%	37,700	43,000	45,100	46,000	46,000	46,000
United Kingdom	54%	(3)	--	--	--	--	--
Total	XX	123,000	135,000	143,000	146,000	147,000	148,000

[e]Estimated. XX Not applicable. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

[2]Iron ore is used domestically as an additive in cement and other construction materials but is of too low a grade to use in the steel industry.

[3]Less than 1/2 unit.

TABLE 12

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED CRUDE STEEL PRODUCTION, 2005–2019[1]

(Thousand metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Albania	87	390	500	600	600	600
Austria	7,031	7,206	7,421	7,800	7,500	7,200
Azerbaijan	286	129	268	290	310	325
Belarus	2,076	2,672	2,869	3,000	3,050	3,100
Belgium	10,420	7,973	7,386	7,800	7,500	7,500
Bosnia and Herzegovina	283	591	700	700	700	700
Bulgaria	1,969	744	632	600	600	600
Croatia	74	95	109	90	90	90
Czech Republic	6,189	5,180	5,072	5,200	5,200	5,200
Finland	4,738	4,023	3,759	4,000	4,000	4,000
France	19,481	15,414	15,609	15,800	15,800	15,800
Germany	44,524	43,830	42,661	43,000	43,000	43,000
Greece	2,266	1,839	2,000	2,000	2,000	2,000
Hungary	2,005	1,678	1,543	900	900	900
Italy	29,061	25,750	27,257	30,000	30,000	32,000
Kazakhstan	4,477	3,338	2,610	3,000	3,200	3,400
Latvia	550	655	800	800	800	800
Luxembourg	2,194	2,563	2,232	2,500	2,500	2,500
Macedonia	326	292	216	200	200	200
Moldova	1,016	242	317	600	800	1,000
Montenegro	104	45	45	42	40	40
Netherlands	6,919	6,651	6,867	6,800	6,800	6,800
Norway	701	514	600	650	650	650
Poland	8,336	7,996	8,539	9,000	10,000	10,000
Portugal	1,400	1,350	1,400	1,400	1,400	1,400
Romania	6,280	3,724	3,417	4,000	4,000	4,000
Russia	66,186	66,800	70,400	72,000	73,000	74,000
Serbia	1,286	1,254	345	900	1,700	1,700
Slovakia	4,242	4,580	4,403	4,450	4,500	4,500
Slovenia	583	606	632	650	650	650
Spain	17,800	16,340	15,600	16,000	16,500	17,000
Sweden	5,692	4,844	4,326	4,800	4,800	4,800
Switzerland	1,158	1,330	1,400	1,400	1,500	1,600
Ukraine	38,541	33,559	32,394	33,000	33,500	34,000
United Kingdom	13,210	9,709	9,579	9,500	9,500	9,500
Uzbekistan	607	731	736	740	740	740
Total	312,000	285,000	285,000	294,000	298,000	302,000

[e]Estimated.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 13
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED NICKEL MINE PRODUCTION, 2005–2019[1]

(Ni content in metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Albania	NA	3	3	3	3	3
Finland	3,386	4,400	80,000	80,000	80,000	80,000
Greece	23,210	13,800	14,000	14,000	14,000	14,000
Kazakhstan	193	500	450	400	400	400
Kosovo	--	9,080	4,400	4,400	4,200	4,000
Norway	100	351	351	350	350	350
Russia	277,177	269,277	255,000	250,000	245,000	250,000
Spain	5,386	5,400	6,200	6,600	6,900	7,200
Ukraine	6,000	--	--	--	--	--
Total	315,000	303,000	360,000	356,000	351,000	356,000

[e]Estimated. NA Not available. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 14
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PALLADIUM MINE PRODUCTION, 2005–2019[1]

(Kilograms)

Country[2]	2005	2010	2012	2015[e]	2017[e]	2019[e]
Poland	10	15	15	15	15	15
Russia	97,400	84,700	82,400	81,000	80,000	80,000
Serbia	19	22	22	20	20	20
Total	97,400	84,700	82,400	81,000	80,000	80,000

[e]Estimated.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

[2]Palladium production for Finland and Norway has not been estimated.

TABLE 15
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PLATINUM MINE PRODUCTION, 2005–2019[1]

(Kilograms)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Finland	678	718	830	850	850	850
Poland	20	25	25	25	25	25
Russia	29,000	25,700	30,200	32,000	34,000	36,000
Serbia	3	--	3	3	3	3
Total	29,700	26,400	31,100	32,900	34,900	36,900

[e]Estimated. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 16
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED OF TIN MINE PRODUCTION, 2005–2019[1]

(Sn content in metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Portugal	30	20	42	45	50	60
Russia	3,000	144	100	1,000	2,000	3,000
Total	3,030	164	142	1,050	2,100	3,100

[e]Estimated.
[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 17
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED TIN METAL PRODUCTION (PRIMARY AND SECONDARY), 2005–2019[1]

(Metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
France	1,500	1,500	--	--	--	--
Russia	5,500	1,381	700	--	1,000	3,000
Total	7,000	2,880	700	0	1,000	3,000

[e]Estimated. -- Zero.
[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 18
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED DIAMOND PRODUCTION, 2005–2019[1]

(Thousand carats)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Russia:						
Gem grade	23,000	17,800	19,900	21,000	21,500	22,000
Industrial grade	15,000	15,000	15,000	15,000	15,000	15,000
Regional total	38,000	32,800	34,900	36,000	36,500	37,000

[e]Estimated.
[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 19
EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED LITHIUM PRODUCTION, 2005–2019[1]

(Li content in metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Portugal	26,185	40,110	20,700	41,000	44,000	44,000

[e]Estimated.
[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 20

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED SALABLE COAL PRODUCTION, 2005–2019[1, 2]

(Thousand metric tons)

Country	2005	2010	2012	2015[e]	2017[e]	2019[e]
Albania	3	3	1	1	1	1
Austria	14	--	--	--	--	--
Bosnia and Herzegovina	9,144	10,976	12,312	12,000	12,000	12,000
Bulgaria	24,909	29,700	34,300	34,000	34,000	34,000
Czech Republic	61,903	55,124	54,506	55,000	55,000	55,000
Georgia	5	241	240	270	290	310
Germany	202,621	182,303	196,202	190,000	185,000	180,000
Greece	73,585	53,600	62	62	63	64
Hungary	9,580	9,114	9,297	9,500	9,500	9,500
Kazakhstan	86,586	106,568	115,659	140,000	160,000	180,000
Kosovo	6,391	7,958	8,028	8,500	8,500	8,500
Kyrgyzstan	396	575	1,184	1,500	1,800	2,100
Macedonia	6,949	6,583	7,310	8,000	9,000	9,000
Montenegro	1,297	1,938	2,000	2,000	2,000	2,000
Norway	300	1,685	1,583	1,600	1,600	1,500
Poland	159,039	133,238	144,135	144,000	144,000	144,000
Romania	34,201	30,000	33,500	34,000	35,000	35,000
Russia	282,881	321,600	366,000	380,000	390,000	400,000
Serbia	34,993	38,598	38,728	39,000	39,000	39,000
Slovakia	2,511	2,378	2,292	2,300	2,300	2,100
Slovenia	4,539	4,430	4,321	4,400	4,100	4,000
Spain	19,350	8,430	6,325	6,000	5,500	5,500
Tajikistan	99	200	412	600	750	900
Ukraine	74,559	75,200	85,700	91,000	95,000	100,000
United Kingdom	20,498	18,159	16,788	18,000	18,000	18,000
Uzbekistan	3,003	3,100	3,600	4,200	4,600	5,000
Total	1,120,000	1,100,000	1,140,000	1,190,000	1,220,000	1,250,000

[e]Estimated. -- Zero.

[1]Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes anthracite, bituminous, and run-of-mine lignite.