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The Mineral Industries of Europe and Central Eurasia

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The area of Europe and Central Eurasia treated in this volume encompasses territory that extends from the Atlantic coast of Europe to the Pacific coast of the Russian Federation and includes the British Isles and Iceland. Greenland, which is located in the northwestern Atlantic Ocean, and the Kurile Islands and the Sakhalin, which are located off the Sea of Japan in the Pacific Ocean and which are political extensions of Denmark and the Russian Federation, respectively, are also treated in this volume.

Economic integration in Western Europe evolved into the formation of the European Union (EU), which is a supranational entity that at yearend 2006 comprised Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom. [A very much diminished European Free Trade Area (EFTA), which comprised Iceland, Liechtenstein, Norway, and Switzerland, served as an alternative entity to the EU in Western Europe.]

The admission of new member countries has been one of the significant political programs of the EU. To gain membership, applying countries must fulfill political and economic requirements, such as achieve stability of the institutions that guarantee democracy, the rule of law, human rights, and respect for and protection of minorities; have a functioning market economy and the capacity to cope with competitive pressure and market forces within the EU; and be able to take on the obligations of EU membership, including adherence to the aims of political, economic, and monetary union.

In 2006, in the former centrally planned economy areas, the countries of Central Europe (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Montenegro, Poland, Serbia, Slovakia, and Slovenia) and the Baltic countries (Estonia, Latvia, and Lithuania) had completed the successful transition from authoritarian Governments with central economic planning to open political systems with market-based economies. The transition among the countries of the Commonwealth of Independent States (CIS) (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan) was less complete, with some of these countries having made little progress, although others had taken significant steps towards the establishment of open political systems and market-based economies.

In 2006, the EU agreed to the accession of Bulgaria and Romania to the EU in January 2007, and Croatia, the Former Yugoslav Republic of Macedonia, and Turkey had official candidate status. Other countries in the Balkans were in more preliminary stages of negotiation for accession. The EU also promoted economic development in such CIS countries as Ukraine through its European Neighborhood Policy (ENP) (Commission of the European Communities, 2006b, p. 2-5; 2006c).

In 2006, the population of the EU exceeded that of the United States by about 1.5 times, and its total gross domestic product (GDP) based on purchasing power parity approximately equaled that of the United States (tables 1, 2).

A major function of the EU has been to remove barriers to trade in an attempt to create a single market and to develop a common set of economic policies. Although all EU members must adhere to the EU's environmental and commercial standards, no common policy was in place regarding the mineral extractive industries specifically. The mineral industries of the EU10 countries (Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia) plus Bulgaria and Romania (in 2007) were expected to increase both employment in and production of the mineral industry of the EU, and the production of industrial minerals and mineral fuels was expected to play a greater role in the expanding EU economy (Commission of the European Communities, 2006a, p. 60).

The CIS was founded in 1991 by several republics of the former Soviet Union (FSU) and later was extended to include all the former Soviet republics except the Baltic states of Estonia, Latvia, and Lithuania. In the adopted Declaration, the participants of the Commonwealth declared their interaction to be based on the principle of the sovereign equality of all members and that the member states were independent and equal subjects of international law. The CIS is not a state and it does not have supranational powers. In 2006, the members of the CIS were Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. Turkmenistan discontinued permanent membership as of August 26, 2005, and became an associate member. Turkmenistan, however, was establishing closer cooperation with the CIS following the death of its President in December 2006 and the installation of a new President.

In September 1993, the Governments of the CIS states signed an agreement on the creation of an economic union that would form a common economic space based on the free movement of goods, services, labor, and capital and: the union would work to coordinate monetary, tax, price, customs, and external economic policy; develop methods of regulating economic activity; and create favorable conditions for the development of direct production relations. Integration of the countries of the CIS was executed through its coordinating institutions (charter bodies, executive bodies, and the bodies of branch cooperation of the CIS). In 1997, an agreement was signed by members of the CIS

[1]Deceased.

to cooperate in the areas of science, exploration, and the use of mineral resources, with the goal of establishing international cooperation in the use of the economic and technical resources of the CIS states. The signers would reestablish ties among the mineral industries of the CIS states that had been broken with the dissolution of the Soviet Union. The Executive Committee of the CIS, with the participation of leading scientists and specialists, prepared a Mining Charter and an Agreement on Cooperation for the study, exploration, and use of the mineral resources of the CIS states. The agreement was signed on March 27, 1997, by Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, and Ukraine. On the basis of this agreement, an Inter-Governmental Council was formed to fulfill the mission of the agreement.

An important step taken by the Inter-Governmental Council was an agreement signed in Minsk, Belarus, on May 30, 2001, to settle disputes regarding mineral development in border areas, to implement environmental measures to protect the population of the neighboring states when developing mineral resources, and to specify conditions for cooperation between neighboring CIS states in mineral development. One of the basic documents regulating these matters was a Model Law Code regarding the Earth's resources and their use signed by the Inter-Parliamentary Assembly of the CIS countries in 2002; the Model Law Code deals with a wide range of issues regarding minerals and mineral development. By 2006, the Inter-Governmental Council was coordinating more than 10 joint programs and projects relating to scientific and technical cooperation, harmonizing laws about the use of resources, and engaging in information exchanges.

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- Lithuania—Industrial Statistics Division;
- Luxembourg—Central Statistical Service;
- Poland—Central Statistical Office;
- Portugal—IGM–Division de Statistical Studies;
- Romania—National Institute of Statistics;
- Slovakia—Statistical Office;
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- Ukraine—State Statistics Committee; and
- United Kingdom—British Geological Survey.

General Economic Conditions

The countries of the EU and the CIS were substantial participants in the world mineral economy and occupy important roles as suppliers and consumers of all major mineral commodities. In 2006, the EU continued to be a major world processing and consuming region and its role in the world mineral industry continued to be one of processing and consuming rather than mining. Central Eurasia remained a major world supplier of mined and processed minerals. Its consumption of these commodities, although at a low level compared with that of the EU, was increasing. As mineral consumption in Central Eurasia increases, more mineral production from this part of the world is likely to be consumed domestically and result in the Central Eurasian countries reducing mineral exports to world markets unless there is a commensurate increase in production. The unaffiliated countries of the Balkans played a much lesser role in both the supply and consumption of most mineral commodities.

As a major world mineral processing and consuming area, the EU remained a significant determinant of world demand for all mineral commodities. With the near exhaustion of much of its mineral reserves and the decline in its role as a world mine producer of minerals, the EU continued to produce metals, which included aluminum, copper, lead, steel, and zinc, using largely imported raw materials and secondary materials; its mineral processing and manufacturing industries accounted for a significant share of the world production of semimanufactured and fabricated ferrous and nonferrous metals. Germany remained the EU's dominant smelter and refiner of most metals. The EU was a major manufacturing center and its industries were large consumers of metal products used to produce industrial and consumer goods. 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.

Despite the diminution of Western Europe's importance as a mining region, Western Europe was an important world financial center and the headquarters of such major transnational mining and mineral processing companies as United Kingdom-based Anglo American plc, BHP Billiton plc, and Rio Tinto plc. Also, Western Europe played a significant global role in the extraction and processing of certain industrial minerals and mineral fuels. Significant petroleum and natural gas resources had been developed in the North Sea, and there were also significant coal

reserves. Germany remained an important mine producer of a number of industrial minerals and coal.

Some metals were mined in the EU (mainly iron ore and copper), but mine production of metals was not globally significant. The key issues for the EU regarding minerals were the need to secure adequate supplies of mineral fuels to supply its energy requirements, the need to secure supplies of metallic mineral raw materials (such as concentrates, ores, and scrap) for its metal refining and processing industries, and the need to supply its manufacturing and construction industries and agriculture with metals and industrial minerals.

The accession of Poland to the EU, in particular, increased the EU's capacity to mine coal and copper, lead-zinc ore, salt, and sulfur, and to produce steel. The metal processing sectors of the EU, however, remained heavily dependent upon imports of mineral materials. The EU still mined and quarried such industrial minerals as feldspar, kaolin, marble, potash, salt, and sand and remained among the world's leading producers of feldspar, kaolin, and natural stone.

In the CIS, Kazakhstan, Russia, and Ukraine were the main mineral producing countries. Russia, which occupied about 75% of the territory of the CIS, was by far the largest country in the CIS in both population and territory and had the leading mineral producing sector. Azerbaijan, Kyrgyzstan, Uzbekistan, and several other CIS countries also were important producers and processors of minerals. In 2006, Russia ranked among the leading world producers or was a large producer of such mineral commodities as aluminum, arsenic, asbestos, bauxite, boron, cadmium, cement, coal, cobalt, copper, diamond, fluorspar, gold, iron ore, lime, lithium, magnesium compound and metals, mica (scrap sheet and flake), natural gas, nickel, nitrogen, oil shale, peat, petroleum, phosphate, pig iron, platinum-group metals (PGM), potash, rhenium, silicon, sulfur, steel, tin, titanium sponge, tungsten, and vanadium.

Kazakhstan was a significant producer of such mineral products as arsenic, barite, beryllium metal, bismuth, cadmium, chromite, copper, ferroalloys, lead, titanium sponge, uranium, and zinc. 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 producers of one or more mineral commodities, including Armenia (molybdenum), Azerbaijan (oil), Belarus (potash), Kyrgyzstan (antimony metal, gold, and mercury ore and metal), Tajikistan (aluminum), Turkmenistan (natural gas), and Uzbekistan (gold and uranium), and all the CIS countries produced a range of other mineral commodities.

Kazakhstan is the largest country in terms of land area in Central Asia and one of the most sparsely populated in the world. The country has considerable mineral resources and vast areas of arable land. Oil production is expected to continue to be the major activity driving the economy of Kazakhstan, and oil production is likely to double by 2010. In 2006, as a percentage of the country's total volume of exports, hydrocarbons constituted 65%, and ores and metals, 14%. Kazakhstan was sending 100% of its gas exports and 90% of its oil exports on routes through Russia. Discussions were underway concerning Kazakhstan diversifying its fuel export routes. The vast majority of Kazakhstan's metal output was exported. China was playing an increasing role as a recipient of Kazakhstan's metal exports. Kazakhmys, the country's major copper producer, exported 85% of its cathodes and rods to China. In 2006, Kazakhstan concluded an agreement with China by which Kazakhstan's iron ore exports to China increased by 83%.

The mineral raw material sector in Russia produced about 30% of the country's GDP and contributed about 70% of the country's budget revenues. Analyses from the International Monetary Fund and the World Bank have estimated that the oil and gas sector accounted for about 20% of the country's GDP, although it employed less than 1% of Russia's workforce. The metallurgical sector accounted for about 5% of the GDP, 18% of industrial production, and 15% of exports.

In 2006, Russia's exports of mineral products were valued at $199 billion, of which $178.7 billion was exported outside the CIS; mineral products accounted for 65.8% of the country's total value of exports and 68.7% of the total value of exports outside the CIS. Exports in 2006 were valued significantly more than in 2005, when exports of mineral products were valued at $156 billion and exports outside the CIS were valued at $140.9 billion; mineral products in 2005 accounted for 64.6% of total exports and 67.5% of exports outside the CIS. Oil and gas exports accounted for more than 60% of export revenues. Russia's exports of natural gas and oil and of ferrous and nonferrous metals accounted for between 7% and 20% of the total volume of world exports of these products.

Russia's exports of ferrous and nonferrous metals ranked second to mineral fuels in the country's total value of exports and accounted for 15% of the total value of exports. In 2006, however, the total value of ferrous and nonferrous metals as a percentage of the country's total exports decreased somewhat compared with that of 2005. In 2006, Russian metal exporters continued to face trade sanctions with more than 38 trade sanctions still in place in such countries as Argentina, Australia, countries of the EU, India, Mexico, Turkey, the United Arab Republic, the United States, and Venezuela. Such restrictions were affecting both ferrous and nonferrous metal exports. In 2006, Russia still had not achieved acceptance to the World Trade Organization; if such membership were achieved, a number of the trade barriers that were erected against Russian metal exports could be removed.

In 2006, Russian exports of ferrous metals totaled 45.96 million metric tons (Mt) and were valued at $17.85 billion. In the ferrous metals sector in 2006, Russia exported 22.9 Mt of iron ore and concentrate, which was a 25.8% increase compared with exports in 2005; 6.1 Mt of pig iron, which was a 15.3% increase; and 19.889 Mt of steel products, which was about a 1% increase. In the nonferrous metals sector, Russia increased its aluminum exports by 10.1% to 4.064 Mt, but copper exports decreased by 12.9% to 271,000 t and nickel exports decreased by less than 1% to 259,800 t. In the mineral fuels sector, Russia exported 91.4 Mt of hard coal, which was a 14.5% increase compared with that of 2005; 248 Mt of crude oil, which was about a 2% decrease; 103 Mt of refinery products, which was a 6% increase; and 203 billion cubic meters of natural gas, which was a 2.4% decrease.

Only a small percentage of Russian exports of mineral products went to countries of the CIS. The leading consumer of

Russian energy products was the EU, which received 63% of Russia's total oil exports and 65% of its gas exports. Russia was the EU's leading supplier of oil and gas and provided 27% of total EU oil imports and 44% of total EU natural gas imports.

Ukraine's steel industry was a mainstay of its economy and a major source of export revenues. The country's steel industry accounted for between 5% and 6% of the GDP and 34% of export revenues. It employed about 420,000 people, which constituted about 10% of industrial employment and about 2% of total employment. Ukraine was among the world's three leading steel exporting countries and its net exports in 2006 totaled 27.8 Mt.

Ukraine's dramatic growth since 2000 had been fueled in part by improved terms of trade created by rising metal prices. Strong demand for steel products globally had helped fuel Ukraine's economy, as Ukrainian steel producers were among the world's lowest-cost producers. Ukraine's steel industry in the beginning of 2006 was experiencing difficulties caused by the weather, a shortage of natural gas, and a weak international market. After the first quarter of the year, however, conditions improved as supplies of iron ore and scrap increased, as did that of natural gas; the world market demand for steel also increased, as did the price.

A large amount of oil and natural gas destined for the EU and southeastern Europe was transited through Ukraine, including about 23% of the EU's oil imports and 46% of the EU's gas imports. Tensions arose between Russia and Ukraine when Russia decided to charge Ukraine the world market rate for the gas it consumed rather than the lower rate it had been charging. In early 2006, Russia began to increase natural gas prices for Ukraine toward prices charged in Western Europe. Ukraine claimed that the proposed almost fourfold price increase was politically motivated because of the "Orange Revolution" that had occurred in Ukraine and the country's election of a President perceived to be more politically oriented towards the West than towards Russia. Russia began cutting gas supplies to Ukraine in an energy price dispute that became a major political dispute. This crisis created fears that Russian exports to Western Europe could be affected, as most of the gas from Russia destined for Europe was channeled through Ukrainian pipelines and Ukraine was capable of diverting these supplies for its own needs. Russia insisted that there would be no disruption of supplies to Europe. An agreement reached between Russia and Ukraine set the gas import price at $95 per thousand cubic meters, which was a 64% increase from the previously prevailing price.

Similar issues also arose in Belarus when Russia decided to raise the price of gas it charged Belarus closer to the price it charged European countries. The decision was explained by Russia as an economic decision but was regarded by Belarus as a form of political pressure. Belarus had threatened to retaliate by interrupting Russian gas crossing the country on its way to Western Europe, which echoed similar issues in Russia's dispute with Ukraine.

Exploration

Based on data provided by the Metals Economics Group (MEG), exploration budgets for Europe and Central Eurasia increased in 2006 to about an estimated $784 million from the 2005 estimate of about $528 million (Cox and Goulden, 2005; Metals Economics Group, 2006). According to the MEG survey, exploration activity in this region increased by 49% compared with estimates for 2005. This increase resulted from an increase in reported Russian exploration activity, as well as continued interest in the Carpathian Arc (including Eastern Europe and western Turkey), Scandinavia (particularly Finland and Sweden), and Central Eurasia.

Based on exploration site data collected by the USGS, exploration activity in the CIS focused on gold (60%), copper (18%), and nickel (8%) projects. European mineral exploration focused on gold (57%) and base metals. Many former mining areas of Europe were being reevaluated with newer geophysical methods; areas rich in base-metal sulfides, for example, were being reevaluated for PGM potential.

Exploration activity in the CIS was greatest in Kazakhstan, Kyrgyzstan, and Russia primarily and was focused on the search for diamond, base metals, and gold. Russian gold deposits typically have a larger tonnage of resources than the world average, but generally have lower grades and require more-expensive processing because of a greater frequency of hard refractory ore (Leskov, 2004). Detailed historical data on many sites collected under the Russian system are often available, but differences in resource nomenclature and data classification confusion add to the difficulty in assessment by foreign companies. It was reported that the Russian President ordered the declassification of data related to diamond and gold; however, the declassification procedures could reportedly take several years (Mining Magazine, 2006). As the next step in freeing up data on diamond and PGMs, Russia's President signed a decree abolishing export quotas for these minerals on January 13, 2007 (Helmer, 2007).

As part of its resource development strategy, the Russian Government was in the process of developing a list of areas of the economy that would be closed to foreign-dominated ownership, and this list included development of large mineral deposits. The former law of 1992 did not impose any special restrictions on companies with foreign participation, with the exception of diamond and radioactive materials. Proposed amendments to Russia's law on the use of subsurface resources were ratified on January 31, 2007. These amendments set criteria for strategic deposits that limited the rights of foreigners to invest in a controlling stake in strategic deposits that had not yet been developed with foreign participation. Strategic deposits included oilfields with more than 70 Mt of reserves, natural gas fields with more than 50 billion cubic meters of reserves, copper deposits with more than 500,000 t of copper contained in the ore, and gold fields with more than 50 t of gold contained in the ore. All mineral deposits of diamond, pure quartz, and uranium were considered strategic. These new amendments set criteria for strategic deposits that were lower for oilfields and gasfields than criteria proposed earlier and would encompass, therefore, a larger number of these fields, which would number about 30 oilfields and 40 gasfields. Three copper deposits would be listed as strategic, including the large Udokan copper deposit. The large Sukhoy Log gold deposit would be among the gold deposits listed.

Commodity Overview

This report includes commodity outlook tables. Estimates for production of major mineral commodities for 2007 and beyond have been based upon such factors 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 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 producing facilities and on planned new facilities that operating companies, consortia, or Governments have projected to come online within indicated timeframes. Forward-looking information, which includes estimates of future exploration, mine development and production, cost of capital projects, and timing of the start of operations, are 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 occur.

Metals

Bauxite and Alumina and Aluminum.—In Europe and Central Eurasia, Europe (excluding the CIS) was the main primary aluminum-producing region; its output accounted for about 15% of the world's primary aluminum output. Europe (excluding the CIS) also was the world's leading producer of secondary aluminum (about 40% of total world output). Aluminum production in Europe was projected to increase slightly. The CIS' production of primary aluminum (12.5% of the world total) was somewhat less than that of the rest of Europe's, but the CIS was projected to overtake production in Europe. Data on secondary aluminum production in Central Eurasia was lacking and, therefore, the region appeared too far behind that of Europe in the production of secondary aluminum; a definitive comparison cannot be made because of the lack of data. Central Eurasia was by far the region's leading producer of bauxite although its production was not on a scale of the world's leading producers.

Russia was the world's second ranked producer of aluminum after China. A steady increase of Russia's substantial aluminum smelting capacity was projected, thereby contributing to Central Eurasia's positive outlook for aluminum production. RUSAL was Russia's leading domestic aluminum producing company and SUAL was the second ranked domestic aluminum producer and the leading domestic bauxite producer. Together, these two firms controlled all Russian aluminum, alumina, and bauxite production enterprises. Plans called for RUSAL to merge with SUAL and with the Switzerland-based Glencore International AG to become United Company RUSAL, which would then become the global leader in aluminum production. The merger was completed in March 2007.

In 2006, RUSAL was investing to expand and modernize its production facilities. It was engaged in commissioning the Khakas aluminum smelter with a capacity of 300,000 metric tons per year (t/yr). The Khakas aluminum smelter was the first aluminum production facility built in Russia in the past 20 years, and the first batch of aluminum was smelted at Khakas in December 2006. The Khakas smelter was projected to reach its installed capacity in October 2007. In 2006, RUSAL began work to construct a 750,000-t/yr greenfield aluminum smelter in Taishet, which is a small town located near Irkutsk. The construction was expected to be completed in 2011. RUSAL also was carrying out large-scale modernization of the Irkutsk aluminum smelter, which was commissioned in 1962, that would enable the smelter to increase its production capacity to 500,000 t/yr from 300,000 t/yr t. Plans for RUSAL also called for modernizing the Nikolayev alumina refinery in Ukraine to increase output to 1.6 million metric tons per year (Mt/yr) of alumina from 1.4 Mt/yr.

The major aluminum industry development project in Russia was the Komi Aluminum project, which was initiated by SUAL. The project entailed the development, construction, and operation of a bauxite-alumina complex in the Komi Republic, based on the Middle Timan bauxite deposit. The design capacity of the complex was 6.5 Mt/yr of bauxite and 1.4 Mt/yr of alumina. Plans called for increasing bauxite production at Komi to 6.5 Mt/yr in the 2009-10 period. Construction of the project's alumina plant in Sosnogorsk had not begun, and its functioning would depend on its obtaining an uninterrupted supply of bauxite from the Komi project to achieve its design capacity. The completion of the Komi project would considerably reduce the Russian aluminum industry's dependency on foreign countries for bauxite and alumina.

Copper.—In 2006, Central Europe (mainly Poland) and Central Eurasia (Kazakhstan and Russia) were the chief areas of copper mine production in the region. Although Western Europe was only a minor mine producer of copper, it produced a significant share of total world output of primary and secondary refined copper. Germany was the leading producer of refined copper in Western Europe and the second in the region following Russia. Belgium, Spain, and Sweden, in that order, followed Germany as Western Europe's next ranked refined copper producers.

Central Eurasia followed Western Europe as a producer of refined copper, and Central Europe produced less than one-half the amount of refined copper as Central Eurasia. Russia remained the major producer of refined copper in Central Eurasia. Kazakhstan was also a major producer but had less than one-half the production of Russia. In Central Europe, Poland remained the main producer of refined copper, with output about 37% above that of Kazakhstan but significantly below that of Russia.

Development and expansion of mine production of copper in Europe and Central Eurasia, in conjunction with reported ongoing and planned mine closures, could result in a net increase of copper mine production of about 530,000 t by 2013 (table 7). Kazakhstan and Russia appeared to be the countries where the most significant growth in the volume of production was likely to take place in both mine output and refined copper production.

All copper ore in Poland was mined by Kombinat Gorniczo Hutniczy Miedzi (KGHM) Polska Miedz S.A. (KGHM S.A.), which was a major world copper mining, beneficiation, smelting, and refining complex located in the Lubin area. KGHM S.A. accounted for almost 4% of world mine copper production in 2006. The Rudna Mine was the leading copper ore producer with a mining capacity of about 11 Mt/yr. Poland's copper reserves were projected to be depleted by 2040 (Ney and Smakowski, 2004). Poland's future mine output of copper may depend not only on the country being able to access new and environmentally tenable domestic copper deposits, but also the country's ability to assure future supplies of copper ore and concentrate from investments in the Democratic Republic of the Congo [Congo (Kinshasa)], in Peru (Rio Blanco copper project), and the Philippines.

In 2006, Poland and Russia ranked among the top 10 copper-ore-mining countries in the world (Edelstein, 2007). Russia's leading copper producing enterprise, MMC Noril'sk Nickel, produced almost 60% of Russia's copper in ore output. The remaining ore came from mining in the Urals. About 29% of Russia's copper metal production was from secondary material. As nickel-rich ores at Noril'sk become depleted, Noril'sk planned to switch to mining larger quantities of ores, which would be primarily copper-rich ores that have a higher copper content relative to their nickel content than the nickel-rich ores, but are lower in metal content for both metals. This would increase copper output as Noril'sk tries to maintain its level of nickel production. Noril'sk's strategy up to 2010, however, appeared to be to maintain its production of nickel-rich ores, which would delay any significant increase in copper production.

The leading copper producer in the Urals was the Urals Mining and Metallurgical Company (UMMC). UMMC consisted of about 40 enterprises in 11 regions managed by UMMC Holding and the company had about a 40% share of the domestic copper cathode market. In 2006, UMMC produced 354,258 t of cathode copper, which was about equal to its 2005 production level, and it planned to increase production in 2010 by 41% compared with that of 2006 to 500,000 t. In 2006, UMMC had the capacity to produce 360,000 t/yr of copper.

The Russian Copper Company (RCC), which was the country's third ranked copper producer and which had production facilities centered in the Ural Mountains, increased production of copper cathode in 2006 by 33% compared with that of 2005 to 164,000 t. The RCC consisted of 11 upstream and downstream enterprises that mined and processed copper and produced copper products. In 2006, RCC's share of the Russian market rose 3% to 18% and its share of the world market was 1%. RCC's copper cathode production capacity increased by 60,000 t/yr in 2006, and RCC planned to increase copper cathode output to 290,000 t in 2010.

A reevaluation of reserves was occurring for the Udokan copper deposit in Chita oblast', which is one of the largest copper deposits in the FSU. The reevaluation was scheduled to be completed at the end of 2009. Owing to the size of its reserves, Udokan was being classified as a strategic deposit, which means that foreign companies would not be able to have a controlling interest in the ownership of the deposit.

Kazakhmys, the firm that controlled almost all copper mining and metal production in Kazakhstan, was engaged in a number of projects to ensure growth in the short term and provide for production replacement in the longer term. Most of these projects were expected to begin production in the near or medium term and included both new mine development and the expansion of existing mines. The new mines included the Artemovskoye, which had already been completed ahead of schedule and had the capacity to produce 28,000 t/yr of copper and 98,000 t/yr of zinc; the Zhaman-Aybat, which was under construction and had reserves of 75.3 Mt of ore containing 1.069 Mt of copper; and the Aktogay, a site that was being evaluated for development of an open pit to mine that has a total of 1.614 billion metric tons (Gt) of ore with an average grade of 0.36% copper and which contain 5.810 Mt of copper. Expansion of existing mines was planned at the East Saryoba underground mine and at the Akbasau, the Kosmurun, and the Taksura open pits.

Gold.—In 2006, Central Eurasia remained the dominant gold producing area within Europe and Central Eurasia, accounting for more than 90% of the region's total output of gold. Central Eurasia's output was projected to increase through 2013. In 2006, in Central Eurasia, Russia, Uzbekistan, Kazakhstan, and Kyrgyzstan, in that order, were the leading gold producers. Russia was expected to continue to be the region's main gold producing area through 2013. Russia has large quantities of undeveloped reserves with which it could increase output. In the rest of the region, Romania appeared poised to become a significant gold producer with the development of the Rosia Montana deposit by Gabriel Resources Ltd. of Canada, which at full capacity could produce as much as 15.6 t/yr.

In 2006, gold output in Russia, including secondary production, decreased by about 2.2% to 164.231 t from 168.070 t in 2005. Gold mine output, which decreased to 159.340 t in 2006 from 163.186 t in 2005, was reduced mainly because of a decline in placer gold production of 9.6 t. Reserves at placer deposits were being depleted and production capacity was being transferred to mine hard rock deposits. Depletion of reserves at placer mines was attributed in part to a lack of resources by the small companies mining these deposits to invest in conducting necessary exploration. In 2006, 62 t was produced from placer deposits, which was far less than the amount produced from placers between 1976 and 1990 when production ranged between 110 and 130 t/yr. The total increase in extraction from hard rock mining enterprises in 2006 was 2.6 t as production increases at some enterprises were offset by decreases at others. Extraction of gold by foreign-controlled enterprises decreased by 10% in 2006.

In 2006, Kyrgyzstan experienced a 36% decline in gold production to 10.721 t. Gold was the country's main mineral commodity produced, in terms of value. Plans had called for producing 12.795 t. The Kumtor Gold Company, which was the country's leading gold producer, reduced output by 39.5% to 9.443 t, which was 16.1% less output than planned. The decline in gold production at Kumtor was caused mainly by a pit wall slide in July but was also the result of the company having to mine lower-grade ore; the ore graded 1.5 grams per metric ton (g/t) gold compared with the higher-grade ore previously mined, which graded at 2.5 g/t gold. In 2007, plans called for Kumtor to increase gold production to 15 t.

The Zarafshan-Newmont joint venture between Newmont Mining Corp. of the United States and Uzbekistan Government entities recycled tailings at the Muruntau gold lode in Uzbekistan. The processing plant was officially opened on May 25, 1995. The joint venture initially contracted to process 220 Mt of ore that had an average grade of 1.23 g/t gold and that contained 5.1 million troy ounces (158.63 t) of recoverable gold. The joint venture produced 7.192 t of gold in 2006, which was a decrease from the 7.714 t produced in 2005 and the 12 t produced in 2004. In June, Uzbekistan's courts ordered Zarafshan-Newmont to pay $48 million in back taxes, froze the joint venture's assets, and seized some of its gold. On August 11, the Government of Uzbekistan launched a criminal investigation against the joint venture and its employees and blocked the export of any gold. Newmont lost control over day-to-day operations of the joint venture. In September, Newmont wrote off the value of its stake in the joint venture after authorities seized gold and other assets based on two tax claims for payments due between 2002 and 2005. An Uzbekistan court seized $49 million for the disputed tax claims and declared the joint venture bankrupt. However, Newmont was still pursuing a settlement in 2006. It reached an agreement in 2007 whereby it agreed to transfer its stake in the Zarafshan-Newmont venture to Uzbekistan with none of the parties admitting liability regarding any matters in the dispute. According to the agreement, Newmont received $80 million for its 50% stake, which reportedly was less than its estimated book value. The enterprise will continue to process tailings from Muruntau.

Iron and Steel.—The level of steel production in the region was not expected to change appreciably through 2013, with some anticipated growth in steel production in Central Europe and Central Eurasia and relatively stable levels of production in Western Europe.

With respect to the steel industry in 2006, the EU was primarily concerned about the competitiveness and the level of privatization of crude steel production capacities in the new member countries, as well as those in prospective member countries. To approximate the EU's average level of productivity, closure goals for yearend 2006 were recommended for inefficient steelmaking capacities in Poland and the Czech Republic, which totaled 1.4 Mt/yr and 590,000 t/yr, respectively. However, Poland had shut down only 90,000 t/yr of capacity, and the Czech Republic apparently still had not shut down any crude steel production capacity by March 2006. These and other new EU member countries were able to defend maintaining high levels of crude steel production capacity because of increased demand and greatly improved steel market conditions for steel producers (relative to when the closures had been recommended by the EU). The EU15 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom) maintained that productivity issues would provide sufficient grounds for requiring closure of less-efficient capacity if steel prices were to decline even slightly (Commission of the European Communities, 2006a, p. 6-7, 9, 14, 24-28, 37).

In 2006, in Western Europe, Germany continued to be the leading producer of crude steel, producing more than 47 Mt, followed by Italy, France, Spain, the United Kingdom, and Belgium. In Central Europe, each steel producing country had an annual output of about 10 Mt or less. Poland was the leading steel producer followed by the Czech Republic, Romania, and Slovakia. Some expansion in the iron and steel sector was taking place in Central Europe. In Bosnia and Herzegovina., Arcelor Mittal Steel had increased its iron ore output to 3.4 Mt in 2006 compared with 127,000 t in 2003 and its Mittal Steel Zenica steel mill was adding production capacity.

Russia and Ukraine together accounted for more than 90% of Central Eurasia's steel output; Russia's output of almost 71 Mt was considerably more than Ukraine's output of almost 41 Mt. In 2006, Russia was the fourth-ranked steel producer after China, Japan, and the United States.

All Russia's steelmaking plants increased output of crude steel in 2006, except one, and all but two increased output of rolled steel. In 2006, 44.6% of total steel production occurred at the three leading steel mills (Magnitogorsk, Novolipetsk, and Severostal). The rate of investment in the Russian steel sector varied greatly among enterprises. For the three leading steel mills, the average rate of investment was $32 per metric ton of steel produced; at the six second-tier group of steel mills, the average rate of investment was $15 per metric ton of steel; and for the third group of smaller steelmakers, the average rate of investment was only between $7 and $8 per metric ton.

Ukraine was Central Eurasia's second ranked steel producing country and ranked among the leading 10 steel producing countries in the world in 2006. Ukraine increased production of crude steel by about 5.9% compared with that of 2005 to 40.899 Mt. The country's production of finished rolled steel increased by less than 1% to 22.380 Mt. The country's major steel producing enterprises each produced more than 4 Mt/yr of steel, with some producing more than 7 Mt/yr. Strong demand for steel products globally had helped fuel Ukraine's economy, as Ukrainian steel producers were among the lowest-cost steel producers in the world. Ukraine's abundant iron ore and manganese ore reserves, its large coal production, its proximity to Russian coal supplies, and its developed transport infrastructure enabled the country to be a major global steel producer. The year started with a number of difficulties facing the steel industry caused by the weather, a shortage of natural gas, and a weak international market. After the first quarter of the year, however, conditions improved as supplies of iron ore and scrap increased as well as that of natural gas. The world market demand for and price of steel increased, which led to a revival of the country's steel production.

Iron Ore.—Russia and Ukraine were the major iron ore producers in the region. As of January 1, 2002, according to official Russian reserve calculations, Russia had 172 iron ore deposits with a reserve base that totaled 56.6 Gt with an average iron content of 35.87% and reserves that totaled about 25 Gt. Mining was taking place at 53 deposits. The iron ore reserves are composed of magnetite and hematite-magnetite ores with the average iron content in the magnetite ores ranging between 31% and 35% and in the hematite ores, between 40% and 50%. Open pit production accounted for more than 90% of ore production. In 2006, Russia's iron ore mining industry had stable economic conditions, which enabled the country to achieve a 7.3% growth in output to 102 Mt compared with almost 97 Mt in 2005. The

growth was fueled by an increase in domestic demand for pig iron and also by the increased demand for iron ore on the world market. The major iron ore producers remained the enterprises in the Kursk Magnetic Anomaly (KMA) and in the North West region, which produced 56% and 17%, respectively, of total output. Growth was specifically notable at the Lebedinskiy and the Mikhaylovskiy mining and beneficiation complexes in the KMA and at the Korshunovskiy mining and beneficiation complex in the North West region..

Despite recent increases in iron ore production, Russia would need significant investment to increase iron ore output because mining conditions for iron ore were becoming more difficult owing to the increasing depths of the open pits. Expansion of iron ore mining was planned in the KMA; the expansion was expected to require large investment, however, because the ore lies under a thick layer of sedimentary rock that is inundated with water. Efforts were also underway to develop technology to mine deeper lying high-grade ore deposits in the KMA.

Ukraine reportedly has about 30 Gt of iron ore reserves. Reserves were reportedly adequate for between 15 and 20 years at the current rate of extraction. Two-thirds of the iron ore reserves are located in the Krivoy Rog basin, where practically all iron ore mining takes place. Although reserves were adequate to maintain production at the current rate past 2013, a large increase in production would require significant investment to develop underground mines to access additional reserves and to process large accumulations of iron-rich tailings. Also, Ukraine's reserve base was considered adequate to sustain production for another 50 to 80 years and was expected to play a key role in the development of Ukraine's ferrous metals sector.

Foreign investment in Ukraine's iron ore mining sector was resulting in increasing the country's iron ore output. In October 2005, the Krivoyrozh steel mill was sold to Arcelor Mittal Steel. Plans called for Arcelor Mittal to invest to increase the iron ore output at the mines it purchased along with the plant. The company planned to increase iron ore output at these mines from about 8 Mt of concentrate in 2005 to 13 Mt in 2009 and eventually to 16 Mt/yr.

In the northern and southern Balkans, iron ore output continued on a small scale as producers developed more electric-arc-furnace steel production and replaced domestic iron ore production with imports from the CIS. Some expansion of iron ore output was planned in Bosnia and Herzegovina. Sweden remained the only significant source of iron ore in Western Europe.

Central Eurasia was expected to continue to be the region's main producer of iron ore through 2013, with a modest increase in production projected for this area. In Central Europe, an increase in production was projected in Bosnia and Herzegovina. Overall, about a 15% increase in iron ore output was projected for the entire region by 2013 (table 10).

Lead and Zinc.—Central Eurasia, Central Europe, and Western Europe were relatively minor mine producers of lead. Europe and Central Eurasia continued to be an important producing region for primary and secondary refined lead. Although Western Europe was a significant producing region for primary refined lead, it produced an even larger share of the world's reported output of secondary refined lead. Data on recovery and use of secondary lead in Central Eurasia has remained incomplete, which makes it difficult to compare production levels for this commodity. In Central Eurasia, only Kazakhstan was a major producer of primary refined lead. Central Europe produced a small share of the world's output of primary and secondary lead.

Poland remained the leading mine producer of lead ore in the entire region followed by Sweden and Ireland. In the region, after Sweden and Ireland, the next ranking lead mining countries were Kazakhstan followed by Russia. Lead was one of the few metals where the leading mining countries in the region were in Western Europe rather than in Central Eurasia.

Mine production of lead could decrease through 2013, with most of the increase in mine output projected for Greece, Kazakhstan, and Russia, which would be offset mostly by production decreases in Poland and Sweden. The low quality of lead-zinc ores in Russia (in terms of metal content) compared with other parts of the world was expected to inhibit investment in their development, which would make it more difficult to substantially increase production. Reported plans for Europe and Central Eurasia until 2013 indicate an increase in the production of primary refined lead, with output buoyed by anticipated production increases in Central Eurasia, mainly in Kazakhstan and Russia. Zinc metal production in Central Eurasia was also projected to increase mainly in Kazakhstan and Russia.

Kazakhstan was the major lead and zinc producing country in the CIS and was also the leading producer of these metals in the Soviet era. The sector's major enterprise was the company Kazzinc, which controlled most lead and zinc production, except for significant zinc output associated primarily with copper, which was controlled by Kazakhmys. Another lead and zinc producer in Kazakhstan, ShalkiyaZinc N.V., was preparing to significantly increase production.

In 2006, Kazzinc produced 289,095 t of zinc, which exceeded its production target of 288,000. Plans called for spending $126 million of the planned investment on Kazzinc's New Metallurgy project, which included construction of a copper smelter and modernization of lead production facilities at its Ust-Kamenogorsk metallurgical plant.

In 2004, Kazzinc was awarded the tender for exploration and development of the Dolinnoe and the Obruchevskoe deposits near the town of Ridder in eastern Kazakhstan; mining was expected to commence in 2011. Plans called for mining 600,000 t/yr of ore from both deposits, which would yield a projected 25,600 t/yr of zinc and 51,000 troy ounces per year (about 1.6 t/yr) of gold.

ShalkiyaZinc had its main operations in southern Kazakhstan, which included the underground Shalkiya Mine in the Kyzylorda region; a processing plant near the town of Kentau, which is located 165 km southeast of the Shalkiya Mine; and a greenfield Talap deposit, which is located 30 km southwest of the Shalkiya Mine. One of the company's major assets was the Shalkiya deposit, which reportedly is the largest known zinc deposit in Kazakhstan and accounted for approximately 30% of the country's total zinc reserves. Based on a new audit of its reserves conducted by AMC Consultants of the United Kingdom according to the Australasian Joint Ore Reserves Committee (JORC) system, ShalkiyaZinc increased its plan to mine lead-zinc ore at its Shalkiya deposit to 4 Mt/yr from 3 Mt/yr by

2010. According to the latest audit, ShalkiyaZinc's probable ore reserves at its Shalkiya deposit totaled 6.6 Mt of zinc and 1.7 Mt of lead and measured resources totaled 8.2 Mt of zinc and 2.1 Mt of lead. The new audit showed that the zinc content of ore that could be profitably mined was far lower than 3%, which was the previous assessment. ShalkiyaZinc had a contract with Outokumpu Technology Oy of Finland to construct a new ore processing plant at the deposit.

Following Kazakhstan, Russia was the next ranked producer of lead and zinc in the CIS. The UMMC, which was Russia's second ranked copper producer and which had facilities centered in the Urals, was also one of Russia's major lead and zinc producers. UMMC planned to increase zinc metal production to 250,000 t in 2012, which would be an increase of 184% compared with the 88,000 t of zinc the company produced in 2006. Plans called for UMMC to construct a 140,000- to 150,000-t/yr-capacity zinc smelter in the Sverdlovsk region, which would be capable of processing all UMMC's raw materials. The new smelter was to be commissioned in the summer of 2008. Plans called for UMMC to produce 87,500 t in 2007 and 2008 and to increase production to 110,000 t in 2009. In 2006, UMMC processed most of its zinc concentrate at its zinc refinery in Vladikavkaz, which had the capacity to produce 90,000 t/yr of zinc.

In 2006, UMMC produced 42,000 t of lead, with production of 28,000 t at its Elektrozinc enterprise in Vladikavkaz and 14,000 t at its Uralektromed enterprise. UMMC planned to increase production at Elektrozinc by 79% to 50,000 t of lead by 2010, with output in 2007 targeted at 30,000 t.

Siberian Polymetals (a subsidiary of UMMC) planned to commission the Zarechenskiy Mine in June, which would increase polymetallic ore production by 100,000 t/yr in the first stage and would reach a design capacity of 300,000 t/yr of ore in 2009. In 2007, the new mine was projected to produce 30,000 t of ore. Reserves were reportedly 1.3 Mt of ore.

Nickel.—Russia was the world's leading producer of nickel. The majority of Russia's output was obtained from mixed sulfide ores at Noril'sk's operations in East Siberia and, to a lesser degree, from its operations on the Kola Peninsula. In 2006, Noril'sk, which was the world's leading nickel producer, produced 244,000 t of nickel metal products compared with 243,000 t in 2005; this level of production was in keeping with the company's production targets. Russia also produced nickel from laterite ores in the Ural Mountains. In Western Europe, relatively small quantities of nickel were mined in Finland and Greece from laterite deposits. In 2006, Russia produced about 21% of the world's refined nickel, and the countries of Western Europe produced about 8%.

In 2006, development was underway at Norilsk's Severny-Gluboky underground mine on the Kola Peninsula; when completed, the mine would have an annual capacity of 6 Mt of disseminated ore. Commissioned capacity at Severny-Gluboky was 1 Mt/yr in 2006. Longer-range plans for Noril'sk called for increasing the total annual ore production on the Kola and the Taymyr Peninsulas to 26 Mt by 2015 from 21.8 Mt in 2006. Production on the Taymyr Peninsula was projected to increase to 18.5 Mt in 2015 from 14.127 Mt in 2006, with the production of nickel-rich ore (grading 2.5% nickel, 2.25% copper, and 5 to 100 g/t PGM) and of cuprous ores (grading 0.2% to 2.5% nickel, 1% to 15% copper, and 5 to 50 g/t PGM) reaching levels of 7.5 Mt and 5.5 Mt, respectively; production of disseminated ores (grading 0.2% to 1.5% nickel, 0.3% to 2% copper, and 2 to 10 g/t PGM) was projected to reach 5.5 Mt.

The key projects that would enable Noril'sk to achieve its production target of 7.5 Mt/yr of nickel-rich ore on the Taymyr Peninsula were the development of the Skalisty Mine, which would have a total capacity of 3 Mt/yr, and the mining of lower horizons of the Taymyrsky Mine, which would increase total output at Taymyrsky to 4 Mt/yr by 2011. Production on the Kola Peninsula was projected to remain at about 7.5 Mt/yr, which would be achieved by commissioning the Severny-Gluboky Mine at its design capacity of 6 Mt/yr by 2012; production from Severny-Gluboky would offset the decommissioning of the Tsentralnaya open pit. Noril'sk's investment in its nickel operations in the period up to 2010 apparently would result in only modest increases in production, although a significant reduction in production that could have occurred because of decreasing ore grades would be averted.

Platinum-Group Metals.—Russia accounted for almost all mine output of platinum-group metals (PGM) in Europe and Central Eurasia. Small amounts of platinum and palladium also were mined by Finland, Poland, and Serbia. Russia and South Africa were the only two major producers of PGM in the world. Russia was the world's second ranked producer of PGM after South Africa in 2006. Russia's PGM output in contrast to that of South Africa was predominately palladium owing to a higher ratio of palladium to platinum in Russian ores than in South African ores.

Both metals have major applications in the industrial sector. Palladium and platinum and, to a lesser extent, rhodium are critical components of catalytic converters, which control automobile emissions, and platinum is the critical catalytic element in the Proton Exchange Membrane (PEM) fuel cell under development to power automobiles. PGM will be in much greater demand as the world's automobile fleet increases and is equipped with catalytic converters. As legislation calling for stricter automobile emissions controls is enacted, greater loadings of PGM in catalytic converters will likely be required. Also, the need for alternative sources of energy to oil could result in the development of a hydrogen-based economy powered by fuel cells that use platinum as a catalyst.

Noril'sk mined more than 95% of Russia's PGM output primarily from its deposits at its Polar Division in East Siberia, but the company also mined a small amount of PGM at its operations on the Kola Peninsula. PGM (mostly platinum) not from Noril'sk was mined from placer deposits in the Russian Far East, Siberia, and the Ural Mountains. In 2006, output at Noril'sk totaled 3,164,000 troy ounces (97.4 t) of palladium and 752,000 troy ounces (23.4 t) of platinum, which was a slight (0.9%) increase compared with that of 2005; the increase was the result of the increased content of PGM in the ore. Based on the results of an independent audit conducted in accordance with the standards of the JORC, proven and probable reserves of palladium on the Taymyr Peninsula exceeded 63 million troy ounces (about 1,960 t) and more than 16 million troy ounces of platinum (about 500 t) at a combined grade of 7.54 g/t PGM.

Industrial Minerals

Diamond.—Russia was the region's only diamond producer. In 2006, Russia's diamond mine production increased by less than 1% to 38,360,810 carats. Russia mined 38 million carats of diamond in 2005. Mine production increased in value to $2.575 billion in 2006 from $2.531 billion in 2005. Russia exported about 35 million carats of uncut diamond valued at $1.746 billion in 2006, which included exports of diamond from the State Precious Metals and Gemstones Repository (Gokhran). Russia exported about 37 million carats of uncut diamond worth $1.687 billion in 2005.

ALROSA Company Ltd. accounted for 97% of Russian diamond production and about 25% of world rough gem diamond production. Its major mining operations were located in the Sakha (Yakutia) Republic, but in 2005, it commenced production at the Lomonosov diamond deposit in the northern European part of Russia in Arkhangelsk oblast.

ALROSA planned to expand its underground mining operations and its exploration activity in Sakha-Yakutiya. According to the company's president, the 2005 program, which is based upon ALROSA's 10-year development guidelines, called for the expansion of underground mine production as its first priority by gradually switching to underground mining at open pits to extract diamond ore reserves. To maintain stable operations, ALROSA also would need to increase ore reserves by carrying out intensive prospecting for new diamond deposits. The company planned to increase investment in exploration significantly.

Mineral Fuels and Related Materials

Most of the countries in Western and Central Europe were net importers of energy. With the exception of North Sea hydrocarbon production, Western Europe's sources of energy were expected to continue to be mainly based on imports from the Middle East and the CIS area. Major increases in energy consumption in the near term were not anticipated.

In Central Europe, domestic production of brown coal and lignite for electric power generation was likely to be maintained to reduce the need for imported natural gas and petroleum, which had been largely supplied by the CIS. Poland's hard coal industry was expected to continue to modernize and to play an important regional role in the energy field. Lignite, which was a fuel mainly used to power thermal electric power stations, continued to be an important source of energy in Central Europe and the Balkans.

Russia and other CIS oil and gas producers were expected to continue to be among the major providers of hydrocarbons to the world market. The rate of increases of future deliveries of these commodities to the world market, along with the successful exploration and development of new deposits, would depend in part on the resolution of pipeline and transport issues for their delivery.

Coal.—The CIS was the major coal producing region in Europe and Central Eurasia. Coal was produced in a large number of CIS countries, with Russia, Kazakhstan, and Ukraine, in that order, as the major coal producers. In 2006, Poland remained Central Europe's leading producer of anthracite, bituminous coal, and lignite. Poland's hard coal industry was expected to continue to modernize and to continue to play an important regional role in the energy sector.

Russia's coal production in the past several years had been increasing as the Russian economy had been growing and domestic demand for coal increasing.

Revised projections for Russian coal production in a moderate case scenario called for production to increase to 410 Mt/yr by 2015 and 470 Mt/yr by 2020. Earlier projections had called for coal production in the moderate scenario to increase to 375 Mt/yr by 2020. As foreseen in the country's energy strategy program, coal production must increase by more than 100 Mt/yr by 2015 and by more than 160 Mt/yr by 2020 to meet the goals of the energy strategy program.

As of January 2006, Russia had in operation 97 underground coal mines and 139 open pits with a total capacity to mine about 325 Mt/yr of coal. The country's coal reserves were estimated to total about 200 Gt. Reserves were adequate to ensure coal output for centuries, even at double to triple the country's current output. The Kuznetsk Basin (Kuzbas) was the country's main producing region. The Kuzbas accounted for more than 56% of Russia's coal output and provided 80% of the metallurgical coal consumed domestically. Reserves in the Kuzbas contained all grades of hard coal, which were suitable for use in energy generation and coke production.

Although the creation of additional coal production capacity through upgrading and expansion of existing mines and development of new mines was potentially possible based on reserves, creating new capacity would require a level of investment in the coal sector, including investment in new technology far in excess of the historic level of investment in the past 5 years, which casts doubt on the feasibility of the planned expansion. An optimistic growth scenario would depend to a large extent on an increase in foreign investment, particularly from Chinese, Japanese, and South Korean companies.

In 2006, 14 coal mining enterprises in Russia were in the stage of design and construction and, when completed, would have a total combined capacity of 14 Mt/yr; 4 beneficiation plants were also in this stage and, when completed, would have a total combined capacity of 4 Mt/yr. Growth in coal production would come from the eastern part of the country from the large Kansk Achinsk brown coal basin; the Pechora Basin, which has significant reserves of metallurgical coal; and from the South Yakutiya basin. Coal production in the current large producing areas in the European part of Russia and the Ural Mountains was projected to stabilize; under favorable circumstances, however, production in this area could increase by 30 Mt/yr.

Ukraine has 34.1 Gt in proven coal reserves, which accounted for more than 60% of the FSU's total coal reserves. In 2006, Ukraine increased coal production by 1.7% to 75.284 Mt of raw coal. Metallurgical coal production decreased compared with that of 2005 to 30.145 Mt, but steam coal production increased by 10.9% to 50.112 Mt. Plans called for increasing coal production to 100 Mt in 2008, with 50 new coal faces scheduled to go into production by the end of 2007. Ukraine's energy strategy for the period to 2030, which was approved by the Government in 2006, called for increasing coal output to 130.3 Mt.

In December 2007, Ukraine's Coal Industry Ministry had selected for development seven of the most promising hard coal deposits, which had combined reserves in excess of 1 Gt. Among the deposits were the Borzhikovskaya, the Dobropolskaya-Kapitalnaya, the Krasnolimanskaya-Glubokaya, and the Novosvetlovskaya in the Luhansk region, and the Chernohradskaya No. 3 and Tyaglovskaya No. 1 in the Lviv region. Mines at the seven new deposits would have a combined capacity to produce 17.7 Mt/yr of hard coal.

Ukraine's Coal Industry Ministry stated that Ukraine has explored brown coal reserves of 6 to 8 Gt with an average ash content of 20%. Most of the reserves are located in the Dnipr basin, as well as in the Cherkassy Kharkiv, Kirovohrad, Poltava, and Zhitomir regions. The Ministry planned to attract investors to develop deposits in the Dnipr brown coal basin, according to an investment project that it posted on its Web site on August 15, 2006. The project called for developing two deposits, the Aleksandriiskoye and the Verkhnedniprovskoye deposits, which had reported reserves of 236 Mt, for which the explored sections were considered suitable for open pit development. The Ministry calculated that these deposits had the potential to produce 5 to 6 Mt/yr by open pit mining. Mines at the deposits were projected to come onstream in 2 years.

According to Kazakhstan's classification system for mineral reserves, total geologic coal resources were assessed to be between 150 Gt and 160 Gt, of which 62% is brown coal and the remainder, bituminous coal. In 2006, Kazakhstan produced 96.3 Mt of coal, which was an 11.5% increase compared with production in 2005.

Kazakhstan had plans to increase production of coal, almost all of which would be subbituminous. Plans for 2007 called for implementing development projects in the Ekibastuz subbituminous coal basin and closing unprofitable coal mines in the Karaganda basin. Long-range plans called for Kazakhstan to increase its annual coal production to 145.6 Mt by 2020, according to the Coal Industry Department of the Energy and Mineral Resources Ministry. Production of metallurgical coal was projected to increase to 24.3 Mt in 2020 from 12.9 Mt in 2006, and production of steam coal, to 121.3 Mt from 83.4 Mt. Achieving the targeted level for 2020 would require an investment of $3.9 billion, of which $2.1 billion would be targeted for metallurgical coal development, and $1.8 billion, for steam coal.

Kazakhstan also planned to reduce coal consumption by 45% by 2024 as part of its program to achieve sustainable growth. At the same time, the use of renewable energy was targeted to increase to 5% in 2024 from 0.2% in 2006.

Natural Gas.—Central Eurasia (mainly Russia) produced a substantial share of the world's production of natural gas, which in 2006 amounted to about 28.5% of the world total. Europe, excluding the CIS, accounted for about 11% of world output. Russia was the world's leading natural gas producer and exporter and it has the world's largest natural gas reserves, with 1,680 trillion cubic feet (almost 47.6 trillion cubic meters) of reserves, which is almost twice the size of the reserves in the next ranked country, Iran.

In 2006, natural gas production in Russia increased by about 3% compared with that of 2005 to more than 656 billion cubic meters. In 2006, OAO Gazprom sold 161.5 billion cubic meters of gas to European countries, and it sold an additional 101 billion cubic meters to the Baltic States and the CIS. Almost 90% of the country's natural gas was produced in the Ndym-Pur-Taz (NPT) region in northern West Siberia. Gasfields in this region, however, were in decline, as reserves were being depleted. Owing to the growth in the Russian economy, which was causing an increase in domestic demand, and the country's long-term export commitments to Europe, Russia would need to increase gas output to meet demand, which would entail incurring 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 could be the Yamal Peninsula, where large reserves were discovered in several fields.

Gazprom, a joint stock company in which the Russian Government was the largest stakeholder, produced 83.9% of the country's gas output in 2006 and controlled and operated the country's natural gas trunk pipeline network. Although Gazprom projected that between 2008 and 2030 it would increase natural gas output, most increases in natural gas output were projected to come from independent gas companies such as Itera, Northgaz, and Novatek, which, although blocked from the export market, had found a niche supplying the domestic market. Priorities for Gazprom were the development of gasfields on the Yamal Peninsula and the Arctic continental shelf and in East Siberia and the Far East.

Kazakhstan and Turkmenistan, which were large regional producers of natural gas, also could be major factors in the region's expected increase in output. In 2007, the Oil and Gas Journal revised upwards its estimate of proven natural gas reserves in Kazakhstan to 100 trillion cubic feet (about 2.8 trillion cubic meters), which was roughly equal to Turkmenistan's natural gas reserves.

Although Kazakhstan produced about as much natural gas in 2006 as it consumed, the country was poised to become a net exporter in 2008 based on production at the Karachaganak and the Tengiz fields. Natural gas production in Kazakhstan was almost entirely associated gas. More than 70% of the country's natural gas was produced by international consortia at the Karachaganak and the Tengiz fields. Most of Kazakhstan's natural gas reserves are located in the west of the country, with about 25% of its proven reserves located in the Karachaganak field. This oil and gas condensate field reportedly has proven natural gas reserves of 48 trillion cubic feet (1.36 trillion cubic meters). The consortium developing Karachaganak expected to produce 900 billion cubic feet (about 25.5 billion cubic meters) by 2012.

Another important natural gas field, Amangeldy, is situated in the south of the country near Zhambul. Exploratory drilling in 2001 indicated reserves of up to 1.8 trillion cubic feet (about 51 billion cubic meters). The field was being developed primarily by Kazmunaigas, and the company expected initial production of roughly 35 billion cubic feet per year (about 991 million cubic meters per year).

According to the 15-year strategy of the Kazakhstan Ministry for Energy and Mineral Resources, the country plans to increase its natural gas production to 1.66 trillion cubic feet (about

47 billion cubic meters) by 2010, and to 1.84 trillion cubic feet (about 52 billion cubic meters) by 2015.

Turkmenistan was one of the leading countries in the world in the quantity of its natural gas reserves. All gas pipelines that connect Turkmenistan to world markets had been owned by the Russian company Gazprom and routed through Russia. In the 1990s, Turkmenistan was denied access through this pipeline network to world markets, and thus Turkmenistan's incentive to produce natural gas was greatly reduced. Turkmenistan was negotiating gas supply agreements with Russia and Ukraine that would increase Turkmenistan's gas exports to these countries. An agreement signed with Russia in September 2006 indicated that Turkmenistan would increase exports of natural gas from about 6 billion cubic meters in 2005 to about 50 billion cubic meters in 2007 and then to about 80 billion cubic meters in 2009 where it would remain until 2028. A portion of this gas sent to Russia would go to Ukraine.

The limited capacity of the existing natural gas pipelines and lack of alternative natural gas export routes constrained Turkmenistan's natural gas export potential and made exports vulnerable to disruptions. A Trans-Afghan pipeline (TAP) was under consideration to export Central Asian natural gas through Afghanistan to Pakistan. The majority of this gas would come from Turkmenistan's Dauletabad field, which, according to authorities in Turkmenistan, holds more than 60 trillion cubic feet (almost 1.7 trillion cubic meters). If verified, it would make this field the fourth largest in the world.

In spring of 2006, Turkmenistan's President signed an agreement with China to build an export pipeline to the east to export Turkmenistan's gas. According to the agreement, in the first phase of the project (starting in 2008), Turkmenistan was to deliver about 30 billion cubic meters per year of gas through Uzbekistan and Kazakhstan to Urumci in western China and beyond to Shanghai, and then to increase these volumes to up to 50 billion cubic meters per year by 2010. Experts have cast doubt on the project's feasibility for a number of reasons, including a lack of details about the financing and construction. Turkmenistan's various export commitments far exceed its current production and it is not clear that additional production could be commissioned in time to meet these commitments.

In 2006, Azerbaijan produced almost 6.1 billion cubic meters of natural gas, which was a 6% increase compared with that of 2005. About 60% of natural gas production was produced by Azneft, which was a subsidiary of State Oil Company of Azerbaijan (SOCAR). The remainder was produced by joint ventures, of which the leading joint venture in terms of production was the Azerbaijan International Operating Company (AIOC). In 2008, increases in production from SOCAR and the Shah Deniz gas and condensate field could increase the country's production to more than 500 billion cubic feet (almost 14.2 billion cubic meters) per year. Government sources in Azerbaijan predicted that the country would produce as much as 1.1 trillion cubic feet (more than 31 billion cubic meters) per year by 2011.

Almost all the natural gas produced in Azerbaijan came from offshore fields. The country's leading natural gas field was the Bakhar oilfield and gasfield, which is located off the southern tip of the Absheron Peninsula and which accounted for almost one-half of the country's natural gas output.

Azerbaijan's major natural gas production increases were expected to come from the development of the Shah Deniz offshore natural gas and condensate field, which was estimated by industry analysts to be one of the world's largest natural gas field discoveries of the past 20 years. Shah Deniz, which is located offshore approximately 60 miles southeast of Baku, was being developed by the Shah Deniz consortium, whose members were BP p.l.c., which was headquartered in the United Kingdom; LukAgip (a joint venture of OAO LUKOIL Co. of Russia and Agip, which was a subsidiary of Eni S.p.A of Italy); National Iranian Oil company (NICO); SOCAR; Statoil ASA of Norway; Total S.A. of France; and Turkiye Petrolleri Anonim Ortaklig (TPAO) of Turkey. According to BP, which was the project operator, Shah Deniz has potential recoverable reserves of about 15 trillion cubic feet (or almost 425 billion cubic meters) of natural gas and 600 million barrels (or almost 82 Mt) of condensate. Using different and varying criteria for defining reserves, other industry and trade sources have estimated the field's size to be as much as 35 trillion cubic feet (about 990 billion cubic meters).

With the development of Shah Deniz, Azerbaijan could eventually become a net natural gas exporter, although Azerbaijan would remain a net importer during 2007. Azerbaijan's natural gas exports would mainly be transported through the South Caucasus Pipeline, which is also known as the Baku-T'bilisi-Erzurum Pipeline. It will run parallel to the Baku-Tblisi-Ceyhan (BTC) pipeline for most of its route before connecting to the Turkish gas pipeline network near the town of Horasan. The pipeline was expected to transport 233 billion cubic feet (about 6.6 billion cubic meters) per year initially, and this amount could be increased eventually to 700 billion cubic feet (almost 20 billion cubic meters) per year.

Petroleum.—Central Eurasia was the leading oil producing region in Europe and Central Eurasia and one of the leading oil producing regions in the world. Oil production in Central Eurasia was centered mainly in Russia in West Siberia. Development of major new petroleum resources, however, was taking place offshore in the Caspian Sea by the littoral states in conjunction with Western firms. The countries of the Caspian Sea region were important to world energy markets because of the large oil and gas reserves in this region that were being developed. Proven oil reserves for the entire Caspian Sea region (estimated to be between 18 billion and 35 billion barrels, or about 2.5 and 4.8 Gt, respectively) were comparable to those of the United States (22 billion barrels, or about 3 Gt) and greater than those in the North Sea (17 billion barrels, or 2.3 Gt); estimated undiscovered oil resources could provide another 235 billion barrels (about 32 Gt) of oil.

For the past decade, Azerbaijan's offshore oil deposits in the Caspian Sea had been a major focus for global oil development. Azerbaijan was the leading contributor to non-Organization of the Petroleum Exporting Countries (OPEC) growth in the global oil supply during 2006. Growth in oil production had come almost exclusively from growth at the Azeri-Chirag-Guneshli (ACG) group of fields. The ACG group of fields produced more than 65% of the country's oil, and this share was expected to increase. According to industry journals, estimates of Azerbaijan's proven crude oil reserves range between

7 billion and 13 billion barrels, but SOCAR estimated proven oil reserves to be 17.5 billion barrels based on the Soviet reserve classification system (which is not based on economic criteria similar to that used to evaluate reserves in market economy countries).

Azerbaijan had signed more than 20 major agreements to develop oilfields with about 30 companies from 15 countries. Azerbaijan exported almost all its oil through the newly built BTC pipeline, which bypasses Russia. Azerbaijan began filling the BTC pipeline in 2005. The achievement of capacity flow through BTC was expected to enable oil production from the offshore ACG project to increase. Increasing oil production and the concomitant increased oil revenues were expected to contribute significantly to the growth of Azerbaijan's GDP.

Kazakhstan was poised to become an even more significant supplier to world oil markets in the next decade. In 2006, Kazakhstan produced 64.8 Mt of oil and gas condensate, which was 5.5% more than in 2005, and exported 57.1 Mt. Kazakhstan has most of the largest known oilfields in the Caspian Sea. The country's combined onshore and offshore proven hydrocarbon reserves were estimated to be between 9 billion and 40 billion barrels (1.2 and 5.4 Gt), which is comparable to Algeria on the lower end and Libya on the higher end of the estimates. Kazakhstan's major oil producing fields included the CNPC-Aktobemunaigas, the Karachaganak, the Kumkol, the Mangistaumunaigas, the Tengiz, and the Uzenmunaigas, which accounted for about 70% of hydrocarbon production in the country. Other production was centered in smaller fields.

Oil production growth was expected to increase in the next decade primarily from the Tengiz field, where production was expected to double, and from the Kashagan offshore field, which could produce an additional 1 million barrels per day (Mbbl/d) after 2011. The Tengiz field, which had been under development since 1993 by the Tengizchevroil joint venture, was the country's leading oil producer; its recoverable crude oil reserves were estimated by Chevron Corp. to be between 6 billion and 9 billion barrels (800 Mt and 1.2 Gt). According to Chevron, Tengiz could potentially produce 700,000 barrels per day (bbl/d) by 2010 if its sour gas injection program is fully implemented.

The Kashagan field, which is located off the northern shore of the Caspian Sea near the city of Atyrau, is the largest oilfield outside of the Middle East and the fifth largest in the world (in terms of reserves). The field's recoverable reserves were estimated to be 13 billion barrels (1.77 Gt) of oil equivalent, with total reserves-in-place of about 38 billion barrels (5.2 Gt) The field could produce about 300,000 bbl/d by late 2011 with full-scale commercial production expected to begin in 2013. Estimated peak production from Kashagan was estimated to be about 1.3 Mbbl/d.

In 2006, Russia's production of crude oil increased by 2.3% to about 480 Mt and made Russia the world's leading oil producer, overtaking Saudi Arabia. Russia remained the world's second ranked oil-exporting nation. Since 2004, however, the rate of growth in Russian oil production had leveled off to somewhat above 2% annually, which has called into question the long-term growth prospect for Russia's oil. Slow growth had been attributed to lack of adequate investment, although questions had also been raised regarding the country's reserve potential. According to data in the BP Statistical Review of Energy 2006, Russia's proven reserves of oil and gas condensate at the end of 2005 totaled 10.2 Gt, which yielded a reserves-to-production ratio of 21.4 years. However, reserves in fields that were in operation would be depleted within a decade. In 2006, additions to reserves exceeded production. Some Russian officials believed that Russia has a large resource base that could serve to replenish oil reserves if adequate investment is devoted to exploration.

Most of Russia's oil reserves are located in West Siberia between the Ural Mountains and the Central Siberian Plateau. Little exploration had occurred in East Siberia despite the promise of large resources. For the coming decade, Russian oil production was projected to grow at an annual rate of about 1.5% to 2.5% annually owing in part to increased output from oil development on Sakhalin Island, which 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 were under development, which could produce 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. The new fields being developed during the next 5 years that could help stem production losses at older fields included development projects on Sakhalin Island, the West Salymskoye project (a Royal Dutch Shell plc joint venture), the TimanPechora project (a joint venture of Lukoil of Russia and ConocoPhillips Co. of the United States), the Prirazlomnoye offshore project (a joint venture of Russian companies Rosneft and Gazprom), and the Vankorskoye and Komsomolskoye development project (Rosneft).

Uranium.—Central Eurasia was one of the world's leading uranium mining regions and accounted for 30.6% of world production. The three major uranium mining countries were Kazakhstan, which produced about 14% of world production; Russia, which produced about 8%; and Uzbekistan, which produced about 6%. Ukraine produced a smaller amount of uranium. In the rest of Europe, Bulgaria and the Czech Republic mined uranium and Germany produced a small amount of uranium from reprocessing waste materials from a closed uranium mining operation on the territory of the former German Democratic Republic.

Kazakhstan, which in 2006 produced 5,279 t of uranium (21% more than was produced in 2005), was planning by 2012 to become the world's leading uranium producing country. All uranium mining, processing, and trade were under the control of the state corporation Kazatomprom. Plans announced in May called for Kazatomprom to produce 17,500 t/yr of uranium by 2013, which would involve putting 12 new mines into operation by 2009. This plan revised upwards Kazatomprom's production goal for 2010 because of a reassessment of world demand. The company projected achieving a maximum output of 20,000 t/yr by 2016, which it could maintain until 2027.

Russian uranium production was controlled by the Corporation TVEL. TVEL fully supplied fuel to 73 nuclear powerplants in Russia and 13 other countries, to 30 research reactors in Russia and abroad, and to ship-propulsion reactors of the Russian fleet. TVEL held 17% of the world's nuclear fuel market. TVEL included enterprises that mined and processed uranium.

In 2006, under an initiative launched by Russia's President, a course was set for increasing nuclear power generation's share to 25% of the country's energy generation by 2030, which would involve building up to 40 new nuclear reactors in Russia. During 2006, TVEL devoted its efforts to the development of mining enterprises.

TVEL's Priargunsky Industrial Mining and Chemicals Association in the Chita region could increase uranium production by more than 50% by 2014 to 2015 to 5,000 t/yr. Plans called for Priargunsky to develop the Sixth and Eighth Mines. The Sixth Mine would be the main source of uranium and was scheduled to be producing 1,000 t/yr and the Eighth Mine 800 t/yr. With production from these two mines, Priargunsky could produce 5,000 t/yr. Considerable investment would be required to commission these new mines and also to implement associated measures to protect the environment.

Russia was establishing the Uranium Mining Company (UMC), which was registered on November 20, 2006, to consolidate its uranium mining assets in Russia and abroad. UMC would mine uranium not just in Russia but also abroad possibly in Australia and Canada. Plans called for UMC to be fully formed during the first half of 2008. This would require transferring the mining assets of TVEL to UMC, which would first become the trustee of these assets. The company would be fully established once Atomenergoprom, a holding company of civilian atomic energy enterprises, was formed. Russia's Prime Minister signed a resolution establishing Atomenergoprom, but the Government would have to issue another resolution approving the new holding's charter before it could be fully established. Atomenergoprom was scheduled to be formed by July 1, 2007.

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TABLE 1
EUROPE AND CENTRAL EURASIA: AREA AND POPULATION (2006)[1]

Region and country	Area (square kilometers)	Population (thousands)
Western Europe:		
Austria	83,870	8,193
Belgium	30,528	10,379
Cyprus	9,250	784
Denmark	43,094	5,451
Finland	338,145	5,231
France	547,030	60,876
Germany	357,021	82,422
Greece	131,940	10,688
Iceland	103,000	299
Ireland	70,280	4,062
Italy	301,230	58,134
Luxembourg	2,586	474
Malta	316	400
Netherlands	41,526	16,491
Norway	323,802	4,611
Portugal	92,391	10,606
Spain	504,782	40,398
Sweden	449,964	9,017
Switzerland	41,290	7,524
United Kingdom	244,820	60,609
Total	3,716,865	396,649
Central Europe:		
Albania	28,748	3,582
Bosnia and Herzegovina	51,129	4,499
Bulgaria	110,910	7,385
Croatia	56,542	4,495
Czech Republic	78,866	10,235
Estonia	45,226	1,324
Hungary	93,030	9,981
Latvia	64,589	2,275
Lithuania	65,200	3,586
Macedonia	25,333	2,051
Montenegro	14,026	631
Poland	312,685	38,537
Romania	237,500	22,304
Serbia	88,361	9,396
Slovakia	48,845	5,439
Slovenia	20,273	2,010
Total	1,341,263	127,730
Central Eurasia:		
Armenia	29,800	2,976
Azerbaijan	86,600	7,962
Belarus	207,600	10,293
Georgia	69,700	4,661
Kazakhstan	2,717,300	15,233
Kyrgyzstan	198,500	5,214
Moldova	33,843	4,467
Russia	17,075,200	142,894
Tajikistan	143,100	7,321
Turkmenistan	488,100	5,043
Ukraine	603,700	46,711
Uzbekistan	447,400	27,307
Total	22,100,843	280,082
Regional total	27,158,971	804,461

[1]Source: U.S. Central Intelligence Agency, The World Factbook 2006

TABLE 2

EUROPE AND CENTRAL EURASIA: GROSS DOMESTIC PRODUCT[1]

Region and country	Purchasing power parity		Annual
	Gross value (million dollars)	Per capita (dollars)	percentage change (constant prices)
Western Europe:			
Austria	299,245	36,215	3.3
Belgium	356,654	33,694	2.9
Cyprus	19,955	25,828	4.0
Denmark	194,830	35,896	3.9
Finland	173,046	32,859	4.9
France	1,956,775	31,893	2.0
Germany	2,668,947	32,432	2.9
Greece	304,007	27,333	4.2
Iceland	11,390	37,019	4.4
Ireland	172,228	40,669	5.7
Italy	1,714,954	29,348	1.8
Luxembourg	35,639	75,395	6.1
Malta	8,818	21,698	3.4
Netherlands	602,050	36,833	3.0
Norway	232,792	50,203	2.5
Portugal	220,379	20,818	1.3
Spain	1,267,934	28,772	3.9
Sweden	317,737	34,865	4.1
Switzerland	283,593	38,919	3.2
United Kingdom	2,018,812	33,351	2.9
Total	12,859,785	XX	XX
Central Europe:			
Albania	18,300	5,808	5.0
Bosnia and Herzegovina	25,520	6,460	6.2
Bulgaria	79,187	10,294	6.3
Croatia	63,532	14,309	4.8
Czech Republic	227,721	22,184	6.4
Estonia	25,749	19,149	11.2
Hungary	183,907	18,251	3.9
Latvia	35,102	15,298	11.9
Lithuania	53,406	15,735	7.7
Macedonia	16,093	7,879	3.7
Montenegro	5,362	8,909	6.5
Poland	567,696	14,884	6.2
Romania	225,613	10,426	7.9
Serbia	70,145	9,427	5.7
Slovakia	96,708	17,871	8.5
Slovenia	50,201	24,971	5.7
Total	1,744,242	XX	XX
Central Eurasia:			
Armenia	14,679	4,326	13.3
Azerbaijan	51,681	6,092	30.6
Belarus	94,738	9,766	10.0
Georgia	17,763	4,036	9.4
Kazakhstan	150,469	9,962	10.7
Kyrgyzstan	9,451	1,819	3.1
Moldova	9,110	2,691	4.0
Russia	1,881,107	13,173	7.4
Tajikistan	10,678	1,673	7.0
Turkmenistan	23,326	4,570	11.1
Ukraine	290,573	6,253	7.1
Uzbekistan	57,058	2,115	7.3
Total	2,610,633	XX	XX
Regional total	17,214,660	XX	XX

XX Not applicable.

[1]Source: International Monetary Fund, World Economic Outlook Database 2006.

TABLE 3
SELECTED EXPLORATION ACTIVITY IN EUROPE AND CENTRAL EURASIA IN 2006

Country	Site	Commodity[1]	Company	Phase[2]	Type[3]
Albania	Korçë	Ni	European Nickel plc.	Exploration	New
Armenia	Hankavan/Toukhmanuk	Au	Global Gold Corp.	Exploration	New
Do.	Tukhmanuk	Au	do.	Production	Extension
Bulgaria	Ogosta	Au	Balkans Gold plc.	Exploration	New
Do.	Tashlaka Hill	Au	Asia Gold Corp.	Exploration	Continuing
Do.	Trun/Nadejda	Au	Euromax Resources Ltd.	Exploration	New
Finland	Arctic	PGM	North American Palladium Ltd.	Exploration	Continuing
Do.	Haarakumpu	Au, Cu, Co	Belvedere Resources Ltd.	Exploration	Continuing
Do.	Hannukainen	Au, Cu	Northland Resources Inc.	Exploration	Continuing
Do.	Haveri/Ansomaki	Au	Northern Lion Gold Corp.	Feasibility	Extension
Do.	Keivitsa	Ni, Cu, Au, Pd, Pt	Scandinavian Gold Ltd.	Exploration	Continuing
Do.	Kettukuusikko	Au	Taranis Resources Inc.	Exploration	New
Do.	Kiimala/Kopsa	Au	Belvedere Resources Ltd.	Exploration	New
Do.	Kittila (formerly Suurikuusikko)	Au	Agnico-Eagle Mines Ltd.	Developing	Extension
Do.	Koillismaa-Naranka	Ni, Cu, PGM	Nortec Ventures Corp.	Exploration	Continuing
Do.	Kylylahti	Cu, Co	Vulcan Resources Ltd.	Exploration	Continuing
Do.	Oijarvi	Au, Ag	Agnico-Eagle Mines Ltd.	Exploration	Continuing
Do.	Orivesi	Au	Dragon Mining NL	Producer	Extension
Do.	Osikonmäki	Au	Belvedere Resources Ltd.	Exploration	New
Do.	Peuna-aho	Ni, Cu, PGM	Vulcan Resources Ltd.	Exploration	Continuing
Do.	Talvivaara	Cu, Zn, Co	Metso Minerals Ltd.	Feasibility	Extension
Georgia	Lukhra	Au	Eastern Mediterranean Resources Public Ltd.	Exploration	New
Greece	Skouries	Au, Cu	European Goldfields Ltd.	Feasibility	Extension
Do.	Stratoni	Pb, Zn, Ag	do.	Producer	Extension
Greenland	Aappaluttoq	Ruby	True North Gems	Exploration	Continuing
Do.	Black Angel	Zn, Pb, Ag	Angus and Ross plc.	Exploration	Continuing
Do.	Garnet Lake	Diamond	Hudson Resources Inc.	Exploration	Continuing
Do.	Isotoq	Ti, V	MDA Investment Pty. Ltd.	Exploration	Continuing
Do.	Malmbjerg	Mo	International Molybdenum plc.	Exploration	Continuing
Do.	Seqi	Olivine	Minelco AB	Producer	Extension
Ireland	Bohaun	Au, Ag	Alba Mineral Resources plc.	Exploration	Continuing
Do.	Curraghinalt	Au	Tournigan Gold Corp.	Exploration	Continuing
Do.	Galmoy area	Zn, Pb, Ag	Lundin Mining Corp.	Exploration	Continuing
Do.	Keel	Zn	do.	Exploration	Continuing
Do.	Lisheen	Zn	Anglo American plc.	Producer	Extension
Do.	Omagh	Au	Galantas Gold Corp.	Exploration	Continuing
Do.	Tara	Zn	Boliden Corp.	Producer	Extension
Italy	Poggio Pietricci	Au	Adroit Resources Inc.	Exploration	New
Do.	Unnamed	Au	do.	Exploration	New
Do.	Varallo	Ni, Cu, Co, PGM	Solid Resources Ltd.	Exploration	New
Kazakhstan	Akbastau	Cu, Ag	Kazakhmys plc.	Exploration	Continuing
Do.	Aktogay	Cu, Ag	do.	Feasibility	Extension
Do.	Artemyevskoe	Cu, Ag	do.	Producer	Extension
Do.	Boschekul	Cu, Ag	do.	Feasibility	Extension
Do.	Kempirsai	Ni, Co	Bekem Metals Inc.	Feasibility	Extension
Do.	Kerbay	Au	Alhambra Resources Ltd.	Exploration	New
Do.	Kosmurun	Cu, Ag	Kazakhmys plc.	Exploration	Continuing
Do.	Naimanjal/Baitimir/Beschoku	Ag, Au	Frontier Mining Ltd.	Exploration	Continuing
Do.	Sazhen	Au	Gold Aura Kazakhstan Ltd.	Exploration	New
Do.	Sekisovskoye	Au	Hambledon Mining plc.	Producer	Extension
Do.	Shaimerden	Zn	ZincOx Resources plc.	Producer	Extension
Do.	Shirotnaia	Au	Alhambra Resources ltd.	Exploration	Continuing
Do.	Tserkovka	Au	Hambleton Mining plc.	Exploration	New
Do.	Uzboy	Au	Alhambra Resources Ltd.	Production	Extension

See footnotes at end of table.

TABLE 3—Continued

SELECTED EXPLORATION ACTIVITY IN EUROPE AND CENTRAL EURASIA IN 2006

Country	Site	Commodity[1]	Company	Phase[2]	Type[3]
Kazakhstan—Continued	Varvarinskoye	Au, Cu	European Minerals Corp.	Developing	Extension
Do.	Voskhod	Cr	Oriel Resources plc.	Developing	Extension
Do.	Vostok	Cu	Scarborough Minerals plc.	Exploration	Continuing
Do.	Zhaman-Aybat	Cu, Ag	Kazakhmys plc.	Developing	Extension
Kosovo (Yugoslavia)	Unnamed	Cu	Phelps Dodge Corp.	Exploration	New
Kyrgyzstan	Aksur	Au	Palladex plc.	Exploration	New
Do.	Andash	Au, Cu	Aurum Mining plc.	Exploration	Continuing
Do.	Gavasai	Au	Monaro Mining NL	Exploration	New
Do.	Kumtor	Au	Centerra Gold Inc.	Producer	Extension
Do.	Obdilla	Au	Perseus Mining Ltd.	Exploration	New
Do.	Orgatash	Au	Eurasian Minerals Inc.	Exploration	New
Do.	Severny	Au	Centrasia Mining Corp.	Exploration	Continuing
Do.	Taldybulak	Au, Cu	Lero Gold Corp.	Exploration	Continuing
Do.	Tokhtonnisai	Au, Cu	do.	Exploration	New
Do.	Uzunbulak	Au	Kentor Gold Ltd.	Exploration	New
Norway	Gubbträsk	Au	Lappland Goldminers AB	Exploration	Continuing
Do.	Hurdal	Au	Crew Gold Corp.	Exploration	New
Do.	South Norway/Ertelien	Ni, Cu	Blackstone Ventures Inc.	Exploration	Continuing
Do.	Tjålmträsk	Au	Lappland Goldminers AB	Exploration	Continuing
Portugal	Aljustrel/Moinho	Zn	EuroZinc Mining Corp.	Feasibility	Extension
Do.	Cercal	Au, Cu	Northern Lion Gold Corp.	Exploration	New
Do.	Montemor	Au	Iberian Resources Ltd.	Feasibility	Extension
Do.	Neves-Corvo	Cu, Pb, Zn	EuroZinc Mining Corp.	Producer	Extension
Do.	Panasqueira	W	Primary Metals Corp.	Producer	Extension
Do.	Portalegre	Au	Iberian Resources Ltd.	Exploration	Continuing
Romania	Certej	Au, Ag	European Goldfields Ltd.	Feasibility	Extension
Do.	Colnic	Au, Cu	Carpathian Gold Inc.	Exploration	Continuing
Do.	Muntele Rotund	Au, Ag	Cloudbreak Resources Ltd.	Exploration	Continuing
Do.	Rovina	Au, Cu	Carpathian Gold Inc.	Exploration	Continuing
Russia	Adamikha	Au, Ag	Peter Hambro Mining plc.	Exploration	New
Do.	Albin	Au	do.	Exploration	New
Do.	Asacha	Au	Trans Siberian Gold Corp.	Feasibility	Extension
Do.	Blagodatnoye	Au	Polyus Gold	Developing	Extension
Do.	Bryantinskiy	Au, Ag	Peter Hambro Mining plc.	Exploration	New
Do.	Chelyabinsk/Miheevskoye	Cu, Au, Mo	Eureka Mining plc.	Feasibility	Extension
Do.	East Pansky	PGM	Consol. Puma Minerals Corp.	Exploration	Continuing
Do.	Federova	Pt, Pd	Barrick Gold Corp.	Exploration	Continuing
Do.	Gaiskoe, Osenkoe, Letnee	Cu	Metso Minerals	Developing	Extension
Do.	Gar II	Au, Ag	Peter Hambro Mining plc.	Exploration	New
Do.	Gedabek	Au, Cu, Ag	Anglo Asian Mining plc.	Exploration	Continuing
Do.	Ixinsky	Bauxite	Rusal	Exploration	New
Do.	Izvestkovaya Sopka	Au, Ag	Peter Hambro Mining plc.	Exploration	New
Do.	Julietta/Evgenia	Au, Ag	Bema Gold Corp.	Producer	Extension
Do.	Kun Manie	Ni	Amur Minerals Corp.	Exploration	New
Do.	Kupol	Au, Ag	Bema Gold Corp.	Developing	Extension
Do.	Malomir	Au	Peter Hambro Mining plc.	Exploration	Continuing
Do.	Miheevskoye	Cu, Au	Eureka Mining plc.	Feasibility	Extension
Do.	Novoshirokinskoye	Au	Highland Gold Mining Ltd.	Feasibility	Extension
Do.	Pokrovskiy	Au	Peter Hambro Mining plc.	Producer	Extension
Do.	Pioneer	Au	do.	Producer	Extension
Do.	Prognoz/Glavnoye	Ag	High River Gold Mines Ltd.	Exploration	Continuing
Do.	Svetloye	Cu, Au	Fortress Minerals Corp.	Exploration	Continuing
Serbia	Plavkovo/Bukovik	Au, Cu	Eurasian Minerals Inc.	Exploration	New
Do.	Stara Planina/Gradiste/Aldinac	Cu, Au	do.	Exploration	New

See footnotes at end of table.

TABLE 3—Continued

SELECTED EXPLORATION ACTIVITY IN EUROPE AND CENTRAL EURASIA IN 2006

Country	Site	Commodity[1]	Company	Phase[2]	Type[3]
Slovakia	Detva	Au, Cu	Eastern Mediterranean Resources Public Ltd.	Exploration	New
Do.	Stiavnica-Hodrusa	Au, Ag	do.	Exploration	Continuing
Do.	Zlatniky	Au	do.	Exploration	Continuing
Spain	Aguas Tenidas	Cu, Zn, Pb, Ag, Au	PGM Ventures Corp.	Feasibility	Extension
Do.	Corcoesto	Au	Kinbauri Gold Corp.	Exploration	Continuing
Do.	La Zarza	Au, Cu, Ag	Ormonde Mining plc.	Exploration	Continuing
Do.	Salamanca 1/Retortillo	Au	do.	Exploration	Continuing
Do.	Valiña	Au	Dragon Mining NL	Exploration	New
Sweden	Barsele Norra	Au	Northland Resources Inc.	Exploration	Continuing
Do.	Bergslagen	Au	Tumi Resources Ltd.	Exploration	Continuing
Do.	Bjorkdal	Au	Gold Ore Resources Ltd.	Developing	Extension
Do.	Copperstone	Au, Cu	Lundin Mining Corp.	Exploration	New
Do.	Fäboliden	Au	Lappland Goldminers AB	Feasibility	Extension
Do.	Grundtrask	Au	Beowulf Mining plc.	Exploration	New
Do.	Kalvbacken	Cu, Au	Tumi Resources Ltd.	Exploration	Continuing
Do.	Palotieva	Cu, Au	Northland Resources Inc.	Exploration	New
Do.	Rakkurijärvi	Au, Cu	Lundin Mining Corp.	Exploration	New
Do.	Ruoutevare	Ti	Beowulf Mining plc.	Exploration	New
Do.	Sala	Cu, Au	Tumi Resources Ltd.	Exploration	Continuing
Do.	Stora Sahavaara	Fe, Cu	Northland Resources Inc.	Exploration	Continuing
Do.	Storbodsund	Ni, Cu, Co	Mawson Resources Ltd.	Exploration	New
Do.	Storliden	Au, Cu	Lundin Mining Corp.	Producer	Extension
Do.	Svartliden	Au	Dragon Mining NL	Producer	Extension
Do.	Vargbäcken	Au	Mawson Resources Ltd.	Exploration	Continuing
Do.	Zinkgruvan-Bergslagen/Dalby	Cu, Zn, Pb	Lundin Mining Corp.	Producer	Extension
Tajikistan	Hukas	Ni, Cu	Kryso Resources plc.	Exploration	New
Do.	Pakrut	Au	do.	Exploration	Continuing
Ukraine	Saulyak	Au	Eurogold Ltd.	Exploration	Continuing
United Kingdom	Falkland Islands	Au	Falkland Gold and Minerals Corp.	Exploration	Continuing
Do.	Parys Mountain/Garth Daniel	Cu, Zn	Angesey Mining plc.	Exploration	Continuing
Uzbekistan	Amantaytau	Au, Ag	Oxus Gold plc.	Producer	Extension

Do., do. Ditto.

[1]Abbreviations used for commodities in this table include the following: Ag, silver; Au, gold; Co, cobalt; Cr, chromium; Cu, copper; Fe, iron; Mo, molybdenum; Ni, nickel; Pb, lead; Pd, palladium; PGM, platinum-group metals; Pt, platinum; Ti, titanium; V, vanadium; W, tungsten; and Z, zinc.

[2]Phase of exploration activity has been separated into the following stages: Developing, includes construction and permitting; Exploration, exploration prior to full feasibility study; Feasibility, feasibility study ongoing or completed; Producer, exploration at producing site.

[3]Type reflects relative timeframe of exploration activity, such as: Continuing, exploration continued from previous year; Extension, extension of resource delineation; New, initial exploration by this company.

TABLE 4

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or country	Metals								
	Aluminum				Antimony, mine output, metal content (metric tons)	Chromite, mine output, gross weight	Copper		
			Metal				Mine, metal content	Metal, refined	
	Alumina	Bauxite	Primary[3]	Secondary				Primary[3]	Secondary
Central Eurasia and Europe:									
Central Eurasia: Commonwealth of Independent States (CIS):									
Armenia	--	--	--	--	--	--	15	--	--
Azerbaijan	363	--	32	--	--	--	--	--	--
Belarus	--	--	--	--	--	--	--	--	--
Georgia	--	--	--	--	--	--	12 e	--	--
Kazakhstan	1,514	4,800 e	--	--	--	3,600 e	457 e	408	--
Kyrgyzstan	--	--	--	--	50 e	--	--	--	--
Moldova	--	--	--	--	--	--	--	--	--
Russia	3,265	6,600 e	3,718	--	3,500 e	800 e	725 e	684	284
Tajikistan	--	--	414	--	2,000 e	--	--	--	--
Turkmenistan	--	--	--	--	--	--	--	--	--
Ukraine	1,672	--	92	130 e	--	--	--	--	--
Uzbekistan[e]	--	--	--	3	--	--	115	110	--
Total	6,810	11,400 e	4,260	133 e	5,550 e	4,400 e	1,320 e	1,200	284
Share of world total	9.7%	6.0%	12.5%	1.7%	3.1%	23.5%	8.7%	8.0%	11.7%
Europe:									
European Free Trade Association (EFTA):									
Iceland	--	--	328	--	--	--	--	--	--
Norway	--	--	1,422	349	--	--	--	40 e	--
Switzerland[e]	--	--	12	190	--	--	--	--	--
Total	--	--	1,760	539	--	--	--	40 e	--
Share of world total	--	--	5.2%	7.0%	--	--	--	0.3%	--
European Union (EU):									
Austria	--	--	--	150 e	--	--	--	--	73
Belgium	--	--	--	--	--	--	--	383	--
Bulgaria	--	--	--	2	--	--	101	66	--
Cyprus	--	--	--	--	--	--	--	1	--
Czech Republic	--	--	--	15 e	--	--	--	--	14
Denmark-Greenland	--	--	--	25 e	--	--	--	--	--
Estonia	--	--	--	--	--	--	--	--	--
Finland	--	--	--	46	--	549	15	137	--
France	200 e	168	442	222	500 e	--	--	--	--
Germany	1	--	516	796	--	--	--	312	350
Greece	775 e	2,163	165	3 e	--	--	--	--	--
Hungary	270 e	538	34	50 e	--	--	--	10 e	--

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or country	Metals								
	Aluminum				Antimony, mine output, metal content (metric tons)	Chromite, mine output, gross weight	Copper		
			Metal				Mine, metal content	Metal, refined	
	Alumina	Bauxite	Primary[3]	Secondary				Primary[3]	Secondary
Central Eurasia and Europe—Continued:									
Europe—Continued:									
European Union (EU)—Continued:									
Ireland	1,800 e	--	--	--	--	--	--	--	--
Italy	1,100 e	--	194	666	--	--	--	36	--
Latvia	--	--	--	--	--	--	--	--	--
Lithuania	--	--	--	--	--	--	--	--	--
Luxembourg	--	--	--	--	--	--	--	--	--
Malta	--	--	--	--	--	--	--	--	--
Netherlands	--	--	312	30 e	--	--	--	--	--
Poland	--	--	58	12 e	--	--	570 e	557	--
Portugal	--	--	--	18 e	--	--	79	--	--
Romania	650 e	--	258	7	--	--	12	22	2 e
Slovakia	161	--	180	--	--	--	(4)	--	--
Slovenia	--	--	140	--	--	--	--	--	--
Spain	1,000 e	--	349	243	--	--	9	255	35 e
Sweden	--	--	101	32	--	--	98 e	229	25 e
United Kingdom	--	--	360	198	--	--	--	--	--
Total	5,960	2,870	3,110	2,510	500 e	549	884	2,010	499
Share of world total	8.5%	1.5%	9.1%	32.6%	0.3%	2.9%	5.8%	13.4%	20.5%
Other Europe:									
Albania	--	--	--	--	--	210	(4) e	--	--
Bosnia and Herzegovina	350	817	136	--	--	--	--	--	--
Croatia	--	--	--	2	--	--	--	--	--
Macedonia	--	--	--	4 e	--	--	34	--	--
Montenegro	237	659	122	--	--	--	--	--	--
Serbia	--	--	--	1	--	--	25	35 e	6 e
Total	587	1,480	258	8	--	210	59	35 e	6 e
Share of world total	0.8%	0.8%	0.8%	0.1%	--	1.1%	0.4%	0.2%	0.2%
Total, Europe and Central Eurasia	13,400	15,700	9,380	3,190	6,050	5,160	2,270	3,280	789
Share of world total	19.1%	8.3%	27.5%	41.4%	3.4%	27.6%	14.9%	21.9%	32.4%
United States	5,220	NA	2,280	--	--	--	1,200	1,210	45
Share of world total	7.5%	NA	6.7%	--	--	--	7.9%	8.0%	1.8%
World total	67,000	190,000	34,100	7,710	176,000	18,700	15,200	15,000	2,440

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or 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: Primary[3]	Metal, refined: Secondary	Manganese ore, mine output, metal content	Mercury, mine output, metal content (metric tons)
Central Eurasia and Europe:									
Central Eurasia: Commonwealth of Independent States (CIS):									
Armenia	1,400	--	--	--	--	--	--	--	--
Azerbaijan	--	6 [e]	--	54	--	--	--	--	--
Belarus	--	--	--	2,200 [e]	--	--	--	--	--
Georgia	2,000 [e]	--	--	--	(4)	--	--	95 [e]	--
Kazakhstan	18,000 [e]	10,500 [e]	3,400 [e]	4,225	48 [e]	125	--	550 [e]	--
Kyrgyzstan	10,721	--	--	--	--	--	--	--	250 [e]
Moldova	--	--	--	675	--	--	--	--	--
Russia	159,340	59,100 [e]	55,023 [e]	70,766	36 [e]	78 [e]	--	24 [e]	50 [e]
Tajikistan[e]	3,000	--	--	--	1	--	--	--	30
Turkmenistan	--	--	--	--	--	--	--	--	--
Ukraine	--	40,700 [e]	32,926	40,899	--	--	6 [e]	820 [e]	--
Uzbekistan[e]	85,000	--	--	730	--	--	--	--	--
Total	279,000	110,000 [e]	91,300	120,000	85 [e]	203	6 [e]	1,490 [e]	330 [e]
Share of world total	11.4%	11.6%	8.8%	9.6%	2.3%	5.0%	0.2%	12.2%	29.0%
Europe:									
European Free Trade Association (EFTA):									
Iceland	--	--	--	--	--	--	--	--	--
Norway	--	400 [e]	100 [e]	679	--	--	--	--	--
Switzerland[e]	--	--	100	1,200	--	--	9	--	--
Total	--	400 [e]	200 [e]	1,880	--	--	9 [e]	--	--
Share of world total	--	(5)	(5)	0.2%	--	--	0.2%	--	--
European Union (EU):									
Austria	--	650 [e]	5,400 [e]	7,129	--	--	22 [e]	--	--
Belgium	--	--	8,000 [e]	11,631	--	--	97 [e]	--	--
Bulgaria	3,818	--	1,000	2,000	28	84	--	6 [e]	--
Cyprus	--	--	--	--	--	--	--	--	--
Czech Republic	--	--	5,131	6,862	--	--	26	--	--
Denmark-Greenland	--	--	--	--	--	--	--	--	--
Estonia	--	--	--	--	--	--	9 [e]	--	--
Finland	4,000 [e]	--	5,423	5,052	--	--	--	--	23
France	1,500	--	13,013	19,857	--	4	100	--	--
Germany	--	44	30,362	47,224	--	100	221	--	--
Greece	--	575	--	2,416	12	--	4 [e]	(4)	--
Hungary	--	--	1,335	2,029	--	--	--	5 [e]	--

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or 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: Primary[3]	Metal, refined: Secondary	Manganese ore, mine output, metal content	Mercury, mine output, metal content (metric tons)
Central Eurasia and Europe—Continued:									
Europe—Continued:									
European Union (EU)—Continued:									
Ireland	--	--	--	--	62	--	22	--	--
Italy	--	--	11,535	31,550	1 [e]	35	156	1 [e]	--
Latvia	--	--	--	550 [e]	--	--	--	--	--
Lithuania	--	--	--	--	--	--	--	--	--
Luxembourg	--	--	--	2,802	--	--	--	--	--
Malta	--	--	--	--	--	--	--	--	--
Netherlands	--	--	5,417	6,372	--	--	17 [e]	--	--
Poland	500 [e]	--	5,533	9,992	94	67	--	--	--
Portugal	--	10 [e]	100 [e]	725	--	--	3 [e]	--	--
Romania	400 [e]	80	3,966	6,318	8	28 [e]	5 [e]	14	--
Slovakia	100	250	4,145	5,094	--	--	--	--	--
Slovenia	--	--	--	627	--	--	15	--	--
Spain	5,300	--	4,200	17,800	--	--	110	--	--
Sweden	4,500 [e]	16,000 [e]	3,500 [e]	5,435	74 [e]	25 [e]	40	--	--
United Kingdom	--	(4)	10,696	13,931	1 [e]	164	144	--	--
Total	20,100	17,600	119,000	205,000	279	508	991	25	23
Share of world total	0.8%	1.9%	11.4%	16.6%	7.6%	12.5%	26.9%	0.2%	2.0%
Other Europe:									
Albania	--	--	--	100 [e]	--	--	--	--	--
Bosnia and Herzegovina	--	1,700	60 [e]	469	1 [e]	(4) [e]	--	1 [e]	--
Croatia	--	--	--	81	--	--	--	--	--
Macedonia	700 [e]	6	--	326	16	--	--	--	--
Montenegro	--	--	--	50	--	--	--	--	--
Serbia	400 [e]	--	1,529	1,837	2 [e]	1 [e]	--	--	--
Total	1,100 [e]	1,710	1,590	2,860	19	1 [e]	--	1 [e]	--
Share of world total	0.0%	0.2%	0.2%	0.2%	0.5%	(5)	--	(5)	--
Total, Europe and Central Eurasia	301,000	130,000	212,000	330,000	383	712	1,010	1,520	353
Share of world total	12.3%	13.7%	20.4%	26.6%	10.5%	17.5%	27.3%	12.4%	31.0%
United States	252,000	33,300	38,100	98,200	429	153	1,160	--	NA
Share of world total	10.3%	3.5%	3.7%	7.9%	11.7%	3.8%	31.5%	--	NA
World total	2,450,000	948,000	1,040,000	1,240,000	3,660	4,080	3,680	12,200	1,140

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or country	Metals—Continued								
	Nickel		Platinum-group metals, refined, primary and secondary		Silver, mine output, metal content	Tin		Titanium	
	Mine output, metal content	Refinery products, metal content	Palladium (kilograms)	Platinum (kilograms)	(metric tons)	Mine output, metal content (metric tons)	Metal, primary[3] (metric tons)	Ilmenite, TiO_2 content (metric tons)	Metal sponge, metal content (metric tons)
Central Eurasia and Europe:									
Central Eurasia: Commonwealth of Independent States (CIS):									
Armenia	--	--	--	--	4 e	--	--	--	--
Azerbaijan	--	--	--	--	--	--	--	--	--
Belarus	--	--	--	--	--	--	--	--	--
Georgia	--	--	--	--	33 e	--	--	--	--
Kazakhstan	--	(4)	--	--	830 e	--	--	15,000	23,000
Kyrgyzstan	--	--	--	--	--	--	--	--	--
Moldova	--	--	--	--	--	--	--	--	--
Russia[e]	320	295	98,400	29,000	1,300	3,000	4,980	--	32,000
Tajikistan	--	--	--	--	5 e	--	--	--	--
Turkmenistan	--	--	--	--	--	--	--	--	--
Ukraine	12 e	18 e	--	--	--	--	--	287,000 e	9,997
Uzbekistan	--	--	--	--	83 e	--	--	--	--
Total	332 e	313 e	98,400 e	29,000 e	2,260 e	3,000 e	4,980 e	302,000	65,000
Share of world total	15.6%	22.5%	44.8%	9.2%	11.2%	1.0%	1.5%	6.0%	78.2%
Europe:									
European Free Trade Association (EFTA):									
Iceland	--	--	--	--	--	--	--	--	--
Norway	(4)	82 e	--	--	--	--	--	385,000 e	--
Switzerland	--	--	--	--	--	--	--	--	--
Total	(4)	82 e	--	-- -	--	--	--	385,000 e	--
Share of world total	(5)	5.9%	--	-- -	--	--	--	7.6%	--
European Union (EU):									
Austria	--	--	--	--	--	--	--	--	--
Belgium	--	--	--	--	--	--	--	--	--
Bulgaria	--	--	--	--	60	--	10 e	--	--
Cyprus	--	--	--	--	--	--	--	--	--
Czech Republic	--	--	--	--	25 e	--	--	--	--
Denmark-Greenland	--	--	--	--	--	--	--	--	--
Estonia	--	--	--	--	--	--	--	--	--
Finland	3	42	--	1,000 e	38 e	--	--	--	--
France	--	14	--	--	1 e	--	--	--	--
Germany	--	--	--	100,000 e	--	--	5,016	--	--
Greece	22	18	--	--	26	--	--	--	--
Hungary	--	--	--	--	--	--	--	--	--

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or country	Metals—Continued								
	Nickel		Platinum-group metals, refined, primary and secondary		Silver, mine output, metal content	Tin		Titanium	
	Mine output, metal content	Refinery products, metal content	Palladium (kilograms)	Platinum (kilograms)	(metric tons)	Mine output, metal content (metric tons)	Metal, primary[3] (metric tons)	Ilmenite, TiO_2 content (metric tons)	Metal sponge, metal content (metric tons)
Central Eurasia and Europe—Continued:									
Europe—Continued:									
European Union (EU)—Continued:									
Ireland	--	--	--	--	13	--	--	--	--
Italy	--	--	--	--	(4)	--	--	--	--
Latvia	--	--	--	--	--	--	--	--	--
Lithuania	--	--	--	--	--	--	--	--	--
Luxembourg	--	--	--	--	--	--	--	--	--
Malta	--	--	--	--	--	--	--	--	--
Netherlands	--	--	--	--	--	--	--	--	--
Poland[e]	--	--	10	20	1,300	--	--	--	--
Portugal	--	--	--	--	20	25	--	--	--
Romania	--	--	--	--	18	--	--	--	--
Slovakia	--	--	--	--	--	--	--	--	--
Slovenia	--	--	--	--	--	--	--	--	--
Spain	6	--	--	--	4 [e]	--	--	--	--
Sweden	--	(4)	--	--	268	--	--	--	--
United Kingdom	--	37	--	--	--	--	--	--	--
Total	31	110	10 [e]	101,000 [e]	1,770	25	5,030	--	--
Share of world total	1.5%	7.9%	(5)	32.0%	8.8%	(5)	1.6%	--	--
Other Europe:									
Albania	--	--	--	--	--	--	--	--	--
Bosnia and Herzegovina	--	--	--	--	--	--	--	--	--
Croatia	--	--	--	--	--	--	--	--	--
Macedonia	--	11	--	--	--	--	--	--	--
Montenegro	--	--	--	--	--	--	--	--	--
Serbia[e]	--	--	8	1	2	--	--	--	--
Total	--	11	8 [e]	1 [e]	2 [e]	--	--	--	--
Share of world total	--	0.8%	(5)	(5)	(5)	--	--	--	--
Total, Europe and Central Eurasia	363	516	98,400	130,000	4,030	3,030	10,000	687,000	65,000
Share of world total	17.1%	37.1%	44.8%	41.2%	20.1%	1.0%	3.1%	13.5%	78.2%
United States	--	--	14,400	4,290	1,140	--	--	273,000	--
Share of world total	--	--	6.6%	1.4%	5.7%	--	--	5.4%	--
World total	2,130	1,390	220,000	316,000	20,000	293,000	324,000	5,070,000	83,100

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or country	Metals—Continued			Industrial minerals					
		Zinc							
	Tungsten, mine output, metal content (metric tons)	Mine output, metal content (metric tons)	Metal, primary and secondary (metric tons)	Ammonia, N content	Cement, hydraulic	Diamond, natural, gemstones and industrial (thousand carats)	Phosphate rock, P_2O_5 content	Potash, K_2O equivalent	Salt
Central Eurasia and Europe:									
Central Eurasia: Commonwealth of Independent States (CIS):									
Armenia	--	2,270	--	--	625	--	--	--	37 [e]
Azerbaijan	--	--	--	--	1,622	--	--	--	12
Belarus	--	--	--	850 [e]	3,495	--	--	4,605	1,900 [e]
Georgia[e]	--	400	--	140	450	--	--	--	30
Kazakhstan[e]	--	400,000	349,000	--	4,200	--	55	--	--
Kyrgyzstan	--	--	--	--	1,216	--	--	--	1 [e]
Moldova	--	--	--	--	837	--	--	--	--
Russia	4,000 [e]	190,000 [e]	240,000 [e]	10,500	54,700	38,400 [e]	4,220 [e]	5,720 [e]	2,900 [e]
Tajikistan	--	--	--	45 [e]	282	--	--	--	52
Turkmenistan[e]	--	--	--	90	800	--	--	--	215
Ukraine	--	--	--	4,200 [e]	13,732	--	--	65 [e]	5,996
Uzbekistan[e]	--	--	35,000	870	5,000	--	140	--	--
Total	4,000 [e]	593,000	624,000 [e]	16,700	87,000	38,400 [e]	4,420 [e]	10,400	11,100
Share of world total	5.1%	5.9%	5.9%	13.1%	3.5%	21.9%	9.3%	33.9%	4.3%
Europe:									
European Free Trade Association (EFTA):									
Iceland	--	--	--	--	141	--	--	--	5 [e]
Norway	--	--	160,700	350 [e]	1,850 [e]	--	--	--	--
Switzerland[e]	--	--	--	30	4,000	--	--	--	560
Total	--	--	160,700	380 [e]	5,990	--	--	--	565 [e]
Share of world total	--	--	1.5%	0.3%	0.2%	--	--	--	0.2%
European Union (EU):									
Austria[e]	1,300	--	--	(4)	4,700	--	--	--	1,030
Belgium	--	--	259,800 [e]	860 [e]	8,192	--	--	--	--
Bulgaria	--	13,500 [e]	85,900	309	2,000	--	--	--	2,000
Cyprus	--	--	--	--	1,786	--	--	--	--
Czech Republic	--	--	250 [e]	250 [e]	3,900	--	--	--	--
Denmark-Greenland[e]	--	--	--	2	2,060	--	--	--	600
Estonia	--	--	--	170 [e]	849	--	--	--	--
Finland	--	66,109	282,238	91	1,513	--	300 [e]	--	--
France	--	--	120,000	616 [e]	21,000 [e]	--	--	--	9,371
Germany	--	--	342,566	2,718	33,516	--	--	3,625	19,846
Greece	--	16,414	--	130 [e]	15,000 [e]	--	--	--	195 [e]
Hungary	--	--	--	275 [e]	3,349	--	--	--	--

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or country	Metals—Continued			Industrial minerals					
		Zinc							
	Tungsten, mine output, metal content (metric tons)	Mine output, metal content (metric tons)	Metal, primary and secondary (metric tons)	Ammonia, N content	Cement, hydraulic	Diamond, natural, gemstones and industrial (thousand carats)	Phosphate rock, P_2O_5 content	Potash, K_2O equivalent	Salt
Central Eurasia and Europe—Continued:									
Europe—Continued:									
European Union (EU)—Continued:									
Ireland	--	425,800	--	--	4,700	--	--	--	--
Italy	--	--	109,200	500 [e]	43,234	--	--	--	3,438
Latvia	--	--	--	--	280 [e]	--	--	--	--
Lithuania	--	--	--	453	1,065	--	--	--	--
Luxembourg	--	--	--	--	700 [e]	--	--	--	--
Malta	--	--	--	--	--	--	--	--	6 [e]
Netherlands	--	--	235,913	1,800 [e]	2,400 [e]	--	--	--	5,000 [e]
Poland	--	126,000	134,000	2,100 [e]	14,688	--	--	--	4,955
Portugal	780	--	7,505	244 [e]	9,000 [e]	--	--	--	586
Romania	--	9,574	43,705	2,000	7,000	--	--	--	2,619
Slovakia	--	--	--	300 [e]	3,593	--	--	--	100 [e]
Slovenia	--	--	--	--	1,500 [e]	--	--	--	2
Spain	--	--	502,800	400 [e]	50,000	--	--	580 [e]	4,600 [e]
Sweden	--	208,551	--	--	2,600 [e]	--	--	--	--
United Kingdom	--	--	--	1,100	11,400	--	--	420	5,800 [e]
Total	2,080	866,000	2,120,000	14,300	250,000	--	300 [e]	4,630	60,100
Share of world total	2.6%	8.6%	20.0%	11.2%	9.9%	--	0.6%	15.1%	23.0%
Other Europe:									
Albania	--	--	--	--	600 [e]	--	--	--	25 [e]
Bosnia and Herzegovina	--	300 [e]	--	1 [e]	1,226	--	--	--	416
Croatia	--	--	--	400 [e]	3,633	--	--	--	30
Macedonia	--	21,700	--	--	800 [e]	--	--	--	--
Montenegro	--	--	--	--	--	--	--	--	5
Serbia	--	2,100	4,000 [e]	80 [e]	2,565	--	--	--	75 [e]
Total	--	24,100	4,000 [e]	481 [e]	8,820	--	--	--	551
Share of world total	--	0.2%	(5)	0.4%	0.4%	--	--	--	0.2%
Total, Europe and Central Eurasia	6,080	1,480,000	2,910,000	31,900	352,000	38,400	4,720	15,000	72,400
Share of world total	7.7%	14.7%	27.4%	25.0%	14.0%	21.9%	10.0%	49.1%	27.7%
United States	--	727,000	269,000	8,520	99,700	--	8,680	1,100	44,300
Share of world total	--	7.2%	2.5%	6.7%	4.0%	--	18.3%	3.6%	17.0%
World total	78,900	10,100,000	10,600,000	128,000	2,520,000	175,000	47,400	30,600	261,000

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or 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			
Central Eurasia and Europe:						
Central Eurasia: Commonwealth of Independent States (CIS):						
Armenia	--	--	--	1,596 [p]	--	--
Azerbaijan	--	--	--	6,080	236,000 [e]	--
Belarus	--	--	--	220	13,100 [e]	--
Georgia	--	8	--	21	466 [e]	--
Kazakhstan	--	93,082	3,239	14,440	476,000 [e]	6,226
Kyrgyzstan	--	77	238	19	518 [e]	--
Moldova	--	--	--	56 [p]	--	--
Russia	18,000	215,000	75,800	656,230	3,530,000 [e]	3,762
Tajikistan	--	102	--	20	164 [e]	--
Turkmenistan	--	--	--	65,000	66,100 [e]	--
Ukraine	16,592	59,000 [e]	232	21	32,300 [e]	943
Uzbekistan	--	82	3,039	58,000 [e]	39,700 [e]	2,665
Total	34,600	367,000	82,500	802,000	4,390,000 [e]	13,600
Share of world total	5.6%	8.3%	8.5%	28.5%	16.2%	30.6%
Europe:						
European Free Trade Association (EFTA):						
Iceland	--	--	--	--	--	--
Norway[e]	--	300	--	84,000	965,000	--
Switzerland	--	--	--	--	--	--
Total[e]	--	300	--	84,000	965,000	--
Share of world total	--	(5)	--	3.0%	3.6%	--
European Union (EU):						
Austria[e]	--	--	5	1,200	6,500	--
Belgium	--	--	--	--	--	--
Bulgaria	--	52	25,307	519	184 [e]	708 [e]
Cyprus	--	--	--	--	--	--
Czech Republic	--	13,017	49,374	148	1,600	422
Denmark-Greenland	--	--	--	9,200	140,000	--
Estonia	--	--	14,188	--	--	--
Finland	--	--	--	--	--	--
France	--	--	--	1,400	7,775	--
Germany	1,963	18,919	176,324	18,443	25,800	77
Greece[e]	--	--	74,000	16	760	--

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

(Thousand metric tons unless otherwise specified)

Region and/or 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			
Central Eurasia and Europe—Continued:						
Europe—Continued:						
European Union (EU)—Continued:						
Hungary	--	--	9,898	3	6,800 [e]	--
Ireland	--	--	--	535	--	--
Italy	--	--	--	11,000	29,600	--
Latvia	--	--	--	1,876 [p]	--	--
Lithuania	--	--	--	2,884 [p]	1,330 [e]	--
Luxembourg	--	--	--	--	--	--
Malta	--	--	--	--	--	--
Netherlands	--	--	--	73,300	11,426	--
Poland	--	95,220	60,844	5,650	5,850 [e]	--
Portugal	--	--	--	--	--	--
Romania	--	--	30,050 [e]	12,700	40,000	--
Slovakia	--	--	2,500	--	350 [e]	--
Slovenia	--	--	4,521	4	2,090 [e]	--
Spain	8,354	3,223	6,822	330 [e]	1,300 [e]	--
Sweden	--	--	--	--	--	--
United Kingdom	1,630 [e]	18,400 [e]	--	80,000	597,140	--
Total	11,900	149,000	454,000	219,000	878,000	1,210
Share of world total	1.9%	3.4%	46.6%	7.8%	3.2%	2.7%
Other Europe:						
Albania[e]	--	--	13	11	2,940	--
Bosnia and Herzegovina	--	--	9,965	--	--	--
Croatia	--	--	--	2,714	6,980 [e]	--
Macedonia	--	--	6,650	--	--	--
Montenegro	--	--	1,502	--	--	--
Serbia	--	65	36,720	280	4,800 [e]	--
Total	--	65	54,900	3,010	14,700 [e]	--
Share of world total	--	(5)	5.6%	0.1%	0.1%	--
Total, Europe and Central Eurasia	46,500	517,000	591,000	1,110,000	6,250,000	14,800
Share of world total	7.5%	11.7%	60.8%	39.4%	23.1%	33.4%
United States	1,370	976,000	76,400	525,000	1,860,000	1,970
Share of world total	0.2%	22.1%	7.9%	18.6%	6.9%	4.4%
World total	618,000	4,420,000	973,000	2,820,000	27,100,000	44,400

See footnotes at end of table.

TABLE 4—Continued

CENTRAL EURASIA AND EUROPE: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2006[1, 2]

[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. 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 of data received at a later date.

[2]Totals may not add due to independent rounding. Table includes data available as of June 11, 2008.

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

[4]Less than 1/2 unit.

[5]Less than 0.5 percent.

TABLE 5

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED BAUXITE MINE PRODUCTION, 1995-2013[1]

(Thousand metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
France	75	185	168	168	--	--	--
Greece	2,200	1,966	2,441	2,163	2,200	2,200	2,200
Italy	11	300	300	--	--	--	--
Total	2,290	2,450	2,910	2,330	2,200	2,200	2,200
Central Europe:							
Albania	--	5	--	--	--	--	5
Bosnia and Herzegovina	75	255	1,032	817	950	1,000	1,000
Croatia	2	--	--	--	--	--	--
Hungary	1,015	1,046	535	538	600	600	600
Montenegro[2]	60	630	672	659	700	800	800
Romania	175	--	--	--	--	--	--
Total	1,330	1,940	2,240	2,010	2,300	2,400	2,400
Central Eurasia:							
Kazakhstan	3,071	3,729	4,800	4,800	5,200	5,500	6,000
Russia	3,800	5,274	6,400	6,600	7,500	8,000	10,000
Total	6,870	9,000	11,200	11,400	13,000	14,000	16,000
Regional total	10,500	13,400	16,300	15,700	17,000	18,000	21,000

[e]Estimated. -- Zero.

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 6

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PRIMARY AND SECONDARY ALUMINUM PRODUCTION, 1995-2013[1]

(Thousand metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Austria	94	158	151	150	150	150	150
Belgium	4	1	--	--	--	--	--
Denmark-Greenland	14	16	20	25	25	25	25
Finland	35	45	34	46	45	45	45
France	603	701	664	664	600	600	600
Germany	994	1,216	1,366	1,311	1,400	1,400	1,400
Greece	133	171	166	168	160	150	150
Iceland	100	224	273	328	500	600	600
Italy	610	848	847	860	900	900	900
Netherlands	407	421	391	342	350	350	350
Norway	902	1,280	1,739	1,771	1,800	1,800	1,800
Portugal	NA	18	18	18	18	18	18
Spain	468	606	637	592	650	650	650
Sweden	118	127	133	133	140	140	140
Switzerland	31	224	238	202	200	200	200
United Kingdom	520	590	574	558	550	550	550
Total	5,030	6,650	7,250	7,170	7,500	7,600	7,600
Central Europe:							
Bosnia and Herzegovina	15	95	131	136	145	175	200
Bulgaria	5	8	2	2	2	2	2
Croatia	31	15	6	2	--	--	--
Czech Republic	48	40	15	15	50	50	50
Hungary	29	89	81	84	100	100	100
Macedonia	4	5	4	4	10	10	10
Montenegro[2]	17	88	117	122	120	120	120
Poland	56	52	67	70	75	75	75
Romania	144	181	251	265	260	260	260
Serbia	NA	NA	(3)	1	2	2	2
Slovakia	38	137	158	180	190	190	190
Slovenia	58	84	139	140	140	140	140
Total	444	794	971	1,020	1,100	1,100	1,100
Central Eurasia:							
Azerbaijan	4	--	32	32	60	110	150
Kazakhstan	--	--	--	--	120	200	300
Russia	2,724	3,245	3,647	3,718	4,300	4,500	5,000
Tajikistan	232	269	380	414	500	500	500
Ukraine	98	233	244	222	120	120	120
Uzbekistan	3	2	3	3	3	3	3
Total	3,060	3,750	4,310	4,390	5,100	5,400	6,100
Regional total	8,540	11,200	12,500	12,600	14,000	14,000	15,000

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

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

[3]Less than 1/2 unit.

TABLE 7

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED COPPER MINE PRODUCTION, 1995-2013[1]

(Cu content in thousand metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Finland	10	14	16	15	16	16	15
France	(2)	(2)	--	--	--	--	--
Norway	7	--	--	--	--	--	--
Portugal	134	76	90	79	90	90	90
Spain	25	23	8	9	9	9	9
Sweden	84	78	98	98	50	45	40
Total	259	192	211	200	170	160	150
Central Europe:							
Albania	4	--	2	(2)	(2)	(2)	--
Bulgaria	76	92	94	101	110	120	120
Macedonia	6	6	22	34	40	45	50
Poland	384	509	533	570	570	560	550
Romania	25	16	15	12	25	25	25
Serbia[3]	75	56	26	25	50	75	75
Slovakia	--	(2)	(2)	(2)	--	--	--
Total	569	679	692	742	800	830	820
Central Eurasia:							
Armenia	8	12	16	15	20	30	40
Georgia	5	8	12	12	20	30	35
Kazakhstan	200	430	422	457	500	550	600
Russia	525	570	700	725	800	900	1,000
Uzbekistan	40	70	110	115	120	130	140
Total	778	1,090	1,260	1,320	1,500	1,600	1,800
Regional total	1,610	1,960	2,160	2,270	2,400	2,600	2,800

[e]Estimated. -- Zero.

[1]Projections, 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.

[3]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 8

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PRIMARY AND SECONDARY REFINED COPPER PRODUCTION, 1995-2013[1]

(Thousand metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Austria	54	79	72	73	70	70	70
Belgium	376	423	383	383	400	400	400
Cyprus	--	5	--	1	--	--	--
Finland	74	114	125	137	140	140	140
France	42	2	--	--	--	--	--
Germany	616	710	638	662	660	660	660
Italy	98	73	32	36	40	40	40
Norway	34	27	39	40	40	40	40
Spain	164	316	302	290	320	320	320
Sweden	105	130	222	254	260	270	270
United Kingdom	55	3	--	--	--	--	--
Total	1,620	1,880	1,810	1,880	1,900	1,900	1,900
Central Europe:							
Albania	3	--	--	--	--	--	--
Bulgaria	29	32	61	66	90	90	120
Czech Republic	20	20	14	14	20	20	20
Hungary	11	12	10	10	5	5	5
Poland	407	486	560	557	550	550	550
Romania	27	19	23	24	30	30	30
Serbia[2]	79	46	31	41	50	60	60
Slovakia	29	--	--	--	--	--	--
Total	604	615	699	712	750	760	790
Central Eurasia:							
Kazakhstan	256	395	388	408	450	500	550
Russia	560	840	933	968	1,000	1,100	1,200
Uzbekistan	95	85	104	110	115	120	125
Total	911	1,320	1,430	1,490	1,600	1,700	1,900
Regional total	3,130	3,820	3,940	4,070	4,200	4,400	4,600

[e]Estimated. -- Zero.

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 9

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED GOLD MINE PRODUCTION, 1995-2013[1]

(Kilograms)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Finland	2,061	4,951	3,747	4,000	3,500	4,000	4,000
France	4,615	2,632	1,500	1,500	1,500	1,500	1,500
Italy	--	791	--	--	--	--	--
Spain	4,131	4,310	5,300	5,300	5,500	5,500	5,500
Sweden	6,528	3,570	6,600	4,500	5,800	6,000	6,000
Total	17,300	16,300	17,100	15,300	16,000	17,000	17,000
Central Europe:							
Bulgaria	3,100	2,347	3,868	3,818	4,000	4,000	4,200
Macedonia	760	750	750	700	700	700	700
Poland	510	367	530	500	450	450	450
Romania	4,000	500	400	400	2,000	5,000	10,000
Serbia[2]	3,040	1,121	400	400	1,000	1,000	1,500
Slovakia	518	306	109	100	100	100	100
Total	11,900	5,390	6,060	5,920	8,300	11,000	17,000
Central Eurasia:							
Armenia	514	600	1,400	1,400	3,500	4,000	4,500
Georgia	500	2,924	2,000	2,000	3,500	4,000	4,000
Kazakhstan	18,200	28,171	18,062	18,000	20,000	22,000	25,000
Kyrgyzstan	1,500	22,000	16,700	10,721	17,000	19,000	20,000
Russia	131,900	142,738	163,186	159,340	170,000	170,000	180,000
Tajikistan	1,500	2,700	3,000	3,000	3,500	4,000	6,000
Uzbekistan	65,000	85,000	90,000	85,000	100,000	100,000	110,000
Total	219,000	284,000	294,000	279,000	320,000	320,000	350,000
Regional total	248,000	306,000	318,000	301,000	340,000	350,000	380,000

[e]Estimated. -- Zero.

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 10

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED IRON ORE MINE PRODUCTION, 1995-2013[1]

(Fe content in thousand metric tons)

Region and country	Average iron content	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:								
Western Europe:								
Austria	33%	709	586	655	650	650	650	650
France	28%	432	--	--	--	--	--	--
Germany[2]	14%	10	65	38	44	50	50	50
Greece	38%	800	575	575	575	580	500	500
Norway	62%	1,348	369	420	400	340	320	300
Portugal	36%	5	12	10	10	10	10	10
Spain	38%	960	--	--	--	--	--	--
Sweden	65%	13,880	13,556	15,300	16,000	17,000	17,000	17,000
United Kingdom	54%	1	1	(3)	(3)	(3)	(3)	(3)
Total	XX	18,100	15,200	17,000	17,700	19,000	19,000	19,000
Central Europe:								
Bosnia and Herzegovina	53%	52	182	1,500	1,700	1,800	1,900	2,000
Bulgaria	50%	265	178	--	--	--	--	--
Czech Republic	29%	10	6	--	--	--	--	--
Macedonia	40%	1	9	--	--	--	--	--
Romania	52%	147	55	69	--	--	--	--
Serbia and Montenegro	45%	61	1	--	--	--	--	--
Slovakia	34%	225	255	259	250	250	250	250
Total	XX	761	686	1,830	1,950	2,100	2,200	2,300
Central Eurasia:								
Azerbaijan	57%	1	--	4	6	20	25	40
Kazakhstan	57%	8,500	9,200	9,300	10,500	12,000	13,000	14,000
Russia	58%	46,000	50,000	56,100	59,100	62,000	64,000	66,000
Ukraine	55%	29,000	30,600	37,700	40,700	45,000	47,000	48,000
Total	XX	83,500	89,800	103,000	110,000	120,000	120,000	130,000
Regional total	XX	102,000	106,000	122,000	130,000	140,000	140,000	150,000

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

[1]Projections, 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 11

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED CRUDE STEEL PRODUCTION, 1995-2013[1]

(Thousand metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Austria	4,537	5,725	7,031	7,129	7,100	7,100	7,100
Belgium	11,606	11,635	10,420	11,631	12,000	12,000	12,000
Denmark-Greenland	654	803	--	--	--	--	--
Finland	3,176	4,096	4,738	5,052	5,000	5,000	5,000
France	18,096	21,002	19,481	19,857	20,000	20,000	20,000
Germany	42,051	46,376	44,524	47,224	48,000	48,000	48,000
Greece	939	1,088	2,266	2,416	2,500	2,500	2,500
Ireland	309	342	--	--	--	--	--
Italy	27,766	26,544	29,061	31,550	34,000	34,000	34,000
Luxembourg	2,613	2,571	2,194	2,802	2,800	2,800	2,800
Netherlands	6,409	5,667	6,919	6,372	6,500	6,500	6,500
Norway	503	620	701	679	700	700	700
Portugal	829	1,097	725	725	800	800	800
Spain	13,975	15,844	17,800	17,800	17,000	17,000	17,000
Sweden	4,953	5,227	5,692	5,435	5,500	5,500	5,500
Switzerland	1,000	1,020	1,158	1,200	1,200	1,200	1,200
United Kingdom	17,604	15,306	13,210	13,931	14,000	14,000	14,000
Total	157,000	165,000	166,000	174,000	180,000	180,000	180,000
Central Europe:							
Albania	22	65	87	100	100	100	100
Bosnia and Herzegovina	--	134	283	469	600	700	800
Bulgaria	2,724	2,023	1,969	2,000	2,200	2,500	2,500
Croatia	45	71	74	81	85	85	90
Czech Republic	7,189	6,216	6,189	6,862	7,000	7,000	7,000
Hungary	1,865	1,969	1,962	2,029	2,000	2,000	2,000
Macedonia	33	161	321	326	350	350	350
Montenegro	NA	NA	28	50	50	50	50
Poland	11,890	10,508	8,336	9,992	10,000	10,000	10,000
Romania	6,557	4,672	5,632	6,318	6,500	6,500	6,500
Serbia[2]	180	682	1,286	1,837	2,000	2,000	2,000
Slovakia	3,958	3,733	4,242	5,094	5,500	5,500	5,500
Slovenia	407	519	583	627	650	650	650
Total	34,900	30,800	31,000	35,800	37,000	37,000	38,000
Central Eurasia:							
Azerbaijan	12	--	286	54	275	300	300
Belarus	744	1,623	2,076	2,200	2,500	2,500	2,500
Georgia	84	(3)	--	--	--	200	200
Kazakhstan	3,030	4,770	4,452	4,225	5,700	5,800	5,900
Latvia	279	500	550	550	550	550	550
Moldova	663	909	1,000	675	1,100	1,200	1,200
Russia	51,600	59,097	66,186	70,766	74,000	76,000	78,000
Ukraine	23,309	31,780	38,636	40,899	43,000	44,000	45,000
Uzbekistan	352	420	607	730	750	800	800
Total	80,100	99,100	114,000	120,000	130,000	130,000	130,000
Regional total	272,000	295,000	311,000	330,000	340,000	350,000	350,000

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

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

[3]Less than 1/2 unit.

TABLE 12

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED LEAD MINE PRODUCTION, 1995-2013[1]

(Pb content in metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Greece	14,300	18,235	3,000	12,400	16,000	18,000	18,000
Ireland	46,100	57,825	63,810	61,800	60,000	60,000	60,000
Italy	15,142	2,000	800	800	--	--	--
Spain	30,300	40,300	--	--	--	--	--
Sweden	137,200	106,584	60,400	74,300	60,000	30,000	30,000
United Kingdom	1,600	1,000	500	500	500	300	200
Total	245,000	226,000	129,000	150,000	140,000	110,000	110,000
Central Europe:							
Bosnia and Herzegovina	150	200	850	850	850	800	800
Bulgaria	33,000	10,500	22,000	18,000	30,000	30,000	30,000
Macedonia	17,000	24,000	--	15,600	15,000	15,000	15,000
Poland	99,400	113,800	115,800	94,000	90,000	85,000	80,000
Romania	23,194	18,750	11,610	7,500	7,000	7,000	7,000
Serbia[2]	3,342	10,500	1,600	1,900	2,000	2,000	2,000
Total	176,000	178,000	152,000	138,000	140,000	140,000	130,000
Central Eurasia:							
Georgia	NA	200	400	400	450	500	600
Kazakhstan	40,000	40,000	44,000	48,000	49,000	55,000	60,000
Russia	23,000	13,300	36,000	36,000	38,000	40,000	42,000
Tajikistan	500	800	800	800	1,000	1,000	1,000
Total	63,500	54,300	81,200	85,200	88,000	97,000	100,000
Regional total	484,000	458,000	362,000	373,000	370,000	340,000	350,000

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

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 13

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PRIMARY AND SECONDARY REFINED LEAD PRODUCTION, 1995-2013[1]

(Metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Austria	21,919	24,000	22,000	22,000	22,000	22,000	22,000
Belgium	122,000	119,000	103,000	97,200	110,000	110,000	110,000
France	297,000	268,094	104,979	104,234	90,000	90,000	90,000
Germany	313,900	373,989	341,710	321,500	350,000	350,000	350,000
Greece	5,000	5,000	4,000	4,000	11,000	11,000	11,000
Ireland	11,000	9,000	19,992	21,700	22,000	22,000	22,000
Italy	180,000	235,000	211,000	190,500	190,000	190,000	190,000
Netherlands	20,200	22,200	17,000	17,000	16,000	16,000	16,000
Portugal	7,700	5,000	3,000	3,000	3,000	3,000	3,000
Spain	80,000	120,000	110,000	110,100	110,000	110,000	110,000
Sweden	91,200	77,859	78,900	65,200	68,000	65,000	65,000
Switzerland	6,400	10,100	8,000	9,000	9,000	9,000	9,000
United Kingdom	320,704	337,151	304,350	307,700	300,000	300,000	300,000
Total	1,480,000	1,610,000	1,330,000	1,270,000	1,300,000	1,300,000	1,300,000
Central Europe:							
Bosnia and Herzegovina	100	100	50	50	50	50	50
Bulgaria	72,150	84,100	93,500	84,300	80,000	80,000	80,000
Czech Republic	20,000	25,000	25,000	26,100	30,000	30,000	30,000
Estonia	--	--	7,000	9,000	10,000	10,000	10,000
Macedonia	22,500	22,900	--	--	15,000	15,000	15,000
Poland	66,421	55,900	62,455	67,298	70,000	70,000	70,000
Romania	26,000	28,000	37,900	33,100	30,000	30,000	30,000
Serbia[2]	23,600	1,242	700	700	1,000	1,000	1,000
Slovenia	7,237	15,300	15,400	15,400	15,000	15,000	15,000
Total	238,000	233,000	242,000	236,000	250,000	250,000	250,000
Central Eurasia:							
Kazakhstan	88,500	185,800	131,316	125,000	140,000	150,000	150,000
Russia	23,000	59,000	66,000	78,000	80,000	95,000	100,000
Ukraine	10,000	15,034	6,000	6,000	9,000	10,000	10,000
Total	122,000	260,000	203,000	209,000	230,000	260,000	260,000
Regional total	1,840,000	2,100,000	1,770,000	1,720,000	1,800,000	1,800,000	1,800,000

[e]Estimated. -- Zero.

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 14

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED NICKEL MINE PRODUCTION, 1995-2013[1]

(Ni content in metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Finland	3,439	3,347	3,386	2,985	3,500	4,000	4,500
Greece	19,900	19,535	23,210	21,670	22,000	22,000	22,000
Norway	3,386	2,538	130	209	100	100	1,000
Spain	--	--	5,380	6,400	8,000	10,000	11,000
Total	26,700	25,400	32,100	31,300	34,000	36,000	39,000
Central Europe, Macedonia	3,500	--	--	--	--	--	--
Central Eurasia:							
Russia	251,000	315,000	315,000	320,000	330,000	330,000	340,000
Ukraine	1,400	--	2,000	12,000	12,000	12,000	12,000
Total	252,000	315,000	317,000	332,000	340,000	340,000	350,000
Regional total	283,000	340,000	349,000	363,000	380,000	380,000	390,000

[e]Estimated. -- Zero.

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

TABLE 15

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PLATINUM MINE PRODUCTION, 1995-2013[1]

(Kilograms)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Finland	37	441	678	1,000	1,000	1,000	1,000
Norway[2]	1,500	1,000	--	--	--	--	--
Total	1,540	1,440	678	1,000	1,000	1,000	1,000
Central Europe:							
Poland	21	21	20	20	20	20	20
Serbia[3]	6	3	1	1	1	1	1
Total	27	24	21	21	21	21	21
Central Eurasia, Russia	31,000	27,000	29,000	29,000	30,000	31,000	32,000
Regional total	32,600	28,500	29,700	30,000	31,000	32,000	33,000

[e]Estimated. -- Zero.

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

[2]Data prior to 2005 represent exports.

[3]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 16

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PALLADIUM MINE PRODUCTION, 1995-2013[1]

(Kilograms)

Region and country[2]	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Central Europe:							
Poland	12	12	10	10	10	10	10
Serbia[3]	46	21	8	8	8	8	8
Total	58	33	18	18	18	18	18
Central Eurasia, Russia	65,000	95,000	97,400	98,400	100,000	103,000	106,000
Regional total	65,100	95,000	97,400	98,400	100,000	100,000	110,000

[e]Estimated.

[1]Projections, 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.

[3]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 17

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED ZINC MINE PRODUCTION, 1995-2013[1]

(Zn content in metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Finland	16,385	30,493	72,474	66,109	65,000	65,000	65,000
Germany	--	--	--	--	--	50,000	50,000
Greece	15,100	20,300	1,300	16,414	22,000	23,000	23,000
Ireland	184,100	262,877	428,596	425,800	460,000	480,000	480,000
Italy	23,100	--	--	--	--	--	--
Norway	9,877	--	--	--	--	--	--
Portugal	--	--	--	7,505	100,000	120,000	135,000
Spain	172,468	200,021	--	--	--	--	--
Sweden	167,090	176,788	215,670	208,551	220,000	200,000	200,000
Total	588,000	690,000	718,000	724,000	870,000	940,000	950,000
Central Europe:							
Bosnia and Herzegovina	300	300	300	300	--	--	--
Bulgaria	26,000	9,400	17,500	13,500	14,000	15,000	15,000
Macedonia	8,300	25,000	--	21,700	25,000	30,000	30,000
Poland	154,500	156,900	117,200	126,000	150,000	140,000	130,000
Romania	34,730	27,452	13,784	9,574	9,000	9,000	9,000
Serbia[2]	3,195	3,266	900	2,100	2,500	2,500	3,000
Total	227,000	222,000	150,000	173,000	200,000	200,000	190,000
Central Eurasia:							
Armenia	700	528	3,196	2,270	2,500	3,000	3,000
Georgia	--	200	400	400	400	400	500
Kazakhstan	225,000	325,000	400,000	400,000	440,000	470,000	500,000
Russia	131,000	136,000	180,000	190,000	220,000	240,000	250,000
Total	357,000	462,000	584,000	593,000	660,000	710,000	750,000
Regional total	1,170,000	1,370,000	1,450,000	1,490,000	1,700,000	1,800,000	1,900,000

[e]Estimated. -- Zero.

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 18

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PRIMARY AND SECONDARY REFINED ZINC PRODUCTION, 1995-2013[1]

(Metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Belgium	240,000	252,000	262,000	259,800	250,000	250,000	250,000
Finland	176,600	222,881	281,905	282,238	290,000	290,000	280,000
France	314,000	347,705	210,000	120,000	150,000	150,000	150,000
Germany	322,460	356,516	334,891	342,556	330,000	320,000	320,000
Italy	259,600	170,300	121,200	109,200	110,000	110,000	110,000
Netherlands	208,000	216,800	213,800	235,913	230,000	230,000	230,000
Norway	121,576	125,800	151,285	160,700	160,000	160,000	160,000
Spain	364,000	387,100	501,400	502,800	500,000	500,000	500,000
United Kingdom	105,998	99,600	--	--	--	--	--
Total	2,110,000	2,180,000	2,080,000	2,010,000	2,000,000	2,000,000	2,000,000
Central Europe:							
Bulgaria	79,700	84,200	92,500	85,900	100,000	100,000	110,000
Czech Republic	1,000	150	250	250	250	250	250
Macedonia	21,335	62,800	--	--	10,000	10,000	10,000
Poland	166,421	173,000	137,300	134,000	140,000	140,000	140,000
Romania	28,331	51,900	56,795	43,705	50,000	50,000	50,000
Serbia[2]	5,976	8,291	6,000	4,000	15,000	15,000	15,000
Total	303,000	380,000	293,000	268,000	320,000	320,000	330,000
Central Eurasia:							
Kazakhstan	239,000	262,200	356,907	349,000	370,000	380,000	400,000
Russia	166,000	230,000	220,000	240,000	260,000	350,000	400,000
Uzbekistan	70,000	18,000	35,030	35,000	40,000	50,000	60,000
Total	475,000	510,000	612,000	624,000	670,000	780,000	860,000
Regional total	2,890,000	3,070,000	2,980,000	2,910,000	3,000,000	3,100,000	3,200,000

[e]Estimated. -- Zero.

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

[2]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 19

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED NATURAL DIAMOND PRODUCTION, 1995-2013[1, 2]

(Thousand carats)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Central Eurasia, Russia:							
Gem grade	17,000	17,500	23,000	23,250	24,000	25,000	25,000
Industrial grade	11,000	11,700	15,000	15,100	16,000	17,000	17,000
Regional total	28,000	29,200	38,000	38,400	40,000	42,000	42,000

[e]Estimated.

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

[2]The large increase in Russian diamond production reflects mainly newly released Russian diamond production data. Future volumes will reflect revised historic Russian diamond production data.

TABLE 20

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED PHOSPHATE ROCK PRODUCTION, 1995-2013[1]

(P_2O_5 content in thousand metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe, Finland	244	277	301	300	300	300	300
Central Eurasia:							
Kazakhstan	2	10	55	55	120	150	150
Russia	3,400	4,450	4,220	4,220	4,400	4,400	4,500
Uzbekistan	--	36	102	140	150	170	180
Total	3,400	4,500	4,380	4,420	4,700	4,700	4,800
Regional total	3,650	4,770	4,680	4,720	5,000	5,000	5,100

[e]Estimated. -- Zero.

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

TABLE 21

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED SALABLE COAL PRODUCTION, 1995-2013[1, 2]

(Thousand metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
Austria	1,282	1,255	6	5	--	--	--
France	8,416	4,102	--	--	--	--	--
Germany	246,322	201,975	202,815	197,206	190,000	180,000	170,000
Greece	56,533	64,026	73,585	74,000	75,000	75,000	75,000
Italy	352	19	--	--	400	600	600
Norway	343	330	300	300	220	200	200
Spain	28,476	23,470	19,354	18,399	15,000	20,000	20,000
United Kingdom	53,600	31,972	20,498	20,000	20,000	20,000	20,000
Total	395,000	327,000	317,000	310,000	300,000	300,000	290,000
Central Europe:							
Albania	81	21	13	13	13	15	20
Bosnia and Herzegovina	1,808	7,441	9,000	9,965	10,000	10,000	10,000
Bulgaria	30,830	27,094	24,909	25,359	27,000	27,000	27,000
Croatia	75	--	--	--	--	--	--
Czech Republic	80,082	68,091	61,903	62,391	65,000	65,000	65,000
Hungary	14,453	14,276	9,580	9,898	12,000	14,000	14,000
Macedonia	7,991	7,516	6,880	6,650	8,000	8,000	8,000
Montenegro	NA	NA	1,288	1,502	2,000	2,000	2,000
Poland	200,713	162,815	159,039	156,064	170,000	170,000	170,000
Romania	41,128	29,294	31,122	30,100	35,000	35,000	35,000
Serbia[3]	40,556	32,275	34,565	36,785	38,000	40,000	40,000
Slovakia	4,140	3,589	2,511	2,500	3,000	3,500	3,500
Slovenia	4,884	4,480	4,539	4,521	4,500	4,500	4,500
Total	427,000	357,000	345,000	346,000	370,000	380,000	380,000
Central Eurasia:							
Georgia	40	7	5	8	10	10	10
Kazakhstan	113,000	74,872	86,385	96,321	105,000	115,000	120,000
Kyrgyzstan	463	425	340	314	350	350	350
Russia	263,000	273,578	298,300	308,800	330,000	350,000	370,000
Tajikistan	100	21	99	102	105	105	110
Ukraine	83,800	81,907	74,559	75,824	90,000	100,000	110,000
Uzbekistan	3,200	2,556	3,000	3,121	3,500	4,000	4,500
Total	464,000	433,000	463,000	484,000	530,000	570,000	600,000
Regional total	1,290,000	1,120,000	1,120,000	1,140,000	1,200,000	1,200,000	1,300,000

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

[1]Projections, 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.

[3]Prior to 2005, data are for a combined Serbia and Montenegro.

TABLE 22

EUROPE AND CENTRAL EURASIA: HISTORIC AND PROJECTED URANIUM PRODUCTION, 1995-2013[1]

(U_3O_8 content in metric tons)

Region and country	1995	2000	2005	2006	2009[e]	2011[e]	2013[e]
Europe:							
Western Europe:							
France	840	375	--	--	--	--	--
Germany	41	33	111	77	60	50	40
Portugal	22	16	--	--	--	--	--
Spain	420	347	--	--	--	--	--
Total	1,320	771	111	77	60	50	40
Central Europe:							
Bulgaria	700	700	700	700	700	700	700
Czech Republic	721	587	482	422	450	450	450
Hungary	277	--	--	--	--	--	--
Total	1,700	1,290	1,180	1,120	1,200	1,200	1,200
Central Eurasia:							
Kazakhstan	1,920	2,052	5,138	6,226	10,000	13,000	15,000
Russia	2,650	2,948	4,045	3,762	4,000	4,300	4,600
Ukraine	590	708	943	943	1,200	1,500	1,600
Uzbekistan	2,100	2,771	2,712	2,665	2,800	3,000	3,200
Total	7,260	8,480	12,800	13,600	18,000	22,000	24,000
Regional total	10,300	10,500	14,100	14,800	19,000	23,000	26,000

[e]Estimated. -- Zero.

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