European Mineral Statistics

2003–07

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Communities and Local Government

BRITISH GEOLOGICAL SURVEY

European Mineral Statistics 2003–07

A product of the World Mineral Statistics database

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Cover photograph: Sand and gravel production at Lafarge Aggregates Ltd's Alrewas Quarry, United Kingdom. Approximately 150 acres of previously worked land at this site have been restored into the National Memorial Arboretum as a living tribute to the personal sacrifices made by the armed and civil services. Photographer: Catherine Weston © Larfarge Aggregates Ltd (used with permission)

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Commentary

1. Introduction

Within Europe's relatively restricted land area there exists a remarkable geological variety. It includes ancient crystalline 'shields' and massifs, complex younger fold-belts penetrated by igneous intrusions, deep sedimentary basins containing coal and other minerals, and landscapes profoundly modified by a recent ice age. As a consequence Europe has a rich endowment of all the major groups of minerals. In the nineteenth century the continent's burgeoning industrial economies were built on its resources of metals and coal. The productive capacity of those resources was, with some exceptions, largely outgrown in the twentieth century but Europe continues to obtain a high proportion of its needs for industrial and construction minerals from within its own borders. In addition, a recent bonanza has been the discovery and exploitation of the offshore resources of petroleum and natural gas beneath the North Sea and other areas of the continental shelf.

During the industrial revolution of the eighteenth and nineteenth centuries the interest of sovereign states in their own economic and demographic performance led to the development of statism, that is, the direction and control of their internal affairs to a much greater degree than before. From statism came the concept of statistics – the numbers collected and compiled as the basis for such action by the state. Among many other things, almost all European countries compile annual statistics of national mineral production and trade and these form the basis of this European compilation[1].

For many countries, from antiquity, the ownership of precious metals has been vested in the state or the sovereign and for the majority of European countries state ownership extends to all metals and high-value industrial minerals. Chiefly as a result, in Europe and the world as a whole, there is a direct correspondence between the unit value of a mineral commodity and the amount and accuracy of official statistical information available on it. At the extreme high end of the value range this relationship tends to break down so that data on gemstones and precious metals is less straightforward than that on base metals. However, as a rule the state does not claim ownership of low-value construction minerals, such as crushed rock aggregate, sand & gravel and others. Partly as a consequence, the statistics for such minerals tend to be less comprehensive, less reliable and more difficult to compile and compare than those for other minerals. It is ironic that with modern environmental concerns and pressures on land-use in Europe it is precisely these less well-documented minerals – their occurrence, production, trade and consumption - that are of greatest concern to local and national governments.

So far as possible, the statistics of production compiled by the BGS are the official data for the countries concerned, whose government departments and agencies compile and publish them on the basis of returns from annual, or more frequent, inquiries in the form of mandatory questionnaires to producers. Trade statistics published by BGS are invariably compiled, directly or indirectly, from official publications. Where official production data are not available, or where there is reasonable cause to doubt the accuracy or completeness of such data, information is sought from other sources such as geological survey organizations, chambers of mines, universities, trade associations and the primary producers themselves. Time and resources preclude double-checking in any but the most necessary of cases.

An increasing problem, particularly in Europe, is the invocation of rules that debar a government body from divulging national production data if there is only a small number of producers, the object being the maintenance of commercial confidentiality. However we often find in such cases that the primary producers themselves are willing to release the information for publication. A further problem lies in the desire of governments, everywhere, to recover costs by asking for payment for official information –

[1] *For this compilation 'Europe' is defined as the 27 EU members (as of 1 February 2008), the EU associates Norway and Switzerland and the EU candidate countries Croatia, Macedonia and Turkey; this group of 32 countries is for convenience referred to as 'EU32'.*

which is often marketed through an agent. This situation is coupled with an increasing apparent disregard for the value (as distinct from the price) of impartial mineral statistics and a conviction that their compilation should be funded entirely by the users of the data, or by the industrial sector concerned. It is true that no other industrial sector has a statistical operation wholly dedicated to its physical (as opposed to financial) activities. The reason is that no other industrial sector is so crucial to the maintenance of civilisation and so little understood by the population at large.

2. Construction minerals

The most important construction minerals and their chief uses are summarised below (Table 1):

Table 1 Construction minerals and their principal uses.

Aggregates, natural (sand and gravel) crushed rock (limestone, sandstone, igneous rock etc.)	 *concrete, building sand and fill* *roadstone, fill, concrete*
Common clay and shale	*bricks, pipes, tiles and cement manufacture*
Gypsum[2]	*plaster, plasterboard and cement*
Limestone and dolomite	*crushed-rock aggregate, cement, other industrial and agricultural uses*
Building stone (dimension stone)	*this comprises almost any competent rock-type that may be used in the form of shaped and/or sized blocks for either structural or decorative purposes. It normally includes roofing stone and slate*

2.1 Statistical problems of aggregate minerals

Aggregates suffer from the incompleteness of available production data and incompatibility of different countries' production statistics for this group. The European data for aggregates presented here represent an attempt at compiling reliable data and we would welcome any comments, amendments and corrections that users may wish to make. Other problems are related to the terminology used by different countries. These can include such categories as:

- 'gravel and crushed rock' with no distinction between types of aggregate minerals
- 'building stone' that incorporates both crushed-rock aggregate and dimension stone
- 'limestone' and other purely petrological descriptions with no indication of the construction/industrial use split
- 'sand' with no distinction between material for construction sand and special sand for industrial uses e.g. for glass

With the establishment of the European single market on 1st January 1993 a new statistical system was introduced across the EU to measure production for sale (Prodcom). It covers many activities, including mining and quarrying. Information is presented on the volume and value of sales and the headings are compatible with trade headings, the intention being to provide an assessment of the apparent consumption of a particular product. However, the data for minerals are of highly variable quality.

[2] *Statistics for gypsum are complicated by the availability of large quantities of synthetic gypsum, which is not covered in this publication.*

2.2 European situation

The statistical tables in this volume show that it is possible to account in detail for at least 3039 million tonnes of primary aggregate production in the EU32 countries. In recent years the European Aggregates Association (UEPG) (www.uepg.eu) has estimated that the average annual production of primary aggregates in only 21 European countries is higher than the figures shown here. At the time of writing their estimates for 2007 were not available.

These totals easily exceed the total tonnage of all other minerals produced in the EU. This fact highlights the concerns expressed in many countries about the sustainability of the resource, both in terms of tonnage remaining and also the land-use and environmental issues that are raised by the implicit need for the expansion of quarries to maintain the level of output.

All European countries consume construction minerals, generally in proportion to the size of their individual economies. The majority of the EU member countries are self-sufficient in supply of aggregate minerals but while some, e.g. Finland, produce approximately equal quantities of sand & gravel and crushed-rock aggregates others are, for obvious geological and topographic reasons, deficient in one or the other. For example, Netherlands lacks resources suitable for the production of hard-rock aggregates while Austria, landlocked and without broad alluvial lowlands, is a net importer of sand and gravel. Simple statistical analysis, especially if only 'gross' national trade positions are examined, can be misleading: aggregates are low-cost minerals and are, as a result, sensitive to transport costs. They may be imported via a short cross-border route at lower cost than if they were carried a much greater distance within national borders.

For countries bordering the North Sea production of marine-dredged sand and gravel is a significant part of supply. In the case of the UK this source amounts to approximately 21 million tonnes/year or 22 per cent of total UK sand and gravel production in 2007. Almost one third of this tonnage is landed at foreign ports as exports. Crushed rock produced from onshore sites is also conveyed by sea from Norway and Scotland.

Recycled and secondary aggregates have become an increasingly important part of supply, in response to environmental constraints on the production of primary (quarried) material. In Great Britain these materials account for approximately 28 per cent of total supply. This is the highest in the EU32 countries in percentage terms although Germany is usually larger in tonnage.

3. Industrial (non-construction) minerals

These comprise a wide range of non-metallic, non-energy minerals used as feedstocks for manufacturing or industrial processing aids, exemplified by barytes, fluorspar, magnesite, kaolin (china clay), mica, and salt. The category includes metallic minerals used for non-metallic products, e.g. bauxite, chromite, ilmenite and also 'construction minerals' used for non-construction purposes, e.g. limestone. Unlike metals, where whatever the raw material the ultimate refined marketable material is produced to a few accepted standards for use in a variety of applications, industrial minerals depend to a great extent on their intrinsic 'as mined' physical and chemical qualities. Thus, for industrial minerals the two most significant variables are the grade of the deposit, that is, how much useful mineral it contains, and the quality of the mineral, that is, its suitability for specific end-uses. The quality may be a combination of physical properties such as particle size and shape, brightness, viscosity in suspension, specific gravity, hardness, strength and insulating properties. Several industrial minerals are valued purely for their chemical composition, for example, the essential plant nutrients potassium and phosphorus or the halogens chlorine and fluorine and many other elements used as chemical feedstocks.

It has been suggested that the point at which the value of a country's industrial mineral production (including construction minerals) overtakes that of its metal (mine) production marks its transition to a

mature industrial economy. Certainly this point was attained long ago for the major economies of Europe: the value of metal production in France, Germany, Italy and the UK is negligible compared to the value of industrial minerals output.

A problem for the compiler of statistics on industrial minerals is that many of them cannot be precisely defined, but grade into one another. Thus, kaolin grades into kaolinitic clay, bauxite into high-alumina clay, dolomite into limestone, and this has implications for the comparability of statistics between deposits and countries. Many industrial minerals are produced and marketed in either a 'wet', 'dried' or 'calcined' forms; this can markedly affect the weight of the material. In this compilation every effort has been made to ensure comparability between countries in this respect. Some mineral-derived elements may be obtained by a number of mineral-based but different routes: sulphur is obtained, in Europe, as a by-product from oil refining, from sour gas, from base metal smelting and as a primary product from pyrites (iron sulphide). Some semi-processed materials[3] can be obtained from completely different sources, for example magnesia (magnesium oxide), which is produced from both magnesite and a combination of sea-water and dolomite. Salt is a further example, being extracted as a solid (rock salt), as brine and by evaporation of sea water.

European production of industrial minerals[4] supplies a fairly high proportion of the continent's requirements, in contrast to the position with metals. However, in the cases of several minerals, production is dominated by one country and the majority are still dependent on imports for all but a few of these minerals. The proportions of selected minerals produced by Europe is given in Table 2.

Table 2 EU32 production of selected industrial minerals as world percentages.

Industrial mineral	***% of world***	***EU32 countries with >2% of world output in 2007***
Feldspar	61.9	Turkey (27%), Italy, Spain, France, Czech Republic
Kaolin	22.2	UK (6.0%), Germany, Czech Republic, Turkey
Bentonite & fuller's earth	22.1	Greece (5.6%), Spain, Italy, Turkey
Magnesite	21.5	Turkey (8.9%), Slovakia, Austria
Gypsum	21.0	Spain (9.4%), France
Salt	20.3	Germany (5.4%), Netherlands, France, UK
Talc	15.9	Finland (6.2%), France
Potash	13.7	Germany (10.9%)
Mica	11.5	France (6.5%), Finland
Fluorspar	4.2	Spain (2.4%)

4. Metals

Until the middle of the nineteenth century the demands of industry in Europe were met by indigenous metal mines but thereafter it became clear that the resources of other continents would become an important source of supply, having, as they did, very large and rich ore bodies that could be worked at relatively low cost. Initially, ores and concentrates were transported to Europe for processing. Many high-volume ores, notably iron ore, are still imported but smelting and refining of base metal concentrates has been increasingly undertaken at or near the sites of the overseas mines. Europe as a whole is now heavily

[3] *In the case of several oxides, hydroxides and salts the yardstick for inclusion in this compilation is that the material should be the basis for a further transformation process although the compilers accept that this criterion has been applied in a flexible way.*

[4] *The tabulated statistics show that availability of reported data is much lower for industrial minerals than for metals, with many estimated totals being shown.*

dependent on extra-European sources of virtually all metals although recycling makes an important contribution and, as the statistical tables show, several European countries still have significant mine production of one or more metals.

Certain European countries are major mine producers of particular metals, e.g. Turkey for chromium (7.0 per cent of the world total in 2007), Norway for titanium (6.8 per cent) and Poland for silver (5.9 per cent), but the majority of European countries depend chiefly on imports from other continents. Between 2006 and 2007, the overall mine production for metals produced in the EU32 has generally increased slightly. Mine production of chromium has increased by nearly 38.9 per cent and mine production of nickel by 19.0 per cent. However, increases in mine production of other metals are more modest with a 3.8 per cent increase in mined zinc and a 5.6 per cent increase in iron ore being typical. The overall European position of mine production of selected metals in 2007 is shown in Table 3.

Table 3 EU32 mine production of selected metals as world percentages.

Metal	***% world***	***EU32 countries with >1% of world output in 2007***
Silver	9.4	Poland (5.9%), Sweden, Turkey
Chromium	9.3	Turkey (7.0%), Finland
Zinc	8.6	Ireland (3.6%), Sweden, Poland
Lead	7.5	Poland (2.1%), Sweden, Ireland
Titanium	6.8	Norway (6.8%)
Copper	5.3	Poland (2.9%)
Tungsten	3.5	Austria (2.0%), Portugal
Nickel	3.2	Greece (1.3%)
Mercury	3.2	Finland (3.2%)
Aluminium (bauxite)	1.8	Greece (1.0%)
Iron	1.6	Sweden (1.2%)
Gold	0.7	–
Manganese	0.4	–

European smelting and refining of imported ores and concentrates provides the bulk of supply in the cases of iron, aluminium (bauxite), zinc and lead, and about half of total copper supply. Refining in Europe of semi-processed materials from other continents accounts for a large part of nickel and tin supply but vanadium and cobalt metal are now entirely imported. Ferro-alloys of a number of metals are produced in Europe but imports of the major types are an indispensable part of total supply. The balance of metals supply is made up of imports of refined metal. It is emphasized that the situation of individual countries may vary widely from one to another, as the statistics show.

During 2007, metals prices for the major non-ferrous metals, copper, aluminium, lead and zinc were mixed. Prices for lead more then doubled over the year, whereas prices for aluminium and copper increased more modestly by three per cent and six per cent respectively. However, prices for zinc actually fell slightly. China consumed 50 per cent of the world total of primary aluminium, 27 per cent of refined copper, 31 per cent of refined lead, 21 per cent of nickel, 38 per cent of refined tin, and 32 per cent of slab zinc (World Bureau of Metal Statistics). It continues to be the largest consuming country of these metals, often by a significant margin. China also consumed 33.8 per cent of steel, but although its per capita consumption increased 12 per cent in a year to 307 kilograms, it is still lower than the EU(27) at 392 kilograms per capita (World Steel Association).

5. Energy minerals

These comprise petroleum, natural gas, coal and uranium. Statistics for production and trade of petroleum and coal are fairly complete and present few problems to compilers. However the data for petroleum conceal the distribution of differing grades of crude oil. For example, although the UK is the second largest exporter of petroleum from the EU32 countries there is also a significant import of heavy crude which is a necessary requirement that cannot be supplied by the North Sea and other offshore fields.

Before 1975, European production of both petroleum and natural gas was negligible but Europe produced 10.1 per cent of the world total for natural gas in 2007 and 6.1 per cent of petroleum. These percentages both show reductions on the 2003 figures which were 12.2 per cent and 8.0 per cent, respectively.

In 2007, Norway produced 3.2 per cent of total world output of oil and the United Kingdom produced 1.8 per cent. These two countries are the eleventh and eighteenth largest world producers respectively. Production in Norway has decreased by 18.1 per cent between 2003 and 2007, and in the UK by 27.9 per cent.

Coal output in Europe has been declining steadily for many years as deep mines become increasingly uncompetitive with sources in other continents. In 1981 production from the present EU32 countries was 1351 million tonnes. In 2007 production from the same territories was 658 million tonnes, of which half was provided by Germany (3.2 per cent of the world total) and Poland (2.3 per cent).

'Black coal' or 'hard coal' is normally taken to mean bituminous coal and anthracite. 'Brown coal' comprises sub-bituminous coal and lignite. Black coals have a higher calorific value and lower volatile content than brown coals, the use of which is almost confined to burning in electricity generating stations. Within black coals a fundamental division is made into 'steam coal', for power generation, and 'coking coal', used for metallurgical purposes, predominantly iron smelting in blast furnaces. An important distinction in mining methods is that between deep mines (with shafts or deep declines) and opencast or open pit mines. The latter have, as a rule, lower costs and are therefore more profitable. Both methods give rise to planning and social concerns.

In 2007, mine production of uranium in the EU32 countries amounted to 519 tonnes U_3O_8 equivalent, or 1.1 per cent of the world total, chiefly attributable to the Czech Republic. The EU32 countries occupy the top four positions for nuclear share in electricity generation in 2007 (International Atomic Energy Agency). These countries are France, Lithuania, Slovakia, and Belgium with nuclear share ranging from 76.8 per cent to 54.0 per cent.

In January 2008, the UK government gave formal backing to the building of new nuclear power stations by private operators. The French company EDF has announced plans to build four nuclear plants in the UK, the first by 2017, and other companies have also expressed interest. In 2007, the UK produced 15.1 per cent of electricity from nuclear generation.

The overall European position with regard to production of energy minerals in 2007 is shown in Table 4.

Table 4 EU32 production of energy minerals as world percentages.

Mineral	***% world***	***EU32 countries with > 1% of world output 2007***
Coal	10.3	Germany (3.2%), Poland
Natural gas	10.1	Norway (3.0%), UK, Netherlands
Petroleum	6.1	Norway (3.2%), UK
Uranium	1.1	-

Contents

Country index

Austria 2
Belgium-Luxembourg 7
Bulgaria 13
Croatia 16
Cyprus 18
Czech Republic 20
Denmark 24
Estonia 27
Finland 30
France 35
Germany 42
Greece 49
Hungary 53
Ireland, Republic of 56
Italy 59
Latvia 65
Lithuania 67
Macedonia 69
Malta 71
Netherlands 72
Norway 78
Poland 82
Portugal 87
Romania 91
Slovakia 94
Slovenia 97
Spain 100
Sweden 106
Switzerland 111
Turkey 115
United Kingdom 120

Commodity index

Aggregates 128
Alumina 134
Aluminium 135
Antimony 143
Arsenic 145
Asbestos 147
Barytes 149
Bauxite 133
Bentonite 152
Bismuth 157
Borates 331
Bromine 159
Cadmium 161
Cement 164
Chromium 171
Coal 176
Cobalt 182
Copper 186
Crushed rock 128
Diamond 194
Diatomite 197
Feldspar 200
Ferro alloys 224
Fluorspar 203
Fuller's earth 152
Gold 206
Graphite 210
Gypsum 213
Iodine 218
Iron ore 219
Iron and steel 222
Kaolin 228
Lead 241
Lithium 247
Magnesia 249
Magnesite 249
Manganese 253
Mercury 257
Mica 260
Molybdenum 262
Natural gas 273
Nepheline syenite 331
Nickel 264
Niobium 306
Perlite 332
Petroleum 270
Phosphates 275
Platinum 277
Potash 280
Pyrites 297
Rare earths 285
Salt 287
Sand and gravel 128
Selenium 332
Silicon 224
Sillimanite 291
Silver 293
Strontium 333
Sulphur 297
Talc 303
Tantalum 306
Tin 308
Titanium 312
Tungsten 317
Uranium 333
Vanadium 320
Wollastonite 334
Zinc 322
Zirconium 329

Explanatory notes

The statistics in this publication are from the World Mineral Statistics database.

Coverage

European Mineral Statistics covers the majority of economically important, and internationally traded, mineral commodities. For each commodity constant efforts are made to ensure that as many producing and trading countries as possible are reported and that trade data cover all major traded forms. For some commodities, where statistics on production and trade are not publicly available, estimates are made. Users of this compilation are advised that more statistical information than can be included in a publication of this nature is held in the BGS files and is available for consultation.

Production

Metals Mine production of many metals is expressed in terms of metal content. This is clearly indicated adjacent to the commodity description. Unless otherwise specified, metal production statistics relate to metal recovered from both domestic and imported materials, whether primary or secondary, but exclude remelted material.

Trade

Although every effort has been made to provide comprehensive coverage of trade statistics the resulting trade compilations depend on the nature of the data available. The fact that a country is not shown as trading in a particular commodity does not necessarily imply that there is no trade in that item. The commodity may not be separately identified in the available trade statistics or may not be traded in significant quantities.

Where an estimate for a trade statistic has been reconstructed from the imports/exports of other countries, the resulting figure may be conservative, as complete coverage of world trade is seldom available. Export statistics may include re-exports.

Tables showing trade in the following metals covered by Harmonised System Chapter 81 include under the term 'metal', unwrought and wrought forms, powder, alloys, waste and scrap, unless these are separately shown: antimony, bismuth, cadmium, chromium, cobalt, manganese, molybdenum, tantalum–niobium, titanium, tungsten, vanadium and zirconium. Trade tables of other metals include only unwrought forms under the term 'metal'.

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Particular acknowledgement is made to the Mines Departments and other government agencies of many countries whose regular statements, yearbooks and other reports are worthy of direct consultations by readers in search of detail.

Specialist commodity organisations which have kindly allowed information to be reproduced include the International Copper Study Group, the International Lead and Zinc Study Group, the International Nickel Study Group and the International Fertilizer Industry Association Ltd. In a few instances, information on specific commodities has been obtained directly from company sources. The co-operation of other members of the International Consultative Group on Non-Ferrous Metal Statistics is also gratefully acknowledged.

Supplementary information is also obtained from publications dealing with a wider range of commodities such as Société de l'Industrie Minérale, *Annuaire Statistique Mondial des Minerais et Métaux*; Mining Journal, *Country and Commodity Reports*; World Bureau of Metal Statistics, *World Metal Statistics* and *Metallstatistik*; publications of the Interstate Statistical Committee of the CIS, the United States Geological Survey, and the United Nations Statistics Division.

In addition, information has been obtained from the websites of the following organisations, companies, statistical offices and government departments: United Nations; Kaolin & Plastic Clays Europe; International Iron and Steel Institute (now known as the World Steel Association); Eurofer; World Nuclear Association; Eurostat; European Aggregates Association; Inmet Mining; Aluminium de Grece; New Boliden; Eurozinc Mining Corporation; Rio Narcea; Lundin Mining; Vereinigung der Osterreichishen Zementindustrie, Austria; Federation de l'Industrie Cimentiere Belge, Belgium; Statistics Belgium; Czech Republic Statistical Office; Statistics Denmark; Geological Survey of Finland; Federation des Minerais, Mineraux Industrielles et Metaux non Ferreux, France; Comite Professionel de Petrole, France; Ministere de l'Economie, des Finances et de l'Industrie, France; Unicem, France; Infociments, France; Statistisches Bundesamt Deutschland, Germany; National Statistical Service of Greece; Federacciai, Italy; Unione Petrolifera, Italy; Istituto Nazionale di Statistica, Italy; Statec, Luxembourg; Centraal Bureau voor de Statistiek, Netherlands; Staatstoezicht op de Mijnen, Netherlands; Statistisk Sentralbyra, Norway; Geological Survey of Norway; Instituto Nacional de Estatistica, Portugal; Unesid, Spain; Sveriges Geologiska Undersokning, Sweden; Jernkontoret, Sweden; Statistiska Centralbyran, Sweden; Department for Business, Enterprise and Regulatory Reform, United Kingdom; Office for National Statistics, United Kingdom; The Crown Estate, United Kingdom.

Units

The Statistics shown in this volume are expressed in metric units. The following factors are given for converting to non-metric units:

tonnes × 0.9842 = long tons
tonnes × 1.1023 = short tons
kilograms × 2.2046 = pounds
kilograms × 32.1507 = troy ounces
cubic metres × 35.3147 = cubic feet
1 tonne of crude petroleum equals on average 7 barrels of crude petroleum
1 flask mercury = 34.5 kilograms
1 metric ton unit = 10 kilograms

Conversion of national currencies to pounds sterling has been made using the annual average factors shown for each country in *International Financial Statistics* published by the International Monetary Fund.

Symbols

...	figures not available
0	quantity less than half unit shown
—	nil
*	estimated
BGS	British Geological Survey
c.i.f.	Cost, Insurance and Freight. The seller's price includes the cost of the goods, the insurance of the goods to their destination port, and the cost of freight.
f.o.b.	Free on Board. The seller is responsible for the cost of delivering goods to the ship. The buyer is responsible for transportation and insurance costs from that point.

Table notes for country tables

Aggregates – production
(1) So far as possible, these statistics include construction sands; gravel, pebbles, shingle and flint; crushed stone used for concrete aggregates, roadstone and other construction use; granules, chippings and powders, listed under Prodcom codes 14211190, 14211210, 14211230, 14211250, 14211290
(2) Where official sources show more than one series for aggregates the higher series has generally been used in this compilation
(3) Where marine sands and gravels have been identified, these are included
(4) Information may be incomplete or absent due to reporting methods, confidentiality or lack of available information. All EU32 countries produce sand and gravel and crushed rock
(5) Production from many small operations are not officially compiled. The minimum number of employees for which establishments are required to report production varies between different countries and can also vary from year to year within a country
(6) Quantities of sand from sand and gravel operations may be discarded due to low demand. This may or may not be included in the statistics

Aggregates - exports and imports
(1) These statistics include construction sands; pebbles, gravel, shingle, flint; crushed rock; granules, chippings and powders covered by the Harmonised System codes 2505.90, 2517.10, 2517.41 and 2517.49
(2) Exports include marine dredged sand and gravel landed at foreign ports

Bauxite - production
(1) Including production of refractory bauxite

Alumina - production
(1) Where possible figures show the alumina equivalent (Al_2O_3) of total hydrate produced, whether or not calcined

Bauxite, alumina and aluminium - exports and imports
(1) Except where alumina hydrate is separately specified, national trade figures for alumina can be considered as inclusive of hydrate
(2) The term 'unwrought' aluminium corresponds to item 7601 of the Harmonised System and comprises ingots, blocks, unwrought bars, etc.
(3) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Antimony - mine production
(1) Including antimony content of antimonial lead alloys

White arsenic - production
(1) Including calculated trioxide equivalent of arsenic metal produced except where this would involve double counting

Arsenic - exports and imports
(1) Data relating to arsenic are not fully recorded by many countries

Barytes - production
(1) Small quantities of witherite may be included

Barytes - exports and imports
(1) Trade in barytes is reported under item 2511 of the Harmonised System and is described as ‘barytes and witherite’. However, only small quantities of witherite are traded

Bentonite and fuller’s earth - production
(1) Bentonites consist of montmorillonite (one of the smectite group of clay minerals) and occur in two main varieties, calcium bentonite, the most commonly occurring, and sodium bentonite, industrially the more important
(2) Calcium bentonite can be converted to sodium bentonite by a sodium-exchange process
(3) In some countries, such as the United Kingdom, calcium bentonite is known as fuller’s earth, a term which is also used to refer attapulgite, a mineralogically distinct clay mineral but exhibiting similar properties

Bentonite and fuller’s earth - exports and imports
(1) See notes 1 - 3 under production
(2) The figures refer to natural and sodium-exchanged bentonite, and fuller’s earth, Harmonised System 2508.10 and 2580.20
(3) Activated bentonite and fuller’s earth, Harmonised System 3802.90 are excluded
(4) Some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Harmonised System 3802.90, e.g. Italy
(5) From 2007 Harmonised System 2508.20, used for fuller's earth, is no longer available

Bismuth - mine production
(1) In some instances the figures are derived from reported bismuth content of refined and impure metal plus recoverable in ores and concentrates exported
(2) Production for some countries may include bismuth produced from imported ores but it is thought that any resulting duplication is insignificant in the countries shown

Bismuth - exports and imports
(1) The compounds are bismuth carbonate and/or bismuth nitrate

Bromine - exports and imports
(1) Trade in bromine is not separately distinguished from other halogens by many countries

Cadmium - production
(1) Data exclude secondary metal

Chromium - exports and imports
(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Coal - production
(1) There is no international agreement as to the separate definition of lignite and brown coal. In some cases they are distinguished. Elsewhere both may be aggregated under one or other term

Coal - exports
(1) Excludes bunker shipments

Cobalt metal - production
(1) In addition, several countries including the United Kingdom, Finland and France are known to produce substantial amounts of cobalt compounds

Copper - smelter production
(1) Primary metal in the form of blister and anode produced from concentrates is shown, and may include copper produced from scrap but this is excluded when it can be separately identified

Refined copper - production
(1) Figures relate to both primary and secondary refined copper, whether electrolytic or fire refined. Metal recovered from secondary materials by remelting alone is excluded

Copper - exports and imports
(1) The term ‘unwrought’ copper corresponds to items 7402, 7403 and 7405 of the Harmonised System and includes both unrefined (including blister) and refined copper
(2) The term ‘unwrought’, as used here, includes alloys unless these are separately specified. The term ‘scrap’ includes scrap alloys

Diamond - exports and imports
(1) Carats have been used as the unit except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
(2) See explanatory notes regarding currency conversion
(3) The term 'Dust' corresponds to item 7105.10 of the Harmonised System and includes both natural and synthetic diamond dust

Gold - mine production
(1) In several countries substantial amounts of gold produced in small operations are not recorded in the official statistics

Gold - exports and imports
(1) The term 'metal' includes both unwrought and partly worked gold and alloys but excludes gold coin
(2) Kilograms have been used as the unit except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling.
(3) See explanatory notes regarding currency conversion

Graphite - production
(1) Including all forms of amorphous and crystalline graphite but excluding synthetic material

Graphite - exports and imports
(1) Excluding synthetic graphite

Gypsum - production
(1) Some countries produce large quantities of synthetic gypsum. Where possible, this output is excluded

Gypsum - exports & imports
(1) The term ‘crude’ may include some anhydrite

Pig iron - production
(1) Sponge iron and direct reduced iron (DRI) are included where these have been separately identified

Crude steel - production
(1) Figures include production from scrap unless otherwise indicated

Iron, steel and ferro-alloys - exports and imports
(1) The term ‘ingots, blooms, billets’ corresponds to items 7206, 7207, 7218 and 7224 of the Harmonised System which includes those of alloy and high carbon steel

Refined Lead - production
(1) Figures relate to both primary and secondary refined lead and include the lead content of antimonial lead. Metal recovered from materials by remelting alone is excluded

Lead - exports and imports
(1) The term ‘unwrought’ lead corresponds to item 7801 of the Harmonised System and comprises base bullion, pigs, unwrought bars, etc
(2) The term ‘unwrought’, as used here, includes alloys unless these are separately identified.

Magnesite and magnesia - exports and imports
(1) The term ‘magnesia’, as used here, includes dead-burned, sintered and caustic-burned (caustic calcined) material

Manganese - exports and imports
(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Mercury - production
(1) Several countries are believed to have unrecorded production of mercury from copper electrowinning processes

Mica - exports and imports
(1) Data show unmanufactured mica and include sheet, block, splittings, ground and waste, unless these are separately specified. Mica powder is included under the term ‘ground’

Molybdenum - exports and imports
(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Nickel - smelter/refinery production
(1) Data relate to refined nickel plus the nickel content of ferro-nickel, nickel oxide and nickel salts

Nickel - exports and imports
(1) The term ‘unwrought’ nickel corresponds to item 7502 of the Harmonised System which excludes all electro-plating anodes
(2) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Crude petroleum - production
(1) The figures include natural gas liquids

Natural gas - production
(1) Flared or reinjected gas is excluded as far as possible

Platinum group metals - exports and imports
(1) The term ‘Platinum’ and/or ‘Platinum metals’ includes unwrought, partly worked and alloys
(2) Kilograms have been used as the unit except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling.
(3) See explanatory notes regarding currency conversion

Rare earths - exports and imports
(1) Rare earths are here taken to include yttrium and scandium

Salt - production
(1) Refined salt is excluded
(2) Salt is known to be produced in many countries for which statistics are not available.

Sillimanite minerals - production
(1) A number of other countries produce sillimanite minerals but details of output are not reported

Sillimanite minerals - exports and imports
(1) ‘Sillimanite minerals’ is understood to include any or all of andalusite, kyanite, sillimanite and mullite

Silver - exports and imports
(1) Excluding silver coin but including silver shipped for minting
(2) The term ‘metal’ includes both unwrought and partly worked silver and alloys

Tantalum and niobium - exports and imports
(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Tin - exports and imports
(1) The term ‘unwrought’ tin corresponds to item 8001 of the Harmonised System and comprises ingots, pigs, unwrought bars, sticks, etc

Titanium minerals - production
(1) The figures refer to gross tonnage of titanium concentrates

Titanium - exports and imports
(1) Significant quantities of titanium slag are traded, but it is not always possible to identify this material in national trade accounts
(2) So far as possible, the term ‘oxides’, includes oxides and oxide based pigments classified under Harmonised System items 2823 and 3206.10
(3) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Tungsten - exports and imports
(1) Significant amounts of tungsten are traded in the forms of ammonium paratungstate (APT) and carbide. Though statistics are included where available, most countries do not separately distinguish these forms in their trade accounts
(2) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Uranium – mine production
(1) Excludes uranium production from decommissioning operations.

Vanadium - exports and imports
(1) The term ‘pentoxide’ also includes vanadium oxides and hydroxides, if any
(2) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

Zinc - exports and imports
(1) The term ‘unwrought’ zinc corresponds to item 7901 of the Harmonised System and comprises blocks, pigs, slabs, etc

Zirconium - exports and imports
(1) Metal traded in ferro-alloy form is included under Iron, Steel and Ferro-alloys

STATISTICAL TABLES BY COUNTRY

Austria

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel (c)	tonnes	27 287 331	29 395 685	29 065 350	27 281 864	29 230 545
Crushed rock (c)	tonnes	26 333 481	27 687 041	25 093 602	26 536 938	25 248 136
Cement clinker	tonnes	...	...	90 053	188 588	221 684
Cement, finished	tonnes	*4 000 000	4 040 000	4 676 768	5 293 370	5 518 303
Coal						
Brown coal & lignite (d)	tonnes	1 152 389	235 397	13 931	7 854	13 992
Copper, refined	tonnes	65 100	74 200	72 300	72 600	81 400
Gypsum						
Gypsum	tonnes	889 727	920 809	911 162	936 072	1 006 416
Anhydrite	tonnes	113 823	117 318	106 032	135 380	57 428
Iron ore (b)	tonnes	2 124 787	1 889 419	2 047 950	2 091 995	2 152 825
Pig iron	tonnes	4 676 742	4 846 740	5 444 000	5 547 000	5 808 000
Crude steel	tonnes	6 261 000	6 529 000	7 031 000	7 129 000	7 577 000
Ferro-alloys						
Ferro-molybdenum	tonnes	4 400	4 700	5 000	5 000	5 000
Ferro-nickel	tonnes	2 000	1 900	2 500	2 500	3 000
Ferro-vanadium	tonnes	5 300	5 800	6 250	6 250	6 500
Kaolin	tonnes	15 034	16 345	16 410	17 431	16 929
Lead, refined	tonnes	*20 000	*26 000	*24 000	*22 000	*22 000
Magnesite	tonnes	766 525	715 459	693 754	769 188	811 556
Nickel, smelter/refinery	tonnes	*1 000	1 300	1 000	900	900
Crude petroleum	tonnes	1 014 716	981 588	933 040	944 637	944 741
Natural gas	million m^3	2 029	2 011	1 654	1 765	1 835
Salt						
Rock salt	tonnes	1 610	1 228	1 497	1 336	1 172
Salt in brine	tonnes	723 286	745 670	771 455	764 103	735 724
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	50 568	55 322	54 377	50 097	50 501
Talc	tonnes	137 596	136 305	166 569	159 447	153 409
Tungsten, mine	tonnes (metal content)	1 381	1 335	1 280	1 153	1 117

Note(s):-
(1) Austria is believed to produce arsenic & bentonite

(a) From petroleum refining and/or natural gas
(b) Including micaceous iron oxide
(c) Sales
(d) Coal; all forms

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	3 163 141	2 829 930	2 745 393	3 086 027	3 394 988
Aluminium and bauxite						
Unwrought	tonnes	16 150	13 341	6 616	7 630	8 294
Unwrought alloys	tonnes	87 528	122 693	125 796	119 058	111 571
Scrap	tonnes	52 564	71 362	67 434	80 200	91 960
Antimony						
Metal	tonnes	16	19	1 089	3	1
Barytes	tonnes	479	2 737	1 407	5 830	3 023
Bentonite and fuller's earth						
Bentonite	tonnes	9 246	8 242	10 173	8 112	5 589
Bismuth						
Metal	tonnes	8	8	8	0	12
Cement						
Cement clinkers	tonnes	54 375	58 262	32 877	136 381	189 450
Portland cement	tonnes	136 732	185 069	151 330	201 687	314 112
Other cement	tonnes	42 712	40 830	53 951	38 926	59 361

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Chromium						
Ores & concentrates	tonnes	1 155	392	276	136	481
Metal	tonnes	5 485	7 194	8 893	11 770	14 739
Cobalt						
Metal	tonnes	85	22	5	10	19
Copper						
Matte & cement	tonnes	85	4 686	2 901	651	2 323
Unwrought	tonnes	81 897	71 119	83 750	84 104	82 985
Unwrought alloys	tonnes	907	580	604	2 509	1 239
Scrap	tonnes	25 606	36 476	33 274	39 169	38 642
Diamond						
Unsorted	carats	£319 000	£477 000	£188 000	£211 000	£85 000
Gem, cut	carats	£1 660 000	£1 665 000	£2 895 000	£3 157 000	£2 792 000
Dust	carats	£190 000	£432 000	£406 000	£45 000	£115 000
Diatomite	tonnes	4 650	5 347	5 375	4 171	4 455
Feldspar	tonnes	13 436	18 864	18 998	17 977	15 058
Gold						
Metal	kilograms	10 900	11 500	8 500	11 100	14 900
Waste & scrap	kilograms	2 500	2 900	5 500	600	17 300
Graphite	tonnes	4 574	5 094	7 082	7 416	7 460
Gypsum						
Crude	tonnes	21 562	22 732	21 433	30 002	89 128
Calcined	tonnes	97 840	100 444	94 207	99 013	121 473
Iodine	kilograms	100	100	...	600	300
Iron, steel and ferro-alloys						
Pig iron	tonnes	5 833	6 585	6 614	5 695	6 958
Ferro-alloys	tonnes	17 202	5 999	9 476	10 218	9 100
Silicon metal	tonnes	751	598	628	1 884	5 166
Ingots, blooms, billets	tonnes	256 981	334 124	484 431	303 284	286 765
Scrap	tonnes	842 323	1 099 278	1 024 301	1 140 091	1 279 775
Kaolin	tonnes	1 870	2 277	3 019	3 649	2 292
Lead						
Unwrought	tonnes	8 988	14 504	10 746	13 129	13 629
Scrap	tonnes	65	252	1 514	1 027	1 018
Magnesite and magnesia						
Magnesite	tonnes	2 401	642	1 338	1 231	760
Magnesia	tonnes	50 263	73 037	59 283	45 311	57 964
Manganese						
Metal	tonnes	18 923	11 575	5 470	306	116
Mercury	kilograms	800	1 700	4 100	214	5 000
Mica	tonnes	3 767	3 917	4 915	4 102	4 234
Molybdenum						
Metal (b)	tonnes	*2 200	*2 100	*4 700	*3 000	*3 500
Oxides	tonnes	5	125	...	...	...
Nickel						
Unwrought (a)	tonnes	206	297	226	197	333
Scrap	tonnes	440	1 520	1 927	2 337	2 208
Phosphates	tonnes	1 280	802	1	942	—
Platinum metals						
Platinum and platinum metals	kilograms	£7 330 000	£8 114 000	£12 253 000	£14 817 000	£30 801 000
Waste & scrap	kilograms	£309 000	£50 000	£397 000	£281 000	£621 000
Potash						
Potassic fertilisers	tonnes	258	158	4 713	8 584	13 595
Rare earths						
Cerium compounds	tonnes	1 750	1 564	1 980	1 569	2 596
Other rare earth compounds	tonnes	6 144	6 415	6 449	5 911	9 039
Metals	tonnes	417	456	421	333	359
Salt	tonnes	253 791	183 850	199 133	202 465	235 775
Silver						
Metal	kilograms	87 800	77 400	62 600	120 400	115 100
Sulphur and pyrites						
Pyrites	tonnes	...	2 418	2 641	2 881	2 645
Sulphur	tonnes	54	46	141	225	3 006
Sulphur, sublimed & precipitated	tonnes	9 265	8 435	9 245	4 881	492
Talc	tonnes	174 590	151 022	158 799	165 923	153 457

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Tin						
Unwrought (a)	tonnes	151	153	116	110	167
Scrap	tonnes	153	278	62	125	103
Titanium						
Metal	tonnes	340	397	317	513	576
Oxides	tonnes	2 404	2 640	3 457	3 976	4 885
Tungsten						
Metal (b)	tonnes	*1 100	*1 300	*2 100	*2 000	*1 600
Zinc						
Unwrought (a)	tonnes	36 012	37 304	13 469	19 981	14 682
Scrap	tonnes	2 984	2 000	3 559	4 329	2 132

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known imports into certain countries

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	2 446 023	2 087 667	2 516 839	2 622 855	3 961 223
Aluminium and bauxite						
Bauxite	tonnes	31 082	36 791	36 123	25 291	16 717
Alumina	tonnes	43 318	23 636	41 269	45 777	49 728
Alumina hydrate	tonnes	7 779	6 372	10 125	12 821	16 056
Unwrought	tonnes	141 841	106 348	82 597	113 047	140 286
Unwrought alloys	tonnes	184 478	229 607	214 611	235 053	250 209
Scrap	tonnes	(a) *143 400	128 798	150 412	157 256	161 995
Antimony						
Metal	tonnes	120	53	74	51	104
Oxide	tonnes	207	316	263	271	277
Arsenic						
Metallic arsenic	tonnes	5	...	2	1	1
Barytes	tonnes	2 742	3 910	5 863	12 550	4 898
Bentonite and fuller’s earth						
Bentonite	tonnes	47 358	53 871	58 344	60 667	58 727
Fuller's earth	tonnes	560	615	374	427	...
Bismuth						
Metal	tonnes	128	114	62	114	42
Bromine	kilograms	252 200	93 000	222 000	228 600	463 900
Cement						
Cement clinkers	tonnes	444 535	443 956	532 745	487 406	520 714
Portland cement	tonnes	763 455	773 897	860 087	686 652	626 723
Other cement	tonnes	17 434	51 811	43 083	31 100	39 568
Chromium						
Ores & concentrates	tonnes	36 348	26 761	21 398	37 326	39 071
Metal	tonnes	2 337	3 731	4 440	8 879	14 480
Coal						
Hard coal (b)	tonnes	3 965 922	3 552 594	4 108 821	3 912 731	4 509 917
Lignite	tonnes	59 077	38 833	2 139	2 294	53 331
Briquettes	tonnes	84 343	83 035	96 318	101 389	12 877
Cobalt						
Metal	tonnes	30	585	694	438	631
Copper						
Unwrought, unrefined	tonnes	—	15 203	20 081	26 508	26 678
Unwrought, refined	tonnes	29 479	18 429	21 176	29 298	20 614
Unwrought alloys	tonnes	3 103	2 460	2 260	2 979	2 485
Scrap	tonnes	82 015	87 807	82 787	88 684	91 043
Diamond						
Unsorted	carats	£1 734 000	£1 193 000	£1 254 000	£1 101 000	£851 000
Gem, cut	carats	£4 329 000	£4 660 000	£5 743 000	£5 892 000	£6 407 000
Industrial	carats	£105 000	£631 000	£706 000	£841 000	£884 000
Dust	carats	15 000 000	24 000 000	23 000 000	28 000 000	25 500 000

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Diatomite	tonnes	12 946	13 178	12 892	11 693	13 710
Feldspar	tonnes	1 083	418	1 549	2 220	3 816
Fluorspar	tonnes	2 125	3 078	2 561	2 722	2 517
Gold						
Metal	kilograms	26 500	17 300	22 100	9 300	30 900
Waste & scrap	kilograms	200	200	1 800	300	100
Graphite	tonnes	4 971	7 229	13 655	10 704	17 757
Gypsum						
Crude	tonnes	23 705	16 985	15 280	11 057	14 651
Calcined	tonnes	59 897	70 261	66 118	61 713	97 281
Iodine	kilograms	85 500	124 100	92 700	173 600	145 500
Iron ore	tonnes	5 691 360	5 783 359	7 423 015	8 411 888	9 061 777
Iron, steel and ferro-alloys						
Pig iron	tonnes	34 462	66 196	51 982	40 133	69 614
Sponge & powder	tonnes	12 042	10 917	25 214	20 542	31 775
Ferro-chrome	tonnes	32 874	43 438	41 046	34 196	49 977
Ferro-silico-magnesium	tonnes	969	627	678	522	1 746
Ferro-manganese	tonnes	34 748	39 026	37 865	29 385	38 857
Ferro-silico-manganese	tonnes	11 795	6 817	26 572	22 456	30 340
Ferro-molybdenum	tonnes	1 066	1 011	617	1 632	1 370
Ferro-niobium & ferro-niobium- tantalum	tonnes	1 669	934	899	955	956
Ferro-phosphorus	tonnes	1 645	1 433	1 749	1 520	1 692
Ferro-silicon	tonnes	36 918	47 223	32 445	25 609	26 180
Ferro-titanium & ferro-silico-titanium	tonnes	1 427	961	1 121	1 081	793
Ferro-tungsten & ferro-silico-tungsten	tonnes	712	589	535	677	796
Ferro-vanadium	tonnes	643	587	256	100	186
Other ferro-alloys	tonnes	1 017	1 279	1 554	1 611	7
Silicon metal	tonnes	9 822	9 127	11 698	12 937	16 581
Ingots, blooms, billets	tonnes	99 393	156 796	108 004	132 901	208 910
Scrap	tonnes	936 512	1 017 497	1 113 082	1 089 942	1 371 393
Kaolin	tonnes	228 674	249 353	234 906	222 007	218 813
Lead						
Unwrought	tonnes	37 927	39 533	23 062	29 184	27 015
Scrap	tonnes	2 672	2 192	1 068	890	661
Lithium						
Carbonate	tonnes	118	115	182	199	248
Magnesite and magnesia						
Magnesite	tonnes	12 935	4 814	17 019	1 653	933
Magnesia	tonnes	9 325	181 050	188 449	213 760	317 952
Manganese						
Metal	tonnes	10 024	6 497	8 707	12 059	17 543
Mercury	kilograms	4 000	3 900	1 600	2 000	4 400
Mica	tonnes	899	645	512	615	722
Molybdenum						
Metal	tonnes	382	865	599	1 342	1 243
Nickel						
Mattes, sinters etc.	tonnes	401	369	460	684	443
Unwrought (c)	tonnes	5 251	6 772	6 903	7 599	7 874
Scrap	tonnes	520	632	447	670	605
Oxides	tonnes	430	293	312	195	78
Crude petroleum	tonnes	7 819 276	7 539 310	7 836 688	7 698 169	7 645 010
Phosphates	tonnes	237 605	210 010	67 853	94 630	106 018
Platinum metals						
Platinum and platinum metals	kilograms	9 400	9 400	7 200	8 400	1 100
Potash						
Fertiliser salts	tonnes	20 424	23 040	23 685	23 423	...
Sulphate	tonnes	...	...	13 377	17 797	13 026
Chloride	tonnes	159 216	145 757	144 234	133 514	123 747
Other potassic fertilisers	tonnes	(d) 17 997	(d) 22 629	2 336	3 199	26 199
Rare earths						
Cerium compounds	tonnes	2 810	2 034	3 055	2 009	3 431
Other rare earth compounds	tonnes	3 062	3 973	2 685	2 618	3 762
Metals	tonnes	457	463	374	403	512
Salt	tonnes	206 355	350 903	210 736	429 515	143 538
Sillimanite	tonnes	2 660	1 981	2 194	2 100	3 160

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Silver						
Metal	kilograms	109 300	127 600	127 900	168 300	151 600
Sulphur and pyrites						
Pyrites	tonnes	2 107	3 126	3 251	3 537	3 809
Sulphur	tonnes	64 198	58 218	60 054	70 350	84 659
Sulphur, sublimed & precipitated	tonnes	388	6 339	9 589	10 850	5 556
Talc	tonnes	30 831	49 930	50 768	49 900	58 500
Tantalum and niobium						
Tantalum	tonnes	54	64	0	0	70
Tin						
Unwrought (c)	tonnes	702	765	1 926	2 177	2 486
Scrap	tonnes	174	170	79	23	10
Titanium						
Titanium minerals	tonnes	675	494	349	575	451
Metal	tonnes	441	943	1 691	1 873	3 851
Oxides	tonnes	18 528	18 612	25 640	27 485	26 856
Tungsten						
Metal	tonnes	271	400	825	670	548
Carbide	tonnes	148	136	42	22	...
Vanadium						
Vanadiferous residues	tonnes	*25 000	*27 000	*29 000	*29 000	*37 000
Ores & concentrates	tonnes	459	467	1 565	792	543
Pentoxide	tonnes	(a) *400	(a) *1 000	(a) *300	(a) *50	...
Metal	tonnes	2	9	—	—	...
Zinc						
Unwrought	tonnes	58 968	47 866	58 838	61 856	65 391
Unwrought alloys	tonnes	24 621	31 444	28 955	41 002	33 939
Scrap	tonnes	1 643	2 035	609	737	149
Zirconium						
Concentrates	tonnes	1 206	1 486	1 200	1 285	2 054

Note(s):-
(a) BGS estimates, based on known exports from certain countries
(b) Including anthracite
(c) Including alloys
(d) Including sulphate

Belgium

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel (a) (b)	tonnes	9 245 757	8 787 817	8 330 239	8 636 966	*8 600 000
Crushed rock (a) (c)	tonnes	36 772 879	36 980 382	38 826 735	39 937 651	*43 000 000
White arsenic	tonnes	*1 000	*1 000	*1 000	*1 000	*1 000
Cement, finished	tonnes	6 553 000	6 216 000	6 587 000	6 965 000	6 930 000
Cobalt metal	tonnes	1 704	(d) 2 947	(d) 3 298	(d) 2 840	(d) 2 825
Copper, refined	tonnes	423 000	383 000	382 900	378 600	394 000
Pig iron	tonnes	7 812 593	8 224 000	7 254 000	7 516 000	6 577 000
Crude steel	tonnes	11 114 775	11 697 000	10 422 000	11 631 000	10 692 000
Ferro-alloys						
Ferro-vanadium	tonnes	...	...	...	...	...
Kaolin	tonnes	*300 000	*300 000	*300 000	*300 000	*300 000
Lead, refined	tonnes	65 000	86 000	103 000	101 000	110 000
Selenium metal	tonnes	*200	*200	*200	*200	*200
Sulphur and pyrites						
Recovered (e) (f)	tonnes (sulphur content)	383 000	371 000	376 000	391 000	396 000
Tin, smelter	tonnes	7 700	8 900	7 700	8 000	8 400
Slab zinc	tonnes	244 400	272 500	222 000	251 000	240 000

Note(s):-
(a) Deliveries
(b) Includes construction sand and silica sand. Excludes gravel
(c) Includes gravel
(d) Some metal production in China is recorded in Belgium
(e) From metal sulphide processing
(f) From petroleum refining and/or natural gas

Luxembourg

Production

Commodity	Units	2003	2004	2005	2006	2007
Cement clinker	tonnes	770 000	847 000	834 000	816 000	817 000
Cement, finished	tonnes	709 000	797 000	767 000	796 000	908 000
Crude steel	tonnes	2 675 000	2 684 000	2 194 000	2 802 000	2 858 000

Belgium-Luxembourg

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	13 562 764	13 208 283	14 573 270	15 452 434	16 081 634
Aluminium and bauxite						
Bauxite	tonnes	98 961	54 734	46 717	53 680	75 904
Alumina	tonnes	7 058	...	10 714	18 151	13 629
Unwrought	tonnes	157 800	266 682	267 811	210 559	164 800
Unwrought alloys	tonnes	40 919	42 010	38 889	29 871	268 119
Scrap	tonnes	133 871	137 374	149 914	186 613	208 272
Antimony						
Ores & concentrates	tonnes	25	...	77	360	301
Metal	tonnes	181	493	693	1 580	974
Oxide	tonnes	12 063	12 443	11 526	12 661	11 643
Arsenic						
Metallic arsenic	tonnes	27	10	101	2 542	117

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Asbestos	tonnes	—	3	...	164	17
Barytes	tonnes	1 424	3 646	4 016	19 004	506
Bentonite and fuller's earth						
Bentonite	tonnes	28 403	22 700	26 049	32 407	18 504
Fuller's earth	tonnes	57	501	501	303	...
Bismuth						
Metal	tonnes	20	0	*—	*—	355
Bromine	kilograms	17 930 400	21 275 800	19 124 000	20 738 100	17 430 000
Cadmium						
Metal	tonnes	1 018	746	639	298	181
Sulphide	tonnes	10	15	29	7	...
Cement						
Cement clinkers	tonnes	749 249	842 257	833 257	544 183	1 078 149
Portland cement	tonnes	1 815 882	1 598 742	1 715 979	1 811 884	2 087 094
Other cement	tonnes	592 657	616 066	612 642	609 236	606 807
Chromium						
Ores & concentrates	tonnes	5 491	2 433	10 777	14 485	11 405
Metal	tonnes	660	852	782	520	635
Coal						
Anthracite	tonnes	999 793	1 399 280	1 463 646	1 521 523	1 454 115
Other coal	tonnes	1 777 869	2 273 223	2 948 838	3 734 518	3 670 706
Briquettes	tonnes	19 122	...	11 682	7 923	8 214
Cobalt						
Ore	tonnes	381	1 064	543	197	1 204
Metal	tonnes	(a) *3 800	(a) *3 900	(a) *3 100	4 329	5 104
Oxides (a)	tonnes	*6 900	*7 300	*5 500	*5 800	6 000
Copper						
Ores & concentrates	tonnes	517	1 478	1 887	1 778	1 061
Matte & cement	tonnes	...	493	401	1 026	1 104
Unwrought, unrefined	tonnes	10 521	19 942	4 499	8 833	10 730
Unwrought, refined	tonnes	336 637	169 556	241 363	236 804	199 650
Unwrought alloys	tonnes	21 710	13 556	14 463	13 419	15 081
Scrap	tonnes	152 584	169 397	177 787	163 418	194 666
Diamond						
Unsorted	carats	...	...	£785 000	£889 000	...
Gem, rough	carats	131 000 000	154 000 000	147 000 000	128 000 000	135 000 000
Gem, cut	carats	6 500 000	6 000 000	5 500 000	4 500 000	8 000 000
Industrial	carats	10 500 000	7 000 000	5 500 000	2 000 000	5 000 000
Dust	carats	38 000 000	42 500 000	40 000 000	35 500 000	27 000 000
Diatomite	tonnes	1 512	1 856	1 330	1 949	1 145
Fluorspar	tonnes	22 639	4 208	26 395	110 965	105 822
Gold						
Metal	kilograms	500	1 200	100	300	16 200
Waste & scrap	kilograms	...	...	458 400	438 000	128 400
Graphite	tonnes	9 097	581	834	460	438
Gypsum						
Crude	tonnes	64 538	91 110	46 691	62 303	54 953
Calcined	tonnes	2 556	175 496	2 709	4 707	4 271
Iodine	kilograms	4 904 400	3 646 100	3 460 200	3 272 600	2 633 100
Iron ore	tonnes	43 752	23 450	81 560	43 555	41 440
Iron, steel and ferro-alloys						
Pig iron	tonnes	227 815	225 486	201 577	230 490	275 411
Sponge & powder	tonnes	18 741	29 127	15 850	19 750	36 997
Ferro-chrome	tonnes	39 778	32 998	31 851	38 401	54 201
Ferro-silico-chrome	tonnes	10 381	7 214	9 107	17 169	15 141
Ferro-silico-magnesium	tonnes	79	39	11	52	6 744
Ferro-manganese	tonnes	16 246	9 621	11 674	11 122	16 126
Ferro-silico-manganese	tonnes	38 032	41 307	29 858	41 422	52 431
Ferro-molybdenum	tonnes	...	19 219	22 420	22 679	20 153
Ferro-silicon	tonnes	18 856	31 000	21 812	39 501	68 385
Other ferro-alloys	tonnes	9 672	6 523	6 689	6 498	1 988
Silicon metal	tonnes	8 227	6 078	9 095	6 765	5 869
Ingots, blooms, billets	tonnes	395 499	368 589	639 936	859 247	1 089 364
Scrap	tonnes	2 310 658	2 851 040	2 712 683	3 052 438	3 268 578

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Kaolin	tonnes	539 940	664 743	777 451	628 479	612 062
Lead						
Ores & concentrates	tonnes	84 545	109 580	96 610	113 576	96 059
Unwrought	tonnes	104 827	93 316	110 372	98 077	111 344
Scrap	tonnes	6 307	12 736	9 142	15 071	20 780
Lithium						
Oxides	tonnes	982	1 837	1 545	1 236	1 370
Carbonate	tonnes	4 000	10 053	4 999	5 107	4 915
Magnesite and magnesia						
Magnesite	tonnes	7 061	512	575	1 520	1 958
Magnesia	tonnes	134 268	53 755	52 665	75 011	64 293
Manganese						
Ores & concentrates	tonnes	13 476	11 300	10 648	5 138	15 819
Metal	tonnes	3 091	1 377	1 826	7 045	4 060
Mercury	kilograms	17 000	1 300	8 800	42 300	3 300
Mica	tonnes	1 907	1 635	3 226	3 225	3 226
Molybdenum						
Ores & concentrates	tonnes	11 690	16 219	17 683	24 320	22 340
Metal	tonnes	314	221	342	194	556
Oxides	tonnes	820	571	687	905	829
Nickel						
Ores & concentrates	tonnes	438	...	853	877	1 423
Mattes, sinters etc.	tonnes	1 139	768	209	559	68
Unwrought	tonnes	9 848	16 290	13 376	14 324	15 642
Unwrought alloys	tonnes	1 947	2 843	2 510	1 994	2 401
Scrap	tonnes	1 114	1 694	1 008	3 656	4 954
Oxides	tonnes	268	772	702	685	476
Crude petroleum	tonnes	2 263 897	2 967 608	2 616 977	2 833 897	2 422 211
Phosphates	tonnes	75 856	101 115	108 238	82 232	115 628
Platinum metals						
Platinum	kilograms	2 000	1 000	700	2 600	4 100
Platinum metals	kilograms	2 100	4 400	2 100	3 000	6 400
Waste & scrap	kilograms	239 700	245 596	305 700	934 000	592 300
Potash						
Fertiliser salts	tonnes	1 193	441	127	...	...
Sulphate (a)	tonnes	*490 000	*685 000	*628 000	*424 000	*364 000
Chloride	tonnes	142 227	140 950	116 862	41 405	58 339
Other potassic fertilisers	tonnes	4 756	7 993	9 773	4 769	595
Rare earths						
Rare earth compounds	tonnes	743	721	413	302	802
Metals	tonnes	158	237	187	444	253
Salt	tonnes	117 806	105 680	121 103	94 196	55 208
Sillimanite	tonnes	22 825	49 319	77 463	48 825	47 141
Silver						
Ores & concentrates	kilograms	56 900	29 800	7 200	8 000	47 600
Metal	kilograms	47 600	24 100	12 600	45 200	31 200
Sulphur and pyrites						
Sulphur	tonnes	40 984	36 824	47 927	38 494	18 393
Sulphur, sublimed & precipitated	tonnes	350	338	290	465	531
Talc	tonnes	92 350	128 120	168 900	144 081	165 105
Tin						
Concentrates	tonnes	...	186	286	118	68
Unwrought	tonnes	7 538	8 803	6 814	1 633	2 734
Unwrought alloys	tonnes	171	184	388	7 421	7 072
Scrap	tonnes	601	607	362	216	148
Titanium						
Titanium minerals	tonnes	123 823	139 393	131 597	100 498	129 722
Titanium slag	tonnes	...	...	4 219	20 830	3 209
Metal	tonnes	1 214	1 031	1 093	1 490	2 074
Oxides	tonnes	348 005	397 481	366 632	401 614	422 885
Tungsten						
Metal	tonnes	374	404	452	484	387
Carbide	tonnes	35	39	25	62	54

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Vanadium						
Vanadiferous residues	tonnes	3 129	...	...	...	...
Ores & concentrates	tonnes	748	1 456	2 600	791	297
Pentoxide	tonnes	22	9	2	13	10
Zinc						
Ores & concentrates	tonnes	232 845	384 652	511 730	540 810	479 825
Unwrought	tonnes	130 356	136 768	10 058	13 275	22 114
Scrap	tonnes	19 485	26 546	37 754	57 851	42 673
Zirconium						
Concentrates	tonnes	10 047	11 105	22 965	27 054	23 645
Metal	tonnes	163	170	222	144	251

Note(s):-
(a) BGS estimates, based on known imports into certain countries

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	19 492 423	20 219 032	20 831 220	22 303 782	23 810 336
Aluminium and bauxite						
Bauxite	tonnes	102 691	82 208	87 376	59 874	85 963
Alumina	tonnes	11 350	12 942	10 879	28 030	28 985
Alumina hydrate	tonnes	43 941	33 798	37 831	45 723	46 815
Unwrought	tonnes	382 266	513 835	497 013	451 309	485 128
Unwrought alloys	tonnes	217 309	235 761	265 937	286 345	329 777
Scrap	tonnes	146 723	157 812	158 799	197 942	380 317
Antimony						
Metal	tonnes	11 409	12 225	10 722	11 543	11 915
Oxide	tonnes	1 615	1 708	1 735	2 524	2 342
Arsenic						
Metallic arsenic	tonnes	90	95	164	105	466
Asbestos	tonnes	1	63	...	1	120
Barytes	tonnes	6 045	3 255	3 432	7 953	35 785
Bentonite and fuller’s earth						
Bentonite	tonnes	33 129	35 509	45 282	48 871	42 816
Fuller's earth	tonnes	6 428	11 164	8 028	7 036	...
Bismuth						
Metal	tonnes	4	20	27	109	111
Bromine	kilograms	21 097 900	23 466 200	25 108 000	24 553 300	21 768 500
Cadmium						
Metal	tonnes	4 914	4 064	4 779	3 948	5 038
Oxide	tonnes	65	61	26	...	2
Sulphide	tonnes	18	—	29	13	...
Cement						
Cement clinkers	tonnes	256 355	553 911	442 986	545 575	798 670
Portland cement	tonnes	846 044	956 062	898 871	897 315	892 981
Other cement	tonnes	292 756	314 515	275 177	277 825	391 850
Chromium						
Ores & concentrates	tonnes	4 644	6 094	18 464	22 053	20 761
Metal	tonnes	765	821	1 245	1 264	1 188
Coal						
Anthracite	tonnes	3 439 165	4 134 160	3 293 344	2 608 840	2 864 554
Other coal	tonnes	8 342 288	9 728 235	8 997 265	10 534 424	9 679 689
Lignite	tonnes	219 162	232 809	229 192	279 982	278 700
Briquettes	tonnes	14 717	3 924	14 120	29 848	26 260
Cobalt						
Ore	tonnes	67	455	263	107	153
Metal (a)	tonnes	*8 400	*7 000	*4 800	*4 300	*6 500
Oxides	tonnes	800	1 103	(b) *1 300	(b) *500	(b) *600

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Copper						
Ores & concentrates	tonnes	161	1 003	5 225	17 263	21 137
Matte & cement	tonnes	9	4 799	370	1 111	6 360
Unwrought, unrefined	tonnes	291 190	291 111	237 645	267 505	224 439
Unwrought, refined	tonnes	58 266	17 318	9 515	21 818	28 746
Unwrought alloys	tonnes	1 641	1 510	1 906	1 083	3 324
Scrap	tonnes	225 822	256 504	257 738	300 260	328 676
Diamond						
Unsorted	carats	841 372	785 589	1 082 340	1 063 171	1 364 021
Gem, rough	carats	126 125 885	123 033 948	135 545 483	118 072 160	116 947 506
Gem, cut	carats	3 709 408	1 101 124	121 222	81 913	52 357 584
Industrial	carats	21 943 645	15 882 763	15 475 112	12 851 679	13 670 182
Dust	carats	57 175 872	59 339 768	65 214 438	61 015 000	63 000 427
Diatomite	tonnes	7 507	9 052	8 192	7 450	8 633
Feldspar	tonnes	30 225	30 969	25 876	21 483	26 151
Fluorspar	tonnes	33 622	10 571	70 149	123 392	130 437
Gold						
Metal	kilograms	9 100	12 400	14 400	9 600	18 300
Waste & scrap	kilograms	(a) *889 000	(a) *117 000	(a) *37 000	147 100	361 400
Graphite	tonnes	12 414	3 301	3 040	1 836	2 323
Gypsum						
Crude	tonnes	524 938	713 502	768 702	811 923	1 118 788
Calcined	tonnes	290 348	366 504	460 067	449 433	521 942
Iodine	kilograms	4 817 700	3 419 800	3 332 800	3 513 200	2 774 500
Iron ore	tonnes	11 577 845	10 655 707	9 384 885	11 387 165	9 583 806
Iron, steel and ferro-alloys						
Pig iron	tonnes	291 507	396 174	330 709	560 116	552 212
Sponge & powder	tonnes	26 084	107 639	48 915	102 543	33 539
Ferro-chrome	tonnes	198 691	215 638	220 896	342 280	452 118
Ferro-silico-chrome	tonnes	12 392	7 435	9 587	19 190	17 149
Ferro-silico-magnesium	tonnes	327	993	1 656	2 040	12 168
Ferro-manganese	tonnes	54 564	49 305	60 564	54 402	65 987
Ferro-silico-manganese	tonnes	54 676	56 622	60 454	69 526	149 121
Ferro-molybdenum	tonnes	5 141	4 317	5 199	5 929	5 405
Ferro-nickel	tonnes	32 673	51 796	61 454	73 384	90 808
Ferro-niobium	tonnes	719	712	849	936	3 252
Ferro-phosphorus	tonnes	1 124	1 237	1 700	1 607	2 185
Ferro-silicon	tonnes	63 474	93 591	79 901	109 389	150 254
Ferro-titanium & Ferro-silico-titanium	tonnes	2 069	1 677	2 141	3 016	3 553
Ferro-vanadium	tonnes	412	568	650	338	615
Other ferro-alloys	tonnes	3 788	7 520	7 807	7 209	157
Silicon metal	tonnes	15 579	15 136	18 563	20 117	17 307
Ingots, blooms, billets	tonnes	3 894 592	2 814 705	3 452 850	2 876 977	3 500 081
Scrap	tonnes	3 896 924	4 413 160	3 761 788	4 297 928	7 416 312
Kaolin	tonnes	890 277	1 023 999	962 536	868 255	862 714
Lead						
Ores & concentrates	tonnes	80 203	117 597	134 300	120 136	108 165
Unwrought	tonnes	20 874	27 042	18 807	15 081	36 620
Scrap	tonnes	28 028	26 904	26 699	41 070	55 153
Lithium						
Oxides	tonnes	1 197	2 250	2 014	1 201	1 784
Carbonate	tonnes	5 086	6 108	6 205	5 357	5 895
Magnesite and magnesia						
Magnesite	tonnes	7 167	505	767	3 872	4 326
Magnesia	tonnes	151 590	65 125	84 730	152 330	101 911
Manganese						
Ores & concentrates	tonnes	79 645	73 953	66 840	65 462	79 022
Metal	tonnes	4 480	2 466	4 150	10 114	6 403
Mercury	kilograms	29 200	54 700	18 600	44 800	7 900
Mica						
Unmanufactured	tonnes	89	1 588	913	470	1 204
Ground	tonnes	3 223	4 311	2 996	2 646	3 461
Waste	tonnes	...	...	...	...	4 364

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Molybdenum						
Ores & concentrates	tonnes	36 903	45 922	54 452	47 122	43 932
Metal	tonnes	179	277	383	490	752
Oxides	tonnes	2 702	1 519	2 072	2 618	2 796
Nickel						
Mattes, sinters etc.	tonnes	61	162	214	203	1 194
Unwrought	tonnes	41 648	42 387	41 364	51 130	37 554
Unwrought alloys	tonnes	636	979	822	483	427
Scrap	tonnes	828	1 644	1 221	271	9 946
Oxides	tonnes	497	366	324	349	241
Crude petroleum	tonnes	42 731 484	34 210 727	34 417 017	33 843 960	34 847 067
Phosphates	tonnes	1 664 247	1 545 478	1 688 029	1 299 125	1 512 076
Platinum metals						
Platinum	kilograms	2 481	19 590	...	...	13 300
Platinum metals	kilograms	11 324	235	1 978	...	2 000
Potash						
Fertiliser salts	tonnes	24 355	26 328	17 331	2 628	...
Sulphate	tonnes	213 779	212 176	260 839	2 839	5 073
Chloride	tonnes	1 163 936	1 276 732	1 211 640	576 972	587 275
Other potassic fertilisers	tonnes	21 700	22 357	17 698	7 693	612
Rare earths						
Cerium compounds	tonnes	843	615	411	280	490
Other rare earth compounds	tonnes	143	287	139	138	353
Metals	tonnes	195	226	252	443	297
Salt	tonnes	1 895 987	1 236 192	1 315 385	2 275 674	1 230 983
Sillimanite	tonnes	29 333	53 146	81 538	50 726	52 899
Silver						
Ores & concentrates	kilograms	84 400	1 100	...	536 600	195 900
Metal	kilograms	735 100	476 800	175 200	258 700	443 200
Sulphur and pyrites						
Sulphur, crude	tonnes	152 598	152 830	167 624	...	...
Sulphur, refined	tonnes	241 917	305 518	322 649	(b) 574 515	(b) 506 662
Sulphur, sublimed & precipitated	tonnes	103	28	127	156	311
Talc	tonnes	124 455	135 046	224 624	186 227	202 593
Tantalum and niobium						
Tantalum	tonnes	41	20	1	0	3
Tin						
Concentrates	tonnes	74	329	377	154	17
Unwrought	tonnes	490	1 686	1 210	1 312	1 657
Unwrought alloys	tonnes	2 737	3 421	1 284	1 368	2 719
Scrap	tonnes	4 816	5 726	1 382	4 866	3 907
Titanium						
Ilmenite	tonnes	11 632	...	—	720	—
Other Titanium minerals	tonnes	164 624	165 288	165 711	156 771	221 173
Metal	tonnes	1 712	1 868	2 289	1 857	4 139
Oxides	tonnes	272 441	339 444	291 670	314 131	145 929
Tungsten						
Metal	tonnes	404	372	340	454	513
Carbide	tonnes	51	42	42	64	1 182
Vanadium						
Ores & concentrates	tonnes	1 379	1 116	894	197	162
Pentoxide	tonnes	57	3	267	12	64
Metal	tonnes	238	32	60	67	...
Zinc						
Ores & concentrates	tonnes	1 189 103	1 410 560	1 182 083	1 109 923	1 100 875
Unwrought	tonnes	244 081	261 216	46 505	73 894	218 660
Unwrought alloys	tonnes	2 649	13 872	35 653	24 414	13 475
Scrap	tonnes	42 424	42 534	44 890	44 221	60 039
Zirconium						
Concentrates	tonnes	5 178	3 991	14 504	18 763	17 593
Metal	tonnes	533	534	605	556	469

Note(s):-
(a) BGS estimates, based on known exports from certain countries
(b) Including crude

Bulgaria

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	7 072 776	9 719 350	12 835 622	15 168 050	17 051 988
Crushed rock	tonnes	3 986 616	5 447 430	8 121 646	8 781 475	11 135 159
Barytes	tonnes	91 200	75 400	76 600	74 500	50 900
Bentonite and fuller's earth						
Bentonite	tonnes	145 500	224 900	181 200	134 500	99 000
Bismuth, mine	tonnes (metal content)	*40	*40	*40	*40	*40
Cadmium	tonnes	307	356	319	320	318
Cement clinker	tonnes	...	...	402 684	400 315	*400 000
Cement, finished	tonnes	*2 410 000	*2 920 000	3 559 420	4 003 664	*4 290 000
Coal						
Anthracite & bituminous	tonnes	53 000	170 000	—	—	—
Brown coal & lignite	tonnes	27 641 000	26 455 000	24 615 300	25 306 400	28 158 500
Copper, mine	tonnes (metal content)	91 600	79 600	82 700	99 000	99 000
Copper, smelter	tonnes	199 300	215 800	225 000	217 000	217 600
Copper, refined	tonnes	45 900	55 300	60 100	65 500	70 000
Feldspar	tonnes	*35 000	86 608	72 867	93 091	*90 000
Gold, mine	kilograms (metal content)	2 270	2 431	3 868	3 818	3 964
Gypsum	tonnes	165 500	175 900	187 700	215 800	234 300
Iron ore	tonnes	466 100	82 700	—	—	—
Pig iron	tonnes	1 386 000	1 200 000	1 100 000	1 100 000	1 100 000
Crude steel	tonnes	1 950 000	2 106 000	1 969 000	2 124 000	2 050 000
Ferro-alloys						
Ferro-silicon	tonnes	*8 000	*8 000	*8 000	*8 000	*8 000
Kaolin	tonnes	*120 000	*190 000	*200 000	*240 000	*240 000
Lead, mine	tonnes (metal content)	19 950	*19 400	*18 500	*16 000	*17 600
Lead, refined	tonnes	69 000	66 000	81 000	76 000	87 000
Manganese ore	tonnes	4 200	27 800	38 500	20 500	27 900
Perlite	tonnes	16 800	8 500	15 300	4 500	13 900
Crude petroleum	tonnes	27 900	33 100	30 000	27 500	25 700
Natural gas	million m^3	11	333	573	519	295
Salt	tonnes	1 882 000	1 900 000	1 900 000	2 000 000	2 000 000
Silver, mine	kilograms (metal content)	*60 000	*60 000	*60 000	*60 000	*60 000
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	260 000	301 000	312 000	340 000	343 000
Recovered (b)	tonnes (sulphur content)	30 000	25 000	30 000	35 000	35 000
Zinc, mine	tonnes (metal content)	13 000	*12 700	*12 000	*10 400	*11 500
Slab zinc	tonnes	86 800	101 500	92 500	85 900	93 200

Note(s):-
(1) Bulgaria is believed to produce chromite, fluorspar, magnesite and platinum group metals

(a) From metal sulphide processing
(b) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	214 135	384 420	160 032	282 018	330 088
Aluminium and bauxite						
Unwrought alloys	tonnes	1 971	4 616	5 254	11 692	10 290
Scrap	tonnes	21 838	22 036	21 902	29 245	23 577
Barytes	tonnes	91 215	75 393	76 644	74 523	50 922
Bentonite and fuller's earth						
Bentonite	tonnes	102 263	95 435	76 614	89 531	74 412
Cadmium						
Metal	tonnes	344	378	316	369	434

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Cement						
Cement clinkers	tonnes	602 632	392 414	338 505	293 031	353 996
Portland cement	tonnes	568 083	460 281	455 824	334 013	52 803
Other cement	tonnes	22 625	50	27	40	1 067
Copper						
Ores & concentrates	tonnes	72 861	78 563	124 717	193 389	168 155
Matte & cement	tonnes	4 356	6 718	5 750	4 818	6 335
Unwrought	tonnes	218 482	219 415	219 009	210 520	185 012
Scrap	tonnes	9 507	9 480	8 244	13 163	11 590
Feldspar	tonnes	612	1 131	452	6 159	22 519
Gypsum						
Crude & calcined	tonnes	1 868	2 231	2 347	2 439	1 439
Iodine	kilograms	50	...	1 199	781	51 610
Iron, steel and ferro-alloys						
Pig iron	tonnes	29	114	51	44 549	62 032
Ferro-silico-manganese	tonnes	3 405	4 034	1 501	3 638	6 845
Ferro-silicon	tonnes	4 402	1 329	1 499	3 345	4 972
Other ferro-alloys	tonnes	238	283	72	180	2 072
Silicon metal	tonnes	15	11	15	11	2 374
Ingots, blooms, billets	tonnes	355 397	277 332	97 757	163 020	135 710
Scrap	tonnes	572 559	769 559	784 778	722 261	677 347
Kaolin	tonnes	124 396	114 399	124 899	149 559	160 372
Lead						
Ores & concentrates	tonnes	13 029	10 370	6 165	10 900	23 417
Unwrought	tonnes	61 799	54 686	69 825	65 400	66 384
Manganese						
Ores & concentrates	tonnes	6 402	42 122	53 559	25 595	19 335
Molybdenum						
Metal	tonnes	49	546	105	87	99
Phosphates	tonnes	1 100	458	265	...	—
Platinum metals						
Waste & scrap (a)	kilograms	*30 500	*24 000	*31 400	*73 200	*94 700
Salt	tonnes	2 625	8 586	10 090	16 020	13 943
Sulphur and pyrites						
Sulphur	tonnes	21 478	20 103	25 019	31 737	33 039
Zinc						
Unwrought (b)	tonnes	74 801	89 287	82 902	227 543	90 573
Scrap	tonnes	653	1 194	1 576	1 854	1 511

Note(s):-
(a) BGS estimates, based on known imports into certain countries
(b) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	24 578	20 303	17 200	19 384	41 782
Aluminium and bauxite						
Alumina	tonnes	1 443	1 663	1 401	2 039	2 368
Unwrought (a)	tonnes	28 194	35 515	40 748	66 644	59 467
Scrap	tonnes	...	435	1 449	2 179	3 554
Antimony						
Metal	tonnes	52	47	...	34	100
Asbestos	tonnes	50	196	...	...	20
Bentonite and fuller’s earth						
Bentonite	tonnes	511	708	1 178	1 455	2 979
Fuller's earth	tonnes	321	381	422	537	...
Cement						
Cement clinkers	tonnes	3 815	23 048	180 254	586 194	123 806
Portland cement	tonnes	33 810	51 493	23 787	9 127	5 690
Other cement	tonnes	1 027	920	1 128	1 665	1 829

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Chromium						
Ores & concentrates	tonnes	480	812	997	1 440	969
Coal						
Anthracite	tonnes	1 396 246	1 464 605	2 016 911	2 170 631	2 229 619
Other coal	tonnes	3 038 589	2 784 512	2 270 525	2 221 526	2 415 165
Copper						
Ores & concentrates	tonnes	454 875	561 613	632 255	581 055	539 325
Matte & cement	tonnes	8 542	383	562	5 003	10 025
Unwrought	tonnes	3 880	8 599	18 613	19 735	28 226
Scrap	tonnes	2 722	2 935	5 094	7 784	12 899
Diatomite	tonnes	1 139	1 292	1 312	1 156	436
Feldspar	tonnes	23 367	30 805	34 723	40 416	35 851
Fluorspar	tonnes	2 143	1 882	1 210	2 321	1 326
Graphite	tonnes	492	420	319	433	250
Gypsum						
Crude	tonnes	38 119	49 426	18 684	10 088	8 240
Calcined	tonnes	22 615	35 558	49 163	56 869	58 880
Iodine	kilograms	11 250	6 755	5 080	3 990	6 500
Iron ore						
Iron ore	tonnes	1 850 563	1 570 605	1 050 925	1 305 110	919 785
Burnt pyrites	tonnes	128 640	357 898	437 710	450 004	464 580
Iron, steel and ferro-alloys						
Pig iron	tonnes	45 935	14 228	19 624	15 278	26 932
Ferro-manganese	tonnes	5 152	5 116	5 540	6 133	7 981
Other ferro-alloys	tonnes	9 232	7 441	6 539	9 172	9 619
Silicon metal	tonnes	232	663	585	9 734	873
Ingots, blooms, billets	tonnes	116 005	280 895	275 001	417 485	462 348
Scrap	tonnes	74 445	90 491	108 450	188 698	295 555
Kaolin	tonnes	36 360	75 425	76 231	91 831	29 717
Lead						
Ores & concentrates	tonnes	64 751	74 163	83 398	100 736	92 929
Unwrought	tonnes	1 759	5 558	10 723	11 305	15 854
Scrap	tonnes	816	441	1 227	1 346	3 338
Magnesite and magnesia	tonnes	5 815	6 354	8 500	6 551	4 670
Manganese						
Ores & concentrates	tonnes	234 401	46 768	13 631	17 367	27 602
Molybdenum						
Metal	tonnes	58	53	108	73	47
Crude petroleum (b)	tonnes	489 151	2 664 126	3 751 650	4 866 478	5 546 761
Phosphates	tonnes	550 013	515 889	543 637	449 874	462 247
Potash						
Potassic fertilisers	tonnes	3 453	4 725	7 794	9 102	4 845
Salt	tonnes	116 840	138 631	165 727	181 801	71 848
Sulphur and pyrites						
Sulphur	tonnes	407	903	1 076	767	1 039
Talc	tonnes	465	487	599	626	688
Tin						
Unwrought	tonnes	65	39	49	278	45
Titanium						
Titanium minerals	tonnes	2 979	407	1 287	300	712
Oxides	tonnes	3 156	3 332	3 959	4 750	5 398
Zinc						
Ores & concentrates	tonnes	149 957	167 098	149 735	198 504	208 313
Unwrought (a)	tonnes	4 146	4 285	1 450	9 994	3 330
Zirconium						
Concentrates	tonnes	1 375	1 149	1 589	1 421	1 357

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known exports from certain countries

Croatia

Production

Commodity	Units	2003	2004	2005	2006	2007
Bentonite and fuller's earth						
Bentonite	tonnes	13 568	15 674	17 391	16 410	19 578
Gypsum	tonnes	166 340	193 263	196 133	170 351	170 721
Crude steel	tonnes	43 380	85 947	73 640	80 516	76 252
Crude petroleum	tonnes	1 052 121	1 037 787	980 486	950 859	911 207
Natural gas	million m^3	2 190	2 198	2 384	2 714	2 892
Salt	tonnes	32 533	32 723	36 970	29 589	32 536
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	7 471	9 000	9 000	7 000	9 000

Note(s):-
(a) From petroleum refining and/or Natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	1 740 334	2 534 177	1 908 732	2 390 517	3 334 229
Aluminium and bauxite						
Bauxite	tonnes	1 478	566	276	48	268
Scrap	tonnes	10 914	12 024	15 927	19 832	20 886
Cement						
Cement clinkers	tonnes	...	44 297	196 594	244 043	310 378
Portland cement	tonnes	1 104 731	1 039 442	1 254 309	1 282 560	855 579
Other cement	tonnes	76 973	95 310	92 074	89 957	94 185
Copper						
Scrap	tonnes	7 497	9 613	10 814	12 105	12 378
Gypsum						
Crude & calcined	tonnes	4 775	5 796	4 890	6 349	4 808
Iron, steel and ferro-alloys						
Scrap	tonnes	235 322	279 852	318 840	398 070	427 540
Kaolin	tonnes	4 362	351	15	35	32
Lead						
Scrap	tonnes	750	853	794	1 057	3 590
Platinum metals						
Waste & scrap	kilograms	...	49 784	76 039	27 719	18 314
Salt	tonnes	5 530	9 226	5 688	9 759	3 986
Silver						
Metal	kilograms	...	733	352	324	461
Sulphur and pyrites						
Sulphur	tonnes	7 505	8 505	8 028	6 606	8 614
Titanium						
Oxides	tonnes	...	60	155	419	489
Zinc						
Scrap	tonnes	566	325	417	511	683

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	487 181	2 404 092	4 603 357	3 867 558	4 583 241
Aluminium and bauxite						
Bauxite	tonnes	71 335	48 302	112 007	80 441	115 367
Alumina	tonnes	1 143	1 885	1 672	1 405	2 431
Unwrought	tonnes	21 289	47 437	56 509	53 021	54 067
Unwrought alloys	tonnes	7 329	9 672	14 915	18 893	22 039

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Asbestos	tonnes	1 958	3 251	2 429	...	...
Barytes	tonnes	1 053	1 878	715	893	98
Bentonite and fuller's earth						
Bentonite	tonnes	1 238	2 181	1 897	2 053	7 633
Cement						
Cement clinkers	tonnes	144 509	61 672	...	...	27 488
Portland cement	tonnes	176 027	214 400	379 711	447 202	340 112
Other cement	tonnes	1 782	287	1 569	5 547	5 242
Chromium						
Ores & concentrates	tonnes	341	459	537	615	584
Metal	tonnes	200	279	54	51	280
Coal						
Hard coal	tonnes	1 034 849	1 218 407	957 899	1 082 446	1 101 803
Lignite	tonnes	69 679	79 921	77 959	78 226	62 789
Briquettes	tonnes	22 828	2 981	4 734	6 084	2 604
Diatomite	tonnes	809	703	495	633	610
Feldspar	tonnes	11 894	13 713	17 011	15 986	16 212
Fluorspar	tonnes	152	204	143	124	149
Gold						
Metal	kilograms	5 034	1 193	1 083	992	1 608
Gypsum						
Crude	tonnes	35 732	14 974	41 665	25 095	48 775
Calcined	tonnes	33 419	37 499	33 316	37 052	37 034
Iron ore						
Burnt pyrites	tonnes	14 098	10 708	12 305	11 349	11 916
Iron, steel and ferro-alloys						
Pig iron	tonnes	14 821	15 175	15 270	16 994	17 011
Ferro-alloys	tonnes	2 421	2 980	2 893	3 031	3 027
Silicon metal	tonnes	350	510	261	61	48
Ingots, blooms, billets	tonnes	18 523	3 562	12 421	27 291	20 953
Scrap	tonnes	5 361	7 156	18 407	17 563	29 553
Kaolin	tonnes	6 303	6 472	7 941	16 423	21 845
Lead						
Unwrought	tonnes	988	1 460	1 492	1 415	911
Magnesite and magnesia	tonnes	1 006	1 479	1 647	1 564	1 872
Manganese						
Ores & concentrates	tonnes	...	...	2	12	828
Metal	tonnes	50	93	93	89	586
Crude petroleum	tonnes	3 776 305	4 197 554	3 855 070	3 778 918	4 285 565
Phosphates	tonnes	181 534	245 224	272 005	317 571	327 936
Platinum metals						
Platinum and platinum metals	kilograms	...	839	12 320	107	171
Potash						
Chloride	tonnes	146 692	168 015	131 567	149 424	159 288
Other potassic fertilisers	tonnes	4 037	34	2 062	3 594	3 564
Salt	tonnes	164 046	165 277	226 931	193 911	104 066
Silver						
Metal	kilograms	*3 500	3 340	3 837	5 043	3 684
Sulphur and pyrites						
Sulphur	tonnes	46 017	63 606	70 897	86 431	71 965
Sulphur, sublimed & precipitated	tonnes	3 611	4 817	1 923	3 492	2 425
Talc	tonnes	1 531	1 726	1 378	1 753	1 985
Tin						
Unwrought (a)	tonnes	95	67	62	73	81
Titanium						
Oxides	tonnes	2 327	2 401	2 561	2 827	3 245
Zinc						
Unwrought (a)	tonnes	5 324	3 516	3 329	11 506	4 674

Note(s):-
(a) Including alloys

Cyprus

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Crushed rock	tonnes	10 700 000	11 600 000	12 064 112	12 198 513	13 129 470
Bentonite and fuller's earth						
Bentonite	tonnes	144 859	155 717	172 366	150 620	154 655
Cement clinker	tonnes	56 034	68 865	37 891	97 846	—
Cement, finished	tonnes	1 636 879	1 688 917	1 804 645	1 786 488	1 882 096
Copper, mine	tonnes (metal content)	2 500	—	—	900	2 900
Copper, refined	tonnes	2 552	1 344	—	880	3 012
Gypsum	tonnes	300 000	255 000	215 500	270 000	330 000

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	106 748	10	55	5 118	148 994
Aluminium and bauxite						
Scrap	tonnes	2 966	3 699	4 578	4 880	4 745
Bentonite and fuller's earth						
Bentonite	tonnes	71 460	81 596	85 724	159 472	156 871
Cement						
Cement clinkers	tonnes	200 461	31 215	37 891	91 635	...
Portland cement	tonnes	196 173	146 669	219 460	155 271	51 022
Copper						
Unwrought	tonnes	2 610	1 322	...	879	3 006
Scrap	tonnes	1 266	2 221	2 548	2 684	2 122
Gypsum						
Crude & calcined	tonnes	184 389	215 297	73 741	152 621	203 109
Iron, steel and ferro-alloys						
Scrap	tonnes	41 926	46 316	55 240	65 998	63 662
Lead						
Scrap	tonnes	2 073	1 711	1 212	129	488
Salt	tonnes	508	559	635	521	769

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	3 201	(a) *8 400	5 921	11 605	15 497
Aluminium and bauxite						
Unwrought alloys	tonnes	7 697	10 858	9 898	12 481	13 868
Bentonite and fuller's earth						
Bentonite	tonnes	20 519	18 052	3 057	9 063	10 556
Cement						
Cement clinkers	tonnes	74 627	28 622	43 375	17 819	17 498
Portland cement	tonnes	2 496	2 092	2 339	1 241	1 017
Coal						
Hard coal (b)	tonnes	29	108	3	23 473	56 892
Briquettes	tonnes	1 173	1 028	935	869	1 686
Fluorspar	tonnes	8 901	5	...	498	1
Gold						
Metal	kilograms	4 561	313	359	340	292
Gypsum						
Crude & calcined	tonnes	468	74	3 501	9 849	12 932

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Iodine	kilograms	8 685	226	67	125	9
Kaolin	tonnes	487	299	154	184	341
Crude petroleum	tonnes	838 280	417 475	...	...	...
Platinum metals						
Platinum and platinum metals	kilograms	35	78	97	73	70
Salt	tonnes	14 053	8 650	13 795	13 647	12 208
Silver						
Metal	kilograms	8 461	5 135	5 675	2 866	3 746
Sulphur and pyrites						
Sulphur	tonnes	1 370	1 226	1 356	893	994
Talc	tonnes	255	242	386	307	343
Titanium						
Oxides	tonnes	1 172	1 172	1 286	1 227	1 243

Note(s):-
(a) BGS estimates, based on known exports from certain countries
(b) Including anthracite

Czech Republic

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	15 267 650	15 703 358	15 672 765	16 931 536	*17 000 000
Crushed rock	tonnes	27 934 515	28 846 776	30 221 600	32 731 255	34 254 056
Bentonite and fuller's earth						
Bentonite	tonnes	199 000	224 000	216 000	267 000	335 000
Cement clinker	tonnes	...	...	...	...	...
Cement, finished	tonnes	3 502 103	3 828 677	3 978 056	4 677 150	4 898 530
Coal						
Bituminous	tonnes	13 382 000	14 648 000	12 778 000	13 017 000	12 462 000
Lignite	tonnes	470 000	450 000	467 000	459 000	437 000
Brown coal	tonnes	49 920 000	47 840 000	48 658 000	48 915 000	49 134 000
Diatomite	tonnes	4 800	3 800	4 100	4 827	3 600
Feldspar	tonnes	421 000	488 000	472 000	487 000	514 000
Graphite	tonnes	9 000	5 000	3 000	5 000	3 000
Gypsum	tonnes	76 000	68 000	24 000	19 000	66 000
Pig iron	tonnes	5 207 000	5 385 000	4 627 000	5 192 000	5 287 000
Crude steel	tonnes	6 783 000	7 033 000	6 189 000	6 862 000	7 059 000
Ferro-alloys						
Ferro-vanadium	tonnes	*3 000	*3 400	*2 700	*2 800	*1 700
Kaolin (a)	tonnes	591 000	596 000	649 000	673 000	682 000
Lead, refined	tonnes	*26 000	*25 000	26 000	26 100	26 000
Crude petroleum	tonnes	310 000	299 000	306 000	259 000	240 000
Natural gas	million m^3	131	175	356	148	148
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	45 000	60 000	65 000	65 000	65 000
Uranium, mine	tonnes (metal content)	458	435	420	383	322

Note(s):-
(a) Beneficiated
(b) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	464 898	344 850	468 540	772 913	716 787
Aluminium and bauxite						
Unwrought (a)	tonnes	43 045	48 698	48 885	45 876	54 457
Scrap	tonnes	33 410	43 223	39 297	53 986	61 067
Antimony						
Oxide	tonnes	59	116	145	108	139
Barytes	tonnes	895	616	557	275	285
Bentonite and fuller's earth						
Bentonite	tonnes	17 439	62 012	85 093	86 296	97 358
Cement						
Cement clinkers	tonnes	44 410	91 626	29 169	32 521	29 924
Portland cement	tonnes	506 588	576 531	526 784	394 105	458 701
Other cement	tonnes	11 476	3 216	34 046	67 930	151 422
Chromium						
Ores & concentrates	tonnes	28	236	523	645	800
Metal	tonnes	338	364	109	2 104	946
Coal						
Hard coal (b)	tonnes	5 668 451	5 706 798	5 260 739	6 690 917	6 732 974
Lignite	tonnes	1 082 961	1 072 275	1 324 025	1 300 406	1 076 140
Briquettes	tonnes	191 650	160 823	148 966	213 621	112 447
Copper						
Unwrought	tonnes	978	7 834	4 251	12 651	10 301
Scrap	tonnes	36 874	53 086	53 707	57 152	58 534
Diatomite	tonnes	5 083	4 734	4 247	4 566	1 094
Feldspar	tonnes	133 868	143 941	160 469	154 672	168 259

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Fluorspar	tonnes	23 471	10 073	8 677	9 954	8 415
Gold						
Metal	kilograms	5 113	12 247	1 100	4 100	3 900
Waste & scrap	kilograms	1 349	31	600	700	6 100
Graphite	tonnes	4 058	3 924	3 489	3 518	4 029
Gypsum						
Crude	tonnes	92 133	90 750	33 307	46 837	105 394
Calcined	tonnes	4 718	5 563	4 272	6 249	5 973
Iodine	kilograms	330	537	1 000	800	1 000
Iron, steel and ferro-alloys						
Pig iron	tonnes	50 125	55 687	15 526	17 599	31 182
Ferro-silicon	tonnes	5 905	7 342	5 396	6 516	8 254
Ferro-vanadium	tonnes	3 012	3 417	2 613	2 763	1 685
Other ferro-alloys	tonnes	802	5 772	14 358	15 078	8 704
Silicon metal	tonnes	778	4 488	512	1 040	1 118
Ingots, blooms, billets	tonnes	249 522	267 912	251 513	324 619	587 296
Scrap	tonnes	1 178 514	1 930 343	1 351 676	1 456 061	1 678 565
Kaolin	tonnes	441 545	483 636	268 850	261 019	173 251
Lead						
Unwrought	tonnes	7 112	7 230	8 665	10 359	16 707
Scrap	tonnes	2 926	3 059	4 948	6 648	6 855
Magnesite and magnesia	tonnes	1 924	3 790	6 273	4 099	3 988
Mercury	kilograms	9 970	22 172	8 200	1 700	3 600
Molybdenum						
Metal	tonnes	4	123	23	12	78
Nickel						
Unwrought (a)	tonnes	186	967	57	690	171
Scrap	tonnes	417	525	843	1 036	1 245
Oxides	tonnes	358	296	658	602	617
Crude petroleum	tonnes	155 258	64 315	57 522	41 794	16 573
Phosphates	tonnes	683	33	545	726	732
Platinum metals						
Platinum and platinum metals (c)	kilograms	*22 000	*4 600	*3 300	*300	*800
Waste & scrap	kilograms	5 316	4 158	4 500	4 700	1 900
Potash						
Potassic fertilisers	tonnes	808	2 416	3 463	685	580
Salt	tonnes	10 490	12 986	13 833	30 648	18 760
Silver						
Metal	kilograms	171 398	291 519	29 337	98 354	102 968
Sulphur and pyrites						
Sulphur	tonnes	10 087	9 787	9 294	11 718	5 579
Sulphur, sublimed & precipitated	tonnes	134	1 581	503	113	114
Tantalum and niobium						
Tantalum	tonnes	55	84	68	53	66
Tin						
Unwrought (a)	tonnes	66	191	381	74	253
Scrap	tonnes	25	130	65	249	958
Titanium						
Titanium minerals	tonnes	177	873	340	492	745
Metal	tonnes	239	191	358	424	126
Oxides	tonnes	33 354	37 673	40 707	43 010	43 166
Tungsten						
Metal	tonnes	108	133	185	142	102
Carbide	tonnes	...	...	...	579	605
Zinc						
Unwrought (a)	tonnes	1 670	5 659	7 865	10 669	18 786
Scrap	tonnes	2 247	2 976	2 498	3 086	2 981

Note(s):-
(a) Including alloys
(b) Including anthracite
(c) BGS estimates, based on known imports into certain countries

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	206 018	509 217	574 008	690 730	252 049
Aluminium and bauxite						
Bauxite	tonnes	13 871	20 922	24 315	24 829	26 865
Alumina	tonnes	23 142	26 898	28 458	24 078	30 523
Alumina hydrate	tonnes	12 767	17 215	10 898	9 782	7 834
Unwrought	tonnes	66 747	75 289	69 977	74 392	82 910
Unwrought alloys	tonnes	82 823	90 688	96 702	104 238	119 773
Scrap	tonnes	24 336	28 542	34 226	48 937	63 508
Antimony						
Metal	tonnes	45	14	72	82	64
Oxide	tonnes	365	557	588	503	604
Arsenic						
Metallic arsenic	tonnes	20	8	9	11	10
Asbestos	tonnes	1 464	2 891	0	...	1
Barytes	tonnes	8 448	8 782	8 552	7 195	6 358
Bentonite and fuller’s earth						
Bentonite	tonnes	11 795	19 852	14 776	18 452	23 559
Fuller's earth	tonnes	702	564	1 290	1 039	...
Bismuth						
Metal	tonnes	56	64	50	77	70
Bromine	kilograms	26 817	8 121	1 174	5 066	7 700
Cadmium						
Sulphide	tonnes	20	19	21	14	...
Cement						
Cement clinkers	tonnes	76 152	167 711	95 108	117 477	109 392
Portland cement	tonnes	1 044 234	1 105 823	1 027 011	1 001 321	918 739
Other cement	tonnes	28 197	24 799	38 434	38 439	30 602
Chromium						
Ores & concentrates	tonnes	10 674	11 365	12 440	11 380	13 936
Metal	tonnes	66	60	149	123	281
Coal						
Anthracite	tonnes	15 177	52 247	43 713	61 255	45 114
Other coal	tonnes	1 265 727	1 642 568	1 192 214	1 896 977	2 507 091
Lignite	tonnes	...	1 083	1 371	24 412	33 472
Cobalt						
Metal	tonnes	54	81	75	84	108
Oxides	tonnes	25	33	18	24	26
Copper						
Unwrought	tonnes	6 326	5 644	4 551	8 321	18 911
Scrap	tonnes	2 080	5 601	6 114	8 104	8 966
Diamond						
Gem, cut	carats	...	...	2 755	18 182	5 837
Industrial	carats	...	...	27 453	30 377	43 006
Dust	carats	£858 000	£776 000	£956 000	£867 000	£884 000
Diatomite	tonnes	1 562	1 969	2 263	2 288	3 318
Feldspar	tonnes	7 388	8 785	13 315	16 032	14 213
Fluorspar	tonnes	16 628	28 408	24 009	24 637	24 915
Gold						
Metal	kilograms	1 596	1 957	769	1 570	8 813
Waste & scrap	kilograms	338	1 911	13 000	15 000	46 200
Graphite	tonnes	2 765	3 663	4 787	3 485	5 301
Gypsum						
Crude	tonnes	20 266	29 328	19 253	38 983	70 972
Calcined	tonnes	32 810	43 894	37 637	43 282	45 167
Iodine	kilograms	29 637	31 428	28 400	31 600	32 300
Iron ore	tonnes	8 221 566	7 636 968	6 576 885	7 984 718	6 578 115
Iron, steel and ferro-alloys						
Pig iron	tonnes	72 151	88 014	88 549	150 032	108 715
Sponge & powder	tonnes	21 478	5 661	6 130	10 136	20 580
Ferro-chrome	tonnes	13 193	16 248	16 772	20 492	34 123
Ferro-manganese	tonnes	24 154	27 051	30 921	32 355	35 500
Ferro-silico-manganese	tonnes	55 989	59 361	53 258	57 857	52 153
Ferro-molybdenum	tonnes	1 346	1 710	1 744	1 889	2 025
Ferro-silicon	tonnes	26 721	34 812	34 114	36 361	41 482
Ferro-vanadium	tonnes	225	395	564	429	440
Other ferro-alloys	tonnes	8 745	9 817	10 959	10 316	7 994

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Silicon metal	tonnes	4 095	8 401	2 589	4 986	6 584
Ingots, blooms, billets	tonnes	268 231	352 672	484 450	409 753	445 181
Scrap	tonnes	506 094	593 330	392 135	560 676	521 779
Kaolin	tonnes	15 466	14 034	16 895	22 962	23 461
Lead						
Unwrought	tonnes	55 699	73 472	69 135	67 850	66 060
Scrap	tonnes	908	1 348	4 147	4 411	6 519
Lithium						
Carbonate	tonnes	45	76	71	118	146
Magnesite and magnesia						
Magnesite	tonnes	5 528	5 973	6 860	5 320	6 527
Magnesia	tonnes	34 377	42 226	43 277	51 674	52 330
Manganese						
Ores & concentrates	tonnes	11 966	11 663	13 820	14 335	16 079
Metal	tonnes	386	593	619	674	757
Mercury	kilograms	2 531	7 300	1 100	4 000	3 200
Mica	tonnes	764	879	819	1 629	2 262
Molybdenum						
Ores & concentrates	tonnes	...	...	189	139	213
Metal	tonnes	42	66	89	175	130
Nickel						
Unwrought (a)	tonnes	2 158	2 574	2 520	3 531	4 429
Oxides	tonnes	465	712	785	844	919
Crude petroleum	tonnes	7 380 375	6 530 733	7 674 771	7 752 356	7 179 766
Phosphates	tonnes	24 299	24 282	22 633	28 141	33 954
Platinum metals						
Platinum and platinum metals	kilograms	5 249	...	1 289	4 599	576
Waste & scrap	kilograms	15	506	55	86	913
Potash						
Chloride	tonnes	76 396	108 061	97 723	43 238	32 745
Other potassic fertilisers	tonnes	2 405	3 632	3 783	...	...
Rare earths						
Rare earth compounds	tonnes	177	92	198	227	228
Salt	tonnes	681 134	909 966	891 667	1 151 331	567 960
Sillimanite	tonnes	3 480	3 779	3 733	6 765	5 601
Silver						
Metal	kilograms	238 756	422 971	103 373	602 527	697 818
Sulphur and pyrites						
Sulphur	tonnes	52 784	34 787	16 983	40 147	55 196
Sulphur, sublimed & precipitated	tonnes	49 164	70 159	89 595	70 555	57 410
Talc	tonnes	10 278	9 426	9 986	10 855	12 993
Tantalum and niobium						
Tantalum	tonnes	168	261	141	164	206
Tin						
Unwrought (a)	tonnes	635	550	634	665	616
Titanium						
Titanium minerals	tonnes	74 709	53 570	80 407	149 925	179 323
Metal	tonnes	620	800	1 143	1 155	1 086
Oxides	tonnes	5 462	6 773	8 008	8 734	10 529
Tungsten						
Metal	tonnes	73	116	173	197	837
Vanadium						
Pentoxide	tonnes	4 898	5 429	3 831	4 858	3 210
Zinc						
Unwrought	tonnes	(a) 28 748	(a) 34 205	28 263	33 732	35 666
Unwrought alloys	tonnes	...	...	8 039	11 113	11 992
Scrap	tonnes	25	220	565	334	4 008
Zirconium						
Concentrates	tonnes	2 105	1 605	655	1 498	1 482
Metal	tonnes	348	32	60	86	78

Note(s):-
(a) Including alloys

Denmark

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	50 800 000	57 300 000	69 500 000	72 508 000	68 255 000
Crushed rock	tonnes	380 000	372 000	378 000	372 000	410 000
Bentonite and fuller's earth						
Bentonite	tonnes	16 303	18 352	18 515	19 211	20 093
Cement clinker	tonnes	61 909	52 758	42 691	5 499	21 209
Cement, finished	tonnes	2 580 427	2 892 831	2 880 554	2 937 132	2 871 402
Diatomite						
Moler (a)	tonnes	221 000	188 000	209 000	196 000	201 000
Crude petroleum	tonnes	18 341 000	19 446 000	18 822 000	17 068 000	15 551 000
Natural gas	million m^3	7 552	8 946	9 908	9 873	8 752
Salt	tonnes	*600 000	*600 000	*600 000	*600 000	*600 000
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	4 751	4 660	4 223	4 142	3 896

Note(s):-
(1) Denmark is believed to produce kaolin
(2) In addition to the countries producing sillimanite minerals, synthetic mullite is known to be produced in Denmark

(a) Moler is an impure diatomite containing a large proportion of clay
(b) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	736 820	795 330	787 389	973 497	1 194 349
Aluminium and bauxite						
Alumina	tonnes	4 556	7 146	3 579	3 470	5 471
Unwrought alloys	tonnes	17 538	14 019	23 509	31 768	36 831
Scrap	tonnes	36 738	55 407	70 828	62 734	50 164
Bentonite and fuller's earth						
Bentonite	tonnes	16 821	17 279	17 066	19 214	19 495
Cement						
Cement clinkers	tonnes	65 962	85 967	54 542	11 981	9 673
Portland cement	tonnes	1 164 923	1 127 638	1 235 477	1 290 816	1 094 730
Other cement	tonnes	11 947	13 535	13 118	14 153	16 222
Chromium						
Metal	tonnes	521	661	703	855	549
Coal						
Hard coal (a)	tonnes	6 665	7 380	86 739	54 338	75 866
Copper						
Scrap	tonnes	39 487	38 573	27 227	31 076	31 569
Diatomite (b)	tonnes	*65 300	*75 800	*69 200	*71 500	*63 300
Gold						
Metal	kilograms	824	803	1 064	1 253	366
Waste & scrap	kilograms	343	1	120	3 531	600
Gypsum						
Crude	tonnes	83 754	81 318	111 720	165 656	197 920
Calcined	tonnes	65 842	13 837	25 474	356 443	1 740
Iodine	kilograms	199	6 921	3 058	6 301	100
Iron, steel and ferro-alloys						
Ferro-silicon	tonnes	325	20 935	23 295	14 611	64
Other ferro-alloys	tonnes	855	187	139	238	701
Ingots, blooms, billets	tonnes	8 119	16 223	1 203	2 199	12 820
Scrap	tonnes	1 310 175	1 564 469	1 402 982	1 414 060	1 263 987
Kaolin	tonnes	583	461	637	443	351
Lead						
Unwrought	tonnes	3 011	1 930	1 312	1 071	721
Scrap	tonnes	1 885	1 805	3 067	2 954	1 685

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Magnesite and magnesia	tonnes	...	165	232	307	451
Mercury	kilograms	10 554	27 458	1 932	824	2 800
Molybdenum						
Oxides	tonnes	...	...	...	...	200
Nickel						
Scrap	tonnes	593	777	676	585	482
Crude petroleum	tonnes	13 015 898	14 324 704	13 567 566	11 456 257	9 493 573
Platinum metals						
Platinum and platinum metals	kilograms	203	642	1 435	32	48
Potash						
Chloride	tonnes	8 212	3 162	1 052	29 533	127
Salt	tonnes	376 794	350 587	355 887	115 980	261 895
Silver						
Metal	kilograms	23 831	17 710	14 748	24 299	43 775
Sulphur and pyrites						
Sulphur	tonnes	1 598	2 608	332	176	153
Tin						
Scrap	tonnes	110	178	68	124	90
Titanium						
Metal	tonnes	185	166	184	146	162
Oxides	tonnes	578	1 304	1 136	1 134	1 121
Tungsten						
Metal	tonnes	13	26	5	86	112
Zinc						
Scrap	tonnes	5 543	2 336	3 538	3 628	2 388

Note(s):-
(a) Including anthracite
(b) BGS estimates, based on known imports into certain countries

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	2 632 665	2 949 549	2 804 325	3 151 321	3 077 714
Aluminium and bauxite						
Bauxite	tonnes	11 297	13 801	9 148	9 025	6 572
Alumina	tonnes	17 896	23 666	21 979	28 709	25 643
Unwrought (a)	tonnes	65 386	75 233	70 617	79 573	86 389
Scrap	tonnes	41 373	39 949	63 678	64 803	66 038
Barytes	tonnes	39 341	36 133	28 788	58 303	38 096
Bentonite and fuller’s earth						
Bentonite	tonnes	46 516	37 253	47 386	49 695	43 555
Fuller's earth	tonnes	40	107	137	921	...
Cement						
Cement clinkers	tonnes	23 222	22 506	31 634	46 600	35 555
Portland cement	tonnes	185 757	187 982	230 842	274 151	243 348
Other cement	tonnes	30 501	33 913	36 753	54 194	52 662
Chromium						
Ores & concentrates	tonnes	920	614	53	775	748
Metal	tonnes	106	90	53	27	31
Coal						
Anthracite	tonnes	92 434	77 502	52 143	85 883	47 233
Other coal	tonnes	9 126 099	7 487 269	5 881 938	9 234 248	8 034 596
Briquettes	tonnes	15 451	9 851	15 865	3 473	171
Copper						
Unwrought	tonnes	2 324	2 065	1 702	4 081	2 901
Scrap	tonnes	18 332	16 446	13 827	14 646	9 187
Diamond						
Unsorted	carats	...	£294 482	£597 000	£686 000	£928 000
Gem, cut	carats	£10 290 000	£9 319 000	£6 506 000	£7 252 000	£8 476 000
Industrial	carats	£151 161	£106 030	£80 942	£183 695	£388 000
Dust	carats	531 702	485 358	696 038	769 511	1 046 604

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Diatomite	tonnes	6 744	5 001	6 561	4 974	4 244
Feldspar	tonnes	3 904	3 878	3 868	2 590	3 145
Fluorspar	tonnes	12 406	16 005	15 124	12 635	8 218
Gold						
Metal	kilograms	1 968	1 948	2 095	1 643	2 350
Graphite	tonnes	567	478	288	268	212
Gypsum						
Crude	tonnes	282 006	283 604	317 736	330 476	388 662
Calcined	tonnes	36 882	38 650	45 691	52 788	53 647
Iodine	kilograms	21 037	9 080	13 249	16 398	110 285
Iron ore						
Iron ore	tonnes	4 908	4 356	8 450	4 318	87 945
Burnt pyrites	tonnes	53 136	80 853	86 399	81 341	13 157
Iron, steel and ferro-alloys						
Pig iron	tonnes	5 678	14 844	12 720	18 128	18 349
Sponge & powder	tonnes	6 471	103 479	29 188	80 148	61 079
Ferro-silicon	tonnes	2 495	3 564	2 548	4 069	1 887
Other ferro-alloys	tonnes	532	975	1 345	3 093	2 390
Silicon metal	tonnes	1 521	1 061	659	1 540	705
Ingots, blooms, billets	tonnes	588 317	598 552	551 407	588 053	780 837
Scrap	tonnes	237 035	250 551	313 558	238 142	213 776
Kaolin	tonnes	20 987	13 056	14 117	19 572	35 288
Lead						
Unwrought	tonnes	816	2 072	2 135	2 322	1 033
Scrap	tonnes	2 237	2 366	2 288	2 209	2 228
Lithium						
Carbonate	tonnes	98	93	81	164	155
Magnesite and magnesia						
Magnesite	tonnes	2 499	1 984	2 002	444	512
Magnesia	tonnes	2 297	2 575	4 560	4 478	3 327
Manganese						
Metal	tonnes	152	164	157	161	317
Mercury	kilograms	260	403	2 901	129	300
Mica	tonnes	305	369	413	1 596	366
Molybdenum						
Oxides	tonnes	150	190	247	196	432
Nickel						
Unwrought (a)	tonnes	96	112	97	92	53
Scrap	tonnes	432	447	317	403	529
Crude petroleum	tonnes	3 517 270	3 725 978	2 666 384	2 576 191	2 136 643
Phosphates	tonnes	80 114	30 425	1 311	274	1 051
Platinum metals						
Platinum and platinum metals	kilograms	859	1 443	2 076	2 962	931
Potash						
Sulphate	tonnes	14 654	18 006	2 683	4 778	6 077
Chloride	tonnes	166 236	119 153	38 706	106 772	34 292
Other potassic fertilisers	tonnes	11 254	13 099	29 605	13 150	13 742
Salt	tonnes	376 122	440 020	436 794	520 735	230 787
Sillimanite	tonnes	3 414	2 274	2 909	3 023	3 377
Silver						
Metal	kilograms	49 704	18 909	18 173	22 687	2 600
Sulphur and pyrites						
Sulphur	tonnes	8 210	7 883	7 066	2 335	204
Talc	tonnes	14 407	14 085	14 103	13 299	10 830
Titanium						
Metal	tonnes	745	778	770	788	623
Oxides	tonnes	21 022	22 269	23 156	24 678	19 514
Tungsten						
Metal	tonnes	5	103	307	523	113
Zinc						
Unwrought	tonnes	10 761	10 813	9 855	11 494	9 931
Unwrought alloys	tonnes	1 647	1 548	1 457	1 320	1 345

Note(s):-
(a) Including alloys

Estonia

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	1 973 740	2 341 620	3 459 760	4 209 080	6 406 740
Crushed rock	tonnes	4 082 700	5 426 600	6 828 600	8 298 400	8 855 800
Cement clinker	tonnes	559 500	622 900	635 500	704 700	1 042 800
Cement, finished	tonnes	506 200	614 600	726 000	848 900	937 400
Lead, refined	tonnes	—	3 000	*7 000	*7 000	*10 000
Crude petroleum (a)	tonnes	1 463 000	1 314 000	1 690 000	1 624 000	1 901 600

Note(s):-
(1) Small amounts of steel are believed to be produced in Estonia

(a) From oil shale

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	469 343	487 863	522 792	563 697	573 530
Cement						
Cement clinkers	tonnes	157 353	113 105	97 442	87 638	325 263
Portland cement	tonnes	172 223	209 168	225 729	228 971	274 997
Aluminium and bauxite						
Unwrought (a)	tonnes	11 986	5 479	2 414	3 013	8 083
Scrap	tonnes	9 712	8 062	10 686	8 263	10 379
Cobalt						
Metal	tonnes	143	12	...	3	12
Copper						
Scrap	tonnes	6 857	6 479	6 660	11 801	7 784
Gold						
Waste & scrap	kilograms	8 812	1	3	...	1
Iron, steel and ferro-alloys						
Pig iron	tonnes	(b) *3 400	...	(b) *200	...	(b) *1 360
Ferro-alloys	tonnes	23 420	1 238	665	672	159
Ingots, blooms, billets	tonnes	911	762	...	425	5 985
Scrap	tonnes	376 554	358 185	440 622	592 372	572 216
Lead						
Unwrought	tonnes	412	3 846	7 774	6 054	10 091
Scrap	tonnes	520	1 414	153	184	323
Manganese						
Metal	tonnes	1 320	...	...	142	464
Mercury	kilograms	2 476	...	3 400	—	—
Molybdenum						
Metal	tonnes	47	1	1	...	...
Nickel						
Unwrought (a)	tonnes	999	...	42	29	6
Scrap	tonnes	108	296	34	713	1 260
Crude petroleum	tonnes	(b) *283 000	(b) *321 000	(b) *339 000	...	...
Platinum metals						
Waste & scrap	kilograms	3 706	3 981	...	...	...
Rare earths						
Rare earth compounds	tonnes	2 129	1 064	2 319	6 819	3 183
Metals	tonnes	30	14	3	1	1
Tantalum and niobium						
Tantalum	tonnes	25	39	65	51	43
Tin						
Scrap	tonnes	8	7	125	17	71
Titanium						
Metal	tonnes	336	188	31	49	11
Oxides	tonnes	493	68	144	163	1 491

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Tungsten						
Ores & concentrates	tonnes	127	...	...	...	...
Metal	tonnes	196	1	3	1	...
Zinc						
Scrap	tonnes	1 612	1 146	539	1 121	725

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known imports into certain countries

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	464 516	456 144	739 618	932 688	929 218
Aluminium and bauxite						
Unwrought (a)	tonnes	10 428	5 859	1 686	7 021	3 035
Scrap	tonnes	1 052	431	453	1 338	808
Bentonite and fuller's earth						
Bentonite	tonnes	1 628	1 356	2 014	2 223	1 995
Fuller's earth	tonnes	221	260	132	145	...
Cement						
Cement clinkers	tonnes	...	...	21 219	75 683	31 127
Portland cement	tonnes	36 438	16 827	3 311	1 102	2 536
Coal						
Hard coal (b)	tonnes	60 731	44 399	53 647	95 079	175 599
Cobalt						
Metal	tonnes	138	17	0	3	1
Gold						
Metal	kilograms	2 570	74	234	1 200	900
Gypsum						
Crude & calcined	tonnes	23 314	80 834	20 957	40 876	46 336
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	16 840	2 132	2 125	1 815	1 240
Silicon metal	tonnes	1 827	574	125	105	156
Scrap	tonnes	35 654	85 689	111 930	64 110	53 155
Kaolin	tonnes	907	964	1 058	1 090	3 214
Manganese						
Metal	tonnes	1 201	401	552	909	836
Molybdenum						
Metal	tonnes	43	4	82	146	...
Nickel						
Mattes, sinters etc.	tonnes	1 696	46	73	...	1
Unwrought (a)	tonnes	1 328	163	60	23	30
Scrap	tonnes	100	331	108	562	803
Platinum metals						
Waste & scrap	kilograms	7 264	...	...	...	...
Potash						
Chloride	tonnes	33 180	22 619	15 197	11 173	7 048
Rare earths						
Rare earth compounds	tonnes	1 734	3 208	4 317	6 819	4 721
Salt	tonnes	78 883	78 849	58 269	78 483	72 445
Silver						
Metal	kilograms	8 892	10 512	132 992	10 100	3 100
Talc	tonnes	246	316	300	295	418
Titanium						
Metal	tonnes	234	113	216	12	393
Oxides	tonnes	1 082	235	1 344	1 726	2 548
Tungsten						
Ores & concentrates	tonnes	121	...	...	...	...

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Zinc						
Unwrought (a)	tonnes	10 578	17 468	9 105	7 253	4 362
Scrap	tonnes	4 473	191	18	86	32

Note(s):-
(a) Including alloys
(b) Including anthracite

Finland

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	55 000 000	55 000 000	53 000 000	54 000 000	...
Crushed rock	tonnes	40 000 000	43 000 000	45 000 000	46 000 000	...
Cement, finished (a)	tonnes	1 186 000	1 295 000	1 347 000	1 684 507	1 771 000
Chromium ores and concentrates	tonnes	549 000	580 000	572 000	549 000	556 000
Cobalt metal	tonnes	7 989	7 893	8 171	8 582	9 173
Copper, mine	tonnes (metal content)	14 900	15 500	15 000	13 000	13 600
Copper, smelter	tonnes	160 596	151 647	157 933	164 306	118 911
Copper, refined	tonnes	135 713	132 384	132 126	137 961	109 870
Feldspar	tonnes	59 362	44 495	42 783	43 187	48 980
Gold, mine	kilograms (metal content)	*1 200	*1 300	*1 300	*1 300	*1 700
Pig iron	tonnes	3 092 051	3 036 566	3 056 165	3 157 894	2 915 130
Crude steel	tonnes	4 766 203	4 832 427	4 738 446	5 053 714	4 430 726
Ferro-alloys						
Ferro-chrome	tonnes	250 000	264 492	234 881	243 350	241 760
Mercury	kilograms	25 000	23 500	34 200	22 820	45 000
Mica	tonnes	9 337	9 250	9 500	8 097	11 449
Nickel, mine	tonnes (metal content)	3 400	3 400	3 400	3 000	3 600
Nickel, smelter/refinery	tonnes	50 989	49 580	39 159	47 469	55 000
Phosphate rock	tonnes	799 339	838 000	822 987	857 922	830 989
Silver, mine	kilograms (metal content)	*12 000	*13 000	*13 000	*13 000	*13 000
Selenium metal	tonnes	52	65	66	70	52
Sulphur and pyrites						
Pyrites	tonnes (sulphur content)	276 200	283 700	184 400	199 700	194 300
Recovered (b)	tonnes (sulphur content)	328 779	325 523	304 751	325 793	*326 000
Recovered (c)	tonnes (sulphur content)	61 000	65 000	70 000	70 000	125 000
Talc	tonnes	501 658	528 943	508 169	547 146	535 882
Vanadium, mine	tonnes (metal content)	...	...	...	...	...
Wollastonite	tonnes	17 300	16 763	15 950	16 200	16 364
Zinc, mine	tonnes (metal content)	38 800	37 200	40 500	35 700	38 900
Slab zinc	tonnes	265 853	284 525	281 904	282 238	305 543

Note(s):-
(1) Finland is believed to produce arsenic

(a) Sales
(b) From metal sulphide processing
(c) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	446 404	422 709	580 815	735 655	837 957
Aluminium and bauxite						
Unwrought alloys	tonnes	18 557	17 254	14 107	11 411	12 924
Scrap	tonnes	16 720	22 946	21 053	25 921	38 364
Cement						
Portland cement	tonnes	837	11 449	3 367	647	982
Chromium						
Ores & concentrates	tonnes	612	708	841	1 570	2 492
Cobalt						
Metal (a)	tonnes	*4 200	*5 200	*5 800	*5 700	*5 700
Oxides (a)	tonnes	*3 400	*2 100	*1 700	*2 200	*2 400
Copper						
Unwrought, unrefined	tonnes	33 180	25 618	29 685	34 962	10 490
Unwrought, refined	tonnes	34 333	27 650	40 170	55 239	32 956
Unwrought alloys	tonnes	724	903	746	1 533	587
Scrap	tonnes	19 693	23 543	30 577	31 182	32 872

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Feldspar	tonnes	33 632	42 612	37 386	41 437	37 392
Gold						
Waste & scrap	kilograms	929	368	778	886	200
Graphite	tonnes	0	0	0	2	46 162
Gypsum						
Crude & calcined	tonnes	981	440	451	267	168
Iron ore						
Burnt pyrites	tonnes	...	52	59 433	67 503	146 844
Iron, steel and ferro-alloys						
Pig iron	tonnes	86	0	8 040	3 045	...
Ferro-chrome	tonnes	33 499	35 780	39 341	37 663	100 022
Ingots, blooms, billets	tonnes	501 945	624 170	436 083	284 313	185 229
Scrap	tonnes	374 778	315 977	286 494	220 124	253 732
Kaolin	tonnes	10 032	8 111	7 378	8 373	10 597
Lead						
Scrap	tonnes	159	884	3 589	2 421	605
Mercury	kilograms	25 530	23 462	32 090	24 859	45 600
Mica	tonnes	8 099	7 511	5 745	6 603	8 956
Nickel						
Ores & concentrates	tonnes	1 459	—	—	—	—
Unwrought	tonnes	37 416	36 458	30 628	37 747	43 427
Scrap	tonnes	...	26	28	47	441
Oxides (a)	tonnes	*600	*500	*300	*600	*600
Phosphates	tonnes	1 626	16 375	996	1 141	6 942
Platinum metals						
Platinum and platinum metals	kilograms	527	6	5	23	19
Waste & scrap	kilograms	68	7	75 063	712	200
Potash						
Sulphate	tonnes	(a) *51 300	(a) *34 900	33 484	(a) *7 900	49 485
Chloride	tonnes	611	1 008	38 915	65 003	50 342
Other potassic fertilisers	tonnes	99	86	78	65	95
Rare earths						
Rare earth compounds	tonnes	1	1	2	1	1
Metals	tonnes	...	...	...	...	104
Salt	tonnes	581	458	384	531	424
Silver						
Ores & concentrates	kilograms	357 250	507 350	416 650	262 669	700
Metal	kilograms	6 882	9 804	6 764	6 041	3 400
Sulphur and pyrites						
Pyrites (a)	tonnes	*266 000	*279 000	*100 000	*73 000	*90 000
Sulphur	tonnes	...	...	3 135	3 674	3 513
Talc (a)	tonnes	*227 000	*275 000	*278 000	*246 000	*284 000
Tin						
Unwrought alloys	tonnes	9	46	60	90	40
Scrap	tonnes	126	86	58	89	201
Titanium						
Metal	tonnes	30	22	44	35	30
Oxides (a)	tonnes	*81 000	*94 000	*104 000	*103 000	*103 000
Tungsten						
Metal	tonnes	67	91	77	80	113
Zinc						
Unwrought	tonnes	212 125	235 735	235 320	233 041	260 342
Unwrought alloys	tonnes	97	436	83	190	92
Scrap	tonnes	5 195	2 281	2 116	1 650	1 274

Note(s):-
(a) BGS estimates, based on known imports into certain countries

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	47 702	75 016	43 488	254 665	326 347
Aluminium and bauxite						
Bauxite	tonnes	6 027	4 782	3 661	6 366	4 909
Alumina	tonnes	1 904	2 220	2 659	2 327	3 296
Alumina hydrate	tonnes	24 958	37 361	28 300	31 024	37 163
Unwrought	tonnes	3 534	3 295	4 057	1 145	1 213
Unwrought alloys	tonnes	33 174	37 999	40 510	39 755	49 299
Scrap	tonnes	23 445	18 901	15 537	14 906	19 051
Antimony						
Oxide	tonnes	238	248	199	256	281
Barytes	tonnes	3 119	3 559	3 931	4 498	5 018
Bentonite and fuller's earth						
Bentonite	tonnes	26 569	27 321	26 395	32 520	37 741
Fuller's earth	tonnes	212	322	201	109	...
Bromine	kilograms	56 506	71 251	71 000	36 158	100
Cement						
Cement clinkers	tonnes	67 297	28 129	17 594	95 730	314 436
Portland cement	tonnes	438 363	423 958	383 260	380 296	341 748
Other cement	tonnes	9 654	9 344	13 211	12 176	16 006
Chromium						
Ores & concentrates	tonnes	6 050	6 092	6 962	8 388	9 324
Metal	tonnes	190	164	258	575	282
Coal						
Hard coal (c)	tonnes	10 145 037	8 283 891	4 724 392	6 683 990	6 669 717
Cobalt						
Ore	tonnes	41 707	80 202	54 794	31 186	26 449
Metal	tonnes	(b) *100	(b) *700	1 759	26 928	27 590
Oxides	tonnes	45	126	336	186	346
Copper						
Ores & concentrates	tonnes	543 488	528 930	504 658	544 149	448 119
Unwrought alloys	tonnes	4 311	2 778	3 229	3 996	4 178
Scrap	tonnes	2 472	1 735	2 423	1 259	2 644
Diamond						
Unsorted	carats	...	55 000	120 000	105 000	...
Gem, cut	carats	...	235 000	355 000	440 000	...
Dust	carats	365 000	320 000	450 000	620 000	682 850
Diatomite	tonnes	6 981	5 881	2 700	2 339	3 510
Feldspar	tonnes	104	257	380	796	1 023
Fluorspar	tonnes	18 672	17 069	16 597	15 011	15 064
Gold						
Metal	kilograms	1 230	1 332	949	931	100
Waste & scrap	kilograms	90 780	67 582	22 981	4	...
Graphite	tonnes	197	168	84	63	62
Gypsum						
Crude	tonnes	231 517	278 645	341 680	310 245	423 355
Calcined	tonnes	7 066	7 010	7 517	9 958	8 588
Iodine	kilograms	4 879	27 020	6 209	2 066	3 400
Iron ore						
Iron ore	tonnes	4 212 158	3 921 507	4 215 633	3 481 019	3 156 096
Burnt pyrites	tonnes	26 163	63	—	—	—

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Iron, steel and ferro-alloys						
Pig iron	tonnes	41 213	30 453	27 160	45 364	53 901
Sponge & powder	tonnes	28 412	16 906	969	779 146	880 575
Ferro-chrome	tonnes	9 395	6 562	7 404	17 926	9 650
Ferro-silico-magnesium	tonnes	620	615	...	623	3 989
Ferro-manganese	tonnes	16 237	15 805	14 728	14 828	18 138
Ferro-silico-manganese	tonnes	41 466	40 800	38 375	38 440	34 994
Ferro-molybdenum	tonnes	2 776	2 709	2 293	1 948	1 892
Ferro-nickel	tonnes	71 996	60 213	47 531	53 741	54 106
Ferro-niobium	tonnes	494	470	478	493	570
Ferro-phosphorus	tonnes	506	570	489	550	560
Ferro-silicon	tonnes	37 976	32 507	25 723	36 659	31 814
Ferro-titanium & ferro-silico-titanium	tonnes	1 632	2 063	1 912	1 558	1 707
Ferro-vanadium	tonnes	238	250	243	249	311
Other ferro-alloys	tonnes	2 514	3 263	4 016	3 380	...
Silicon metal	tonnes	1 601	2 097	1 306	1 402	1 318
Ingots, blooms, billets	tonnes	196 611	253 730	51 678	5 138	7 649
Scrap	tonnes	781 633	865 142	756 267	1 013 675	687 887
Kaolin	tonnes	1 305 240	1 301 806	1 144 335	1 261 699	1 155 041
Lead						
Unwrought	tonnes	2 753	2 582	2 854	1 571	2 283
Lithium						
Carbonate	tonnes	55	53	77	85	73
Magnesite and magnesia						
Magnesia	tonnes	17 096	11 567	16 476	9 540	15 989
Manganese						
Ores & concentrates	tonnes	9 983	20 381	28 335	10 433	27 251
Metal	tonnes	717	547	753	2 182	2 379
Mercury	kilograms	214	554	28	38	200
Mica	tonnes	3 664	2 861	2 998	2 874	4 098
Molybdenum						
Ores & concentrates	tonnes	4 868	5 603	4 127	9 270	5 789
Nickel						
Ores & concentrates	tonnes	146 122	169 170	104 983	190 233	256 932
Mattes, sinters etc.	tonnes	51 225	42 944	50 194	45 851	50 856
Unwrought (a)	tonnes	24 289	24 307	23 801	27 939	15 457
Scrap	tonnes	200	1 332	860	757	299
Crude petroleum	tonnes	12 019 477	12 249 366	10 603 534	12 176 669	12 221 330
Phosphates	tonnes	55 555	57 184	488	343	189
Platinum metals						
Platinum and platinum metals	kilograms	773	231	495	309	...
Potash						
Chloride (d)	tonnes	177 100	192 600	163 600	161 400	148 400
Rare earths						
Cerium compounds	tonnes	117	73	83	117	92
Salt	tonnes	395 727	408 367	438 346	401 961	409 761
Sillimanite	tonnes	299	302	445	207	109
Silver						
Metal	kilograms	56 470	75 350	70 623	64 504	55 400
Sulphur and pyrites						
Sulphur	tonnes	19 575	8 238	310	11 925	415
Talc	tonnes	3 971	1 827	866	757	663
Tin						
Unwrought (a)	tonnes	151	126	178	173	166
Titanium						
Titanium minerals	tonnes	...	...	5 080	34 403	20 578
Oxides	tonnes	11 390	13 163	14 380	14 788	15 838
Tungsten						
Metal	tonnes	169	119	121	21	130

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Zinc						
Ores & concentrates	tonnes	436 345	479 603	499 024	520 081	555 569
Unwrought alloys	tonnes	566	908	1 218	1 372	1 358
Scrap	tonnes	2 511	395	711	138	...

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known exports from certain countries
(c) Including anthracite
(d) K_2O content

France

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	165 470 000	168 080 000	168 640 000	174 360 000	180 450 000
Crushed rock	tonnes	217 400 000	223 170 000	222 780 000	233 090 000	242 950 000
Bauxite	tonnes	170 000	170 000	175 000	160 000	*160 000
Alumina	tonnes (Al_2O_3 content)	*600 000	*600 000	*600 000	*636 000	*500 000
Primary aluminium	tonnes	444 000	447 000	440 000	442 879	430 159
Barytes	tonnes	81 100	81 000	*81 000	*40 000	—
Bromine	kilograms	...	...	...	—	—
Cadmium	tonnes	*120	*120	*100	*90	*50
Cement clinker	tonnes	16 313 000	17 157 000	17 332 000	17 731 000	18 046 000
Cement, finished	tonnes	19 655 000	20 962 000	21 277 000	22 268 000	22 268 000
Coal						
Anthracite & bituminous	tonnes	1 728 000	200 000	—	—	—
Lignite	tonnes	9 000	—	—	—	—
Diatomite	tonnes	*80 000	*75 000	*75 000	*75 000	*75 000
Feldspar	tonnes	654 000	628 000	651 000	*650 000	*650 000
Fluorspar	tonnes	90 000	70 000	53 000	*40 000	—
Gold, mine	kilograms (metal content)	1 470	—	—	—	—
Gypsum	tonnes	*5 600 000	*5 700 000	4 902 498	*4 800 000	*4 800 000
Pig iron	tonnes	12 615 893	13 087 705	12 595 584	12 873 900	12 327 637
Crude steel	tonnes	19 757 864	20 770 252	19 480 777	19 852 125	19 249 862
Ferro-alloys						
Ferro-manganese & spiegeleisen	tonnes	356 192	110 072	109 111	139 533	98 066
Ferro-silico-manganese	tonnes	60 700	64 100	52 300	63 300	*50 000
Ferro-silicon	tonnes	*100 000	*100 000	*100 000	*100 000	*100 000
Silicon metal	tonnes	*85 000	*85 000	*85 000	*85 000	*85 000
Kaolin	tonnes	335 000	316 000	319 464	*300 000	307 253
Lead, refined	tonnes	91 000	89 000	*90 000	*88 000	*88 000
Mica (a)	tonnes	18 000	19 000	*20 000	*20 000	*20 000
Nickel, smelter/refinery	tonnes	11 370	12 103	12 684	13 700	16 400
Crude petroleum	tonnes	1 219 000	1 288 000	1 179 000	1 100 000	1 013 000
Natural gas	million m^3	1 523	1 325	1 089	1 167	1 023
Salt						
Rock salt	tonnes	320 000	406 000	494 000	...	...
Brine salt	tonnes	1 409 000	1 433 000	1 468 000	...	...
Salt in brine	tonnes	4 351 000	4 408 000	4 750 780	(b) 9 371 000	(b) 6 139 840
Sea salt	tonnes	1 302 000	1 365 000	1 026 000	...	...
Sillimanite minerals						
Andalusite	tonnes	62 000	68 000	*65 000	*65 000	*65 000
Silver, mine	kilograms (metal content)	495	682	—	—	—
Sulphur and pyrites						
Recovered (c)	tonnes (sulphur content)	710 400	698 400	622 345	616 234	605 820
Recovered (d)	tonnes (sulphur content)	196 000	150 000	127 000	75 000	75 000
Talc	tonnes	394 000	402 000	416 000	*420 000	*420 000
Slab zinc	tonnes	257 000	260 000	209 000	120 000	116 000

Note(s):-
(1) France may produce fullers earth
(2) In addition to the countries producing sillimanite minerals, synthetic mullite is known to be produced in France
(3) Significant quantities of germanium are believed to be recovered from imported domestic material

(a) Including mica recovered from mica schists and/or kaolin beneficiation
(b) Salt; all forms
(c) From petroleum refining and/or natural gas
(d) Other

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	10 116 439	9 389 763	8 492 936	8 928 358	8 383 027
Aluminium and bauxite						
Bauxite	tonnes	253	2 985	5 195	46 042	26 661
Alumina	tonnes	188 951	232 762	255 392	224 866	276 207
Alumina hydrate	tonnes	125 437	144 331	139 694	168 250	146 531
Unwrought	tonnes	63 659	70 010	77 097	65 943	45 503
Unwrought alloys	tonnes	75 318	78 047	95 700	148 253	136 803
Scrap	tonnes	257 279	299 226	314 243	345 107	380 708
Antimony						
Metal	tonnes	8	79	186	53	19
Oxide	tonnes	4 352	4 540	5 177	4 964	6 109
Arsenic						
Metallic arsenic	tonnes	0	...	8	15	3
Asbestos	tonnes	5	31	—	8	—
Barytes (a)	tonnes	*55 900	*75 900	*57 700	*36 300	*37 100
Bentonite and fuller's earth						
Bentonite	tonnes	18 966	7 696	9 243	9 788	13 454
Fuller's earth	tonnes	—	10	31	2	...
Bismuth						
Metal	tonnes	46	28	39	24	52
Cadmium						
Metal	tonnes	794	604	533	798	815
Cement						
Cement clinkers	tonnes	479 952	460 364	310 228	325 352	325 897
Portland cement	tonnes	604 494	785 100	792 192	683 110	590 684
Other cement	tonnes	144 523	112 828	102 222	113 145	13 999
Chromium						
Ores & concentrates	tonnes	2 879	2 928	2 340	2 013	2 391
Metal	tonnes	4 498	7 182	8 074	6 457	7 225
Coal						
Anthracite	tonnes	9 324	1 077	14 913	10 442	13 161
Other coal	tonnes	74 343	93 265	68 197	128 523	200 682
Cobalt						
Metal	tonnes	502	675	699	709	1 006
Oxides	tonnes	69	221	57	68	91
Copper						
Unwrought	tonnes	32 947	60 745	48 050	47 839	67 765
Unwrought alloys	tonnes	6 585	11 940	9 851	9 680	13 140
Scrap	tonnes	180 294	243 074	262 874	290 528	284 890
Diamond						
Unsorted	carats	1 959	858	14 853	40 105	22 863
Gem	carats	68 295	75 969	98 712	164 433	227 372
Dust	carats	355 000	528 370	1 273 515	1 069 100	430 000
Diatomite	tonnes	30 199	26 043	25 379	24 866	29 607
Feldspar	tonnes	286 371	219 741	255 836	224 062	261 112
Fluorspar	tonnes	18 519	12 002	6 821	28	3 770
Gold						
Metal	kilograms	34 720	31 890	20 053	24 302	20 229
Waste & scrap	kilograms	33 700	70 500	29 600	29 600	29 300
Graphite	tonnes	167	122	225	85	163
Gypsum						
Crude	tonnes	335 780	324 894	250 845	321 789	414 428
Calcined	tonnes	297 326	311 437	350 955	349 703	356 716
Iodine	kilograms	30 900	30 500	40 900	51 300	91 100
Iron ore	tonnes	43 473	38 413	106 849	76 097	69 375

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Iron, steel and ferro-alloys						
Pig iron	tonnes	153	679	350	113 729	89 768
Sponge & powder	tonnes	6 231	5 221	6 465	13 059	17 948
Ferro-chrome	tonnes	1 456	1 074	857	875	1 217
Ferro-silico-magnesium	tonnes	5 262	5 521	6 829	2 165	16 377
Ferro-manganese	tonnes	28 094	14 360	7 181	7 483	8 049
Ferro-silico-manganese	tonnes	53 270	63 483	76 021	53 278	41 110
Ferro-molybdenum	tonnes	300	538	547	673	481
Ferro-niobium	tonnes	926	521	240	596	948
Ferro-silicon	tonnes	65 871	65 881	69 551	63 432	50 334
Ferro-titanium & ferro-silico-titanium	tonnes	1 463	1 305	1 542	1 992	2 292
Other ferro-alloys	tonnes	32 324	29 320	27 432	22 699	357
Ingots, blooms, billets	tonnes	3 420 829	3 833 258	3 914 427	3 071 836	2 650 976
Scrap	tonnes	4 990 462	5 578 148	4 955 474	6 019 890	6 210 854
Kaolin	tonnes	1 613 484	484 554	421 927	968 538	412 284
Lead						
Unwrought	tonnes	12 868	6 182	6 920	25 933	14 936
Scrap	tonnes	27 789	27 003	24 683	21 854	29 544
Lithium						
Carbonate	tonnes	2 382	1 166	462	12	2
Magnesite and magnesia						
Magnesite	tonnes	507	241	230	241	373
Magnesia	tonnes	23 037	37 930	45 661	47 832	48 852
Manganese						
Ores & concentrates (c)	tonnes	332 067	272 815	139 723	303 881	333 747
Metal	tonnes	424	745	324	415	327
Mercury	kilograms	6 800	93 800	15 400	27 300	9 100
Mica	tonnes	114 464	14 323	13 469	12 845	13 959
Molybdenum						
Ores & concentrates	tonnes	0	41	365	512	485
Metal	tonnes	15	436	35	38	79
Oxides	tonnes	27	31	9	10	12
Nickel						
Unwrought	tonnes	8 396	9 203	10 148	11 761	12 308
Unwrought alloys	tonnes	542	1 455	1 762	999	1 475
Scrap	tonnes	8 306	6 618	6 373	7 826	7 578
Oxides	tonnes	359	1 140	63	433	26
Crude petroleum	tonnes	91 091	39	20 374	2 675	190
Phosphates	tonnes	1 018	6 362	4 463	10 147	15 919
Platinum metals						
Platinum	kilograms	3 800	2 800	1 700	...	...
Platinum metals	kilograms	3 400	5 200	2 600	...	...
Waste & scrap	kilograms	35 400	44 182	184 400	383 300	190 100
Potash						
Sulphate	tonnes	860	8 248	54 235	32 887	33 446
Chloride	tonnes	41 600	19 459	6 376	3 185	8 166
Other potassic fertilisers	tonnes	660	1 271	841	...	...
Rare earths						
Rare earth compounds	tonnes	1 660	8 588	2 007	2 185	2 545
Ferro-cerium & other pyrophoric alloys	tonnes	109	125	32	...	...
Metals	tonnes	58	65	7	24	11
Salt	tonnes	497 458	506 431	407 255	254 487	363 438
Sillimanite	tonnes	49 958	51 653	55 052	59 002	66 776
Silver						
Ores & concentrates	kilograms	—	7 100	...	...	26 500
Metal	kilograms	465 300	404 600	252 300	228 673	208 832
Sulphur and pyrites						
Sulphur, crude	tonnes	382 273	481 226	347 690	(b) 294 003	(b) 59 934
Sulphur, refined	tonnes	16 851	16 076	13 904	...	...
Sulphur, sublimed & precipitated	tonnes	652	562	642	619	680
Talc	tonnes	226 550	262 147	279 659	273 706	276 014
Tantalum and niobium						
Tantalum	tonnes	3	20	101	9	21

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Tin						
Unwrought	tonnes	577	430	324	368	552
Unwrought alloys	tonnes	612	527	1 020	1 010	884
Scrap	tonnes	279	457	478	893	590
Titanium						
Metal	tonnes	3 722	4 086	5 891	5 722	5 112
Oxides	tonnes	180 080	172 796	157 543	167 807	171 337
Tungsten						
Metal	tonnes	538	571	574	617	1 148
Carbide	tonnes	241	251	265	343	431
Vanadium						
Pentoxide	tonnes	183	138	13	10	15
Metal	tonnes	0	26	25	63	...
Zinc						
Ores & concentrates	tonnes	37 167	38 779	39 463	47 516	51 781
Unwrought	tonnes	109 839	115 352	80 472	31 960	29 305
Unwrought alloys	tonnes	31 625	35 879	33 940	12 205	7 238
Scrap	tonnes	38 294	56 440	63 571	71 224	56 200
Zirconium						
Concentrates	tonnes	653	1 129	1 058	2 316	1 832

Note(s):-
(a) BGS estimates, based on known imports into certain countries
(b) Including refined
(c) Including manganiferous iron ore

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	8 239 025	9 431 953	10 264 292	12 064 403	11 381 954
Aluminium and bauxite						
Bauxite	tonnes	1 786 905	1 507 504	1 799 671	1 664 642	2 001 899
Alumina	tonnes	704 393	644 513	655 246	667 146	710 029
Alumina hydrate	tonnes	44 743	41 187	41 682	45 085	46 584
Unwrought	tonnes	165 490	144 053	150 798	198 042	147 693
Unwrought alloys	tonnes	324 997	369 795	366 369	394 929	449 505
Scrap	tonnes	149 876	143 833	135 611	208 142	191 897
Antimony						
Metal	tonnes	5 241	8 486	7 766	8 919	8 568
Oxide	tonnes	1 972	2 096	2 243	2 092	3 315
Arsenic						
Metallic arsenic	tonnes	4	9	21	20	19
Asbestos	tonnes	3	8	5	52	169
Barytes	tonnes	23 009	28 748	31 965	24 471	40 760
Bentonite and fuller’s earth						
Bentonite	tonnes	170 540	220 260	163 999	220 996	243 350
Fuller's earth	tonnes	3 701	17 907	18 445	23 522	...
Bismuth						
Metal	tonnes	629	830	1 029	547	382
Bromine	kilograms	13 225 500	12 595 900	13 989 000	13 971 600	12 146 400
Cadmium						
Metal	tonnes	1 248	1 465	2 114	527	771
Oxide	tonnes	839	743	584	...	885
Sulphide	tonnes	20	5 802	6	—	...
Cement						
Cement clinkers	tonnes	793 933	865 213	946 642	1 010 056	1 739 962
Portland cement	tonnes	1 090 120	1 114 684	1 271 478	1 556 864	1 793 027
Other cement	tonnes	1 123 098	927 157	984 597	1 120 524	1 223 442
Chromium						
Ores & concentrates	tonnes	22 917	19 770	18 980	23 031	20 156
Metal	tonnes	677	1 323	669	1 040	717

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Coal						
Anthracite	tonnes	1 557 639	2 076 592	3 266 840	3 018 025	3 532 378
Other coal	tonnes	15 082 984	17 619 595	16 234 759	16 372 754	15 425 960
Lignite	tonnes	41 784	40 405	34 396	36 436	51 589
Briquettes	tonnes	68 883	75 872	116 845	147 381	174 170
Cobalt						
Metal	tonnes	1 813	*1 600	2 038	2 117	3 137
Oxides	tonnes	533	522	474	562	658
Copper						
Matte & cement	tonnes	1 651	386	19	20	293
Unwrought, unrefined	tonnes	118	168	248	275	328
Unwrought, refined	tonnes	578 525	590 304	516 881	506 721	431 897
Unwrought alloys	tonnes	8 308	7 564	10 132	11 029	14 389
Scrap	tonnes	70 422	78 853	75 464	97 462	90 195
Diamond						
Unsorted	carats	118 290	101 610	263 542	45 393	32 997
Gem, rough	carats	31 958	38 855	21 896	33 887	68 532
Gem, cut	carats	16 596	17 601	11 973	10 447	13 038
Industrial	carats	210 815	539 791	355 505	332 077	439 860
Dust	carats	10 500 000	11 327 446	10 013 030	10 037 456	8 361 221
Diatomite	tonnes	12 194	12 368	11 181	12 712	14 371
Feldspar	tonnes	37 538	44 615	85 460	54 106	20 974
Fluorspar	tonnes	7 006	10 457	21 526	34 972	48 758
Gold						
Metal	kilograms	31 186	24 446	28 834	23 605	23 567
Waste & scrap	kilograms	12 500	...	5 200	1 500	1 100
Graphite	tonnes	11 149	15 083	20 449	19 430	19 250
Gypsum						
Crude	tonnes	266 857	311 411	361 820	588 367	580 341
Calcined	tonnes	45 214	85 845	60 358	68 652	111 325
Iodine	kilograms	1 563 800	1 317 700	1 685 200	1 929 100	1 687 900
Iron ore						
Iron ore	tonnes	18 890 174	20 777 700	19 506 894	19 463 057	20 065 037
Burnt pyrites	tonnes	3 348	65	160	3 451	2 107
Iron, steel and ferro-alloys						
Pig iron	tonnes	254 512	237 824	249 585	183 755	195 466
Sponge & powder	tonnes	148 215	151 090	184 661	219 813	147 662
Ferro-chrome	tonnes	260 231	224 722	192 129	159 940	106 513
Ferro-silico-chrome	tonnes	1 524	59	122	677	8
Ferro-silico-magnesium	tonnes	1 840	1 524	920	928	26 899
Ferro-manganese	tonnes	46 048	96 276	55 239	57 240	63 487
Ferro-silico-manganese	tonnes	73 362	61 446	58 403	49 287	45 827
Ferro-molybdenum	tonnes	4 643	5 474	5 235	5 223	5 650
Ferro-nickel	tonnes	28 974	10 966	9 229	4 487	6 373
Ferro-niobium	tonnes	2 286	2 297	2 722	2 597	2 785
Ferro-phosphorus	tonnes	2 160	2 942	2 536	2 360	2 528
Ferro-silicon	tonnes	70 729	62 260	71 269	64 727	52 945
Ferro-titanium & ferro-silico-titanium	tonnes	4 828	4 768	6 448	9 037	10 009
Ferro-tungsten & ferro-silico-tungsten	tonnes	485	346	523	839	597
Ferro-vanadium	tonnes	1 063	1 031	1 351	1 396	1 432
Other ferro-alloys	tonnes	12 253	14 204	24 126	17 608	...
Silicon metal	tonnes	16 489	19 299	25 257	21 813	19 659
Ingots, blooms, billets	tonnes	1 595 528	1 803 335	1 621 219	1 557 219	1 998 943
Scrap	tonnes	3 019 857	3 449 108	2 819 160	3 319 269	3 197 843
Kaolin	tonnes	325 358	349 353	338 848	320 425	311 060
Lead						
Unwrought	tonnes	103 439	91 979	109 426	121 930	118 384
Scrap	tonnes	30 508	34 513	33 818	32 705	34 169
Lithium						
Oxides	tonnes	347	407	482	369	314
Carbonate	tonnes	1 381	1 484	1 392	1 186	1 289
Magnesite and magnesia						
Magnesite	tonnes	3 193	1 701	3 427	2 509	2 355
Magnesia	tonnes	149 468	148 780	161 488	161 029	163 908

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Manganese						
Ores & concentrates (a)	tonnes	892 176	626 061	615 884	611 043	678 369
Metal	tonnes	7 613	8 851	11 039	11 131	15 198
Mercury	kilograms	57 900	299 200	202 600	138 100	190 000
Mica						
Ground (b)	tonnes	3 182	1 358	1 534	2 674	2 532
Waste	tonnes	1 043	546	1 423	—	—
Molybdenum						
Ores & concentrates	tonnes	1 591	1 492	1 783	1 896	1 511
Metal	tonnes	727	762	993	1 075	830
Oxides	tonnes	371	664	678	579	670
Nickel						
Mattes, sinters etc.	tonnes	15 087	12 329	15 399	19 818	19 864
Unwrought	tonnes	30 995	26 842	22 656	26 631	25 752
Unwrought alloys	tonnes	3 192	5 350	6 104	5 500	7 702
Scrap	tonnes	2 210	2 068	1 554	2 393	1 341
Oxides	tonnes	200	166	228	297	542
Crude petroleum	tonnes	84 181 898	86 416 072	84 951 337	83 411 036	81 011 061
Phosphates	tonnes	773 860	593 253	427 194	387 794	442 826
Platinum metals						
Platinum	kilograms	5 341	6 416	5 390	4 455	6 263
Platinum metals	kilograms	4 219	4 268	3 500	3 711	3 631
Waste & scrap	kilograms	334 300	40 700	55 600	370 600	114 300
Potash						
Fertiliser salts	tonnes	1 807	1 988	1 401	712	...
Sulphate	tonnes	90 543	77 441	70 705	33 195	...
Chloride	tonnes	1 755 346	1 866 149	1 492 129	777 056	...
Other potassic fertilisers	tonnes	32 600	31 959	29 488	11 432	...
Rare earths						
Cerium compounds	tonnes	10 315	11 710	7 105	9 723	8 831
Other rare earth compounds	tonnes	1 480	1 037	585	1 329	1 232
Metals	tonnes	279	251	322	479	417
Salt	tonnes	753 902	850 703	1 110 898	1 024 789	592 976
Sillimanite	tonnes	3 411	3 360	3 080	4 813	6 026
Silver						
Ores & concentrates	kilograms	...	19 800	...	16 300	39 800
Metal	kilograms	970 315	675 245	731 182	734 679	643 280
Sulphur and pyrites						
Pyrites	tonnes	3 359	5 643	4 521	2 533	160
Sulphur, crude	tonnes	50 147	43 846	39 973	...	...
Sulphur, refined	tonnes	56 388	27 041	42 353	(c) 72 785	(c) 56 072
Sulphur, sublimed & precipitated	tonnes	2 488	12 555	5 809	2 439	797
Talc	tonnes	40 650	77 240	76 021	59 853	77 772
Tantalum and niobium						
Tantalum	tonnes	41	67	23	55	83
Tin						
Unwrought	tonnes	9 693	9 167	7 307	8 159	7 689
Unwrought alloys	tonnes	701	638	1 080	931	409
Scrap	tonnes	148	24	217	182	432
Titanium						
Ilmenite	tonnes	127 083	48 930	60 205	83 499	60 739
Other Titanium minerals	tonnes	34 984	81 141	86 552	78 849	71 292
Titanium slag	tonnes	...	61 456	111 137	107 092	91 602
Metal	tonnes	5 689	8 259	9 403	9 431	10 521
Oxides	tonnes	151 809	140 068	119 699	135 309	126 786
Tungsten						
Metal	tonnes	448	568	784	925	823
Carbide	tonnes	695	692	592	898	866
Vanadium						
Ores & concentrates	tonnes	1	...	21	—	...
Pentoxide	tonnes	496	441	556	533	656
Metal	tonnes	34	72	88	71	...

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Zinc						
Ores & concentrates	tonnes	482 493	458 760	423 664	250 791	259 750
Unwrought	tonnes	115 491	103 037	143 476	170 263	166 110
Unwrought alloys	tonnes	34 874	56 492	45 566	47 309	44 124
Scrap	tonnes	8 203	6 046	6 996	7 833	7 247
Zirconium						
Concentrates	tonnes	58 457	48 004	53 701	48 973	47 719
Metal	tonnes	288	276	207	378	570

Note(s):-
(a) Including manganiferous iron ore
(b) Including unmanufactured
(c) Including crude

Germany

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	285 500 000	267 300 000	252 000 000	266 000 000	251 700 000
Crushed rock	tonnes	124 047 000	125 600 000	122 244 000	138 700 000	135 400 000
Alumina	tonnes (Al_2O_3 content)	*830 000	*835 000	*830 000	*850 000	*1 000 000
Primary aluminium	tonnes	660 783	667 800	647 900	515 539	551 030
Barytes	tonnes	109 506	93 624	88 591	85 524	88 265
Bentonite and fuller's earth						
Bentonite	tonnes	478 796	404 549	352 374	363 998	384 709
Bromine	kilograms	*500 000	—	—	—	—
Cadmium	tonnes	640	*640	*640	*640	*640
Cement clinker	tonnes	21 513 000	26 281 000	24 315 000	24 921 000	26 992 000
Cement, finished	tonnes	32 700 000	31 900 000	30 600 000	33 630 000	33 382 000
Coal						
Anthracite & bituminous	tonnes	25 873 043	25 871 882	24 909 867	20 882 119	21 531 956
Brown coal	tonnes	179 086 776	181 926 060	177 907 945	176 324 117	180 411 991
Copper, smelter	tonnes	288 800	278 600	257 200	273 800	275 300
Copper, refined	tonnes	597 531	652 600	638 800	662 338	665 517
Feldspar	tonnes	233 028	182 842	168 640	167 332	171 303
Fluorspar	tonnes	33 289	33 203	35 364	53 009	54 359
Graphite	tonnes	2 840	3 155	2 638	—	—
Gypsum (a)	tonnes	1 748 000	1 579 000	1 644 000	1 771 000	1 898 000
Iron ore (b) (c)	tonnes	429 170	412 238	362 106	416 000	421 700
Pig iron	tonnes	30 071 000	30 628 000	29 294 000	30 940 000	31 700 000
Crude steel	tonnes	44 809 000	46 377 000	44 524 000	47 224 000	48 550 000
Ferro-alloys						
Ferro-chrome	tonnes	18 318	24 857	22 672	26 710	22 030
Other ferro-alloys	tonnes	*30 000	*30 000	*30 000	*30 000	*30 000
Silicon metal	tonnes	27 870	28 773	29 349	29 865	29 379
Kaolin (d)	tonnes	738 123	*740 000	*750 000	*750 000	*750 000
Lead, refined	tonnes	356 900	359 200	341 700	321 500	355 081
Crude petroleum	tonnes	3 799 864	3 515 537	3 572 764	3 514 284	3 414 590
Natural gas	million m^3	22 202	20 381	19 143	19 798	18 075
Potash						
Potassic salts	tonnes (K_20 content)	3 563 932	3 626 510	3 663 829	3 624 977	3 636 504
Salt						
Rock salt	tonnes	6 178 000	7 268 000	8 258 000	9 280 000	4 826 000
Brine salt	tonnes	1 123 000	974 000	1 006 000	1 001 000	1 010 000
Salt in brine	tonnes	6 668 000	7 212 000	7 449 000	7 189 000	7 558 000
Selenium metal	tonnes	*14	*14	*12	12	12
Sulphur and pyrites						
Recovered (e)	tonnes (sulphur content)	1 619 900	1 526 700	1 627 900	1 706 200	1 650 100
Recovered (f)	tonnes (sulphur content)	43 900	40 000	42 900	42 500	35 900
Talc	tonnes	3 859	...	...	...	...
Uranium, mine	tonnes (metal content)	104	77	80	65	41
Slab zinc	tonnes	388 131	382 020	334 900	342 566	334 891

Note(s):-
(1) Germany is believed o produce strontium minerals and tellurium metal
(2) Significant quantities of germanium are believed to be recovered from imported or domestic material

(a) Including anhydrite
(b) Including manganiferous iron ore
(c) Used as aggregate in the construction industry
(d) Washed and dried
(e) From petroleum refining and/or natural gas
(f) Other

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	19 811 898	21 817 271	21 698 651	25 912 337	29 024 954
Aluminium and bauxite						
Bauxite	tonnes	26 666	30 647	28 087	30 772	36 361
Alumina	tonnes	308 210	294 034	204 075	313 586	282 245
Alumina hydrate	tonnes	472 091	528 700	527 900	717 433	672 561
Unwrought	tonnes	48 570	58 365	60 757	72 132	61 090
Unwrought alloys	tonnes	340 772	354 998	330 843	360 157	361 917
Scrap	tonnes	556 405	544 522	583 987	675 261	770 042
Antimony						
Metal	tonnes	27	12	15	30	141
Oxide	tonnes	683	786	724	892	1 130
Arsenic						
Metallic arsenic	tonnes	8	14	20	20	32
Barytes	tonnes	32 546	32 383	32 375	33 947	43 104
Bentonite and fuller's earth						
Bentonite	tonnes	57 237	50 477	71 977	77 368	81 272
Fuller's earth	tonnes	299	860	1 540	1 378	...
Bismuth						
Metal	tonnes	152	275	371	534	901
Bromine	kilograms	16 700	5 600	3 000	4 600	3 400
Cadmium						
Sulphide	tonnes	5	6	14	4	...
Cement						
Cement clinkers	tonnes	1 001 024	868 384	773 394	687 056	1 051 733
Portland cement	tonnes	2 472 418	3 496 157	3 587 966	4 251 126	4 874 062
Other cement	tonnes	1 196 558	1 580 315	1 876 289	1 852 990	2 086 591
Chromium						
Ores & concentrates	tonnes	3 666	12 691	14 188	24 185	20 629
Metal	tonnes	2 096	1 256	1 478	2 877	3 114
Coal						
Hard coal	tonnes	182 233	183 694	251 623	305 046	309 501
Lignite	tonnes	71 777	430	73	27 801	140 400
Briquettes	tonnes	156 180	87 022	74 952	83 990	72 008
Cobalt						
Ore	tonnes	...	367	171	...	457
Metal	tonnes	1 116	1 441	1 395	1 602	2 067
Oxides	tonnes	151	233	185	140	158
Copper						
Ores & concentrates	tonnes	48 674	49 617	46 139	54 167	61 535
Matte & cement	tonnes	899	944	536	101	24
Unwrought, unrefined	tonnes	1 592	53	232	3 244	105
Unwrought, refined	tonnes	117 566	137 238	149 083	146 137	117 596
Unwrought alloys	tonnes	21 421	21 038	20 232	22 941	22 436
Scrap	tonnes	363 762	373 809	439 134	465 264	480 700
Diamond						
Unsorted	carats	£138 000	£663 000	£756 000	£21 000	£112 000
Gem	carats	183 133	190 272	169 535	175 658	153 739
Industrial	carats	6 918	7 997	5 255	7 510	8 720
Dust	carats	23 751 975	54 314 035	42 628 300	27 074 465	3 340 725
Diatomite	tonnes	20 036	20 312	7 000	11 500	7 949
Feldspar	tonnes	102 472	118 838	113 329	121 046	125 258
Fluorspar	tonnes	17 105	17 594	24 061	35 207	56 023
Gold						
Metal	kilograms	36 400	36 500	47 600	65 200	71 250
Waste & scrap	kilograms	651 000	170 065	30 600	7 500	14 800
Graphite	tonnes	11 746	14 783	14 241	20 777	23 993
Gypsum						
Crude	tonnes	142 263	197 613	259 631	391 494	423 152
Calcined	tonnes	1 070 873	1 033 057	991 946	1 471 660	1 703 212
Iodine	kilograms	583 100	640 400	465 800	340 600	183 200
Iron ore						
Iron ore	tonnes	9 376	8 756	7 023	18 294	17 770
Burnt pyrites	tonnes	6 491	3 241	7 257	6 623	7 491

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Iron, steel and ferro-alloys						
Pig iron	tonnes	56 571	112 911	82 834	180 939	145 453
Sponge & powder	tonnes	95 612	148 734	175 291	197 636	147 303
Ferro-chrome	tonnes	30 640	22 758	26 472	36 289	39 892
Ferro-silico-magnesium	tonnes	5 551	13 887	14 254	12 142	24 051
Ferro-manganese	tonnes	8 937	13 776	12 660	24 659	14 733
Ferro-silico-manganese	tonnes	10 306	9 286	2 928	9 748	8 684
Ferro-molybdenum	tonnes	2 054	2 597	3 867	3 499	3 636
Ferro-nickel	tonnes	94	625	31	115	2 116
Ferro-niobium	tonnes	713	1 076	1 448	1 130	1 149
Ferro-phosphorus	tonnes	691	786	936	977	839
Ferro-silicon	tonnes	60 016	61 239	53 979	53 963	51 343
Ferro-titanium & ferro-silico-titanium	tonnes	2 478	3 069	5 263	4 795	6 011
Ferro-tungsten & ferro-silico-tungsten	tonnes	268	178	176	423	480
Ferro-vanadium	tonnes	653	600	528	268	558
Other ferro-alloys	tonnes	15 369	12 691	10 652	10 720	...
Silicon metal	tonnes	16 141	18 064	—	—	—
Ingots, blooms, billets	tonnes	2 563 182	2 104 580	1 950 158	2 171 036	2 496 951
Scrap	tonnes	6 718 904	6 956 839	6 692 022	7 605 306	7 770 479
Kaolin	tonnes	359 926	369 141	301 870	463 804	507 867
Lead						
Ores & concentrates	tonnes	31 512	3 423	102	475	467
Unwrought	tonnes	129 550	120 361	122 120	126 790	136 609
Scrap	tonnes	15 468	12 412	11 064	8 390	17 799
Lithium						
Oxides	tonnes	649	625	...	...	...
Carbonate	tonnes	2 484	2 660	2 991	2 907	2 705
Magnesite and magnesia						
Magnesite	tonnes	878	218	61	132	463
Magnesia	tonnes	45 840	66 422	81 021	93 286	87 264
Manganese						
Ores & concentrates	tonnes	1 776	2 860	3 249	3 046	5 761
Metal	tonnes	10 703	12 261	17 824	19 757	15 414
Mercury	kilograms	48 900	55 500	36 200	40 000	42 300
Mica	tonnes	2 457	3 655	3 656	4 039	4 957
Molybdenum						
Ores & concentrates	tonnes	905	2 309	2 770	3 812	2 723
Metal	tonnes	1 465	2 014	2 241	2 958	346
Oxides	tonnes	2 894	—	—	—	—
Nickel						
Ores & concentrates	tonnes	10 884	10 717	7 822	8 901	2 520
Mattes, sinters etc.	tonnes	...	644	5 604	9 285	18 473
Unwrought	tonnes	5 225	5 549	8 988	5 287	4 256
Unwrought alloys	tonnes	6 011	8 732	9 376	9 970	9 664
Scrap	tonnes	8 091	8 096	9 342	6 224	7 383
Oxides	tonnes	246	105	102	143	167
Crude petroleum	tonnes	1 741 465	1 253 391	1 257 658	344 965	196 926
Phosphates	tonnes	66	43	5 048	700	168
Platinum metals						
Platinum	kilograms	26 300	31 900	43 300	40 600	28 100
Palladium	kilograms	22 000	15 900	20 800	24 400	27 800
Other platinum metals	kilograms	2 900	4 600	11 100	16 000	22 300
Waste & scrap	kilograms	803 500	815 821	1 648 800	2 797 600	3 399 700
Potash						
Potassic fertilisers (a) (b)	tonnes	3 103 009	3 077 154	3 235 651	3 624 977	3 636 504
Rare earths						
Rare earth compounds	tonnes	115	108	123	145	217
Metals	tonnes	10	4	1	1	8
Salt	tonnes	3 695 084	3 201 549	3 372 522	3 943 083	2 787 088
Sillimanite	tonnes	12 413	14 382	12 191	13 257	16 143
Silver						
Metal	kilograms	3 032 700	2 814 700	2 631 200	2 995 900	2 884 200

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Sulphur and pyrites						
Pyrites	tonnes	389	339	240	486	741
Sulphur, crude	tonnes	856 707	854 548	862 753	(c) 796 341	(c) 828 544
Sulphur, refined	tonnes	41 163	40 135	36 067	...	...
Sulphur, sublimed & precipitated	tonnes	4 021	276	163	102	114
Talc	tonnes	5 285	3 862	3 906	4 790	5 394
Tantalum and niobium						
Niobium & tantalum ores	tonnes	174	93	...	...	...
Tantalum	tonnes	323	337	190	294	199
Tin						
Concentrates	tonnes	...	...	163	331	—
Unwrought	tonnes	909	978	1 343	1 015	1 246
Unwrought alloys	tonnes	481	408	329	392	1 371
Scrap	tonnes	849	994	701	965	1 222
Titanium						
Titanium minerals	tonnes	778	319	607	490	776
Metal	tonnes	6 705	8 048	8 911	8 893	8 713
Oxides	tonnes	331 806	356 007	359 946	400 832	409 495
Tungsten						
Metal	tonnes	2 209	2 816	4 020	4 320	3 020
Vanadium						
Ores & concentrates	tonnes	127	1 060	4 680	2 372	...
Pentoxide	tonnes	102	296	1 216	1 444	1 250
Metal	tonnes	483	522	1 469	573	...
Zinc						
Ores & concentrates	tonnes	4 741	695	7 257	2 336	612
Unwrought	tonnes	104 982	91 123	81 664	65 824	77 443
Unwrought alloys	tonnes	38 710	37 762	30 115	29 999	30 439
Scrap	tonnes	47 414	52 545	55 913	54 939	59 297
Zirconium						
Concentrates	tonnes	2 111	2 567	5 211	1 643	2 057
Metal	tonnes	300	275	286	434	514

Note(s):-
(a) K_2O content
(b) Including sulphate, chloride and other potassic fertilisers
(c) Including refined

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	11 870 353	11 127 947	11 563 984	11 147 034	11 913 688
Aluminium and bauxite						
Bauxite	tonnes	1 907 966	2 119 259	2 435 244	2 143 631	3 141 693
Alumina	tonnes	1 047 728	1 107 265	999 798	912 564	790 515
Alumina hydrate	tonnes	225 998	204 721	231 124	219 035	266 042
Unwrought	tonnes	796 479	628 038	648 764	754 311	786 506
Unwrought alloys	tonnes	1 099 136	1 170 875	1 121 715	1 318 713	1 444 289
Scrap	tonnes	462 320	462 580	438 066	539 367	613 084
Antimony						
Metal	tonnes	149	178	148	421	612
Oxide	tonnes	6 707	7 072	6 560	8 305	8 527
Arsenic						
Metallic arsenic	tonnes	5	4	2	...	...
Asbestos	tonnes	59	69	98	61	54
Barytes	tonnes	218 811	226 706	231 471	272 526	320 702
Bentonite and fuller's earth						
Bentonite	tonnes	253 998	218 349	253 226	323 999	351 991
Fuller's earth	tonnes	8 483	11 202	9 571	9 371	...
Bismuth						
Metal	tonnes	1 689	1 693	1 508	1 337	1 130
Bromine	kilograms	1 835 400	1 626 600	1 304 000	801 100	607 500

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Cadmium						
Metal	tonnes	11	39	16	7	22
Oxide	tonnes	143	139	231	...	423
Sulphide	tonnes	8	6	18	9	...
Cement						
Cement clinkers	tonnes	325 302	370 454	289 600	235 023	92 757
Portland cement	tonnes	906 718	1 002 404	934 865	794 716	833 311
Other cement	tonnes	277 349	343 597	380 858	345 286	311 152
Chromium						
Ores & concentrates	tonnes	126 278	128 886	141 483	126 874	154 367
Metal	tonnes	4 063	5 599	5 428	7 552	8 454
Coal						
Anthracite	tonnes	1 143 311	1 413 902	991 877	2 499 908	4 353 426
Other coal	tonnes	25 164 977	31 047 441	29 452 512	35 218 836	37 993 445
Lignite	tonnes	49 433	10 570	9 890	10 070	15 411
Briquettes	tonnes	178 993	95 446	110 971	128 877	96 163
Cobalt						
Metal	tonnes	2 568	2 602	2 990	3 532	3 150
Oxides	tonnes	439	448	542	759	898
Copper						
Ores & concentrates	tonnes	880 332	1 141 843	1 149 088	1 148 316	1 300 491
Matte & cement	tonnes	33 896	15 085	25 931	30 463	14 880
Unwrought, unrefined	tonnes	17 319	11 635	36 671	41 589	31 830
Unwrought, refined	tonnes	516 590	584 852	624 688	881 427	844 747
Unwrought alloys	tonnes	38 410	24 066	26 657	36 770	48 261
Scrap	tonnes	379 726	426 995	432 147	552 413	595 751
Diamond						
Gem	carats	448 898	513 371	443 747	487 354	504 519
Industrial	carats	458 671	763 745	1 572 864	1 554 184	1 090 017
Dust	carats	77 071 290	96 561 025	63 878 900	53 291 240	47 242 440
Diatomite	tonnes	43 406	48 644	40 224	40 197	42 882
Feldspar	tonnes	50 809	70 064	101 931	126 834	143 596
Fluorspar	tonnes	234 067	302 071	264 896	293 737	346 581
Gold						
Metal	kilograms	40 100	49 800	56 500	54 600	8 100
Waste & scrap	kilograms	1 153 500	1 375 800	1 923 600	1 821 100	1 304 700
Graphite	tonnes	41 161	53 602	55 843	45 884	54 627
Gypsum						
Crude	tonnes	100 269	102 596	66 590	79 798	80 449
Calcined	tonnes	91 143	116 628	73 647	85 665	93 275
Iodine	kilograms	1 318 400	1 422 800	1 302 300	1 205 800	1 102 600
Iron ore						
Iron ore	tonnes	33 876 167	43 317 039	39 061 160	44 850 286	46 194 376
Burnt pyrites	tonnes	56 249	37 194	20 496	36 299	570
Iron, steel and ferro-alloys						
Pig iron	tonnes	221 451	342 152	320 481	422 525	655 022
Sponge & powder	tonnes	142 967	180 615	156 048	193 503	249 673
Ferro-chrome	tonnes	478 203	440 993	454 703	458 070	484 276
Ferro-silico-chrome	tonnes	8 354	11 367	1 429	12 867	14 426
Ferro-silico-magnesium	tonnes	1 103	1 722	6 831	23 761	25 758
Ferro-manganese	tonnes	178 917	175 176	170 967	195 387	217 428
Ferro-silico-manganese	tonnes	144 637	172 164	172 967	181 726	210 703
Ferro-molybdenum	tonnes	10 369	13 214	15 594	17 473	18 423
Ferro-nickel	tonnes	82 618	90 614	157 091	150 789	169 677
Ferro-niobium	tonnes	3 197	3 864	4 361	6 063	6 176
Ferro-phosphorus	tonnes	4 728	4 131	4 985	5 575	6 519
Ferro-silicon	tonnes	231 346	237 700	238 120	214 736	274 783
Ferro-titanium & ferro-silico-titanium	tonnes	8 862	6 845	10 302	13 492	15 339
Ferro-tungsten & ferro-silico-tungsten	tonnes	486	400	600	990	1 512
Ferro-vanadium	tonnes	5 471	4 006	4 843	5 171	5 711
Other ferro-alloys	tonnes	19 536	16 901	13 323	13 698	...
Silicon metal	tonnes	120 821	130 408	156 690	184 499	190 933
Ingots, blooms, billets	tonnes	1 306 210	1 945 817	2 331 264	2 578 298	3 095 162
Scrap	tonnes	4 364 130	5 411 710	5 026 286	5 592 745	5 920 061
Kaolin	tonnes	771 902	774 307	803 001	809 329	717 102

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Lead						
Ores & concentrates	tonnes	193 156	202 309	171 533	161 113	211 132
Unwrought	tonnes	159 860	112 975	108 533	134 805	138 978
Scrap	tonnes	9 075	11 757	15 419	18 141	30 313
Lithium						
Oxides	tonnes	4 405	3 699	4 209	4 260	5 163
Carbonate	tonnes	6 018	7 189	8 101	7 948	8 131
Magnesite and magnesia						
Magnesite	tonnes	7 724	4 684	6 353	13 794	17 029
Magnesia	tonnes	348 042	348 766	515 089	519 576	568 508
Manganese						
Ores & concentrates (a)	tonnes	6 917	8 034	7 645	11 327	15 997
Metal	tonnes	21 229	22 435	29 449	45 937	42 368
Mercury	kilograms	39 500	80 600	36 200	70 600	84 100
Mica						
Unmanufactured	tonnes	205	237	89	12	16
Ground	tonnes	24 993	28 784	30 820	33 101	36 345
Waste	tonnes	840	1 212	1 101	980	782
Molybdenum						
Ores & concentrates	tonnes	9 800	12 221	11 537	14 059	10 721
Metal	tonnes	1 878	3 043	2 569	3 894	4 238
Oxides	tonnes	545	703	725	2 049	1 776
Nickel						
Mattes, sinters etc.	tonnes	4 030	7 264	6 902	6 459	1 911
Unwrought	tonnes	72 571	72 788	87 939	70 947	74 083
Unwrought alloys	tonnes	1 933	1 646	2 182	2 908	2 531
Scrap	tonnes	10 889	11 347	11 672	15 116	19 799
Oxides	tonnes	563	517	502	445	593
Crude petroleum	tonnes	107 268 878	112 096 299	113 067 864	113 960 654	105 162 534
Phosphates	tonnes	120 231	148 082	104 335	117 711	115 109
Platinum metals						
Platinum	kilograms	44 800	39 600	58 400	46 900	51 500
Palladium	kilograms	31 600	20 700	56 000	42 000	54 700
Other platinum metals	kilograms	6 100	6 400	9 100	8 700	9 700
Waste & scrap	kilograms	3 837 500	3 713 700	6 574 600	9 332 700	11 442 800
Potash						
Chloride	tonnes	85 597	97 924	75 483	62 917	101 081
Other potassic fertilisers	tonnes	5 810	4 996	10 029	6 283	18 452
Rare earths						
Cerium compounds	tonnes	1 115	1 082	1 082	975	901
Other rare earth compounds	tonnes	7 810	7 776	6 961	7 024	9 748
Ferro-cerium & other pyrophoric alloys	tonnes	828	214	6	3	7
Metals	tonnes	358	285	402	369	410
Salt	tonnes	2 366 521	2 467 276	2 558 898	2 591 036	2 476 738
Sillimanite	tonnes	63 602	60 782	58 047	80 183	109 961
Silver						
Ores & concentrates	kilograms	...	...	...	1 323 500	859 400
Metal	kilograms	2 185 300	1 434 200	1 861 800	2 227 600	2 565 300
Sulphur and pyrites						
Pyrites	tonnes	42 170	53 264	62 686	76 343	92 569
Sulphur	tonnes	45 962	56 272	46 127	31 267	51 785
Sulphur, sublimed & precipitated	tonnes	1 448	12 782	4 389	1 363	2 007
Talc	tonnes	307 374	352 177	376 618	345 863	347 230
Tantalum and niobium						
Tantalum	tonnes	239	281	164	148	125
Tin						
Unwrought	tonnes	20 904	21 258	20 438	21 584	23 917
Unwrought alloys	tonnes	381	453	554	936	409
Scrap	tonnes	505	408	506	917	1 689
Titanium						
Ilmenite	tonnes	349 819	315 214	333 603	414 037	425 175
Other titanium minerals	tonnes	175 660	225 849	224 675	253 392	200 512
Titanium slag	tonnes	41 319	—	—	17 403	112 474
Metal	tonnes	10 044	14 756	15 978	18 426	19 385
Oxides	tonnes	211 539	237 464	240 554	269 812	299 599

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Tungsten						
Ores & concentrates	tonnes	195	389	493	512	604
Metal	tonnes	4 874	4 976	5 515	4 450	4 791
Carbide	tonnes	1 419	1 520	1 802	1 366	2 678
Vanadium						
Pentoxide	tonnes	802	648	741	1 222	1 071
Metal	tonnes	106	159	193	173	...
Zinc						
Ores & concentrates	tonnes	340 244	480 355	401 829	314 268	357 692
Unwrought	tonnes	253 892	248 654	245 794	313 034	316 603
Unwrought alloys	tonnes	100 172	83 556	76 981	83 795	87 785
Scrap	tonnes	26 647	23 997	22 480	30 028	19 586
Zirconium						
Concentrates	tonnes	(b) 85 178	(b) 80 328	(b) 79 729	—	—
Metal	tonnes	632	516	503	571	880

Note(s):-
(a) Including manganiferous iron ore
(b) Including niobium and tantalum concentrates

Greece

Production

Commodity	Units	2003	2004	2005	2006	2007
Bauxite	tonnes	2 418 000	2 396 065	2 441 443	2 162 900	*2 220 000
Alumina	tonnes (Al_2O_3 content)	496 000	514 000	511 000	510 000	516 000
Primary aluminium	tonnes	167 797	166 634	165 300	165 000	168 000
Asbestos	tonnes	*13 000	*4 000	—	—	—
Bentonite and fuller's earth						
Bentonite	tonnes	1 156 642	1 030 556	1 124 795	*1 100 000	*1 100 000
Cement clinker	tonnes	15 016 562	12 185 001	12 442 361	...	11 298 626
Cement, finished	tonnes	18 741 977	15 040 760	15 403 230	*16 000 000	*15 700 000
Coal						
Lignite	tonnes	71 000 000	71 600 000	70 600 000	64 800 000	62 500 000
Feldspar	tonnes	102 800	88 274	100 586	*100 000	*100 000
Gypsum	tonnes	731 785	856 606	865 216	*860 000	*860 000
Crude steel	tonnes	1 701 000	1 967 000	2 266 000	2 416 000	2 554 000
Ferro-alloys						
Ferro-nickel	tonnes	90 000	91 000	*96 000	*89 000	*94 000
Kaolin	tonnes	59 680	53 438	49 912	*50 000	*50 000
Lead, mine	tonnes (metal content)	2 000	—	3 000	10 400	15 700
Lead, refined	tonnes	*4 000	*3 000	*6 000	*6 000	*11 000
Magnesite	tonnes	542 800	552 300	471 000	463 277	351 414
Nickel, mine	tonnes (metal content)	19 100	19 000	20 400	21 700	21 200
Nickel, smelter/refinery	tonnes	18 000	18 116	19 235	17 700	18 700
Crude petroleum	tonnes	143 000	143 000	135 000	93 000	...
Natural gas	million m^3	27	23	16	*16	...
Perlite	tonnes	1 079 036	1 053 388	1 075 129	*1 100 000	*1 100 000
Salt	tonnes	192 161	187 522	198 024	*200 000	*200 000
Silver, mine	kilograms (metal content)	7 000	—	2 300	25 500	38 300
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	162 000	160 000	162 000	162 000	165 000
Talc	tonnes	500	200	250	*250	*250
Zinc, mine	tonnes (metal content)	3 000	—	4 000	18 000	21 300

Note(s):-
(1) Greece is believed to produce gold

(a) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	12 670	108 042	43 306	48 990	49 781
Aluminium and bauxite						
Bauxite	tonnes	701 911	925 282	1 136 505	912 093	1 086 405
Alumina	tonnes	358 955	404 852	439 374	457 726	715 003
Alumina hydrate	tonnes	11 568	3 760	2 944	8 239	21 716
Unwrought	tonnes	58 714	61 846	60 964	64 487	27 195
Unwrought alloys	tonnes	8 880	8 597	15 017	18 804	67 732
Scrap	tonnes	10 731	13 777	15 205	19 105	13 566
Antimony						
Metal	tonnes	49	3	141	160	143
Asbestos	tonnes	12 576	4 256	—	...	—
Bentonite and fuller's earth						
Bentonite	tonnes	27 395	15 612	1 283	12 620	168
Fuller's earth	tonnes	—	8	90	122	...
Cement						
Cement clinkers	tonnes	742 540	257 136	304 750	356 077	848 925
Portland cement	tonnes	2 507 359	2 679 607	3 502 085	2 816 832	2 685 623
Other cement	tonnes	110 674	170 640	242 957	181 529	207 665
Chromium						
Ores & concentrates	tonnes	...	21	249	726	—

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Coal						
Hard coal (a)	tonnes	49 146	16 229	11 673	15 852	25 717
Lignite	tonnes	...	...	116	306	—
Briquettes	tonnes	73 628	67 702	51 752	23 465	12
Copper						
Unwrought, refined	tonnes	1 414	1 894	1 242	2 541	1 944
Unwrought alloys	tonnes	2 179	1 273	365	1 142	995
Scrap	tonnes	9 460	8 517	15 126	16 889	14 669
Diamond						
Gem, cut	carats	1 895 000	55 000	1 840 000	325 000	500 000
Feldspar	tonnes	25 176	8 515	4 755	5 258	6 052
Gold						
Metal	kilograms	4 714	15	3	311	900
Gypsum						
Crude	tonnes	112 510	106 082	88 187	116 442	47 694
Calcined	tonnes	390	549	926	752	1 842
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	1 742	5 528	1 044	511	340
Ingots, blooms, billets	tonnes	2 908	64 105	48	13 899	121 989
Scrap	tonnes	56 047	59 502	37 164	126 188	34 584
Kaolin	tonnes	976	131	129	472	276
Lead						
Unwrought	tonnes	107	3 003	4 017	3 292	9 913
Scrap	tonnes	276	240	848	1 256	769
Magnesite and magnesia						
Magnesia	tonnes	65 673	130 910	140 083	125 783	132 083
Mica	tonnes	4 239	2 769	5 653	9 613	3
Nickel						
Ores & concentrates	tonnes	2 362	190	...	52 169	150
Potash						
Potassic fertilisers	tonnes	2 107	4 083	2 894	3 977	1 217
Salt	tonnes	42 976	44 664	50 390	62 896	37 232
Silver						
Metal	kilograms	351	3 299	152	3 325	8 300
Sulphur and pyrites						
Pyrites	tonnes	23	6 920	4 306	16 495	73 606
Sulphur	tonnes	338	3 385	138	43 773	52 668
Talc	tonnes	990	2 566	3 479	4 065	5 016
Titanium						
Oxides	tonnes	1 624	1 835	2 373	1 861	2 233
Zinc						
Ores & concentrates	tonnes	0	0	3 276	12 615	14 890
Unwrought (b)	tonnes	1 076	709	334	1 802	29 861
Scrap	tonnes	683	709	517	421	644

Note(s):-
(a) Including anthracite
(b) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	324 882	199 144	22 026	45 081	341 376
Aluminium and bauxite						
Bauxite	tonnes	375 275	247 358	206 870	268 899	376 304
Alumina	tonnes	889	905	1 049	71 073	283 255
Unwrought	tonnes	98 093	116 074	121 266	125 541	125 327
Unwrought alloys	tonnes	46 193	51 522	68 958	62 828	73 561
Scrap	tonnes	15 127	16 631	18 083	20 030	50 470
Antimony						
Ores & concentrates	tonnes	76	119	95	131	83
Metal	tonnes	40	46	24	...	21

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Arsenic						
Metallic arsenic	tonnes	16	21	35	16	9
Asbestos	tonnes	91	—	...	...	4
Barytes	tonnes	791	858	996	1 065	1 255
Bentonite and fuller's earth						
Bentonite	tonnes	14 280	8 902	22 164	14 573	19 780
Fuller's earth	tonnes	898	633	844	811	...
Bismuth						
Metal	tonnes	17	23	6	6	11
Cement						
Cement clinkers	tonnes	5 243	1 237	1 494	50 907	45 388
Portland cement	tonnes	302	1 754	425	3 237	3 603
Other cement	tonnes	3 322	3 497	4 548	3 228	3 010
Chromium						
Ores & concentrates	tonnes	218	122	477	732	257
Coal						
Anthracite	tonnes	51 753	37 633	35 475	39 250	59 007
Other coal	tonnes	803 239	753 949	724 600	461 181	382 933
Cobalt						
Metal	tonnes	30	89	31	30	42
Copper						
Unwrought	tonnes	107 425	120 088	90 557	106 404	105 722
Unwrought alloys	tonnes	843	550	488	4 439	6 855
Scrap	tonnes	1 979	1 864	930	2 141	10 148
Diamond						
Unsorted	carats	£340 000	£625 000	£597 000	£1 221 000	£1 102 000
Gem, rough	carats	£166 000	£145 000	£357 000	£333 000	£349 000
Gem, cut	carats	£1 130 000	£1 701 000	£1 893 000	£1 592 000	£2 388 000
Industrial	carats	£456 000	£771 000	£959 000	£887 000	£1 823 000
Dust	carats	6 205 000	8 390 000	19 475 000	10 550 000	17 573 974
Diatomite	tonnes	556	610	645	757	958
Feldspar	tonnes	5 216	499	3 032	439	478
Fluorspar	tonnes	10 579	20 720	10 681	2 855	2 232
Gold						
Metal	kilograms	8 276	37 484	56 572	60 999	48 500
Waste & scrap	kilograms	79 288	—	...	126	...
Graphite	tonnes	77	127	91	83	111
Gypsum						
Crude	tonnes	362	826	801	88	123
Calcined	tonnes	1 361	13 614	5 270	14 233	4 624
Iodine	kilograms	2 593	1 673	2 247	2 153	500
Iron ore						
Burnt pyrites	tonnes	132	4 601	180	5 701	98
Iron, steel and ferro-alloys						
Pig iron	tonnes	10 844	15 494	6 415	9 172	10 461
Ferro-manganese	tonnes	2 454	2 604	1 293	640	2 654
Ferro-silico-manganese	tonnes	19 505	23 808	31 657	31 524	38 321
Ferro-silicon	tonnes	7 353	7 899	6 339	4 694	18 783
Other ferro-alloys	tonnes	792	1 591	1 148	1 315	1 562
Silicon metal	tonnes	1 140	1 055	1 126	1 408	1 383
Ingots, blooms, billets	tonnes	211 021	229 854	90 412	120 241	250 572
Scrap	tonnes	1 138 900	1 178 451	1 545 912	1 517 545	1 637 437
Kaolin	tonnes	52 833	56 380	54 293	68 083	40 298
Lead						
Unwrought	tonnes	4 633	28 460	5 112	5 401	11 792
Scrap	tonnes	5 496	1 284	85	138	2 071
Magnesite and magnesia						
Magnesite	tonnes	23 470	20 579	14 250	15 645	12 611
Magnesia	tonnes	10 427	11 985	17 232	22 763	20 682
Manganese						
Ores & concentrates	tonnes	24 985	1	22 001	46 164	...
Metal	tonnes	389	1 510	905	730	291
Mercury	kilograms	11 617	187	954	933	100
Mica	tonnes	203	94	131	111	123
Molybdenum						
Metal	tonnes	1	13	2	47	34

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Nickel						
Ores & concentrates	tonnes	10 480	6	29 153	6 657	36
Unwrought	tonnes	60	61	56	39	44
Crude petroleum	tonnes	18 976 807	18 390 500	18 926 138	18 370 720	16 938 841
Phosphates	tonnes	336 893	364 398	378 931	197 629	237 577
Platinum metals						
Platinum and platinum metals	kilograms	156	179	181	248	7 400
Potash						
Sulphate	tonnes	55 208	92 816	28 334	44 049	37 785
Chloride	tonnes	36 469	29 191	46 667	36 887	22 518
Other potassic fertilisers	tonnes	5 256	6 411	4 387	9 682	6 189
Salt	tonnes	218 991	173 729	162 669	277 940	177 719
Sillimanite	tonnes	25	107	25	62	734
Silver						
Metal	kilograms	49 225	95 318	1 059 816	46 241	1 039 000
Sulphur and pyrites						
Pyrites	tonnes	...	...	...	31 906	94 621
Sulphur	tonnes	106 922	83 733	68 765	3 933	35 625
Talc	tonnes	5 316	10 061	9 937	10 000	8 550
Tin						
Unwrought (a)	tonnes	598	671	615	244	323
Titanium						
Titanium minerals	tonnes	313	563	528	440	826
Oxides	tonnes	22 801	27 241	25 592	25 372	27 284
Zinc						
Unwrought (a)	tonnes	24 982	29 255	20 110	19 320	58 708
Zirconium						
Concentrates	tonnes	651	611	629	466	547

Note(s):-
(a) Including alloys

Hungary

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	40 530 145	46 354 829	69 027 609	46 458 296	34 815 891
Crushed rock	tonnes	10 090 547	13 037 471	15 078 440	17 944 036	13 046 962
Bauxite	tonnes	665 904	646 726	535 337	507 259	515 061
Alumina	tonnes (Al_2O_3 content)	300 000	304 000	300 000	300 000	*300 000
Primary aluminium	tonnes	35 000	34 400	31 000	300	—
Bentonite and fuller's earth						
Bentonite	tonnes	87 200	9 300	4 900	6 635	54 231
Cement clinker	tonnes	...	...	...	2 533 076	2 500 698
Cement, finished	tonnes	3 573 000	3 349 000	3 371 000	3 724 153	3 551 746
Coal						
Bituminous	tonnes	667 126	280 000	—	885 849	838 672
Lignite	tonnes	8 563 697	8 470 258	8 153 968	8 467 220	8 351 563
Brown coal	tonnes	4 128 000	2 500 000	1 426 000	1 431 700	1 342 000
Diatomite	tonnes	1 770	1 640	2 190	495	1 424
Gypsum (a)	tonnes	62 000	55 000	19 000	30 000	26 000
Pig iron	tonnes	1 332 000	1 350 000	1 329 000	1 336 000	1 393 655
Crude steel	tonnes	2 044 526	1 944 017	2 004 250	2 089 000	2 227 000
Kaolin	tonnes	...	3 300	1 300	1 350	2 136
Manganese ore	tonnes	48 000	49 000	50 000	50 000	51 000
Crude petroleum	tonnes	1 134 245	1 076 844	947 542	880 000	838 700
Natural gas	million m^3	3 145	3 112	3 041	3 254	2 653
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	51 000	35 000	65 000	50 000	65 000
Perlite	tonnes	95 100	65 000	69 900	71 019	67 542

Note(s):-
(1) Hungary is believed to produce antimony and arsenic
(2) In addition to the countries producing sillimanite minerals, synthetic mullite is known to be produced in Hungary

(a) Including anhydrite
(b) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	598 056	729 270	736 586	961 775	1 889 989
Aluminium and bauxite						
Alumina	tonnes	125 433	170 664	142 470	170 030	178 984
Alumina hydrate	tonnes	90 768	80 314	75 811	90 705	98 187
Unwrought (a)	tonnes	16 231	25 475	22 635	28 884	27 580
Scrap	tonnes	27 022	38 684	41 192	34 986	29 228
Bentonite and fuller's earth						
Bentonite	tonnes	1 030	897	442	860	849
Cement						
Cement clinkers	tonnes	41 006	78 590	27 328	—	—
Portland cement	tonnes	440 285	244 276	274 262	257 050	177 191
Coal						
Lignite	tonnes	13 966	81 047	366 132	—	—
Copper						
Scrap	tonnes	27 405	31 741	34 861	27 051	23 394
Diatomite	tonnes	284	452	12	44	44
Gold						
Metal	kilograms	...	828	628	470	871
Gypsum						
Crude & calcined	tonnes	1 180	1 305	2 648	6 408	8 626

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	436	701	234	—	829
Ingots, blooms, billets	tonnes	32 452	24 042	24 923	14 731	36 548
Scrap	tonnes	618 827	887 069	761 464	658 499	567 923
Kaolin	tonnes	2 388	7 180	6 252	3 781	3 762
Lead						
Scrap	tonnes	1 237	2 377	2 987	3 286	2 369
Platinum metals						
Waste & scrap	kilograms	...	...	...	...	89 200
Potash						
Potassic fertilisers	tonnes	61	2 512	1 253	...	1 394
Salt	tonnes	2 987	576	49 578	45 215	1 459
Sillimanite						
Mullite	tonnes	3 869	6 108	6 920	6 870	(b) *7 500
Silver						
Metal	kilograms	1 300	2 519	1 033	395	527
Sulphur and pyrites						
Sulphur	tonnes	...	22 607	36 471	34 850	43 178
Talc	tonnes	314	1 533	—	—	162
Titanium						
Oxides	tonnes	163	278	126	324	991
Tungsten						
Metal	tonnes	56	64	24	49	52
Zinc						
Unwrought	tonnes	921	3 798	415	1 189	—
Scrap	tonnes	2 794	3 571	3 938	4 557	3 716

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known imports into certain countries

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	104 705	254 800	446 504	211 927	455 416
Aluminium and bauxite						
Bauxite	tonnes	164 930	189 528	279 660	243 873	319 681
Alumina	tonnes	17 819	8 751	15 638	2 558	3 350
Unwrought	tonnes	199 978	337 995	109 382	109 506	132 695
Unwrought alloys	tonnes	27 925	32 021	54 362	72 573	149 299
Scrap	tonnes	16 764	13 111	17 164	49 076	37 204
Antimony						
Oxide	tonnes	150	186	180	139	192
Asbestos	tonnes	574	...	...	...	...
Barytes	tonnes	1 704	3 453	...	...	1 444
Bentonite and fuller's earth						
Bentonite	tonnes	5 371	4 963	2 794	4 850	2 933
Fuller's earth	tonnes	543	251	281	...	...
Bromine	kilograms	(d) 24 900	(d) 5 623	12 000	9 300	(d) 29 143
Cement						
Cement clinkers	tonnes	1 924	583	9 051	65 437	40 099
Portland cement	tonnes	342 107	451 613	565 366	455 108	560 863
Other cement	tonnes	536 445	579 735	508 067	375 337	144 824
Chromium						
Ores & concentrates	tonnes	593	367	388	306	492
Metal	tonnes	82	68	0	289	27
Coal						
Hard coal (c)	tonnes	1 108 289	1 347 232	1 298 122	1 765 117	1 950 139
Lignite	tonnes	311 845	403 297	710 417	686 862	572 742
Briquettes	tonnes	...	12 295	14 310	15 416	13 590

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Copper						
Unwrought	tonnes	14 327	11 365	3 269	2 175	2 492
Scrap	tonnes	502	512	500	516	954
Diamond						
Gem, cut	carats	£868 000	£1 669 000	£849 000	£246 000	£52 000
Diatomite	tonnes	1 593	1 390	1 158	1 476	2 111
Feldspar	tonnes	19 131	19 205	20 184	16 091	13 567
Fluorspar	tonnes	3 907	4 366	...	2 801	7 460
Gold						
Metal	kilograms	41	1 514	1 380	235	229
Graphite	tonnes	517	234	191	192	178
Gypsum						
Crude & calcined	tonnes	59 741	64 726	60 336	65 546	66 039
Iodine	kilograms	...	...	6 700	1 800	4 400
Iron ore	tonnes	1 864 033	1 063 931	1 210 543	987 544	966 633
Iron, steel and ferro-alloys						
Pig iron	tonnes	19 312	14 429	8 808	14 821	13 285
Ferro-manganese	tonnes	11 503	9 152	2 898	15 611	4 311
Ferro-silicon	tonnes	5 530	5 295	5 013	4 821	5 907
Other ferro-alloys	tonnes	4 089	4 376	5 417	4 980	5 703
Silicon metal	tonnes	4 686	5 196	2 260	4 847	2 982
Ingots, blooms, billets	tonnes	91 664	82 336	102 861	38 956	29 820
Scrap	tonnes	112 463	62 753	45 860	65 136	87 369
Kaolin	tonnes	28 472	23 417	33 075	25 282	25 168
Lead						
Unwrought	tonnes	7 148	4 545	5 028	4 063	5 802
Magnesite and magnesia	tonnes	10 463	7 003	6 251	5 435	9 760
Manganese						
Metal	tonnes	568	111	889	1 180	271
Mercury	kilograms	3 875	4 426	4 607	3 529	3 300
Molybdenum						
Metal	tonnes	121	129	129	145	112
Nickel						
Unwrought (a)	tonnes	149	155	115	141	116
Crude petroleum	tonnes	...	5 001 714	6 320 762	...	6 064 641
Phosphates	tonnes	9 140	...	4	...	24
Platinum metals						
Platinum and platinum metals	kilograms	245	184	985	91	126
Potash						
Chloride	tonnes	116 586	140 551	137 278	133 764	168 692
Other potassic fertilisers	tonnes	5 226	2 913	3 735	3 180	5 863
Rare earths						
Rare earth compounds	tonnes	114	158	...	146	242
Salt	tonnes	557 050	486 695	592 522	662 455	514 119
Sillimanite	tonnes	2 045	2 396	4 519	3 001	3 428
Silver						
Metal	kilograms	17 697	33 036	15 200	900	14 581
Sulphur and pyrites						
Sulphur (b)	tonnes	*2 178	*1 697	*1 228	*3 442	*1 228
Sulphur, sublimed & precipitated	tonnes	67	296	362	326	174
Talc	tonnes	10 070	9 178	...	8 175	9 224
Tin						
Unwrought (a)	tonnes	91	155	192	384	328
Titanium						
Metal	tonnes	367	387	107	238	138
Oxides	tonnes	8 247	8 677	7 523	7 845	8 291
Zinc						
Unwrought (a)	tonnes	16 900	15 779	14 529	19 093	16 843
Zirconium						
Concentrates	tonnes	...	...	3 266	...	2 427

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known exports from certain countries
(c) Including anthracite
(d) May include some fluorine

Ireland, Republic of

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	40 000 000	*40 000 000	*40 000 000	*64 000 000	*64 000 000
Crushed rock	tonnes	60 000 000	*60 000 000	*94 000 000	*96 000 000	*96 000 000
Alumina	tonnes (Al_2O_3 content)	1 500 000	*1 500 000	*1 800 000	1 800 000	1 800 000
Cement, finished	tonnes	...	...	*4 900 000	*4 700 000	*4 700 000
Gypsum	tonnes	*600 000	*650 000	*700 000	*700 000	*700 000
Lead, mine	tonnes (metal content)	50 300	63 800	72 200	61 800	52 700
Lead, refined	tonnes	7 800	19 600	22 500	21 700	22 500
Natural gas (a)	million m^3	673	848	570	500	519
Silver, mine	kilograms (metal content)	8 500	5 200	10 500	12 900	10 000
Zinc, mine	tonnes (metal content)	419 000	438 300	445 400	425 800	400 900

Note(s):-
(a) Sales

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	563 286	135 579	62 729	230 125	85 146
Aluminium and bauxite						
Bauxite	tonnes	9	5	472	9 210	11 167
Alumina	tonnes	2 405 797	1 388 723	1 459 036	1 534 845	1 652 967
Alumina hydrate	tonnes	51 149	44 645	85 062	115 676	10 011
Unwrought alloys	tonnes	4 569	3 776	3 542	4 637	5 425
Scrap	tonnes	12 307	15 367	16 475	18 784	22 397
Cement						
Cement clinkers	tonnes	2 650	...	...	...	16 033
Portland cement	tonnes	439 876	1 133 469	942 655	972 585	1 120 808
Other cement	tonnes	14	850	10	1 489	1 596
Coal						
Briquettes	tonnes	21 151	18 049	13 103	4 823	4 083
Cobalt						
Metal	tonnes	79	32	42	43	45
Oxides	tonnes	118	11	—	38	152
Copper						
Ores & concentrates	tonnes	...	...	...	1 273	1 024
Scrap	tonnes	17 824	16 118	13 152	15 784	9 836
Gold						
Metal	kilograms	£784 000	£1 076 000	£942 000	£1 400 000	£1 678 000
Waste & scrap	kilograms	£1 520 000	£1 672 000	£1 429 000	£1 313 000	£902 000
Gypsum						
Crude	tonnes	873	919	1 022	1 054	1 058
Calcined	tonnes	33 382	40 636	42 212	40 027	37 914
Iodine	kilograms	9 600	—	1 462	—	1 944
Iron, steel and ferro-alloys						
Scrap	tonnes	292 971	347 479	352 028	398 587	478 562
Lead						
Ores & concentrates	tonnes	56 141	84 115	92 813	129 748	108 645
Magnesite and magnesia						
Magnesite	tonnes	52	6	...	5 991	5 487
Magnesia	tonnes	65 549	69 105	82 417	46 656	3 981
Nickel						
Scrap	tonnes	664	797	641	1 015	556
Crude petroleum	tonnes	...	...	(a) *52 000	1	(a) *66 000
Platinum metals						
Waste & scrap	kilograms	5 544	13 100	7 900	6 523	7 179
Rare earths						
Rare earth compounds	tonnes	107	85	14	73	8
Ferro-cerium & other pyrophoric alloys	tonnes	362	...	...	...	...

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Salt	tonnes	110	233	1 521	2 492	3 867
Silver						
Ores & concentrates	kilograms	—	1 137	19	...	2 560
Tin						
Concentrates	tonnes	172	190	151	110	75
Unwrought (b)	tonnes	29	103	67	71	1 094
Scrap	tonnes	21	140	...	54	77
Tungsten						
Metal	tonnes	41	72	963	183	180
Zinc						
Ores & concentrates	tonnes	439 247	564 018	522 312	483 949	412 703
Scrap	tonnes	298	450	684	569	3 044

Note(s):-
(a) BGS estimates, based on known imports into certain countries
(b) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	1 036 886	1 269 673	1 444 893	1 687 279	1 729 337
Aluminium and bauxite						
Bauxite	tonnes	3 418 940	3 740 006	3 606 983	3 368 967	4 144 231
Alumina	tonnes	6 718	6 626	4 252	7 470	9 268
Unwrought (a)	tonnes	6 503	6 603	4 092	2 756	1 261
Antimony						
Metal	tonnes	15	13	0	—	—
Arsenic						
Metallic arsenic	tonnes	47	...	158	125	137
Asbestos	tonnes	—	475	2 794	2 700	23
Barytes	tonnes	332	411	894	293	586
Bentonite and fuller's earth						
Bentonite	tonnes	869	2 042	2 658	953	2 914
Bismuth						
Metal	tonnes	54	2	6	8	12
Bromine	kilograms	33 238	602	...	886	1 760
Cement						
Cement clinkers	tonnes	88 669	226 116	245 955	395 053	592 721
Portland cement	tonnes	259 703	281 044	335 055	559 645	664 977
Other cement	tonnes	4 105	9 132	8 958	9 079	16 409
Chromium						
Metal	tonnes	27	25	40	44	101
Coal						
Anthracite	tonnes	164 270	100 792	60 325	68 190	33 175
Other coal	tonnes	1 307 994	2 930 298	2 641 074	1 908 618	1 830 979
Briquettes	tonnes	46 789	48 348	35 959	48 158	14 278
Cobalt						
Ore	tonnes	18	30	28	35	571
Metal	tonnes	282	273	390	464	298
Oxides	tonnes	3	5	13	43	7
Diamond						
Unsorted	carats	5 134	...	12 187	6 825	3 837
Gem, rough	carats	3 716	9 409	577	740	732
Gem, cut	carats	22 024	...	29 076	48 342	41 501
Industrial	carats	380	...	92 204	278 592	397 060
Dust	carats	21 465 552	...	30 924 437	200 868 966	268 092 682
Diatomite	tonnes	729	594	641	943	859
Gold						
Metal	kilograms	£9 565 000	£7 480 000	£7 227 000	£7 213 000	£6 263 000
Waste & scrap	kilograms	2 322	4 880	2 567	904	47
Graphite	tonnes	248	288	177	23	73

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Gypsum						
Crude	tonnes	373	536	1 056	2 064	7 487
Calcined	tonnes	2 228	6 015	20 024	22 500	22 676
Iodine	kilograms	8 712	18 215	11 921	9 705	10 318
Iron, steel and ferro-alloys						
Pig iron	tonnes	4 808	3 812	3 215	2 710	939
Ferro-alloys	tonnes	224	286	474	397	464
Silicon metal	tonnes	431	367	221	286	430
Ingots, blooms, billets	tonnes	1 291	1 487	1 637	7 928	8 319
Scrap	tonnes	786	1 277	1 137	3 650	4 179
Kaolin	tonnes	19 186	22 213	22 764	19 647	19 322
Lead						
Unwrought	tonnes	28 438	26 896	30 999	28 386	35 675
Scrap	tonnes	7 798	18 290	28 530	31 794	25 828
Magnesite and magnesia						
Magnesite	tonnes	15 449	25 886	12 653	1 967	5 971
Magnesia	tonnes	43 802	49 664	49 466	35 800	48 088
Manganese						
Ores & concentrates (b)	tonnes	19 306	268	285	368	286
Metal	tonnes	9	5	5	15	118
Mercury	kilograms	11 604	61	72	11 804	1 019
Mica	tonnes	364	551	889	650	508
Nickel						
Unwrought (a)	tonnes	1 558	1 493	1 775	1 256	97
Crude petroleum	tonnes	1 378 494	2 128 991	3 226 383	3 082 372	3 595 537
Phosphates	tonnes	440	1 159	219	154	6 028
Platinum metals						
Platinum and platinum metals	kilograms	1 829	2 620	4 934	3 999	10 382
Potash						
Chloride	tonnes	3 790	30 456	113 476	125 803	122 191
Other potassic fertilisers	tonnes	6 156	4 924	5 747	4 566	1 785
Rare earths						
Rare earth compounds	tonnes	245	74	32	7	23
Metals	tonnes	64	4	14	11	...
Salt	tonnes	77 992	83 789	83 746	96 164	89 236
Silver						
Metal	kilograms	2 247	2 709	2 611	5 147	1 070
Sulphur and pyrites						
Sulphur, sublimed & precipitated	tonnes	898	1 371	2 327	2 486	887
Talc	tonnes	2 008	2 508	2 632	1 278	375
Tantalum and niobium						
Tantalum	tonnes	2	2	8	2	3
Tin						
Unwrought (a)	tonnes	171	462	307	211	249
Titanium						
Metal	tonnes	107	151	290	350	362
Oxides	tonnes	5 095	5 685	5 059	4 703	4 822
Tungsten						
Metal	tonnes	331	177	292	173	277
Carbide	tonnes	33	...	...	53	184
Zinc						
Unwrought (a)	tonnes	4 241	2 956	3 629	7 010	7 687

Note(s):-
(a) Including alloys
(b) Including manganiferous iron ore

Italy

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel (a)	tonnes	177 031 670	200 836 237	183 908 475	177 625 321	195 348 311
Crushed rock (a)	tonnes	54 305 864	59 377 657	75 103 192	70 887 571	102 027 353
Alumina	tonnes (Al_2O_3 content)	1 021 000	1 064 000	1 070 000	1 090 000	1 100 000
Primary aluminium	tonnes	191 400	195 400	192 900	194 200	179 500
Barytes	tonnes	12 214	12 258	7 312	*7 000	*7 000
Bentonite and fuller's earth						
Bentonite	tonnes	474 475	437 659	445 573	469 654	599 735
Fuller's earth	tonnes	250	300	...	...	...
Cadmium	tonnes	22	—	—	—	—
Cement clinker	tonnes	32 077 055	33 048 546	...	...	...
Cement, finished	tonnes	43 580 047	45 342 868	46 400 000	47 400 000	*48 000 000
Copper, refined	tonnes	26 700	33 600	32 200	36 400	28 600
Feldspar	tonnes	2 343 722	3 251 264	3 334 848	4 019 495	4 726 908
Fluorspar	tonnes	26 387	24 339	70 326	*15 000	—
Gold, mine	kilograms (metal content)	*100	—	—	—	...
Gypsum	tonnes	1 783 903	1 615 287	*1 600 000	1 600 000	*1 600 000
Pig iron	tonnes	10 123 000	10 566 000	11 392 000	11 500 000	11 100 000
Crude steel	tonnes	27 058 000	28 603 000	29 349 000	31 625 000	31 506 000
Ferro-alloys						
Ferro-manganese	tonnes	25 000	38 000	32 000	*30 000	*30 000
Ferro-silico-manganese	tonnes	*100 000	108 000	99 000	96 600	87 000
Kaolin	tonnes	224 755	246 608	183 804	*180 000	*180 000
Lead, mine	tonnes (metal content)	2 700	800	*800	*800	*800
Lead, refined	tonnes	214 100	201 600	211 000	190 500	211 800
Manganese ore	tonnes	763	714	632	...	...
Crude petroleum	tonnes	5 570 000	5 445 000	6 100 000	5 800 000	5 800 000
Natural gas	million m^3	13 885	12 961	11 977	11 000	9 700
Perlite	tonnes	*60 000	*60 000	*60 000	*60 000	*60 000
Salt						
Rock salt & brine salt	tonnes	2 922 251	2 876 469	2 988 051	*3 000 000	*2 000 000
Silver, mine	kilograms (metal content)	200	100	100	—	—
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	127 000	113 000	92 000	87 000	84 000
Recovered (c)	tonnes (sulphur content)	565 000	575 000	650 000	680 000	650 000
Talc	tonnes	81 568	111 887	140 581	146 942	112 080
Slab zinc	tonnes	123 100	118 400	121 200	109 200	102 100

Note(s):-
(1) Germanium is believed to be recovered from imported or domestic material

(a) Sales
(b) From metal sulphide processing
(c) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	1 333 675	1 556 414	1 734 620	1 720 142	1 482 346
Aluminium and bauxite						
Bauxite	tonnes	9 291	40 512	121 029	12 082	49 989
Alumina	tonnes	682 587	606 416	651 704	748 594	696 603
Alumina hydrate	tonnes	34 820	24 895	26 652	26 668	34 521
Unwrought	tonnes	3 385	4 203	8 742	20 315	18 971
Unwrought alloys	tonnes	31 082	43 578	57 573	73 137	104 361
Scrap	tonnes	20 358	26 630	35 904	50 024	42 052
Antimony						
Ores & concentrates	tonnes	7	100	274	250	355
Oxide	tonnes	340	207	94	254	237

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Arsenic						
Metallic arsenic	tonnes	—	—	16	2	—
Asbestos	tonnes	...	...	20	5	29
Barytes	tonnes	224	1 951	505	1 000	2 239
Bentonite and fuller's earth						
Bentonite	tonnes	221 353	257 596	245 515	272 438	296 809
Bromine	kilograms	1 296	505	1 000	228 287	55 156
Cadmium						
Metal	tonnes	239	54	18	1	796
Cement						
Cement clinkers	tonnes	55 289	8 965	19 427	61 437	143 235
Portland cement	tonnes	1 816 975	1 903 368	2 379 941	2 091 427	2 143 940
Other cement	tonnes	181 086	130 920	130 120	660 595	536 324
Chromium						
Ores & concentrates	tonnes	2 638	3 803	4 673	5 446	3 980
Metal	tonnes	1 993	4 184	1 070	111	1 666
Coal						
Hard coal (b)	tonnes	17 124	92 227	66 115	38 239	41 075
Cobalt						
Metal	tonnes	174	236	97	224	168
Oxides	tonnes	63	123	63	77	223
Copper						
Matte & cement	tonnes	561	366	107	1 511	2 244
Unwrought	tonnes	13 371	22 988	6 387	13 567	22 424
Unwrought alloys	tonnes	12 110	16 772	14 128	14 620	20 830
Scrap	tonnes	53 184	97 964	110 711	102 463	120 231
Diamond						
Gem, cut	carats	64 018	99 218	119 462	105 514	131 174
Dust	carats	36 863 653	49 921 702	49 139 151	18 028 081	65 975 744
Diatomite	tonnes	1 217	1 745	1 138	1 110	3 884
Feldspar	tonnes	165 128	204 096	302 715	238 555	226 963
Fluorspar	tonnes	28 222	20 607	28 699	16 710	19 281
Gold						
Metal	kilograms	36 047	44 180	60 480	55 847	56 360
Graphite	tonnes	222	625	274	442	401
Gypsum						
Crude	tonnes	1 032	8 040	12 641	141	17 748
Calcined	tonnes	38 778	42 223	41 404	69 272	27 123
Iodine	kilograms	2 065	3 080	14 499	7 067	2 613
Iron ore						
Burnt pyrites	tonnes	30 848	11 086	9 410	4 407	1 544
Iron, steel and ferro-alloys						
Pig iron	tonnes	40 069	41 068	15 740	22 114	50 789
Sponge & powder	tonnes	130	62	163	194	1 097
Ferro-chrome	tonnes	7 290	8 411	3 753	8 276	5 411
Ferro-silico-magnesium	tonnes	1 673	3 163	30	93	2 061
Ferro-manganese	tonnes	6 322	8 857	10 380	8 670	14 562
Ferro-silico-manganese	tonnes	1 392	3 167	3 511	4 086	7 048
Ferro-molybdenum	tonnes	352	162	90	174	68
Ferro-nickel	tonnes	...	...	3 967	173	239
Ferro-silicon	tonnes	3 287	3 594	5 035	4 457	7 113
Other ferro-alloys	tonnes	...	...	996	1 986	84
Silicon metal	tonnes	583	1 667	3 931	3 304	4 576
Ingots, blooms, billets	tonnes	546 474	402 967	698 402	958 626	983 369
Scrap	tonnes	173 616	211 385	185 688	190 139	240 735
Kaolin	tonnes	37 357	29 995	40 800	17 287	16 265
Lead						
Unwrought	tonnes	26 711	28 295	18 244	8 143	8 008
Scrap	tonnes	5 652	1 262	2 477	3 806	7 661
Lithium						
Carbonate	tonnes	162	206	269	347	225
Magnesite and magnesia						
Magnesite	tonnes	2 141	2 868	3 489	3 003	3 878
Magnesia	tonnes	17 414	9 779	12 130	12 174	9 036
Manganese						
Metal	tonnes	37	113	241	298	309

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Mercury	kilograms	20 153	6 952	18 244	14 820	125 946
Mica	tonnes	371	623	738	1 159	1 429
Molybdenum						
Ores & concentrates	tonnes	20	295	246	29	311
Metal	tonnes	250	171	132	639	221
Oxides	tonnes	10	21	47	107	185
Nickel						
Unwrought (a)	tonnes	2 923	1 637	1 720	799	1 272
Scrap	tonnes	351	644	1 923	448	724
Crude petroleum	tonnes	802 524	824 206	986 121	937 813	1 442 498
Phosphates	tonnes	475	4 417	4 883	6 789	7 800
Platinum metals						
Platinum	kilograms	10 430	6 277	6 555	9 542	11 783
Platinum metals	kilograms	8 310	4 207	6 458	51 628	20 646
Waste & scrap	kilograms	96 968	105 220	206	1 065	94 988
Potash						
Potassic fertilisers	tonnes	2 415	1 169	1 270	2 194	5 572
Rare earths						
Rare earth compounds	tonnes	39	20	13	43	38
Metals	tonnes	15	81	168	56	177
Salt	tonnes	325 395	289 415	317 124	361 602	212 223
Silver						
Metal	kilograms	677 683	616 861	564 308	516 281	547 042
Sulphur and pyrites						
Pyrites	tonnes	8 185	7 384	4 763	8 646	8 024
Sulphur, crude	tonnes	14 358	8 785	41 534	...	...
Sulphur, refined	tonnes	136 717	156 833	183 869	(c) 253 472	(c) 263 362
Sulphur, sublimed & precipitated	tonnes	5 693	930	2 159	36 881	39 061
Talc	tonnes	116 739	118 131	120 920	122 148	131 071
Tin						
Unwrought (a)	tonnes	458	406	503	437	567
Scrap	tonnes	201	180	17	269	204
Titanium						
Titanium slag	tonnes	...	...	1 499	...	...
Metal	tonnes	3 159	4 439	4 130	4 101	4 884
Oxides	tonnes	28 323	28 476	25 433	22 473	26 242
Tungsten						
Metal	tonnes	191	357	233	197	455
Vanadium						
Ores & concentrates	tonnes	1 691	1 267	1 092	1 291	527
Pentoxide	tonnes	88	13	6	...	2
Zinc						
Ores & concentrates	tonnes	61 273	93 317	96 439	114 339	105 437
Unwrought	tonnes	2 761	2 331	9 230	37 659	21 048
Unwrought alloys	tonnes	6 914	3 523	2 854	7 792	6 689
Scrap	tonnes	17 313	15 157	13 652	12 934	13 574
Zirconium						
Concentrates	tonnes	22 050	25 633	21 760	23 472	25 596
Metal	tonnes	424	441	455	260	630

Note(s):-
(a) Including alloys
(b) Including anthracite
(c) Including crude

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	3 368 905	4 102 477	4 331 596	4 655 740	4 967 745
Aluminium and bauxite						
Bauxite	tonnes	2 169 206	2 407 108	2 602 224	2 618 296	2 374 609
Alumina	tonnes	123 514	142 931	147 537	137 469	148 384
Alumina hydrate	tonnes	128 280	151 086	155 718	156 231	166 453
Unwrought	tonnes	425 165	434 802	426 721	481 919	534 385
Unwrought alloys	tonnes	446 358	468 500	463 411	504 142	545 052
Scrap	tonnes	327 721	346 736	326 901	366 623	432 780
Antimony						
Ores & concentrates	tonnes	786	879	1 005	829	851
Metal	tonnes	1 377	743	164	279	399
Oxide	tonnes	4 314	5 528	5 543	6 061	5 950
Arsenic						
Metallic arsenic	tonnes	111	84	54	52	64
Barytes	tonnes	87 501	86 874	84 178	84 398	89 745
Bentonite and fuller's earth						
Bentonite	tonnes	139 576	153 410	138 973	121 697	155 568
Fuller's earth	tonnes	10 982	5 760	7 893	8 208	...
Bismuth						
Metal	tonnes	151	175	203	251	316
Bromine	kilograms	139 908	355 734	281 000	522 069	374 426
Cadmium						
Metal	tonnes	48	87	72	30	40
Oxide	tonnes	62	96	55	...	1
Cement						
Cement clinkers	tonnes	2 322 710	2 720 499	2 828 906	2 872 114	2 827 333
Portland cement	tonnes	2 033 657	2 130 079	2 014 905	1 564 049	1 162 254
Other cement	tonnes	168 008	146 033	152 325	184 862	287 190
Chromium						
Ores & concentrates	tonnes	26 802	30 872	39 999	41 992	46 433
Metal	tonnes	520	677	958	830	891
Coal						
Anthracite	tonnes	243 578	338 706	369 840	282 831	406 331
Other coal	tonnes	21 029 014	25 382 339	24 714 768	24 860 362	25 111 043
Briquettes	tonnes	10 270	9 374	9 136	10 207	6 914
Cobalt						
Ore	tonnes	495	122	5	11	17
Metal	tonnes	449	440	468	587	626
Oxides	tonnes	966	1 004	1 128	1 161	1 682
Copper						
Unwrought, unrefined	tonnes	310	216	955	323	796
Unwrought, refined	tonnes	650 757	700 101	652 089	774 140	746 482
Unwrought alloys	tonnes	21 862	16 723	8 053	15 174	24 996
Scrap	tonnes	164 700	128 501	124 737	214 289	177 546
Diamond						
Unsorted	carats	10 497	23 375	75 470	25 367	99 993
Gem, rough	carats	6 207	11 171	13 115	5 535	1 481
Gem, cut	carats	906 326	784 909	872 180	849 976	1 085 924
Industrial	carats	397 953	178 996	121 628	102 112	194 739
Dust	carats	113 159 858	130 785 430	141 433 010	160 140 116	171 988 444
Diatomite	tonnes	10 429	14 744	9 141	5 179	4 487
Feldspar	tonnes	2 291 993	2 693 951	2 623 428	2 603 981	2 573 637
Fluorspar	tonnes	226 780	212 975	249 756	237 597	236 797
Gold						
Metal	kilograms	281 157	274 841	250 938	204 012	206 914
Waste & scrap	kilograms	1 685	3 612	904	810	17 885
Graphite	tonnes	10 845	10 699	11 102	11 548	11 362
Gypsum						
Crude	tonnes	1 947	5 024	6 134	5 285	6 814
Calcined	tonnes	17 681	22 515	22 076	20 028	21 088
Iodine	kilograms	1 167 573	1 127 906	854 831	1 033 737	1 231 082
Iron ore						
Iron ore	tonnes	8 842 872	10 578 006	11 244 293	17 844 641	17 013 076
Burnt pyrites	tonnes	6 445 903	6 136 765	6 307 527	...	...

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Iron, steel and ferro-alloys						
Pig iron	tonnes	1 209 778	1 304 367	1 729 086	1 791 165	2 235 376
Sponge & powder	tonnes	316 524	206 956	424 810	468 825	465 834
Ferro-chrome	tonnes	368 649	400 159	428 716	464 364	419 392
Ferro-silico-magnesium	tonnes	6 601	7 826	5 409	6 809	16 751
Ferro-manganese	tonnes	69 901	79 827	84 920	95 010	108 976
Ferro-silico-manganese	tonnes	150 805	182 945	174 391	216 632	229 755
Ferro-molybdenum	tonnes	4 954	7 289	7 294	7 469	7 433
Ferro-nickel	tonnes	59 367	82 107	141 603	129 870	91 651
Ferro-niobium	tonnes	1 408	1 403	2 457	2 194	2 783
Ferro-phosphorus	tonnes	662	830	987	547	721
Ferro-silicon	tonnes	130 582	119 820	141 789	147 121	154 797
Ferro-titanium & ferro-silico-titanium	tonnes	3 065	3 379	3 978	3 922	4 230
Ferro-tungsten & ferro-silico-tungsten	tonnes	123	229	208	307	385
Ferro-vanadium	tonnes	1 759	1 890	1 945	1 839	2 521
Other ferro-alloys	tonnes	7 863	8 411	11 799	9 727	...
Silicon metal	tonnes	48 298	46 108	49 129	51 696	57 854
Ingots, blooms, billets	tonnes	2 510 222	3 874 346	4 310 404	5 792 203	5 991 974
Scrap	tonnes	4 380 744	5 606 124	5 367 259	5 668 405	5 242 020
Kaolin	tonnes	947 116	939 832	956 948	978 378	881 968
Lead						
Ores & concentrates	tonnes	86 985	99 015	107 685	65 610	111 999
Unwrought	tonnes	88 333	114 546	72 181	112 069	114 471
Scrap	tonnes	3 669	3 877	3 333	4 097	7 107
Lithium						
Oxides	tonnes	237	148	223	159	160
Carbonate	tonnes	1 686	1 505	2 263	1 646	1 303
Magnesite and magnesia						
Magnesite	tonnes	17 326	9 429	23 536	10 862	10 240
Magnesia	tonnes	129 672	163 273	161 432	174 000	131 140
Manganese						
Ores & concentrates (a)	tonnes	100 796	206 249	76 278	72 465	113 300
Metal	tonnes	3 673	4 970	8 494	35 391	7 100
Mercury	kilograms	27 140	135 119	32 471	49 335	9 491
Mica						
Unmanufactured	tonnes	106	65	118	158	189
Ground	tonnes	2 759	3 473	3 405	3 657	4 803
Molybdenum						
Ores & concentrates	tonnes	4 119	4 719	5 109	5 552	5 901
Metal	tonnes	122	105	203	189	215
Oxides	tonnes	172	247	117	229	183
Nickel						
Mattes, sinters etc.	tonnes	306	353	32	1 550	1
Unwrought	tonnes	51 276	41 944	37 708	48 178	41 802
Unwrought alloys	tonnes	1 211	2 664	1 455	3 918	1 613
Scrap	tonnes	2 248	3 075	5 119	1 606	1 372
Oxides	tonnes	127	101	56	40	74
Crude petroleum	tonnes	84 724 010	87 208 954	89 007 151	86 807 240	89 130 022
Phosphates	tonnes	296 497	359 090	279 693	242 633	249 847
Platinum metals						
Platinum	kilograms	10 551	12 087	15 586	17 279	20 491
Platinum metals	kilograms	20 085	21 430	19 183	19 020	20 721
Waste & scrap	kilograms	39	278	20 085	431	447
Potash						
Sulphate	tonnes	102 855	96 904	96 415	91 061	90 992
Chloride	tonnes	422 469	392 833	334 324	302 115	396 162
Other potassic fertilisers	tonnes	16 491	29 902	13 203	17 583	15 929
Rare earths						
Rare earth compounds	tonnes	656	932	987	853	1 146
Metals	tonnes	102	108	38	58	149
Salt	tonnes	745 388	833 790	773 507	863 836	611 435
Sillimanite	tonnes	14 669	15 132	27 476	26 304	24 807
Silver						
Ores & concentrates	kilograms	546	1 428	2 378	...	1 002
Metal	kilograms	1 724 000	1 776 385	1 635 765	1 583 508	1 445 303

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Sulphur and pyrites						
Pyrites	tonnes	12 067	8 929	15 548	17 741	14 879
Sulphur, crude	tonnes	11 975	8 646	3 150	...	...
Sulphur, refined	tonnes	8 478	10 279	10 497	(b) 11 691	(b) 16 271
Sulphur, sublimed & precipitated	tonnes	483	281	328	375	414
Talc	tonnes	127 855	126 745	125 913	129 218	140 461
Tin						
Concentrates	tonnes	—	241	24	572	65
Unwrought	tonnes	6 201	5 610	5 899	5 526	4 113
Unwrought alloys	tonnes	105	95	135	392	504
Titanium						
Titanium minerals	tonnes	123 862	88 361	85 607	185 121	136 274
Metal	tonnes	4 738	6 580	5 186	6 248	8 609
Oxides	tonnes	149 238	158 592	154 950	161 253	166 223
Tungsten						
Metal	tonnes	258	321	257	236	280
Carbide	tonnes	318	299	337	365	361
Vanadium						
Pentoxide	tonnes	129	134	156	209	150
Zinc						
Ores & concentrates	tonnes	191 369	249 978	219 491	175 253	195 798
Unwrought	tonnes	226 245	273 146	261 192	229 040	314 714
Unwrought alloys	tonnes	28 659	35 835	34 929	42 768	51 514
Scrap	tonnes	14 095	15 991	14 172	18 541	21 599
Zirconium						
Concentrates	tonnes	130 207	149 787	147 435	143 672	114 838
Metal	tonnes	823	122	120	128	315

Note(s):-
(a) Including manganiferous iron ore
(b) Including crude

Latvia

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	3 577 604	4 946 204	6 059 487	5 957 744	8 971 933
Crushed rock	tonnes	...	414 305	586 607	582 081	552 145
Cement clinker	tonnes	*200 000	250 000	...	...	...
Cement, finished	tonnes	295 205	283 645	280 000	*280 000	*280 000
Gypsum (a)	tonnes	159 133	225 742	*220 000	*230 000	*230 000
Crude steel	tonnes	546 000	550 000	550 000	550 000	550 000

Note(s):-
(a) Including anhydrite

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	12 108	10 278	13 178	11 618	32 783
Aluminium and bauxite						
Unwrought alloys	tonnes	34 081	39 368	34 697	18 180	19 281
Scrap	tonnes	747	748	910	1 767	2 416
Cement						
Cement clinkers	tonnes	...	...	184	326	35 307
Portland cement	tonnes	42 644	26 144	10 762	5 528	43 951
Other cement	tonnes	2	...	1	141	10 178
Copper						
Unwrought	tonnes	100	384	503	2 734	3 272
Scrap	tonnes	6 329	7 153	9 207	7 116	7 309
Gypsum	tonnes	58 186	24 782	48 896	109 404	74 627
Iron, steel and ferro-alloys						
Ingots, blooms, billets	tonnes	...	...	...	2 626	4 371
Scrap	tonnes	6 415	64 936	217 361	313 455	245 958
Nickel						
Scrap	tonnes	853	170	538	116	49
Crude petroleum	tonnes	10 162	19 892	6 085	12 099	—
Platinum metals						
Waste & scrap	kilograms	567	716	1 002	0	—
Salt	tonnes	411	5 169	10 205	14 485	14 282
Tin						
Scrap	tonnes	...	...	20	307	...
Tungsten						
Metal	tonnes	84	32	4	3	1
Zinc						
Scrap	tonnes	348	504	629	750	757

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	676 383	629 613	1 320 287	1 412 127	1 663 783
Aluminium and bauxite						
Unwrought (a)	tonnes	4 940	6 100	1 810	577	154
Scrap	tonnes	22 149	27 340	16 970	6 505	6 837
Asbestos	tonnes	...	34	4	28	1
Bentonite and fuller's earth						
Bentonite	tonnes	1 710	1 917	1 629	1 544	1 850
Cement						
Cement clinkers	tonnes	...	...	38 589	43 774	29 438
Portland cement	tonnes	138 488	204 353	234 862	322 187	431 482
Coal						
Hard coal (b)	tonnes	123 844	94 896	115 720	159 787	153 806
Diatomite	tonnes	392	592	389	467	545
Fluorspar	tonnes	242	240	216	204	220
Gypsum						
Crude & calcined	tonnes	3 232	2 931	3 563	9 960	13 670
Iron ore	tonnes	...	...	...	3 919	46 109
Iron, steel and ferro-alloys						
Pig iron	tonnes	79 359	75 448	54 639	57 696	65 437
Ferro-manganese	tonnes	1 710	3 576	3 119	3 281	3 021
Ferro-silicon	tonnes	2 993	6 620	3 876	2 550	3 086
Other ferro-alloys	tonnes	6 217	6 044	5 227	6 046	15 320
Silicon metal	tonnes	5 638	2 220	1 711	1 409	656
Ingots, blooms, billets	tonnes	172 092	195 467	206 550	145 037	158 649
Scrap	tonnes	174 272	171 941	161 538	266 616	294 904
Kaolin	tonnes	4 962	5 096	5 016	5 422	11 071
Magnesite and magnesia	tonnes	3 518	5 297	3 344	4 092	4 681
Platinum metals						
Waste & scrap	kilograms	...	...	...	...	1 900
Potash						
Potassic fertilisers	tonnes	22 764	26 368	21 343	15 230	8 454
Salt	tonnes	100 459	122 251	139 662	149 696	123 316
Talc	tonnes	157	154	105	217	396
Titanium						
Oxides	tonnes	2 032	1 232	726	833	781
Zinc						
Unwrought (a)	tonnes	895	1 172	654	901	664

Note(s):-
(a) Including alloys
(b) Including anthracite

Lithuania

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	4 793 670	5 835 729	7 034 402	7 633 311	9 173 540
Crushed rock	tonnes	2 896 045	3 683 266	4 757 023	5 259 535	6 424 791
Cement, finished	tonnes	596 857	753 069	832 076	1 065 367	1 105 365
Crude petroleum	tonnes	382 400	301 874	216 634	180 894	154 449
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	48 515	67 094	74 276	61 135	42 618

Note(s):-
(1) Small amounts of steel are believed to be produced in Lithuania

(a) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	228 171	460 569	957 488	871 522	1 053 802
Aluminium and bauxite						
Unwrought alloys	tonnes	5 222	3 943	3 922	3 410	3 453
Scrap	tonnes	15 140	11 953	7 210	5 640	5 701
Bentonite and fuller's earth						
Bentonite	tonnes	238	218	26	2 491	5 457
Cement						
Portland cement	tonnes	212 730	247 918	299 782	246 350	154 649
Chromium						
Ores & concentrates	tonnes	...	...	948	2 213	1 156
Copper						
Scrap	tonnes	8 383	7 611	5 821	5 020	4 814
Iodine	kilograms	827	7 502	33	4 800	20
Iron, steel and ferro-alloys						
Ferro-alloys	tonnes	...	...	13 293	17 952	15 437
Scrap	tonnes	618 231	677 727	599 084	681 692	661 349
Lead						
Scrap	tonnes	3 239	6 613	7 848	6 118	11 776
Molybdenum						
Ores & concentrates	tonnes	331	...	310	...	173
Nickel						
Scrap	tonnes	996	770	411	674	232
Crude petroleum	tonnes	273 187	197 709	148 031	115 075	155 416
Phosphates	tonnes	...	...	150	1 406	2 011
Platinum metals						
Waste & scrap	kilograms	7 980	6 019	...	0	4 200
Potash						
Potassic fertilisers	tonnes	7 128	8 037	10 463	8 939	5 752
Salt	tonnes	3 377	5 457	5 895	7 150	6 761
Sulphur and pyrites						
Sulphur	tonnes	16 724	13 960	3 851	1	7
Tantalum and niobium						
Tantalum	tonnes	14	13	5	5	48
Vanadium						
Ores & concentrates	tonnes	...	...	...	...	346
Zinc						
Scrap	tonnes	878	691	685	976	517

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	993 051	1 069 921	1 289 117	1 214 058	1 333 772
Aluminium and bauxite						
Alumina	tonnes	6 673	10 388	13 079	11 176	13 304
Scrap	tonnes	4 435	1 131	1 841	1 964	3 380
Bentonite and fuller's earth						
Bentonite	tonnes	2 607	2 472	2 675	2 838	3 105
Cement						
Cement clinkers	tonnes	...	22 496	766	416	104 219
Portland cement	tonnes	206 317	183 712	265 103	209 400	170 955
Coal						
Hard coal (a)	tonnes	294 938	260 684	290 058	391 032	356 342
Diatomite	tonnes	1 499	917	520	504	1 178
Feldspar	tonnes	3 380	7 461	4 166	1 933	1 693
Gold						
Waste & scrap	kilograms	...	(b) *16 000	114 600	12 470	2
Gypsum						
Crude	tonnes	1 495	39 653	58 859	71 649	78 185
Calcined	tonnes	45 996	16 245	20 990	36 588	47 112
Iodine	kilograms	1 050	1 796	6 929	500	400
Iron, steel and ferro-alloys						
Ferro-chrome	tonnes	3	6	5 211	6 140	9 705
Ferro-silico-manganese	tonnes	...	...	3 153	6 864	5 983
Other ferro-alloys	tonnes	398	562	3 047	1 413	437
Ingots, blooms, billets	tonnes	971	2 351	4 279	5 260	6 011
Scrap	tonnes	30 508	82 325	74 816	103 878	64 661
Kaolin	tonnes	577	701	802	1 399	568
Magnesite and magnesia						
Magnesia	tonnes	5 229	5 448	5 398	5 513	6 501
Mica	tonnes	138	137	124	122	53
Crude petroleum	tonnes	7 075 694	8 375 777	9 746 806	7 994 367	4 869 858
Phosphates	tonnes	1 079 502	1 082 901	1 178 816	1 193 093	1 202 196
Platinum metals						
Waste & scrap	kilograms	...	1 100	5 403	26 700	65 900
Potash						
Sulphate	tonnes	7 384	12 553	12 086	10 439	15 637
Chloride	tonnes	160 334	172 622	123 782	143 499	138 895
Rare earths						
Rare earth compounds	tonnes	25	80	34	52	3
Salt	tonnes	187 050	204 839	198 994	197 262	171 915
Silver						
Metal	kilograms	1 771	5 885	3 943	4 500	5 200
Sulphur and pyrites						
Sulphur	tonnes	316 359	255 917	306 635	320 658	317 678
Sulphur, sublimed & precipitated	tonnes	...	...	560	607	...
Talc	tonnes	64	87	402	463	511
Tantalum and niobium						
Tantalum	tonnes	7	12	10	11	47
Titanium						
Oxides	tonnes	648	713	926	975	1 328
Zinc						
Unwrought	tonnes	685	393	547	235	86
Unwrought alloys	tonnes	80	95	129	873	541

Note(s):-
(a) Including anthracite
(b) BGS estimates, based on known exports from certain countries

Macedonia

Production

Commodity	Units	2003	2004	2005	2006	2007
Bentonite and fuller's earth						
Bentonite	tonnes	6 013	16 373	14 958	20 353	22 509
Cadmium	tonnes	75	—	—	—	—
Coal						
Lignite	tonnes	7 200 793	7 129 535	6 879 726	6 650 182	6 569 220
Copper, mine	tonnes (metal content)	618	—	4 799	7 054	7 029
Feldspar	tonnes	25 640	22 921	27 076	38 124	32 814
Gypsum	tonnes	150 618	165 416	190 232	267 760	255 500
Crude steel	tonnes	306 635	319 873	321 170	326 484	370 317
Ferro-alloys						
Ferro-nickel	tonnes	5 629	5 313	8 141	10 942	15 321
Ferro-silicon	tonnes	49 905	66 769	71 249	59 023	78 892
Lead, mine	tonnes (metal content)	—	—	—	9 349	29 221
Lead, refined	tonnes	6 357	3 591	—	—	—
Nickel, mine	tonnes (metal content)	5 600	5 300	8 100	10 900	15 000
Nickel, smelter/refinery	tonnes	5 600	5 300	8 100	10 900	15 000
Silver, mine	kilograms (metal content)	22 195	—	—	*10 000	*30 000
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	7 000	—	—	—	—
Talc	tonnes	3 271	4 350	1 955	1 025	1 775
Zinc, mine	tonnes (metal content)	—	—	—	9 349	32 195
Slab zinc	tonnes	23 746	—	—	—	—

Note(s):-
(a) From metal sulphide processing

Exports

Commodity	Units	2003	2004	2005	2006	2007
Aluminium and bauxite						
Scrap	tonnes	840	1 107	2 105	2 788	1 795
Bentonite and fuller's earth						
Bentonite	tonnes	5 698	3 973	4 346	4 747	4 181
Cadmium						
Metal	tonnes	818	500	...	...	...
Cement						
Cement clinkers	tonnes	16 356	16 762	129 570	151 663	90 869
Portland cement	tonnes	177 801	189 166	207 457	220 588	308 468
Chromium						
Ores & concentrates	tonnes	1 383	247	46	...	1 835
Copper						
Ores & concentrates	tonnes	3 723	648	21 441	31 547	32 224
Scrap	tonnes	1 065	1 413	1 926	3 190	2 277
Feldspar	tonnes	24 059	18 661	22 369	36 539	28 766
Gypsum						
Crude & calcined	tonnes	22 609	15 408	9 779	9 488	10 167
Iron, steel and ferro-alloys						
Ferro-silico-manganese	tonnes	53	138	1 673	6 682	48 258
Ferro-nickel	tonnes	17 304	16 260	34 419	45 058	71 189
Ferro-silicon	tonnes	44 583	67 929	74 450	62 794	30 139
Scrap	tonnes	26 935	61 690	85 745	98 763	124 200
Lead						
Ores & concentrates	tonnes	4 172	0	233	16 371	47 209
Unwrought	tonnes	7 458	1 135	54	...	70
Scrap	tonnes	370	1 468	935	2 511	2 622
Manganese						
Ores & concentrates	tonnes	71 052	...	...	5 117	...
Phosphates	tonnes	3 086	3 104	3 388	1 944	2 050
Salt	tonnes	1 339	1 329	2 677	4 508	5 091

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Silver						
Metal	kilograms	24 330	64	500	...	71
Talc	tonnes	720	664	789	735	1 124
Zinc						
Ores & concentrates	tonnes	217	...	3 306	23 106	58 973
Unwrought (a)	tonnes	27 083	745	124	30	5
Scrap	tonnes	15	222	720	719	874

Note(s):-
(a) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Aluminium and bauxite						
Unwrought (a)	tonnes	528	1 753	1 610	2 941	3 930
Scrap	tonnes	33	120	492	496	663
Cement						
Portland cement	tonnes	60 849	81 250	59 679	44 542	69 220
Chromium						
Ores & concentrates	tonnes	...	...	3	709	1 432
Coal						
Hard coal	tonnes	64 851	53 495	98 024	179 193	199 946
Lignite	tonnes	7 005	...	2 242	3 920	1 532
Briquettes	tonnes	198 246	190 519	188 634	103 508	63 805
Fluorspar	tonnes	207	172	92	218	380
Graphite	tonnes	...	...	107	648	1 969
Gypsum						
Crude & calcined	tonnes	495	819	1 165	1 106	1 080
Iron, steel and ferro-alloys						
Pig iron	tonnes	1 130	1 484	1 970	3 781	2 467
Ferro-alloys	tonnes	2 842	4 907	2 786	2 860	3 737
Ingots, blooms, billets	tonnes	...	137 447	226 286	359 029	501 134
Scrap	tonnes	61 164	129 487	264 067	277 360	310 410
Kaolin	tonnes	6 240	6 966	19 414	9 797	16 849
Lead						
Unwrought	tonnes	411	1 150	1 146	857	331
Magnesite and magnesia						
Magnesite	tonnes	...	...	...	42	1 007
Magnesia	tonnes	1 436	1 288	1 384	5 005	17 856
Manganese						
Ores & concentrates	tonnes	...	...	28 977	44 040	143 556
Nickel						
Ores & concentrates	tonnes	42 306	65 162	236 025	466 623	863 999
Crude petroleum	tonnes	880 062	781 438	950 742	1 081 738	1 063 614
Phosphates	tonnes	37 599	6 567	...	...	...
Potash						
Potassic fertilisers	tonnes	4 089	5 736	362	995	490
Salt	tonnes	37 383	34 790	39 178	40 184	35 657
Silver						
Metal	kilograms	2 986	3 725	3 813	3 901	3 612
Titanium						
Oxides	tonnes	408	430	466	471	383
Zinc						
Unwrought (a)	tonnes	568	5 025	3 750	15 658	6 721

Note(s):-
(a) Including alloys

Malta

Exports

Commodity	Units	2003	2004	2005	2006	2007
Aluminium and bauxite						
Scrap	tonnes	868	1 008	1 142	1 221	1 136
Asbestos	tonnes	...	...	65	16	...
Copper						
Scrap	tonnes	2 099	1 461	1 242	1 036	1 790
Iron, steel and ferro-alloys						
Scrap	tonnes	23 093	12 424	5 252	19 012	28 083
Tin						
Scrap	tonnes	5	6	9	373	340

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	3 828	8 880	4 529	2 520	29 929
Cement						
Portland cement	tonnes	275 736	179 533	334 107	389 690	356 365
Gold						
Metal	kilograms	3 927	3 607	14 001	7 900	6 800
Gypsum						
Crude & calcined	tonnes	3 180	5 310	5 980	7 529	6 309
Salt	tonnes	4 034	3 863	5 453	1 629	3 590
Silver						
Metal	kilograms	872	1 031	15 661	1 800	600
Talc	tonnes	170	315	302	271	179

Netherlands

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	74 200 000	66 200 000	63 579 000	72 146 700	69 196 000
Primary aluminium	tonnes	282 800	330 000	333 820	285 317	296 900
Cadmium	tonnes	495	493	494	524	495
Cement clinker	tonnes	800 000	825 000	...	...	...
Cement, finished	tonnes	2 450 000	2 380 000	2 496 000	2 790 000	...
Pig iron	tonnes	5 846 000	6 011 000	6 031 000	5 417 000	6 400 000
Crude steel	tonnes	6 561 000	6 848 000	6 919 000	6 372 000	7 368 000
Lead, refined	tonnes	*17 000	*17 000	*17 000	*16 000	*16 000
Magnesite (a)	tonnes	261 194	245 495	285 336	293 006	*300 000
Crude petroleum	tonnes	3 076 398	2 890 979	2 268 746	2 022 475	2 576 222
Natural gas	million m^3	69 114	81 499	74 460	73 300	72 431
Salt	tonnes	5 980 000	5 896 000	6 155 000	6 056 000	6 177 000
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	131 000	137 000	141 000	141 000	141 000
Recovered (c)	tonnes (sulphur content)	408 000	410 000	440 000	495 000	505 000
Slab zinc	tonnes	224 000	224 000	227 500	227 500	225 000

Note(s):-
(a) Chloride produced from solution mining
(b) From metal sulphide processing
(c) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	*9 000 000	8 300 000	6 900 000	9 400 000	9 500 000
Aluminium and bauxite						
Bauxite	tonnes	58 848	96 740	93 993	107 660	41 170
Alumina	tonnes	51 228	267 947	264 116	301 767	542 794
Alumina hydrate	tonnes	48 026	42 398	48 643	45 480	151 641
Unwrought	tonnes	408 302	314 462	304 993	370 471	490 373
Unwrought alloys	tonnes	227 283	320 583	304 675	341 439	341 670
Scrap	tonnes	187 522	234 761	265 755	334 426	317 877
Antimony						
Metal	tonnes	315	212	570	886	308
Oxide	tonnes	270	652	664	780	496
Arsenic						
Metallic arsenic	tonnes	64	115	50	33	59
Barytes	tonnes	91 083	77 269	52 444	37 392	68 798
Bentonite and fuller’s earth						
Bentonite	tonnes	180 736	203 897	186 286	132 076	129 692
Fuller's earth	tonnes	3 752	9 085	2 931	2 141	...
Bismuth						
Metal	tonnes	327	136	97	48	238
Bromine (b)	kilograms	5 221 557	1 001 471	1 388 695	1 333 583	1 475 500
Cadmium						
Metal	tonnes	572	621	553	1 064	544
Cement						
Cement clinkers	tonnes	2 326	1 585	4 610	3 119	10 725
Portland cement	tonnes	209 122	326 234	295 457	410 232	278 904
Other cement	tonnes	53 743	30 013	18 513	134 225	12 931
Chromium						
Ores & concentrates	tonnes	52 636	58 623	72 062	74 909	78 433
Metal	tonnes	1 817	2 655	3 543	4 430	2 125
Coal						
Anthracite	tonnes	206 426	161 320	165 918	196 407	158 572
Other coal	tonnes	5 574 363	8 624 870	8 445 919	11 940 024	14 089 233
Briquettes	tonnes	1 362	71 710	58 241	73 524	10 188

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Cobalt						
Metal	tonnes	2 247	1 954	1 326	587	1 579
Oxides	tonnes	150	953	1 323	112	127
Copper						
Unwrought	tonnes	18 605	32 548	39 638	31 204	49 300
Scrap	tonnes	109 595	140 909	207 551	306 132	229 090
Diamond						
Unsorted	carats	...	£1 883 000	£928 000	£1 564 200	£1 000 000
Gem, rough	carats	£437 000	—	—	...	...
Gem, cut	carats	£8 511 000	£9 806 000	£8 687 000	£16 579 000	£6 216 000
Industrial	carats	£813 000	£188 000	£842 000	£4 146 000	£1 891 000
Dust	carats	£776 000	£724 000	£44 000	£112 000	£82 000
Diatomite	tonnes	1 212	1 569	804	1 395	348
Feldspar	tonnes	749	81	17	552	456
Fluorspar	tonnes	19 186	3 019	37 113	1 587	27 213
Gold						
Metal	kilograms	8 094	24 557	11 603	19 634	22 468
Waste & scrap	kilograms	276 600	62 212	72 427	98 813	4 433
Graphite	tonnes	5 209	5 987	3 240	2 991	4 308
Gypsum						
Crude	tonnes	32 752	37 920	53 351	32 425	49 394
Calcined	tonnes	7 905	11 088	61 508	70 005	17 744
Iodine	kilograms	527 769	58 633	59 228	76 080	517 872
Iron ore	tonnes	20 881	1 384 740	1 977 963	2 491 191	2 710 120
Iron, steel and ferro-alloys						
Pig iron	tonnes	7 377	31 821	40 552	28 806	134 324
Sponge & powder	tonnes	15 255	15 794	46 464	22 899	543
Ferro-chrome	tonnes	38 469	70 272	81 105	92 920	94 048
Ferro-silico-chrome	tonnes	68	18	508	299	25
Ferro-silico-magnesium	tonnes	121	751	4 195	...	...
Ferro-manganese	tonnes	25 842	53 367	49 203	28 423	42 958
Ferro-silico-manganese	tonnes	20 830	16 109	13 994	14 118	21 432
Ferro-molybdenum	tonnes	1 610	2 712	4 304	5 652	5 579
Ferro-nickel	tonnes	4 112	9 855	23 252	42 421	42 331
Ferro-niobium	tonnes	131	47	126	217	1 439
Ferro-phosphorus	tonnes	4 447	12 515	12 173	7 910	...
Ferro-silicon	tonnes	27 511	27 328	95 845	97 120	106 764
Ferro-titanium & ferro-silico-titanium	tonnes	213	660	6 235	4 281	3 706
Ferro-tungsten & ferro-silico-tungsten	tonnes	264	193	624	477	2 010
Ferro-vanadium	tonnes	2 838	2 901	22 495	5 855	7 263
Other ferro-alloys	tonnes	10 519	5 925	9 700	5 683	7 719
Silicon metal	tonnes	15 957	10 319	40 393	56 525	15 237
Ingots, blooms, billets	tonnes	239 603	309 454	152 593	378 061	1 111 462
Scrap	tonnes	3 242 779	3 859 394	4 140 362	4 786 987	4 500 919
Kaolin	tonnes	335 299	307 337	441 248	431 027	416 108
Lead						
Ores & concentrates	tonnes	1 526	2 730	17 161	27 068	2 897
Unwrought	tonnes	23 942	34 426	24 382	11 133	14 824
Scrap	tonnes	8 732	12 395	11 950	16 067	21 822
Lithium						
Oxides	tonnes	190	187	115	154	331
Carbonate	tonnes	89	199	224	405	318
Magnesite and magnesia						
Magnesite	tonnes	12 352	8 704	1 452	4 750	582
Magnesia	tonnes	384 711	431 175	492 077	465 555	128 060
Manganese						
Ores & concentrates	tonnes	12 041	15 143	14 903	...	8 223
Metal	tonnes	7 365	12 548	13 585	16 739	19 767
Mercury	kilograms	105 100	183 998	188 220	176 670	196 039
Mica	tonnes	5 359	6 084	2 912	2 735	6 842
Molybdenum						
Ores & concentrates	tonnes	17 141	30 424	47 395	27 264	26 613
Metal	tonnes	161	120	59	190	409
Oxides	tonnes	1 640	2 010	2 708	2 110	3 059

Netherlands

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Nickel						
Mattes, sinters etc. (a)	tonnes	*8 100	*11 700	*11 800	*11 700	*6 500
Unwrought (c)	tonnes	33 096	24 467	21 895	77 742	80
Scrap	tonnes	3 602	2 745	2 009	1 740	4 456
Oxides	tonnes	0	28 549	6 017	1 757	...
Crude petroleum	tonnes	54 938	136 202	145 541	309 456	207 858
Phosphates	tonnes	94 541	94 150	91 592	98 687	106 235
Platinum metals						
Platinum	kilograms	£19 007 000	£18 570 000	£9 061 000	£8 718 000	£8 190 000
Platinum metals	kilograms	£1 015 000	£1 377 000	£8 211 000	£3 971 000	£3 766 000
Waste & scrap	kilograms	9 200	201 129	876	16 569	25 850
Potash						
Sulphate	tonnes	...	578	382	842	7 918
Chloride	tonnes	219 413	197 731	163 072	152 423	170 921
Other potassic fertilisers	tonnes	468	391	759	1 557	1 162
Rare earths						
Rare earth compounds	tonnes	95	87	171	157	77
Metals	tonnes	58	124	13	16	64
Salt	tonnes	3 679 323	3 212 606	3 749 442	4 126 810	4 055 898
Sillimanite	tonnes	6 400	10 097	11 444	7 679	9 689
Silver						
Ores & concentrates	kilograms	...	42 000	...	26 860	...
Metal	kilograms	119 012	99 221	93 668	151 077	144 024
Sulphur and pyrites						
Pyrites	tonnes	...	76 812	82 502	531	24
Sulphur, crude	tonnes	223 880	133 553	55 758	...	...
Sulphur, refined	tonnes	98 196	170 473	192 922	(d) 436 669	(d) 460 352
Talc	tonnes	177 554	225 528	183 270	190 668	199 896
Tantalum and niobium						
Tantalum	tonnes	23	24	3	76	2
Tin						
Unwrought	tonnes	4 278	3 921	5 330	6 971	8 061
Unwrought alloys	tonnes	240	1 430	1 790	1 051	293
Scrap	tonnes	344	685	297	761	545
Titanium						
Titanium minerals	tonnes	3 611	4 050	1 390	1 660	449
Metal	tonnes	2 015	1 846	2 181	1 902	2 182
Oxides	tonnes	(a) *65 100	92 050	84 310	95 512	64 544
Tungsten						
Ores & concentrates	tonnes	1	16	—	276	...
Metal	tonnes	237	777	502	434	391
Vanadium						
Pentoxide	tonnes	219	1 167	381	411	157
Metal	tonnes	379	5	11	6	...
Zinc						
Ores & concentrates	tonnes	...	31 254	5 836	3 730	13 939
Unwrought	tonnes	277 262	265 840	273 832	615 269	243 354
Unwrought alloys	tonnes	7 571	19 867	9 364	38 116	31 276
Scrap	tonnes	24 856	32 684	41 593	39 073	67 010
Zirconium						
Concentrates	tonnes	7 011	8 548	8 178	7 391	14 539

Note(s):-
(a) BGS estimates, based on known imports into certain countries
(b) May include some fluorine
(c) Including alloys
(d) Including crude

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	45 300 000	37 100 000	40 800 000	43 000 000	33 600 000
Aluminium and bauxite						
Bauxite	tonnes	120 787	231 213	169 012	118 203	108 088
Alumina	tonnes	634 626	671 167	654 487	440 195	706 255
Alumina hydrate	tonnes	191 165	181 328	223 823	205 902	190 351
Unwrought	tonnes	367 227	349 481	370 979	650 035	713 441
Unwrought alloys	tonnes	216 251	249 182	287 504	321 582	358 930
Scrap	tonnes	138 051	174 969	189 722	197 160	204 117
Antimony						
Metal	tonnes	511	817	705	651	699
Oxide	tonnes	1 481	2 932	3 717	35 127	3 783
Arsenic						
Metallic arsenic	tonnes	61	110	85	20	19
Barytes	tonnes	136 981	155 325	116 512	88 489	148 808
Bentonite and fuller's earth						
Bentonite	tonnes	298 369	358 305	199 692	281 144	305 364
Fuller's earth	tonnes	76 241	76 177	70 482	80 511	...
Bismuth						
Metal	tonnes	274	166	85	168	127
Bromine (a)	kilograms	981 870	147 994	5 019 459	3 037	5 100
Cadmium						
Metal	tonnes	357	284	233	113	437
Cement						
Cement clinkers	tonnes	679 330	581 267	388 146	494 944	228 817
Portland cement	tonnes	1 614 917	1 812 884	1 632 872	1 925 756	2 072 034
Other cement	tonnes	826 513	774 050	846 622	1 452 353	722 635
Chromium						
Ores & concentrates	tonnes	52 353	88 660	80 622	99 305	125 778
Metal	tonnes	310	612	1 838	3 632	2 222
Coal						
Anthracite	tonnes	363 692	293 892	186 936	218 516	62 577
Other coal	tonnes	20 158 178	22 241 661	21 958 859	21 368 119	24 622 621
Lignite	tonnes	23 782	18 294	30 769	22 548	29 517
Briquettes	tonnes	24 574	15 510	58 737	83 734	68 765
Cobalt						
Metal	tonnes	551	1 340	1 532	1 511	1 270
Oxides	tonnes	215	369	351	269	489
Copper						
Unwrought, unrefined	tonnes	2 867	10 185	10 485	18 333	18 130
Unwrought, refined	tonnes	123 682	125 310	135 004	147 428	151 515
Unwrought alloys	tonnes	1 326	2 172	1 904	2 214	3 379
Scrap	tonnes	80 262	98 396	92 927	110 753	117 259
Diamond						
Unsorted	carats	£1 858 000	£3 327 000	£344 000	£269 000	£299 000
Gem, rough	carats	£828 000	£108 000	£79 000	£633 000	£320 000
Gem, cut	carats	£13 846 000	£14 630 000	£14 764 000	£22 400 000	£13 947 000
Industrial	carats	£940 000	£907 000	£2 009 000	£1 850 000	...
Dust	carats	£687 000	£600 000	£425 000	£488 000	£544 000
Diatomite	tonnes	12 069	10 806	7 967	6 799	7 214
Feldspar	tonnes	11 084	9 606	7 721	7 505	8 529
Fluorspar	tonnes	63 896	108 312	45 073	7 836	48 089
Gold						
Metal	kilograms	10 318	16 275	24 679	22 744	21 706
Waste & scrap	kilograms	1 044	1	1	93	19 174
Graphite	tonnes	10 208	18 139	15 205	12 339	13 463
Gypsum						
Crude	tonnes	132 882	176 349	155 519	227 950	402 915
Calcined	tonnes	387 829	492 478	686 085	483 249	430 550
Iodine	kilograms	632 000	357 225	21 015	158 145	1 870
Iron ore						
Iron ore	tonnes	8 740 391	12 622 628	12 285 177	10 833 565	12 693 210
Burnt pyrites	tonnes	22 545	26 717	—	...	...

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Iron, steel and ferro-alloys						
Pig iron	tonnes	63 821	71 664	107 828	122 097	158 199
Sponge & powder	tonnes	71 606	59 030	131 170	251 304	244 874
Ferro-chrome	tonnes	68 424	176 862	170 806	204 637	325 741
Ferro-silico-chrome	tonnes	6	616	621	1 125	674
Ferro-silico-magnesium	tonnes	1 305	2 196	2 779	3 733	...
Ferro-manganese	tonnes	72 916	112 073	115 972	102 493	105 789
Ferro-silico-manganese	tonnes	54 901	33 492	30 114	47 986	81 034
Ferro-molybdenum	tonnes	1 800	5 282	5 100	7 554	11 826
Ferro-nickel	tonnes	9 213	38 872	39 305	17 866	16 878
Ferro-niobium	tonnes	16	16	51	159	465
Ferro-phosphorus	tonnes	1 421	(b) ...	11 714	9 470	...
Ferro-silicon	tonnes	110 329	153 435	145 459	122 016	160 792
Ferro-titanium & ferro-silico-titanium	tonnes	2 083	4 272	11 496	11 005	10 730
Ferro-tungsten & ferro-silico-tungsten	tonnes	405	625	1 148	2 928	1 186
Ferro-vanadium	tonnes	3 565	3 608	5 100	4 409	4 132
Other ferro-alloys	tonnes	1 276	3 484	—	12 079	12 829
Silicon metal	tonnes	43 195	36 792	52 931	69 104	68 719
Ingots, blooms, billets	tonnes	124 817	302 637	322 908	390 652	269 481
Scrap	tonnes	1 751 693	2 250 964	2 030 115	2 321 144	1 669 159
Kaolin	tonnes	560 878	646 638	564 518	627 768	612 720
Lead						
Ores & concentrates	tonnes	1 535	4 281	9 268	13 186	22 303
Unwrought	tonnes	66 405	83 391	36 051	24 272	22 419
Scrap	tonnes	8 034	7 818	9 700	17 508	22 006
Lithium						
Oxides	tonnes	237	270	178	359	428
Carbonate	tonnes	956	1 081	1 171	1 356	1 459
Magnesite and magnesia						
Magnesite	tonnes	13 139	20 619	3 057	3 007	1 390
Magnesia	tonnes	392 299	644 428	558 764	454 271	437 684
Manganese						
Ores & concentrates	tonnes	11 136	14 558	35 936	22 495	11 749
Metal	tonnes	9 112	14 347	61 240	22 162	31 236
Mercury	kilograms	143 200	616 057	670 022	889 199	674 888
Mica						
Unmanufactured	tonnes	139	54	143	176	400
Ground	tonnes	8 403	9 951	7 381	7 251	9 933
Molybdenum						
Ores & concentrates	tonnes	29 337	39 710	31 781	34 891	30 403
Metal	tonnes	459	141	287	801	1 060
Oxides	tonnes	1 577	2 032	1 509	1 441	1 341
Nickel						
Mattes, sinters etc.	tonnes	8 566	9 144	3 832	1 488	...
Unwrought	tonnes	65 504	61 516	76 469	62 009	...
Unwrought alloys	tonnes	266	321	343	139	204
Scrap	tonnes	5 585	6 582	6 738	9 870	14 008
Oxides	tonnes	7 683	4 632	5 654	3 051	...
Crude petroleum	tonnes	56 463 347	61 377 494	62 152 486	61 548 064	57 027 374
Phosphates	tonnes	922 349	724 960	776 661	815 692	847 776
Platinum metals						
Platinum	kilograms	£14 657 000	£14 670 000	£12 517 000	£21 774 000	£22 793 000
Platinum metals	kilograms	£5 635 000	£7 964 000	£3 682 000	£7 066 000	£7 725 000
Potash						
Sulphate	tonnes	12 777	23 765	26 208	24 658	21 211
Chloride	tonnes	467 219	387 637	445 767	265 838	314 011
Other potassic fertilisers	tonnes	6 018	4 321	2 486	5 283	6 691
Rare earths						
Cerium compounds	tonnes	135	103	141	290	473
Other rare earth compounds	tonnes	2 222	2 254	1 879	2 781	3 868
Metals	tonnes	38	10	14	135	100
Salt	tonnes	489 369	535 581	630 738	1 150 949	193 457
Sillimanite	tonnes	24 106	12 975	20 001	24 195	17 488
Silver						
Metal	kilograms	140 415	139 218	139 625	263 049	229 637

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Sulphur and pyrites						
Sulphur	tonnes	29 631	40 439	37 083	23 928	38 189
Sulphur, sublimed & precipitated	tonnes	210 984	104 982	37 484	5 563	...
Talc	tonnes	220 448	226 602	206 485	243 071	225 720
Tantalum and niobium						
Tantalum	tonnes	4	35	12	6	8
Tin						
Unwrought	tonnes	7 368	6 801	8 730	13 696	7 858
Unwrought alloys	tonnes	1 330	1 832	1 983	1 283	1 972
Scrap	tonnes	202	155	201	466	607
Titanium						
Titanium minerals	tonnes	123 129	154 460	127 941	79 377	103 580
Metal	tonnes	2 676	2 835	1 857	2 234	4 295
Oxides	tonnes	33 290	47 957	92 334	8 387	41 221
Tungsten						
Ores & concentrates	tonnes	342	222	110	1 532	575
Metal	tonnes	217	210	204	330	284
Carbide	tonnes	18	56	99	49	36
Vanadium						
Pentoxide	tonnes	865	1 718	714	362	316
Zinc						
Ores & concentrates	tonnes	430 349	408 032	484 472	532 861	359 520
Unwrought	tonnes	160 793	143 218	144 592	200 473	182 072
Unwrought alloys	tonnes	853	2 318	2 387	40 482	38 602
Scrap	tonnes	14 213	20 288	15 257	14 619	13 633
Zirconium						
Concentrates	tonnes	11 607	13 613	10 975	15 948	20 462
Metal	tonnes	52	105	88	123	199

Note(s):-
(a) May include some fluorine
(b) Included with 'other ferro-alloys'

Norway

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	15 000 000	15 000 000	15 000 000	13 418 000	14 855 000
Crushed rock	tonnes	36 000 000	37 000 000	38 000 000	45 947 000	51 533 000
Primary aluminium	tonnes	1 180 200	1 318 000	1 391 000	1 383 000	1 362 000
Cadmium	tonnes	323	141	153	125	269
Cement, finished	tonnes	1 650 000	1 420 000	1 613 000	1 695 000	...
Coal						
Bituminous (a)	tonnes	2 944 000	3 018 500	1 667 000	2 359 000	3 223 000
Cobalt metal	tonnes	4 556	4 670	5 021	4 927	3 939
Copper, smelter	tonnes	35 851	35 643	38 681	39 700	34 200
Copper, refined	tonnes	35 852	35 643	38 681	39 700	34 200
Feldspar	tonnes	70 000	67 000	*67 000	65 000	65 000
Graphite	tonnes	1 000	6 000	9 000	9 000	3 000
Iron ore	tonnes	410 000	586 100	713 000	620 000	630 000
Pig iron	tonnes	*110 000	*100 000	*100 000	*100 000	*100 000
Crude steel	tonnes	703 000	725 000	705 000	684 000	708 000
Ferro-alloys						
Ferro-manganese	tonnes	*130 000	*130 000	*130 000	*130 000	*130 000
Ferro-silico-manganese	tonnes	*250 000	*260 000	*290 000	*310 000	*280 000
Ferro-silicon	tonnes	*350 000	389 599	*165 000	*80 000	...
Other ferro-alloys	tonnes	*50 000	*60 000	*60 000	*60 000	*62 000
Silicon metal	tonnes	*150 000	193 566	178 572	*150 000	*140 000
Nepheline syenite	tonnes	332 000	329 000	320 000	312 000	312 000
Nickel, mine	tonnes (metal content)	—	382	342	320	240
Nickel, smelter/refinery	tonnes	77 183	71 410	85 374	82 257	87 600
Crude petroleum	tonnes	153 508 000	150 974 000	139 802 000	136 695 000	125 763 000
Natural gas	million m^3	72 905	78 351	84 702	87 600	89 700
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	105 000	*105 000	*110 000	*110 000	*95 000
Recovered (c)	tonnes (sulphur content)	20 000	18 000	19 000	20 000	18 000
Talc	tonnes	48 000	32 000	34 000	*34 000	*34 000
Titanium minerals						
Ilmenite	tonnes	859 000	866 700	806 800	850 000	882 000
Slab zinc	tonnes	143 627	140 901	151 285	160 670	157 027

Note(s):-
(1) Norway is believed to produce gold

(a) Spitzbergen: not including production from mines controlled by Russia
(b) From metal sulphide processing
(c) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	12 300 157	12 561 778	13 334 212	14 357 509	16 183 927
Aluminium and bauxite						
Unwrought	tonnes	150 101	150 479	147 295	126 841	113 285
Unwrought alloys	tonnes	1 212 372	1 333 251	1 365 929	1 412 569	1 496 556
Scrap	tonnes	37 566	39 742	38 218	42 804	41 296
Barytes	tonnes	11 105	15 888	1 482	14 199	13 425
Cadmium						
Metal	tonnes	237	304	132	90	205
Cement						
Cement clinkers (a)	tonnes	*23 000	*100	*50 000	*65 000	*117 000
Portland cement (a)	tonnes	*500 000	*413 000	*569 000	*369 000	*236 000
Chromium						
Metal	tonnes	141	413	116	203	96

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Cobalt						
Metal	tonnes	4 635	4 744	4 997	4 990	4 030
Copper						
Unwrought	tonnes	35 392	35 632	37 430	38 232	34 007
Unwrought alloys	tonnes	1 195	988	1 707	1 141	1 161
Scrap	tonnes	25 382	21 256	22 667	24 205	24 066
Diatomite	tonnes	79	81	1 362	281	566
Feldspar	tonnes	68 076	60 972	58 821	66 838	66 484
Gold						
Metal	kilograms	2 527	2 293	2 415	2 337	2 601
Waste & scrap	kilograms	174	127	137	182	426
Gypsum						
Crude	tonnes	27 287	30 825	49 443	40 784	51 128
Iodine	kilograms	1 509	—	—	17	7 200
Iron ore						
Iron ore	tonnes	530 851	648 583	721 975	720 582	739 731
Burnt pyrites	tonnes	62 315	117 389	14 730	2 658	...
Iron, steel and ferro-alloys						
Pig iron (a)	tonnes	*118 400	*123 600	*66 800	*149 400	*119 800
Ferro-chrome (a)	tonnes	*1 900	*600	*200	200	*100
Ferro-manganese (a)	tonnes	*214 100	*336 800	*274 200	*287 500	*329 400
Ferro-silico-manganese	tonnes	255 243	264 163	289 497	306 932	280 028
Ferro-silicon	tonnes	194 246	256 018	179 503	90 556	155 198
Other ferro-alloys	tonnes	53 913	59 696	55 564	58 033	...
Silicon metal	tonnes	151 476	176 458	168 790	152 514	144 607
Ingots, blooms, billets	tonnes	160 127	148 514	151 882	180 500	176 755
Scrap	tonnes	263 510	270 903	267 051	337 088	290 644
Lead						
Scrap	tonnes	987	601	1 013	892	974
Manganese						
Ores & concentrates	tonnes	...	105	1 410	7 880	56 939
Mica	tonnes	2 413	2 076	2 003	2 157	2 168
Nickel						
Ores & concentrates	tonnes	6 268	9 575	7 581	7 860	5 379
Unwrought	tonnes	78 389	71 982	84 012	81 440	88 628
Scrap	tonnes	264	909	897	641	1 185
Crude petroleum	tonnes	135 201 186	129 935 579	119 119 538	105 110 521	99 245 180
Platinum metals						
Platinum and platinum metals	kilograms	11 150	13 360	11 871	11 885	14 611
Waste & scrap	kilograms	616	384	342	29 817	66 193
Potash						
Chloride	tonnes	10 964	10 107	7 611	2 243	1 285
Rare earths						
Metals	tonnes	...	...	11	59	...
Salt	tonnes	4 657	4 948	6 679	9 040	4 178
Silver						
Metal	kilograms	62 669	69 207	66 139	52 952	45 461
Sulphur and pyrites						
Sulphur	tonnes	...	...	1	20	3 325
Sulphur, sublimed & precipitated	tonnes	12 194	2 671	—	—	—
Talc	tonnes	32 520	30 279	28 448	31 834	33 032
Tin						
Scrap	tonnes	14	211	323	236	189
Titanium						
Titanium minerals	tonnes	500 000	(a) *416 000	(a) *382 000	(a) *477 000	(a) *435 000
Metal	tonnes	214	182	159	176	117
Oxides (a)	tonnes	*229 000	*193 000	*177 000	*221 000	*199 000
Zinc						
Unwrought	tonnes	125 896	127 410	134 690	138 491	130 570
Unwrought alloys	tonnes	6 245	6 710	5 600	12 275	13 899

Note(s):-
(a) BGS estimates, based on known imports into certain countries

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	71 837	85 471	67 562	66 708	72 906
Aluminium and bauxite						
Bauxite	tonnes	22 147	9 035	16 601	11 384	3 446
Alumina	tonnes	2 267 237	2 620 149	2 723 588	2 730 064	2 535 547
Alumina hydrate	tonnes	42 487	42 775	45 957	43 721	48 560
Unwrought	tonnes	277 122	325 514	328 722	352 293	435 126
Unwrought alloys	tonnes	24 473	29 974	42 056	34 783	73 058
Scrap	tonnes	113 228	70 430	20 806	26 326	32 024
Antimony						
Metal	tonnes	8	0	71	11	70
Oxide	tonnes	351	775	305	507	337
Barytes	tonnes	115 402	129 547	109 802	125 134	127 181
Bentonite and fuller's earth						
Bentonite	tonnes	13 963	13 667	10 000	15 246	14 399
Fuller's earth	tonnes	111	170	260	209	...
Cement						
Cement clinkers	tonnes	1 450	2 307	6 615	8 782	14 895
Portland cement	tonnes	188 442	236 622	373 788	443 104	441 619
Other cement	tonnes	5 026	10 738	12 319	14 147	19 062
Chromium						
Ores & concentrates (a)	tonnes	*600	*400	*500	*500	*20
Metal	tonnes	47	88	92	73	254
Coal						
Anthracite (b)	tonnes	84 858	71 785	92 673	55 914	76 744
Other coal (b)	tonnes	586 775	693 106	575 921	472 129	*490 000
Cobalt						
Metal	tonnes	4 773	9 629	5 775	6 362	3 871
Copper						
Unwrought	tonnes	1 190	2 594	3 190	3 133	3 650
Scrap	tonnes	12 591	11 270	12 420	12 759	13 486
Diamond						
Unsorted	carats	125 000	45 000	...	...	...
Diatomite	tonnes	1 596	2 500	2 044	1 228	1 645
Feldspar	tonnes	13 710	15 490	17 103	17 199	12 930
Gold						
Metal	kilograms	1 599	1 253	2 099	1 739	1 448
Waste & scrap	kilograms	776	987	1 049	1 304	1 455
Graphite	tonnes	502	548	423	296	980
Gypsum						
Crude	tonnes	49 398	109 069	119 962	117 892	128 045
Calcined	tonnes	295 160	259 001	274 006	287 568	328 003
Iodine	kilograms	1 105 811	1 294 934	1 748 110	1 919 848	1 785 526
Iron ore	tonnes	178 025	495 047	526 713	216 372	179 727
Iron, steel and ferro-alloys						
Pig iron	tonnes	14 639	8 823	10 841	12 813	11 335
Sponge & powder	tonnes	45 271	38 519	13 729	320	2 355
Ferro-chrome	tonnes	571	860	1 251	1 440	1 303
Ferro-manganese	tonnes	5 921	9 703	6 154	5 328	10 639
Ferro-silico-manganese	tonnes	3 560	933	1 071	2 729	1 034
Ferro-silicon	tonnes	19 180	11 684	25 663	26 931	43 350
Other ferro-alloys	tonnes	2 228	1 885	1 877	3 392	135
Silicon metal	tonnes	13 424	17 653	26 714	37 439	39 961
Ingots, blooms, billets	tonnes	101 819	150 611	142 986	161 778	195 928
Scrap	tonnes	381 683	416 062	345 634	313 184	267 085
Kaolin	tonnes	241 975	237 725	250 879	241 976	208 709
Lead						
Unwrought	tonnes	2 024	2 970	4 882	4 749	7 055
Magnesite and magnesia						
Magnesite	tonnes	3 736	2 587	2 125	4 265	126
Magnesia	tonnes	190	1 643	500	1 784	4 298
Manganese						
Ores & concentrates	tonnes	803 971	1 132 985	1 172 711	849 729	1 083 361
Metal	tonnes	3 069	3 610	2 976	3 531	2 953
Mica	tonnes	1 759	1 559	1 001	1 141	1 267

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Nickel						
Mattes, sinters etc.	tonnes	158 897	136 200	176 657	158 274	165 628
Unwrought (c)	tonnes	46	222	80	60	215
Crude petroleum	tonnes	562 851	440 346	983 848	440 374	—
Phosphates	tonnes	666 188	646 319	710 528	672 546	673 331
Platinum metals						
Platinum and platinum metals	kilograms	747	973	1 076	922	1 057
Waste & scrap	kilograms	87	59	998	1 102	846
Potash						
Sulphate	tonnes	249 307	267 653	247 379	266 149	241 918
Chloride	tonnes	310 954	309 061	306 369	307 422	349 459
Rare earths						
Metals	tonnes	713	702	544	686	738
Salt	tonnes	702 713	741 959	910 846	1 026 541	988 001
Sillimanite	tonnes	2 004	3 605	2 400	2 288	3 404
Silver						
Ores & concentrates	kilograms	...	3 118 000	...	7 923 075	—
Metal	kilograms	72 647	86 037	90 331	64 511	62 077
Sulphur and pyrites						
Pyrites	tonnes	225 492	225 513	26 940	...	...
Sulphur	tonnes	628	4 559	16 413	11 983	5 224
Sulphur, sublimed & precipitated	tonnes	...	...	240	5 571	10 790
Talc	tonnes	14 737	14 522	16 488	10 991	13 374
Tin						
Unwrought	tonnes	382	47	21	23	28
Unwrought alloys	tonnes	71	79	57	103	46
Titanium						
Titanium minerals	tonnes	...	...	33 000	73 690	17 600
Metal	tonnes	557	505	636	661	637
Oxides	tonnes	8 729	10 026	11 924	16 013	12 121
Vanadium						
Metal	tonnes	55	32	10	63	...
Zinc						
Ores & concentrates	tonnes	221 754	231 563	255 158	248 486	284 791
Unwrought (c)	tonnes	109	296	247	2 828	2 167

Note(s):-
(a) BGS estimates, based on known exports from certain countries
(b) Excludes coal imported from Spitzbergen
(c) Including alloys

Poland

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel (a)	tonnes	76 515 000	79 232 000	95 277 000	110 580 000	*124 000 000
Crushed rock	tonnes	29 403 264	29 271 189	33 098 360	38 835 618	46 854 829
Primary aluminium	tonnes	57 145	58 931	54 508	57 620	58 736
Barytes	tonnes	3 030	3 183	2 357	2 034	*2 000
Bentonite and fuller's earth	tonnes	31 648	66 143	86 331	97 900	105 943
Cadmium	tonnes	375	356	408	373	421
Cement clinker	tonnes	8 647 397	9 620 601	9 468 410	11 219 940	13 167 950
Cement, finished	tonnes	11 653 448	12 566 000	12 646 223	14 688 353	16 963 752
Coal						
Bituminous	tonnes	103 016 400	100 087 100	97 903 730	95 222 512	88 313 369
Lignite	tonnes	60 919 100	61 197 500	61 636 445	60 844 278	57 537 727
Copper, mine	tonnes (metal content)	503 544	530 768	511 799	497 200	451 900
Copper, smelter	tonnes	559 960	547 228	555 681	555 907	518 303
Copper, refined	tonnes	529 616	550 066	560 256	556 625	532 975
Diatomite	tonnes	700	800	500	600	—
Feldspar	tonnes	276 264	373 459	426 914	457 600	*388 500
Gold, mine (b)	kilograms (metal content)	356	527	713	1 700	891
Gypsum						
Gypsum	tonnes	1 030 693	970 786	1 048 000	1 172 000	(c) 1 581 299
Anhydrite	tonnes	197 000	196 000	195 000	181 000	...
Pig iron	tonnes	5 585 094	6 292 341	4 476 831	5 332 632	5 804 418
Crude steel	tonnes	9 107 384	10 578 482	8 335 898	9 991 638	9 831 723
Ferro-alloys						
Ferro-manganese	tonnes	979	46 898	7 782	4 089	2 093
Ferro-silico-manganese	tonnes	5 000	29 600	10 242	3 310	15 590
Ferro-silicon	tonnes	92 687	83 552	65 118	13 034	58 538
Other ferro-alloys	tonnes	188	1 419	3 663	4 488	6 255
Kaolin (d)	tonnes	106 761	130 596	159 207	148 579	153 670
Lead, mine	tonnes (metal content)	87 100	86 000	78 980	77 450	74 200
Lead, refined	tonnes	74 300	73 900	81 000	73 000	104 200
Magnesite	tonnes	27 200	57 900	55 300	63 000	65 000
Crude petroleum	tonnes	764 806	886 188	847 844	795 742	720 603
Natural gas	million m^3	5 315	5 630	5 742	5 651	5 653
Salt						
Rock salt	tonnes	847 880	1 099 072	1 123 219	1 129 875	591 240
Brine salt	tonnes	2 790 996	2 940 169	2 889 941	2 899 076	2 930 726
Selenium metal	tonnes	78	83	82	87	*90
Silver, mine	kilograms (metal content)	1 332 200	1 372 700	1 262 400	1 265 100	1 244 000
Sulphur and pyrites						
Frasch	tonnes (sulphur content)	762 689	821 489	801 799	800 200	833 600
Recovered (e)	tonnes (sulphur content)	293 700	289 100	289 000	308 000	*310 000
Recovered (f)	tonnes (sulphur content)	181 900	182 000	186 600	203 100	*205 300
Zinc, mine	tonnes (metal content)	154 277	140 381	135 600	126 600	129 600
Slab zinc	tonnes	154 200	155 500	137 300	133 900	141 900

Note(s):-
(1) Poland is believed to produce strontium minerals

(a) Includes an estimate for small producers
(b) Metal production
(c) Including anhydrite
(d) Washed
(e) From metal sulphide processing
(f) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	393 090	790 734	1 237 482	1 671 890	1 378 634
Aluminium and bauxite						
Unwrought (a)	tonnes	52 132	70 740	81 962	80 266	78 187
Scrap	tonnes	63 022	71 525	82 875	107 939	113 649
Bentonite and fuller's earth						
Bentonite	tonnes	1 999	1 365	12 061	15 851	19 107
Fuller's earth	tonnes	660	431	404	580	...
Bromine	kilograms	...	...	3 000	5 500	9 400
Cadmium						
Metal	tonnes	697	665	610	364	368
Cement						
Cement clinkers	tonnes	87 470	226 981	256 621	856 035	181 690
Portland cement	tonnes	262 290	341 112	460 479	402 741	313 361
Other cement	tonnes	7 406	7 059	49 970	67 457	65 822
Chromium						
Metal	tonnes	181	82	...	...	1 556
Coal						
Anthracite	tonnes	71 646	8 599	23 331	31 200	30 256
Other coal	tonnes	20 044 204	19 684 005	20 816 121	16 586 467	11 761 743
Lignite	tonnes	35 824	26 929	8 211	317	—
Cobalt						
Metal	tonnes	...	26	19	8	11
Copper						
Matte & cement	tonnes	763	1 606	3 673	6 774	2 187
Unwrought	tonnes	278 113	275 089	290 462	287 666	239 508
Unwrought alloys	tonnes	5 329	5 007	6 183	6 205	6 397
Scrap	tonnes	40 542	42 763	47 463	55 285	64 377
Diatomite	tonnes	...	536	455	527	774
Feldspar	tonnes	1 626	1 441	1 509	2 749	1 849
Gold						
Metal	kilograms	249	...	100	1 100	300
Waste & scrap	kilograms	8 477	4 074	1 100	1 600	700
Gypsum						
Crude & calcined	tonnes	24 706	29 467	33 277	40 832	56 003
Iodine	kilograms	...	...	100	200	1 300
Iron, steel and ferro-alloys						
Pig iron	tonnes	16 023	57 696	4 917	19 286	7 481
Ferro-manganese & ferro-silico-manganese	tonnes	1 451	66 666	22 713	11 954	20 412
Ferro-silicon	tonnes	84 406	85 538	64 974	16 023	46 923
Other ferro-alloys	tonnes	86	195	915	1 630	2 364
Ingots, blooms, billets	tonnes	975 777	1 585 494	1 249 618	964 361	1 575 099
Scrap	tonnes	1 804 181	1 973 116	1 426 831	1 197 827	1 199 620
Kaolin	tonnes	10 408	9 941	6 194	7 177	10 401
Lead						
Ores & concentrates	tonnes	86 395	94 126	92 226	73 902	70 970
Unwrought	tonnes	42 518	39 287	44 008	68 635	34 455
Scrap	tonnes	2 408	963	1 652	2 168	3 120
Magnesite and magnesia	tonnes	34	796	1 208	654	2 632
Mercury	kilograms	...	2	3 000	33 900	61 600
Molybdenum						
Metal	tonnes	...	...	61	122	113
Nickel						
Unwrought	tonnes	(a) 41	(a) 110	(a) 480	312	(a) 466
Scrap	tonnes	...	...	642	290	268
Oxides	tonnes	339	468	529	577	558
Crude petroleum	tonnes	161 074	138 253	216 256	243 699	287 684
Phosphates	tonnes	...	507	1	1	1
Platinum metals						
Platinum and platinum metals	kilograms	308	470	903	350	156
Waste & scrap	kilograms	52 366	33 019	60	4 312	139
Potash						
Potassic fertilisers	tonnes	1 023	1 638	932	3 130	2 202
Salt	tonnes	419 201	493 259	495 481	498 345	345 335
Silver						
Metal	kilograms	1 251 194	821 501	318 800	519 800	1 148 300

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Sulphur and pyrites						
Sulphur	tonnes	530 180	560 340	575 796	478 736	555 603
Sulphur, sublimed & precipitated	tonnes	...	13 706	17 364	18 426	26 376
Tin						
Unwrought	tonnes	14	64	115	174	1 483
Titanium						
Metal	tonnes	1	25	740	917	52
Oxides	tonnes	23 977	20 818	24 394	25 598	21 776
Tungsten						
Metal	tonnes	34	89	84	89	76
Zinc						
Ores & concentrates	tonnes	64 486	44 257	63 913	61 094	61 595
Unwrought	tonnes	65 661	72 820	74 938	62 332	73 096
Unwrought alloys	tonnes	1 330	850	857	2 513	1 829
Scrap	tonnes	136	269	797	233	422

Note(s):-
(a) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	1 527 892	1 756 513	1 775 291	2 976 252	5 566 874
Aluminium and bauxite						
Bauxite	tonnes	67 966	82 233	59 758	61 638	71 598
Alumina	tonnes	120 733	124 274	102 845	114 800	120 768
Alumina hydrate	tonnes	25 572	26 927	29 538	27 358	27 634
Unwrought	tonnes	88 008	85 010	62 403	76 996	105 281
Unwrought alloys	tonnes	94 090	119 305	140 792	167 914	192 930
Scrap	tonnes	13 472	31 536	39 907	52 498	59 623
Antimony						
Metal	tonnes	49	80	28	158	142
Oxide	tonnes	920	1 042	1 231	1 338	1 315
Arsenic						
White arsenic	tonnes	32	...	...	...	...
Metallic arsenic	tonnes	—	14	39	21	24
Barytes	tonnes	8 318	6 593	7 744	9 138	10 895
Bentonite and fuller's earth						
Bentonite	tonnes	93 915	126 127	115 208	153 266	162 424
Fuller's earth	tonnes	1 263	1 749	2 566	2 564	...
Bismuth						
Metal	tonnes	4	6	14	14	15
Bromine	kilograms	2 000	(b) 9 348	6 000	16 100	14 300
Cement						
Cement clinkers	tonnes	70 207	13 746	33 673	45 560	65 632
Portland cement	tonnes	699 379	540 342	444 855	285 135	520 330
Other cement	tonnes	16 352	2 323	5 537	5 700	22 982
Chromium						
Ores & concentrates	tonnes	10 977	13 053	9 391	16 161	38 543
Metal	tonnes	29	242	54	45	1 717
Coal						
Anthracite	tonnes	49 745	168 095	263 929	295 026	449 362
Other coal	tonnes	2 506 316	2 231 606	3 112 462	4 866 783	5 442 327
Cobalt						
Metal	tonnes	49	44	35	52	69
Oxides	tonnes	16	37	121	63	18
Copper						
Ores & concentrates	tonnes	...	30	43 504	112 708	61 319
Matte & cement	tonnes	...	...	312	5 053	10 062
Unwrought	tonnes	2 257	3 071	7 118	40 899	35 420
Scrap	tonnes	6 001	14 973	5 855	4 885	18 596

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Diamond						
Industrial	carats	75 000	67 042	43 583	31 323	150 918
Dust	carats	...	3 799 175	4 042 100	...	3 149 550
Diatomite	tonnes	6 394	6 387	6 465	5 997	8 235
Feldspar	tonnes	155 283	201 509	215 185	219 719	237 963
Fluorspar	tonnes	5 858	7 501	6 290	7 834	8 682
Gold						
Metal	kilograms	588	2 301	100	400	6 100
Graphite	tonnes	3 150	3 089	3 028	3 658	5 701
Gypsum						
Crude	tonnes	101 589	163 227	150 622	175 567	283 724
Calcined	tonnes	123 919	100 886	91 356	150 619	216 536
Iodine	kilograms	23 875	18 687	10 200	18 700	18 800
Iron ore						
Iron ore	tonnes	6 817 467	8 627 650	5 785 200	8 571 004	8 746 836
Burnt pyrites	tonnes	1 764 657	2 303 655	1 003 456	...	...
Iron, steel and ferro-alloys						
Pig iron	tonnes	86 108	150 163	239 240	220 163	228 445
Sponge & powder	tonnes	34 091	34 456	24 490	12 448	10 282
Ferro-chrome	tonnes	8 073	10 352	10 863	12 318	14 113
Ferro-manganese	tonnes	37 530	46 414	29 230	35 508	42 352
Ferro-silico-manganese	tonnes	53 968	64 985	51 197	63 332	79 942
Ferro-molybdenum	tonnes	829	1 138	1 178	1 168	1 527
Ferro-silicon	tonnes	27 132	29 551	22 769	24 986	24 846
Ferro-vanadium	tonnes	228	393	313	480	445
Other ferro-alloys	tonnes	6 322	7 454	11 871	15 521	11 233
Silicon metal	tonnes	10 586	9 967	9 243	11 935	13 946
Ingots, blooms, billets	tonnes	85 027	191 722	298 314	569 057	679 404
Scrap	tonnes	96 426	278 271	238 113	289 956	313 907
Kaolin	tonnes	81 181	89 139	90 931	94 257	122 245
Lead						
Unwrought	tonnes	47 030	50 189	53 095	56 504	44 235
Scrap	tonnes	...	602	794	1 633	1 256
Lithium						
Oxides	tonnes	74	132	136	266	245
Carbonate	tonnes	56	117	128	252	184
Magnesite and magnesia	tonnes	77 830	82 164	71 774	103 380	111 346
Manganese						
Ores & concentrates	tonnes	10 037	205 290	38 845	6 017	32 984
Metal	tonnes	432	652	499	1 155	1 167
Mercury	kilograms	3 875	4 456	15 700	9 200	15 700
Mica	tonnes	486	878	547	918	1 118
Molybdenum						
Ores & concentrates	tonnes	1	8	1	5	15
Metal	tonnes	36	142	102	208	616
Nickel						
Unwrought (a)	tonnes	1 589	2 207	1 683	2 573	2 344
Scrap	tonnes	...	...	3	116	4 897
Crude petroleum	tonnes	17 448 290	17 316 135	17 639 489	19 479 284	20 778 118
Phosphates	tonnes	1 452 726	1 885 350	1 558 007	1 658 266	1 689 120
Platinum metals						
Platinum and platinum metals	kilograms	402	...	3 560	15 500	16 400
Potash						
Fertiliser salts	tonnes	948	2 264	621	1 066	...
Sulphate	tonnes	19 967	24 143	21 770	14 517	20 242
Chloride	tonnes	821 469	1 098 679	1 041 798	770 674	992 979
Other potassic fertilisers	tonnes	5 223	4 174	4 726	4 110	4 659
Rare earths						
Rare earth compounds	tonnes	245	61	118	123	143
Salt	tonnes	156 406	294 590	376 829	582 080	313 297
Sillimanite minerals						
Sillimanite	tonnes	17 682	14 928	9 975	21 196	23 321
Mullite	tonnes	1 974	1 355	2 207	2 012	4 956
Silver						
Metal	kilograms	36 266	34 563	40 100	28 800	77 000

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Sulphur and pyrites						
Pyrites	tonnes	1 933	1 061	1 013	5 065	1 582
Sulphur	tonnes	88 544	78 292	78 274	83 432	74 805
Talc	tonnes	18 342	16 155	20 536	22 348	23 122
Tin						
Unwrought (a)	tonnes	1 077	1 367	1 437	1 583	1 838
Scrap	tonnes	...	697	705	1 653	1 931
Titanium						
Titanium minerals	tonnes	101 284	98 214	100 539	95 057	100 002
Metal	tonnes	151	271	328	2 550	2 122
Oxides	tonnes	30 546	29 710	33 417	36 943	45 984
Tungsten						
Metal	tonnes	42	46	108	111	108
Vanadium						
Metal	tonnes	...	32	32	35	...
Zinc						
Ores & concentrates	tonnes	113 990	114 800	78 746	129 551	127 720
Unwrought	tonnes	11 609	19 580	13 333	28 714	31 838
Unwrought alloys	tonnes	10 573	12 022	13 337	11 421	13 660
Scrap	tonnes	656	4 636	3 899	2 681	4 445
Zirconium						
Concentrates	tonnes	1 056	1 085	870	863	542
Metal	tonnes	2	23	6	43	15

Note(s):-
(a) Including alloys
(b) May include some fluorine

Portugal

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	7 417 636	9 405 437	8 284 238	9 764 029	...
Crushed rock	tonnes	70 994 473	73 264 403	73 343 159	65 428 239	...
White arsenic	tonnes	*25	*15	*15	*15	*15
Cement clinker (a)	tonnes	845 594	1 082 678	1 450 646	1 484 856	1 513 487
Cement, finished (a)	tonnes	8 485 826	8 839 048	8 426 830	8 326 687	9 178 735
Copper, mine	tonnes (metal content)	77 581	95 700	89 541	78 576	90 182
Feldspar	tonnes	197 866	221 312	238 843	257 570	371 952
Gypsum	tonnes	419 799	461 212	389 180	366 599	...
Crude steel	tonnes	1 000 000	1 400 000	1 400 000	1 400 000	1 400 000
Kaolin	tonnes	169 669	152 077	164 072	167 792	*170 000
Lead, mine	tonnes (metal content)	—	—	—	—	1 000
Lead, refined	tonnes	4 000	4 000	3 000	3 000	5 000
Lithium minerals						
Lepidolite	tonnes	24 606	28 696	26 185	28 497	34 755
Salt						
Rock salt	tonnes	602 035	661 704	597 945	586 190	590 588
Sea salt	tonnes	86 603	75 400	92 495	76 858	64 048
Silver, mine	kilograms (metal content)	21 100	24 400	23 786	20 078	26 514
Sulphur and pyrites						
Recovered	tonnes (sulphur content)	27 000	25 000	30 000	38 000	27 000
Talc	tonnes	5 460	6 231	5 362	5 517	12 367
Tin, mine	tonnes (metal content)	203	200	243	25	41
Tungsten, mine (b)	tonnes (metal content)	715	746	816	780	846
Zinc, mine	tonnes (metal content)	—	—	—	7 505	24 163

Note(s):-
(1) Portugal is a small producer of tantalum bearing tin slags but no detailed information is available

(a) Sales
(b) Wolframite and scheelite

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	31 257	53 451	138 939	101 721	120 914
Aluminium and bauxite						
Unwrought alloys	tonnes	111 732	105 837	140 505	152 591	130 636
Scrap	tonnes	19 513	28 576	41 797	38 026	41 603
Antimony						
Metal	tonnes	...	26	1	646	267
Cement						
Cement clinkers	tonnes	117 332	148 984	1 271 578	1 138 307	1 263 190
Portland cement	tonnes	114 182	286 819	1 110 739	1 204 981	1 481 219
Other cement	tonnes	6 081	13 267	17 301	11 364	58 931
Chromium						
Ores & concentrates	tonnes	44	...	1 111	591	295
Copper						
Ores & concentrates	tonnes	286 781	346 534	375 312	328 296	399 589
Unwrought	tonnes	747	1 165	9 356	918	227
Scrap	tonnes	24 440	35 927	33 583	29 736	24 566
Diamond						
Gem, rough	carats	£3 650 000	£96 000	—	...	—
Gem, cut	carats	£37 983 000	£45 779 000	£17 981 000	£8 000	£105 000
Diatomite	tonnes	2 050	7 755	11	286	943
Feldspar	tonnes	5	—	1 546	862	4 048
Gold						
Waste & scrap	kilograms	126	...	4 800	400	1 100

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Gypsum						
Calcined	tonnes	1 351	1 424	1 332	4 280	8 335
Iron, steel and ferro-alloys						
Ingots, blooms, billets	tonnes	33 032	184 547	159 868	79 697	138 692
Scrap	tonnes	201 189	259 297	330 536	479 017	378 043
Kaolin	tonnes	10 131	11 383	31 484	46 494	70 580
Lead						
Unwrought	tonnes	2 367	1 988	1 269	2 018	3 092
Scrap	tonnes	3 502	3 452	4 127	9 471	9 961
Platinum metals						
Waste & scrap	kilograms	...	...	...	...	33 500
Potash						
Potassic fertilisers	tonnes	128	30	1 056	42	80
Salt	tonnes	3 952	4 444	6 130	11 872	25 341
Silver						
Ores & concentrates	kilograms	...	...	...	...	4 000
Sulphur and pyrites						
Pyrites	tonnes	...	...	...	...	1 750
Sulphur	tonnes	9 847	10 838	28 122	9 747	15 410
Sulphur, sublimed & precipitated	tonnes	408	121	80	500	1
Talc	tonnes	204	1 117	1 614	6 013	4 243
Tantalum and niobium						
Tantalum	tonnes	18	42	15	4	63
Tin						
Concentrates	tonnes	266	147	—	0	80
Unwrought alloys	tonnes	...	...	...	146	172
Titanium						
Oxides	tonnes	383	431	512	840	1 064
Tungsten						
Ores & concentrates	tonnes	...	900	1 425	1 305	1 466
Metal	tonnes	143	217	12	14	16
Zinc						
Ores & concentrates	tonnes	...	...	...	13 035	40 950
Scrap	tonnes	1 198	1 855	2 050	2 023	3 345

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	641 696	790 615	698 717	488 917	731 709
Aluminium and bauxite						
Alumina	tonnes	10 152	9 257	6 250	7 760	9 325
Unwrought	tonnes	7 903	10 903	13 941	16 292	16 859
Unwrought alloys	tonnes	185 279	200 335	224 631	237 617	214 990
Scrap	tonnes	1 755	4 214	2 651	1 487	3 994
Antimony						
Metal	tonnes	10	6	5	2	6
Oxide	tonnes	147	242	137	166	172
Asbestos	tonnes	1 568	474	356	...	...
Barytes	tonnes	3 589	2 630	5 382	3 099	1 934
Bentonite and fuller’s earth						
Bentonite	tonnes	14 208	17 907	16 881	17 640	18 480
Fuller's earth	tonnes	936	662	483	379	...
Cement						
Cement clinkers	tonnes	7 715	8 775	17 084	140 673	331 025
Portland cement	tonnes	1 225 167	1 066 969	669 272	356 040	45 012
Other cement	tonnes	50 576	65 793	10 479	14 286	11 966
Chromium						
Ores & concentrates	tonnes	2 062	1 547	2 599	2 845	3 339
Metal	tonnes	14	18	18	336	55

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Coal						
Anthracite	tonnes	276 685	30 630	48 785	30 688	44 447
Other coal	tonnes	5 084 416	5 241 255	5 386 968	5 630 721	4 733 158
Copper						
Unwrought	tonnes	6 245	7 740	4 572	5 752	5 309
Scrap	tonnes	1 383	1 874	3 329	5 946	8 503
Diamond						
Gem, rough	carats	£26 362 000	£18 757 000	£10 968 000	£925 000	£83 000
Gem, cut	carats	£3 926 000	£11 608 000	£7 015 000	£2 940 000	£3 436 000
Industrial	carats	£803 000	£669 000	£565 000	£381 000	£427 000
Dust	carats	690 000	710 000	2 870 000	...	8 473 445
Diatomite	tonnes	3 223	2 263	3 946	3 432	1 731
Feldspar	tonnes	79 521	96 049	115 286	98 106	108 150
Fluorspar	tonnes	574	158	1 633	2 530	2 423
Gold						
Metal	kilograms	1 893	655	6 074	5 234	300
Graphite	tonnes	1 129	1 317	1 722	1 954	2 210
Gypsum						
Crude	tonnes	60 120	82 603	79 370	96 070	75 794
Calcined	tonnes	338 228	340 665	361 284	307 953	320 174
Iodine	kilograms	28 807	14 717	12 000	1 400	900
Iron, steel and ferro-alloys						
Pig iron	tonnes	12 763	16 089	19 713	15 149	17 468
Ferro-silico-magnesium	tonnes	...	...	1 028	1 005	6 070
Ferro-manganese	tonnes	779	889	885	816	1 281
Ferro-silico-manganese	tonnes	5 757	1 742	10 021	12 779	9 835
Ferro-silicon	tonnes	2 339	1 881	3 028	3 341	3 355
Other ferro-alloys	tonnes	3 894	2 981	8 171	9 800	1 241
Ingots, blooms, billets	tonnes	5 829	7 167	10 538	14 494	84 769
Scrap	tonnes	353 646	292 753	653 988	1 056 949	1 075 517
Kaolin	tonnes	135 681	124 508	143 943	137 656	154 891
Lead						
Unwrought	tonnes	15 624	18 885	21 198	17 523	14 704
Magnesite and magnesia						
Magnesite	tonnes	885	969	1 012	1 269	924
Magnesia	tonnes	5 855	4 808	5 998	6 544	7 119
Mercury	kilograms	523	291	0	0	...
Mica	tonnes	198	311	193	630	284
Molybdenum						
Metal	tonnes	15	24	14	14	8
Nickel						
Unwrought (a)	tonnes	184	310	602	739	450
Crude petroleum	tonnes	12 544 785	13 081 242	12 941 851	13 479 579	12 386 104
Phosphates	tonnes	141 740	149 365	137 423	91 912	114 826
Potash						
Sulphate	tonnes	4 457	7 526	3 631	3 227	4 223
Chloride	tonnes	55 775	79 232	65 682	58 237	51 600
Other potassic fertilisers	tonnes	1 630	1 752	2 780	2 141	1 629
Salt	tonnes	139 720	121 621	70 266	110 581	169 480
Silver						
Metal	kilograms	2 520	2 237	200	300	...
Sulphur and pyrites						
Sulphur	tonnes	6 333	3 532	5 878	4 485	3 233
Sulphur, sublimed & precipitated	tonnes	5	431	28	3	3
Talc	tonnes	17 721	20 203	23 583	30 955	36 089
Tantalum and niobium						
Tantalum	tonnes	69	68	115	103	69
Tin						
Unwrought	tonnes	781	434	971	763	577
Unwrought alloys	tonnes	63	71	100	274	419
Titanium						
Oxides	tonnes	18 922	20 120	17 458	18 565	19 545
Tungsten						
Metal	tonnes	103	153	179	106	122
Carbide	tonnes	96	109	105	97	119

Portugal

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Zinc						
Unwrought	tonnes	18 113	13 450	11 862	19 015	16 367
Unwrought alloys	tonnes	10 616	14 675	11 573	5 778	5 054
Zirconium						
Concentrates	tonnes	2 802	2 045	5 918	6 426	7 205

Note(s):-
(a) Including alloys

Romania

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	1 013 386	1 458 266	1 394 414	*1 800 000	*2 200 000
Alumina	tonnes (Al_2O_3 content)	332 853	560 243	689 329	622 083	23 097
Primary aluminium	tonnes	196 844	222 347	258 000	277 382	297 940
Bentonite and fuller's earth						
Bentonite	tonnes	17 637	18 161	18 190	21 165	14 713
Bismuth, mine	tonnes (metal content)	*40	*40	*40	*40	*40
Cement, finished	tonnes	5 991 962	6 238 584	7 032 100	8 198 090	9 844 706
Coal						
Anthracite & bituminous	tonnes	3 309 000	3 016 000	3 079 000	...	...
Lignite	tonnes	30 871 000	29 726 895	28 491 480	32 753 526	(a) *33 200 000
Brown coal	tonnes	250 000	220 157	62 609	*58 000	...
Copper, mine	tonnes (metal content)	23 389	20 380	16 286	12 535	2 213
Copper, smelter	tonnes	4 473	61	—	—	—
Copper, refined	tonnes	16 739	24 526	20 739	21 583	18 589
Diatomite	tonnes	33 296	20 626	1 402	1 719	15
Feldspar	tonnes	72 827	60 924	74 927	33 100	44 897
Fluorspar	tonnes	*15 000	*15 000	—	—	—
Gold, mine	kilograms (metal content)	1 878	1 430	*500	*500	*500
Graphite	tonnes	1 014	395	486	—	—
Gypsum	tonnes	409 516	490 372	532 867	615 072	706 704
Iron ore	tonnes	244 000	231 417	220 788	122 684	...
Pig iron	tonnes	4 101 409	4 243 956	4 097 998	3 945 975	3 923 234
Crude steel	tonnes	5 692 496	6 076 600	6 280 000	6 266 036	6 261 376
Ferro-alloys						
Ferro-manganese	tonnes	—	191	18 625	3 777	—
Ferro-silico-manganese	tonnes	141 899	194 754	100 957	66 476	33 585
Kaolin	tonnes	25 741	22 338	26 772	11 063	6 879
Lead, mine	tonnes (metal content)	15 747	18 297	11 610	6 269	784
Lead, refined	tonnes	28 000	37 600	37 900	29 133	34 369
Manganese ore	tonnes	72 931	79 130	72 000	60 107	49 350
Crude petroleum	tonnes	5 651 000	5 462 000	5 215 000	4 777 000	4 837 000
Natural gas	million m^3	13 174	13 246	12 637	12 422	11 981
Salt	tonnes	2 416 970	2 399 956	2 442 640	2 621 129	2 475 324
Silver, mine	kilograms (metal content)	*18 000	*18 000	*18 000	*18 000	*18 000
Sulphur and pyrites						
Recovered	tonnes (sulphur content)	49 000	53 000	79 000	60 000	64 000
Talc	tonnes	10 082	9 725	6 760	2 967	1 513
Uranium, mine	tonnes (metal content)	90	90	*90	*90	*77
Zinc, mine	tonnes (metal content)	22 081	23 599	13 784	8 052	849
Slab zinc	tonnes	51 000	52 746	56 795	43 705	58 342

Note(s):-
(1) Romania is believed to produce asbestos, mica and molybdenum

(a) Including brown coal

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	35 924	23 073	63 110	51 793	111 803
Aluminium and bauxite						
Alumina	tonnes	155 094	209 950	261 862	137 753	5 191
Unwrought	tonnes	35 093	59 363	31 543	12 672	23 193
Unwrought alloys	tonnes	14 998	20 145	7 711	10 110	9 080
Scrap	tonnes	5 787	4 703	4 829	11 132	14 332
Bentonite and fuller's earth						
Bentonite	tonnes	4 056	8 810	7 154	521	68

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Cement						
Cement clinkers	tonnes	360 639	669 204	465 660	608 616	243 116
Portland cement	tonnes	963 978	701 686	739 215	447 713	134 044
Coal						
Hard coal	tonnes	(a) 2 028	(a) 1 390	(a) 661	(a) 7 997	67 304
Copper						
Ores & concentrates	tonnes	94 668	81 485	84 084	72 900	23 689
Matte & cement	tonnes	218	3 482	...	2 818	11 569
Unwrought	tonnes	1 185	815	614	735	125
Scrap	tonnes	16 683	15 979	22 665	41 911	35 856
Feldspar	tonnes	33 265	28 820	28 859	20 563	25 102
Gypsum	tonnes	10 539	14 277	15 089	14 283	13 507
Iron, steel and ferro-alloys						
Pig iron	tonnes	6 367	3 339	...	1	5
Sponge & powder	tonnes	6 886	9 187	12 522	12 851	17 832
Ferro-silico-manganese	tonnes	124 557	179 788	142 617	41 000	33 529
Other ferro-alloys	tonnes	2 529	3 891	8 657	3 561	872
Ingots, blooms, billets	tonnes	130 415	161 438	100 515	87 685	183 551
Scrap	tonnes	2 386 017	2 394 490	1 661 747	1 862 498	1 963 213
Lead						
Ores & concentrates	tonnes	30 390	25 092	25 012	18 104	10 501
Unwrought	tonnes	23 388	20 894	22 120	18 786	23 289
Scrap	tonnes	964	1 689	3 295	4 389	4 659
Magnesite and magnesia						
Magnesia	tonnes	176	281	231	277	351
Manganese						
Ores & concentrates	tonnes	6 029	1 742	...	...	—
Metal	tonnes	...	...	...	...	3 024
Molybdenum						
Metal	tonnes	...	...	...	...	80
Salt	tonnes	546 390	497 826	598 154	503 629	506 641
Sulphur and pyrites						
Sulphur	tonnes	12 974	20 682	54 917	43 255	45 579
Titanium						
Metal	tonnes	94	277	255	579	650
Zinc						
Ores & concentrates	tonnes	49 989	31 665	26 611	16 796	4 043
Unwrought (b)	tonnes	49 234	42 991	42 012	32 008	48 339

Note(s):-
(a) Including anthracite
(b) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	213 091	370 184	197 911	332 191	352 576
Aluminium and bauxite						
Bauxite	tonnes	821 036	1 532 335	1 655 045	1 597 023	75 934
Alumina	tonnes	223 466	125 902	29 350	43 594	499 302
Unwrought (a)	tonnes	3 145	7 449	2 849	4 151	10 191
Scrap	tonnes	5	43	565	436	3 833
Antimony						
Metal	tonnes	65	62	55	43	68
Asbestos	tonnes	11 859	13 036	9 077	3 272	...
Barytes	tonnes	2 943	9 943	5 747	7 604	14 040
Bentonite and fuller’s earth						
Bentonite	tonnes	2 726	4 192	3 805	4 685	5 253
Fuller's earth	tonnes	657	460	321	358	...
Cement						
Cement clinkers	tonnes	8	3	50	280	500 794
Portland cement	tonnes	123 332	228 506	167 686	102 759	142 476
Other cement	tonnes	1 654	1 755	1 653	3 085	12 072

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Chromium						
Ores & concentrates	tonnes	2 701	2 562	2 828	1 675	1 856
Metal	tonnes	70	58	245	958	78
Coal						
Anthracite	tonnes	18 267	74 708	82 683	60 272	68 924
Other coal	tonnes	3 251 154	3 584 413	3 681 406	3 398 344	4 421 709
Lignite	tonnes	18 554	44 787	367 781	620 251	575 514
Copper						
Unwrought	tonnes	2 225	7 255	9 723	12 794	25 093
Scrap	tonnes	20	3 359	1 528	2 946	1 710
Diatomite	tonnes	3 267	3 294	3 183	3 707	3 254
Feldspar	tonnes	41 385	38 470	39 448	31 433	48 999
Fluorspar	tonnes	5 547	4 117	6 285	3 915	4 738
Graphite	tonnes	387	315	548	488	542
Gypsum	tonnes	48 336	37 805	69 027	118 652	144 131
Iodine	kilograms	423	833	1 054	1 107	2 700
Iron ore	tonnes	6 977 977	6 609 026	6 601 393	6 117 270	6 259 705
Iron, steel and ferro-alloys						
Pig iron	tonnes	11 535	3 702	19 339	9 872	53 779
Ferro-manganese	tonnes	17 534	14 859	14 245	23 409	20 410
Ferro-silicon	tonnes	13 246	14 245	21 742	19 395	26 142
Other ferro-alloys	tonnes	38 631	63 198	52 467	35 841	42 735
Silicon metal	tonnes	5 888	3 401	2 813	8 947	1 192
Ingots, blooms, billets	tonnes	510 940	559 793	448 454	633 196	922 499
Kaolin	tonnes	82 981	71 987	55 653	54 862	51 347
Lead						
Ores & concentrates	tonnes	14 899	26 920	31 085	13 288	17 064
Unwrought	tonnes	1 111	1 667	1 620	1 400	835
Magnesite and magnesia	tonnes	23 255	26 209	27 243	27 963	19 853
Manganese						
Ores & concentrates	tonnes	380 043	534 014	357 327	3 134	79
Metal	tonnes	297	303	427	1 000	3 030
Mercury	kilograms	72	24 287	20 288	49 623	80 000
Mica						
Mica	tonnes	590	828	886	912	478
Nickel						
Unwrought (a)	tonnes	280	563	745	747	528
Crude petroleum	tonnes	5 216 636	7 314 284	8 688 818	8 678 466	8 533 821
Phosphates	tonnes	264 547	303 713	283 192	148 110	193 276
Potash						
Sulphate	tonnes	41 698	8 070	757	6 361	4 086
Chloride	tonnes	33 920	53 008	41 974	35 384	50 558
Other potassic fertilisers	tonnes	...	...	563	491	1 058
Salt	tonnes	99 679	120 787	131 683	113 585	111 681
Silver						
Metal (b)	kilograms	*10 900	*10 900	*17 700	*18 600	*7 500
Sulphur and pyrites						
Sulphur	tonnes	5 660	2 075	964	1 413	1 959
Sulphur, sublimed & precipitated	tonnes	30	9	113	112	2
Talc	tonnes	1 187	1 609	1 962	2 101	2 006
Tin						
Unwrought (a)	tonnes	291	188	216	421	137
Titanium						
Titanium minerals	tonnes	2 192	2 334	2 111	1 809	2 093
Metal	tonnes	83	195	328	486	610
Oxides	tonnes	5 454	6 378	7 600	9 794	11 132
Zinc						
Ores & concentrates	tonnes	113 683	109 019	150 282	137 878	173 536
Unwrought (a)	tonnes	16 030	19 555	14 640	23 732	13 135
Zirconium						
Concentrates	tonnes	827	809	552	766	303
Metal	tonnes	22	30	22	32	16

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known exports from certain countries

Slovakia

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	3 453 058	4 892 089	6 807 116	7 522 034	*7 500 000
Crushed rock	tonnes	9 212 400	9 717 300	13 834 800	14 088 600	*14 000 000
Primary aluminium	tonnes	132 089	156 893	158 400	158 289	190 237
Barytes	tonnes	12 000	25 000	26 589	57 000	58 000
Bentonite and fuller's earth						
Bentonite	tonnes	98 000	98 000	97 000	136 000	149 000
Cement, finished	tonnes	3 147 478	3 158 308	3 498 685	3 592 509	3 718 410
Coal						
Brown coal	tonnes	3 076 100	2 578 273	2 513 030	2 208 590	1 859 000
Gold, mine	kilograms (metal content)	79	107	109	84	92
Gypsum (a)	tonnes	93 800	127 100	107 500	126 200	151 000
Iron ore	tonnes	287 000	305 072	258 500	311 000	349 000
Pig iron	tonnes	3 892 000	3 765 000	3 681 000	4 145 000	4 012 000
Crude steel	tonnes	4 588 000	4 454 000	4 485 000	5 093 000	5 082 000
Ferro-alloys						
Ferro-chrome	tonnes	1 924	1 784	867	19	—
Ferro-silico-manganese	tonnes	52 733	64 862	47 843	59 128	...
Ferro-silicon	tonnes	41 539	34 684	16 512	16 155	...
Other ferro-alloys	tonnes	44 589	68 096	48 161	65 498	...
Kaolin	tonnes	31 000	46 000	31 000	58 000	46 000
Magnesite	tonnes	994 000	965 900	920 100	941 100	957 000
Crude petroleum	tonnes	47 953	42 410	33 150	30 520	23 000
Natural gas	million m^3	201	178	151	135	195
Perlite	tonnes	15 000	23 840	8 630	10 560	20 000
Salt	tonnes	133 100	121 600	105 100	122 500	117 000
Sulphur and pyrites						
Recovered (b)	tonnes (sulphur content)	5 000	5 000	5 000	5 000	5 000
Recovered (c)	tonnes (sulphur content)	60 000	65 000	65 000	65 000	78 000
Talc	tonnes	4 200	7 100	200	—	—

Note(s):-
(1) Slovakia is believed to produce feldspar

(a) Including anhydrite
(b) From metal sulphide processing
(c) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	328 547	(a) *552 000	(a) *796 000	(a) *644 000	(a) *740 000
Aluminium and bauxite						
Unwrought	tonnes	3 098	6 827	15 302	66 893	61 319
Unwrought alloys	tonnes	169 698	183 346	159 134	93 141	118 286
Scrap	tonnes	5 722	7 594	8 042	9 876	10 421
Barytes	tonnes	6 642	7 919	7 876	13 843	9 174
Bentonite and fuller's earth						
Bentonite	tonnes	66 954	85 341	76 014	105 273	89 517
Fuller's earth	tonnes	856	*1 000	1 757	...	...
Cement						
Cement clinkers	tonnes	27 695	4 768	26 549	27 092	30 800
Portland cement	tonnes	1 476 998	1 470 728	1 433 926	1 372 554	1 346 692
Other cement	tonnes	15 958	24 408	44 670	35 596	85 987
Chromium						
Metal	tonnes	2 289	2 362	1 876	1 735	1 116
Coal						
Hard coal (b)	tonnes	18	34 346	47 485	32 784	18 052

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Copper						
Unwrought	tonnes	7 094	15 680	19 130	27 178	34 232
Scrap	tonnes	8 889	12 764	14 752	18 821	23 502
Gold						
Metal	kilograms	325	274	268	569	300
Waste & scrap	kilograms	1 012	357	986	1 000	1 600
Iron ore	tonnes	76 957	135 398	8 581	141 448	4 353
Iron, steel and ferro-alloys						
Pig iron	tonnes	37 145	73 303	31 261	50 497	10 588
Ferro-manganese	tonnes	37 139	57 440	41 918	59 475	49 723
Ferro-silico-manganese	tonnes	54 945	66 902	51 623	73 050	62 898
Ferro-silicon	tonnes	42 018	40 135	29 130	25 240	16 437
Other ferro-alloys	tonnes	10 013	11 834	10 741	8 033	13 604
Ingots, blooms, billets	tonnes	125 822	286 072	289 090	654 743	508 620
Scrap	tonnes	497 645	544 714	390 620	524 597	404 401
Kaolin	tonnes	87	475	2 332	10 946	12 546
Lead						
Unwrought	tonnes	3 124	2 119	1 662	98	221
Magnesite and magnesia						
Magnesite	tonnes	786	2 294	636	...	...
Magnesia	tonnes	395 689	404 448	385 312	394 826	444 539
Mercury	kilograms	2 418	3	6	—	...
Crude petroleum	tonnes	16 699	113 305	30 887	27 686	22 172
Phosphates	tonnes	26	48	438	2 603	—
Potash						
Potassic fertilisers	tonnes	281	204	26	...	1 407
Salt	tonnes	47 199	51 539	53 451	51 566	51 517
Silver						
Metal	kilograms	7 985	7 112	1 872	3 430	35 036
Sulphur and pyrites						
Sulphur, sublimed & precipitated	tonnes	48 534	65 648	60 776	63 019	75 817
Talc	tonnes	1 205	1 239	1 051	1 011	1 494
Tungsten						
Metal	tonnes	11	...	16	66	2
Zinc						
Unwrought	tonnes	587	...	3 522	5 232	16 356
Unwrought alloys	tonnes	311	5 977	3 618	14 053	7 147

Note(s):-
(a) BGS estimates, based on known imports into certain countries
(b) Including anthracite

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	208 515	294 267	682 608	665 844	633 400
Aluminium and bauxite						
Bauxite	tonnes	8 300	7 991	3 669	5 886	7 524
Alumina	tonnes	253 825	366 784	307 756	314 576	311 914
Unwrought (a)	tonnes	49 945	45 913	31 683	31 521	52 718
Scrap	tonnes	10 593	13 701	12 567	8 550	8 748
Antimony						
Oxide	tonnes	161	116	118	82	104
Barytes	tonnes	956	927	814	872	147
Bentonite and fuller's earth						
Bentonite	tonnes	3 912	6 040	6 863	6 916	7 145
Fuller's earth	tonnes	1 014	866	1 082	886	...
Cement						
Cement clinkers	tonnes	34 550	33 021	68 894	42 666	52 608
Portland cement	tonnes	113 926	85 834	88 403	98 625	123 589
Other cement	tonnes	3 379	19 636	49 619	56 418	58 035

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Chromium						
Ores & concentrates	tonnes	12 624	24 479	12 475	11 252	16 819
Metal	tonnes	179	2	55	11	20
Coal						
Anthracite	tonnes	13 823	61 361	111 906	38 147	176 682
Other coal	tonnes	4 930 664	5 387 110	5 231 562	4 411 685	4 802 258
Lignite	tonnes	805 556	717 562	700 503	877 582	725 586
Briquettes	tonnes	1 803	20 243	33 049	10 863	5 604
Copper						
Matte & cement	tonnes	104	758	4 342	1 071	...
Unwrought	tonnes	3 689	1 269	1 718	2 084	1 557
Scrap	tonnes	8 448	20 776	19 977	17 973	17 476
Diatomite	tonnes	1 067	865	675	698	549
Feldspar	tonnes	48 100	39 689	36 989	30 726	27 548
Fluorspar	tonnes	1 965	1 574	1 615	1 543	908
Gold						
Metal	kilograms	421	417	123	11 200	92 400
Graphite	tonnes	2 209	1 667	1 031	1 382	2 246
Gypsum						
Crude & calcined	tonnes	121 461	110 803	116 252	110 237	117 977
Iron ore	tonnes	5 704 522	2 745 925	5 510 508	6 406 019	5 853 880
Iron, steel and ferro-alloys						
Pig iron	tonnes	14 998	29 498	39 400	59 145	59 778
Sponge & powder	tonnes	11 704	11 141	13 832	24 994	51 560
Ferro-manganese	tonnes	17 534	14 858	14 245	23 409	20 410
Ferro-silicon	tonnes	13 246	14 245	21 742	19 395	26 142
Other ferro-alloys	tonnes	5 258	6 775	8 547	11 678	15 575
Silicon metal	tonnes	7 593	8 199	6 279	5 416	6 004
Ingots, blooms, billets	tonnes	17 534	15 927	10 753	17 086	20 708
Scrap	tonnes	389 383	241 718	197 550	243 822	257 815
Kaolin	tonnes	88 513	76 440	94 705	100 551	87 956
Magnesite and magnesia	tonnes	31 606	27 698	23 379	31 227	40 288
Manganese						
Ores & concentrates	tonnes	176 511	257 331	273 270	308 417	253 048
Metal	tonnes	147	...	146	193	242
Mercury	kilograms	2 230	2 738	3 457	3 100	3 400
Nickel						
Unwrought	tonnes	79	199	264	71	70
Crude petroleum	tonnes	5 603 952	5 858 911	5 421 866	5 878 819	6 141 203
Phosphates	tonnes	441	2 954	5 421	494	267
Platinum metals						
Platinum and platinum metals	kilograms	61	1 885	125	22 900	62 800
Potash						
Potassic fertilisers	tonnes	30 582	36 256	28 913	32 302	31 889
Salt	tonnes	213 250	266 601	320 413	299 087	182 234
Sillimanite	tonnes	2 690	2 459	4 312	2 069	3 299
Silver						
Metal	kilograms	13 073	17 735	57 416	6 400	12 200
Sulphur and pyrites						
Sulphur	tonnes	7 439	3 582	3 669	3 454	4 339
Sulphur, sublimed & precipitated	tonnes	167	94	689	287	755
Talc	tonnes	369	192	211	4 174	1 344
Tin						
Unwrought (a)	tonnes	1 091	2 034	2 610	2 246	2 260
Titanium						
Titanium minerals	tonnes	...	6 407	17 627	12 648	17 242
Metal	tonnes	111	101	980	179	250
Oxides	tonnes	2 701	2 173	2 804	2 742	2 193
Zinc						
Unwrought (a)	tonnes	33 557	42 324	43 500	45 143	44 959

Note(s):-
(a) Including alloys

Slovenia

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	11 012 000	12 373 000	12 432 000	17 873 000	21 548 000
Crushed rock	tonnes	15 040 340	13 719 888	12 223 182	14 213 319	14 279 253
Primary aluminium	tonnes	109 800	120 700	120 642	118 682	111 016
Cement, finished	tonnes	1 370 000	1 186 000	1 200 000	1 269 000	*1 300 000
Coal						
Lignite	tonnes	4 222 000	4 195 953	3 945 100	3 932 842	4 037 766
Brown coal	tonnes	607 786	611 349	594 456	587 912	483 417
Crude steel	tonnes	541 000	566 000	583 000	628 000	638 000
Ferro-alloys						
Ferro-silicon	tonnes	*12 000	*18 000	*11 000	*9 000	*1 000
Lead, refined	tonnes	*15 000	*15 000	*15 000	*15 000	*15 000
Natural gas	million m^3	4 926	5 500	5 500	4 200	3 400
Salt	tonnes	3 632	2 852	803	1 624	3 029

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	137 354	166 176	221 830	324 830	437 208
Aluminium and bauxite						
Bauxite	tonnes	...	...	...	2 650	8 013
Alumina	tonnes	18 072	24 277	205 606	237 366	243 062
Unwrought alloys	tonnes	101 446	124 069	123 555	133 005	123 041
Scrap	tonnes	11 619	14 971	21 103	27 584	30 132
Cement						
Cement clinkers	tonnes	7 589	18 577	58 765	21 440	2
Portland cement	tonnes	166 323	101 842	56 776	73 187	55 803
Other cement	tonnes	...	16 154	63 732	115 104	156 183
Coal						
Lignite	tonnes	...	1 959	6 881	29 794	2 150
Cobalt						
Metal	tonnes	14	40	42	16	31
Copper						
Scrap	tonnes	10 550	12 564	13 054	15 922	17 810
Gold						
Metal	kilograms	681	254	101	100	106
Waste & scrap	kilograms	1 012	1 649	—	3 700	—
Gypsum						
Crude & calcined	tonnes	352	164	993	9 502	36 039
Iron, steel and ferro-alloys						
Pig iron	tonnes	770	574	752	3 511	14 942
Ferro-silicon	tonnes	18 679	25 894	24 290	26 859	15 277
Other ferro-alloys	tonnes	15 741	11 820	27 120	22 497	24 205
Silicon metal	tonnes	188	1 608	252	3 006	1 875
Ingots, blooms, billets	tonnes	13 311	15 327	12 647	12 273	31 849
Scrap	tonnes	113 448	186 726	225 627	222 403	245 869
Lead						
Unwrought	tonnes	5 136	4 701	5 818	6 524	8 860
Scrap	tonnes	631	568	572	843	1 415
Lithium						
Carbonate	tonnes	64	89	96	96	110
Manganese						
Metal	tonnes	185	143	2 584	228	236
Mercury	kilograms	15 815	7 309	1 517	28	—
Nickel						
Unwrought (a)	tonnes	116	144	117	118	232
Phosphates	tonnes	...	...	189 207	140 281	109 350

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Platinum metals						
Platinum and platinum metals	kilograms	25	839	47	248	84
Salt	tonnes	4 814	5 253	8 034	20 702	18 280
Silver						
Metal	kilograms	3 948	2 699	6 382	3 100	5 200
Titanium						
Oxides	tonnes	35 655	38 497	44 123	50 755	55 867
Zinc						
Scrap	tonnes	950	788	803	846	873
Zirconium						
Concentrates	tonnes	...	...	1 009	1 186	509

Note(s):-
(a) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	541 189	532 614	364 091	863 881	3 113 823
Aluminium and bauxite						
Bauxite	tonnes	51 683	44 560	47 935	51 064	63 229
Alumina	tonnes	252 351	264 319	450 273	480 454	466 163
Alumina hydrate	tonnes	22 878	14 131	23 581	24 102	28 628
Unwrought	tonnes	63 688	57 362	73 137	48 337	65 589
Unwrought alloys	tonnes	40 332	43 403	46 782	60 484	58 215
Scrap	tonnes	13 676	27 390	47 381	50 865	52 338
Antimony						
Metal	tonnes	52	84	137	98	110
Asbestos	tonnes	...	10	25	...	...
Barytes	tonnes	931	896	845	1 044	585
Bentonite and fuller's earth						
Bentonite	tonnes	4 321	3 555	3 612	4 981	4 048
Bismuth						
Metal	tonnes	42	43	69	66	90
Cement						
Cement clinkers	tonnes	95 002	61 151	1 343	11 970	145 638
Portland cement	tonnes	205 345	219 779	215 513	249 749	328 312
Other cement	tonnes	1 440	112	2 861	6 917	17 037
Chromium						
Ores & concentrates	tonnes	340	406	446	1 414	986
Metal	tonnes	26	31	122	97	85
Coal						
Hard coal (b)	tonnes	54 168	38 849	51 173	47 221	83 100
Lignite	tonnes	488 929	584 117	543 465	614 851	567 139
Cobalt						
Metal	tonnes	198	162	209	209	96
Copper						
Unwrought	tonnes	3 835	2 948	2 764	3 150	2 809
Scrap	tonnes	3 787	3 743	5 762	9 000	10 431
Diamond						
Dust	carats	...	...	1 136 505	£1 287 165	1 670 815
Diatomite	tonnes	450	730	846	738	686
Feldspar	tonnes	8 605	10 045	5 852	5 813	6 877
Fluorspar	tonnes	1 113	1 178	1 031	1 184	1 017
Gold						
Metal	kilograms	612	382	374	100	600
Waste & scrap	kilograms	256	363	4 219	1 600	100
Graphite	tonnes	155	155	112	161	108
Gypsum						
Crude	tonnes	48 336	39 062	29 388	31 312	38 588
Calcined	tonnes	11 349	7 429	7 429	8 167	7 936

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Iron, steel and ferro-alloys						
Pig iron	tonnes	19 260	27 783	32 217	70 254	102 973
Ferro-chrome	tonnes	17 438	21 299	23 307	26 992	23 645
Ferro-silicon	tonnes	6 184	7 729	13 486	17 937	14 017
Other ferro-alloys	tonnes	11 337	15 226	34 506	21 181	18 697
Silicon metal	tonnes	6 483	10 171	6 393	9 945	7 654
Ingots, blooms, billets	tonnes	3 312	3 199	3 505	3 444	11 479
Scrap	tonnes	316 188	386 832	434 585	434 330	363 362
Kaolin	tonnes	29 449	28 782	25 928	24 389	28 363
Lead						
Unwrought	tonnes	13 604	12 854	10 262	8 897	12 761
Scrap	tonnes	538	1 223	1 382	2 946	5 191
Lithium						
Oxides	tonnes	88	127	116	115	144
Magnesite and magnesia	tonnes	9 732	9 560	9 899	8 478	8 117
Manganese						
Metal	tonnes	152	296	316	435	388
Molybdenum						
Ores & concentrates	tonnes	42	524	5 674	700	876
Nickel						
Unwrought (a)	tonnes	992	959	931	874	967
Phosphates	tonnes	...	...	189 208	140 455	109 768
Platinum metals						
Platinum and platinum metals	kilograms	1 033	430	12 262	300	1 500
Potash						
Potassic fertilisers	tonnes	1 725	1 751	1 704	2 465	1 973
Rare earths						
Metals	tonnes	80	107	139	96	139
Salt	tonnes	155 881	178 531	207 314	232 017	148 352
Silver						
Metal	kilograms	36 253	307 045	45 584	19 700	27 800
Sulphur and pyrites						
Pyrites	tonnes	399	375	400	463	612
Sulphur	tonnes	46 289	49 649	58 669	58 159	53 434
Talc	tonnes	5 251	5 628	5 383	5 297	5 301
Titanium						
Titanium minerals	tonnes	24 652	11 610	21 054	22 825	14 903
Titanium slag	tonnes	...	...	...	64 246	53 245
Metal	tonnes	118	300	614	392	348
Oxides	tonnes	3 219	3 033	3 157	3 153	3 500
Vanadium						
Metal	tonnes	22	21	16	25	...
Zinc						
Unwrought (a)	tonnes	19 925	21 146	21 740	29 435	28 407
Zirconium						
Concentrates	tonnes	529	416	625	443	550

Note(s):-
(a) Including alloys
(b) Including anthracite

Spain

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	118 746 034	113 947 729	125 299 480	...	...
Crushed rock	tonnes	254 100 000	273 555 490	340 000 000	(a) 485 000 000	(a) 500 000 000
Alumina	tonnes (Al_2O_3 content)	1 380 000	*1 400 000	*1 400 000	*1 400 000	1 450 000
Primary aluminium	tonnes	389 100	397 500	395 000	367 400	405 100
Barytes	tonnes	44 660	40 776	42 792	45 001	20 000
Bentonite and fuller's earth						
Bentonite	tonnes	103 174	156 760	163 290	154 746	156 875
Attapulgite	tonnes	18 975	20 796	20 565	20 933	24 284
Sepiolite	tonnes	548 728	655 346	807 820	806 345	700 000
Bromine	kilograms	*100 000	*100 000	*100 000	*100 000	*100 000
Cement, finished	tonnes	44 746 757	46 595 560	50 300 000	54 032 770	...
Coal						
Anthracite	tonnes	3 857 364	3 692 220	3 888 838	3 775 504	3 484 305
Bituminous	tonnes	5 547 150	5 220 407	4 664 589	4 572 350	4 384 603
Sub-bituminous	tonnes	3 182 572	3 426 001	3 354 014	3 221 083	3 130 758
Lignite	tonnes	7 977 546	8 146 908	7 587 113	6 859 641	6 179 954
Copper, mine	tonnes (metal content)	635	1 308	7 358	8 700	6 281
Copper, smelter	tonnes	290 282	224 249	284 215	263 662	256 300
Copper, refined	tonnes	293 495	228 466	313 105	299 146	308 100
Diatomite (b)	tonnes	57 934	33 799	44 335	52 123	45 000
Feldspar	tonnes	563 580	552 507	650 061	696 912	700 000
Fluorspar	tonnes	139 266	145 694	144 126	144 845	137 310
Gold, mine	kilograms (metal content)	5 417	5 248	2 145	1 565	—
Gypsum	tonnes	11 366 375	12 533 972	14 453 053	14 596 559	14 000 000
Iron ore	tonnes	571	10 879	—	—	—
Pig iron	tonnes	3 645 000	4 036 000	4 160 000	3 432 000	4 400 000
Crude steel	tonnes	16 407 000	17 700 000	17 825 000	18 391 000	18 998 000
Ferro-alloys						
Ferro-manganese	tonnes	*35 000	*35 000	*35 000	*35 000	*35 000
Ferro-silico-manganese	tonnes	*100 000	*100 000	*100 000	*100 000	*100 000
Ferro-silicon	tonnes	*60 000	*60 000	*60 000	*60 000	*60 000
Silicon metal	tonnes	*25 000	*25 000	*25 000	*25 000	*25 000
Kaolin (c)	tonnes	427 193	437 990	463 398	476 327	475 000
Lead, mine	tonnes (metal content)	1 765	—	—	—	—
Lead, refined	tonnes	99 100	105 600	110 000	129 000	136 000
Lithium minerals						
Lepidolite	tonnes	6 333	3 226	6 751	8 339	9 000
Magnesite	tonnes	517 030	567 504	556 129	520 646	463 850
Mercury	kilograms	745 260	—	—	—	—
Mica (d)	tonnes	11 800	7 825	4 043	4 496	4 300
Nickel, mine	tonnes (metal content)	—	—	5 380	6 398	6 630
Crude petroleum	tonnes	329 171	262 707	166 014	143 432	143 123
Natural gas	million m^3	268	370	174	118	42
Potash						
Chloride	tonnes (K_2O content)	505 527	553 210	494 594	493 189	530 700
Salt						
Rock salt	tonnes	2 562 832	2 656 904	2 909 526	2 809 046	2 800 000
Sea salt	tonnes	1 327 108	1 227 625	1 368 960	1 506 343	1 450 000
Other salt	tonnes	97 730	108 733	121 461	115 826	110 000
Silver, mine	kilograms (metal content)	2 173	3 583	5 227	2 369	—
Strontium minerals	tonnes	152 383	206 001	336 630	280 195	142 512
Sulphur and pyrites						
Recovered (e)	tonnes (sulphur content)	560 000	488 000	541 000	547 000	543 000
Recovered (f)	tonnes (sulphur content)	145 000	145 000	*150 000	*150 000	*150 000
Talc						
Talc	tonnes	101 739	107 829	90 589	83 502	85 000
Pyrophyllite	tonnes	900	700	700	—	—

Production continued

Commodity	Units	2003	2004	2005	2006	2007
Wollastonite	tonnes	...	...	30 000	30 000	30 000
Zinc, mine	tonnes (metal content)	15 140	—	—	—	—
Slab zinc	tonnes	519 000	525 000	501 400	507 300	494 100

Note(s):-
(1) Spain is believed to produce arsenic

(a) Includes sand and gravel
(b) Including tripoli
(c) Washed
(d) Including mica recovered from mica schists and/or kaolin beneficiation
(e) From metal sulphide processing
(f) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	1 647 138	1 694 285	1 546 315	2 489 305	2 042 075
Aluminium and bauxite						
Bauxite	tonnes	2 521	4 159	3 821	3 647	6 057
Alumina	tonnes	369 353	491 808	561 125	511 992	539 739
Alumina hydrate	tonnes	214 263	241 910	264 829	258 854	199 679
Unwrought	tonnes	915	1 024	3 002	8 245	15 999
Unwrought alloys	tonnes	87 356	102 146	111 992	128 262	125 008
Scrap	tonnes	41 646	35 021	36 688	41 923	34 520
Antimony						
Metal	tonnes	41	409	13	21	17
Oxide	tonnes	622	706	859	2 031	246
Barytes	tonnes	37 141	33 930	27 389	27 743	31 693
Bentonite and fuller's earth						
Bentonite	tonnes	74 277	80 410	75 450	73 767	72 278
Sepiolite	tonnes	507 584	501 988	506 019	464 939	481 589
Fuller's earth	tonnes	12 417	11 362	9 828	7 896	...
Bismuth						
Metal	tonnes	10	2	9	118	32
Bromine	kilograms	479	291	1 000	192 339	418 531
Cement						
Cement clinkers	tonnes	18 350	9 491	13 259	28 809	37 343
Portland cement	tonnes	1 585 078	1 681 953	1 713 572	1 386 652	1 358 857
Other cement	tonnes	100 272	59 696	51 340	43 262	46 348
Chromium						
Ores & concentrates	tonnes	947	2 113	1 314	1 908	1 529
Metal	tonnes	1 126	905	709	990	779
Coal						
Anthracite	tonnes	47 185	48 710	49 563	74 826	101 968
Other coal	tonnes	7 904	14 624	8 208	135 401	872 269
Cobalt						
Metal	tonnes	14	35	7	22	12
Oxides	tonnes	8	33	59	30	56
Copper						
Ores & concentrates	tonnes	2 682	4 327	14 434	5 835	905
Unwrought, unrefined	tonnes	37 437	50 901	62 269	45 906	37 210
Unwrought, refined	tonnes	46 677	32 366	44 365	38 205	48 288
Unwrought alloys	tonnes	9 747	11 724	9 810	10 590	12 679
Scrap	tonnes	62 879	77 850	99 600	84 570	88 429
Diamond						
Unsorted	carats	£515 000	£792 000	£673 000	£531 000	£346 000
Gem, cut	carats	£2 606 000	£1 855 000	£5 275 000	£61 119 000	£8 478 000
Industrial	carats	£245 000	£212 000	£325 000	£331 000	£208 000
Dust	carats	...	...	1 607 384	210 000	254 600
Diatomite	tonnes	5 385	5 278	6 694	6 118	6 399
Feldspar	tonnes	65 385	71 993	66 427	77 348	74 461
Fluorspar	tonnes	1 745	2 221	4 434	10 518	29 117

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Gold						
Metal	kilograms	4 793	6 490	3 520	3 679	23 667
Waste & scrap	kilograms	784	2 908	38	2 636	92
Graphite	tonnes	9 288	27 634	11 972	6 356	8 728
Gypsum						
Crude	tonnes	2 732 211	2 820 367	3 228 806	3 568 327	3 335 273
Calcined	tonnes	473 180	470 437	391 274	306 791	274 781
Iodine	kilograms	27 811	31 156	21 089	7 356	7 689
Iron ore						
Burnt pyrites	tonnes	105 203	171 292	230 985	90 432	69 590
Iron, steel and ferro-alloys						
Pig iron	tonnes	2 751	3 258	12 709	4 202	12 491
Sponge & powder	tonnes	4 447	4 914	4 397	4 030	6 404
Ferro-chrome	tonnes	369	551	775	1 024	2 461
Ferro-manganese	tonnes	62 260	82 733	101 850	91 018	71 345
Ferro-silico-manganese	tonnes	44 214	40 130	42 916	32 806	33 636
Ferro-molybdenum	tonnes	342	60	331	317	70
Ferro-silicon	tonnes	13 140	19 332	11 843	7 759	18 323
Other ferro-alloys	tonnes	891	558	992	493	1 170
Silicon metal	tonnes	11 035	13 254	16 742	16 566	16 175
Ingots, blooms, billets	tonnes	182 247	130 079	118 414	114 897	91 085
Scrap	tonnes	103 413	205 298	140 200	137 273	162 371
Kaolin	tonnes	172 414	154 667	192 735	213 955	199 541
Lead						
Ores & concentrates	tonnes	5 057	6 057	2	29	130
Unwrought	tonnes	6 219	8 301	9 805	7 830	9 242
Scrap	tonnes	7 028	6 399	9 128	6 460	7 023
Lithium						
Carbonate	tonnes	373	3 157	1 123	554	192
Magnesite and magnesia						
Magnesite	tonnes	23 640	25 557	901	19 635	607
Magnesia	tonnes	158 844	185 811	189 005	179 046	185 364
Manganese						
Ores & concentrates	tonnes	855	989	776	1 336	1 299
Metal	tonnes	4 791	6 117	6 651	5 827	5 783
Mercury	kilograms	836 784	596 739	581 653	463 954	779 110
Mica	tonnes	3 996	3 075	2 591	4 457	3 562
Nickel						
Ores & concentrates	tonnes	...	...	85 203	95 377	65 853
Unwrought (a)	tonnes	126	177	572	795	767
Scrap	tonnes	420	363	528	910	227
Crude petroleum (b)	tonnes	*25 000	*3 000	*28 000	*53 000	*201
Phosphates	tonnes	12	7	42	7 259	7 840
Platinum metals						
Platinum and platinum metals	kilograms	104	1 054	152	363	434
Waste & scrap	kilograms	7 479	1 893	2 892	290	44
Potash						
Sulphate	tonnes	11 628	3 958	2 832	1 245	1 795
Chloride	tonnes	502 348	675 140	514 042	201 242	163 891
Rare earths						
Cerium compounds	tonnes	30	12	17	45	63
Other rare earth compounds	tonnes	3	80	20	18	2
Ferro-cerium & other pyrophoric alloys	tonnes	1	2	3	1	...
Salt	tonnes	695 177	744 750	750 180	743 390	463 791
Silver						
Ores & concentrates	kilograms	...	...	...	...	1 608
Metal	kilograms	115 059	43 448	11 665	7 915	13 637
Sulphur and pyrites						
Sulphur, crude	tonnes	29 959	45 034	32 557	(c) 76 771	(c) 77 220
Sulphur, refined	tonnes	12 746	8 704	13 133	...	...
Sulphur, sublimed & precipitated	tonnes	575	79	124	338	244
Talc	tonnes	67 748	60 832	56 493	47 142	39 689
Tin						
Unwrought (a)	tonnes	179	205	139	120	98
Scrap	tonnes	198	221	435	408	460

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Titanium						
Titanium minerals	tonnes	494	604	170	185	232
Metal	tonnes	697	483	903	2 005	1 431
Oxides	tonnes	70 052	85 867	83 905	85 307	91 583
Tungsten						
Metal	tonnes	158	141	77	59	177
Zinc						
Ores & concentrates	tonnes	33 913	37 986	67 420	31 416	98 359
Unwrought	tonnes	245 702	294 548	333 966	270 233	220 002
Unwrought alloys	tonnes	75 497	54 670	32 673	87 073	66 155
Scrap	tonnes	3 561	5 125	11 981	7 946	5 295
Zirconium						
Concentrates	tonnes	13 669	10 844	9 805	9 811	11 803
Metal	tonnes	602	989	820	110	200

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known imports into certain countries
(c) Including refined

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	1 156 484	1 190 670	1 305 835	762 652	1 396 928
Aluminium and bauxite						
Bauxite	tonnes	2 781 769	3 329 441	3 224 101	3 007 043	3 547 201
Alumina	tonnes	50 403	55 184	58 627	56 961	53 579
Alumina hydrate	tonnes	14 595	30 429	43 246	49 725	49 451
Unwrought	tonnes	116 742	91 382	110 257	95 436	122 303
Unwrought alloys	tonnes	166 538	235 123	223 627	303 607	328 314
Scrap	tonnes	66 466	86 553	99 459	103 839	123 074
Antimony						
Ores & concentrates	tonnes	153	105	108	175	164
Metal	tonnes	1 516	2 270	1 881	1 596	1 676
Oxide	tonnes	519	5 656	808	984	1 146
Arsenic						
Metallic arsenic	tonnes	114	92	112	143	116
Asbestos	tonnes	130	192	23	20	50
Barytes	tonnes	50 596	59 378	47 923	50 743	65 569
Bentonite and fuller’s earth						
Bentonite	tonnes	68 776	60 709	83 784	82 645	104 057
Fuller's earth	tonnes	488	271	238	159	...
Bismuth						
Metal	tonnes	188	206	179	297	190
Bromine	kilograms	122 194	73 493	53 000	82 351	77 578
Cadmium						
Metal	tonnes	23	22	2	19	...
Oxide	tonnes	29	28	53	17	22
Cement						
Cement clinkers	tonnes	5 897 219	6 266 470	7 852 531	9 108 499	10 894 888
Portland cement	tonnes	2 606 300	2 549 086	2 845 856	2 771 668	2 929 208
Other cement	tonnes	54 726	21 527	20 031	40 164	74 401
Chromium						
Ores & concentrates	tonnes	5 799	3 947	10 262	5 906	6 437
Metal	tonnes	921	1 519	1 308	1 830	1 483
Coal						
Anthracite	tonnes	2 015 985	2 376 019	2 534 019	2 508 261	1 019 341
Other coal	tonnes	19 537 014	22 098 156	22 222 316	21 196 872	23 420 766
Cobalt						
Metal	tonnes	171	181	158	180	121
Oxides	tonnes	1 401	1 249	1 352	1 254	1 187

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Copper						
Ores & concentrates	tonnes	1 052 115	776 980	1 040 099	1 100 338	1 001 284
Unwrought, unrefined	tonnes	15 283	2 488	312	2 631	1 032
Unwrought, refined	tonnes	33 781	74 277	69 039	62 982	56 237
Unwrought alloys	tonnes	4 444	5 254	4 458	5 898	5 417
Scrap	tonnes	57 315	112 934	84 824	89 252	56 754
Diamond						
Unsorted	carats	£4 602 000	£5 431 000	£6 908 000	£4 616 000	£3 668 000
Gem, cut	carats	£25 111 000	£41 732 000	£37 408 000	£47 084 000	£57 941 000
Industrial	carats	£1 809 000	£1 412 000	£1 421 000	£2 701 000	£1 396 000
Dust	carats	5 545 000	...	8 490 229	...	67 062 395
Diatomite	tonnes	10 575	7 004	5 186	7 281	9 447
Feldspar	tonnes	760 473	955 039	1 231 861	1 422 514	1 407 350
Fluorspar	tonnes	8 538	15 006	8 575	29 134	21 430
Gold						
Metal	kilograms	27 662	29 702	20 594	15 072	6 641
Waste & scrap	kilograms	411	5 018	139	233	2 352
Graphite	tonnes	7 363	9 402	8 334	10 143	15 582
Gypsum						
Crude	tonnes	65 152	43 004	47 585	59 656	53 028
Calcined	tonnes	142 719	14 462	32 078	20 440	14 129
Iodine	kilograms	784 718	710 814	781 787	790 641	582 029
Iron ore	tonnes	5 765 648	6 118 975	6 248 366	5 511 245	5 719 061
Iron, steel and ferro-alloys						
Pig iron	tonnes	434 682	593 588	806 327	793 050	652 786
Sponge & powder	tonnes	593 176	670 063	516 423	641 804	611 893
Ferro-chrome	tonnes	579 714	221 156	200 543	253 172	1 123 216
Ferro-silico-magnesium	tonnes	3 979	6 183	5 256	2 891	7 289
Ferro-manganese	tonnes	27 846	19 817	16 489	14 406	24 599
Ferro-silico-manganese	tonnes	56 110	75 061	66 531	42 326	48 205
Ferro-molybdenum	tonnes	4 042	3 456	6 327	10 473	5 863
Ferro-nickel	tonnes	60 141	58 664	59 113	92 147	75 625
Ferro-niobium	tonnes	348	491	906	515	8 283
Ferro-phosphorus	tonnes	2 020	2 072	2 036	1 771	2 554
Ferro-silicon	tonnes	56 258	56 736	39 623	52 215	71 487
Ferro-titanium & ferro-silico-titanium	tonnes	1 017	1 212	1 880	796	1 276
Ferro-vanadium	tonnes	1 050	1 077	824	515	1 189
Other ferro-alloys	tonnes	930	3 095	6 546	4 586	82
Silicon metal	tonnes	3 677	5 660	4 160	2 837	3 640
Ingots, blooms, billets	tonnes	1 524 971	1 495 840	1 219 342	1 601 769	1 733 247
Scrap	tonnes	6 389 902	7 093 195	6 975 101	7 437 224	6 316 516
Kaolin	tonnes	999 504	1 209 303	1 366 226	1 506 142	1 571 143
Lead						
Ores & concentrates	tonnes	329	1 845	1 526	2 299	8 188
Unwrought	tonnes	129 925	154 828	174 618	147 423	157 485
Scrap	tonnes	21 943	27 866	30 499	30 625	42 629
Lithium						
Oxides	tonnes	436	329	480	573	600
Carbonate	tonnes	983	759	1 553	828	1 811
Magnesite and magnesia						
Magnesite	tonnes	3 608	2 901	2 348	3 937	4 092
Magnesia	tonnes	367 117	102 418	103 747	88 898	117 867
Manganese						
Ores & concentrates	tonnes	437 088	575 518	415 959	393 476	349 131
Metal	tonnes	10 569	9 786	10 537	9 165	9 563
Mercury	kilograms	350 266	301 097	572 872	628 737	906 297
Mica	tonnes	1 810	1 641	1 917	1 484	1 871
Molybdenum						
Ores & concentrates	tonnes	3 917	3 805	3 317	4 584	4 622
Metal	tonnes	45	30	31	163	113
Nickel						
Unwrought	tonnes	26 716	27 854	27 452	28 171	21 202
Unwrought alloys	tonnes	630	380	1 188	1 174	1 426
Oxides	tonnes	225	210	176	127	94
Crude petroleum	tonnes	57 578 507	59 343 873	59 510 408	59 203 359	57 773 847
Phosphates	tonnes	1 790 138	1 800 329	1 768 425	1 556 734	1 653 874

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Platinum metals						
Platinum and platinum metals	kilograms	1 612	1 402	13 799	1 506	2 075
Waste & scrap	kilograms	31	298	122	526	4 111
Potash						
Sulphate	tonnes	37 444	48 174	47 561	10 412	5 547
Chloride	tonnes	249 881	269 278	243 017	224 320	199 403
Other potassic fertilisers	tonnes	10 432	22 019	4 667	86	25
Rare earths						
Rare earth compounds	tonnes	548	692	824	828	835
Ferro-cerium & other pyrophoric alloys	tonnes	87	...	8	29	40
Metals	tonnes	90	84	20	84	95
Salt	tonnes	47 011	36 494	111 449	37 632	33 691
Sillimanite	tonnes	15 782	15 262	27 308	22 102	27 792
Silver						
Ores & concentrates	kilograms	59 205	54 295	59 653	56 421	58 344
Metal	kilograms	133 844	158 529	106 596	134 673	126 668
Sulphur and pyrites						
Pyrites	tonnes	667	1 012	1 542	1 478	2 585
Sulphur, crude	tonnes	210 794	220 662	182 318	(a) 133 552	(a) 152 566
Sulphur, refined	tonnes	5 936	13 582	5 778	...	...
Sulphur, sublimed & precipitated	tonnes	753	533	243	296	265
Talc	tonnes	68 760	80 626	80 726	87 578	96 298
Tantalum and niobium						
Tantalum	tonnes	30	4	62	10	112
Tin						
Concentrates	tonnes	101	160	137	29	27
Unwrought	tonnes	8 072	7 860	7 109	7 716	7 093
Unwrought alloys	tonnes	90	292	170	220	167
Scrap	tonnes	2 400	2 111	1 919	1 576	185
Titanium						
Ilmenite	tonnes	128 692	172 431	121 204	159 090	121 898
Other titanium minerals	tonnes	2 296	2 316	1 746	1 807	22 037
Titanium slag	tonnes	...	...	57	8	2 164
Metal	tonnes	2 974	3 722	3 862	5 782	3 450
Oxides	tonnes	100 814	116 397	117 203	112 778	123 132
Tungsten						
Metal	tonnes	179	259	134	556	914
Carbide	tonnes	48	59	38	35	41
Vanadium						
Pentoxide	tonnes	36	118	62	71	45
Zinc						
Ores & concentrates	tonnes	1 096 292	917 968	1 090 022	1 188 067	1 257 304
Unwrought	tonnes	7 448	3 862	8 203	7 577	21 634
Unwrought alloys	tonnes	12 477	16 601	17 858	18 933	17 411
Scrap	tonnes	4 103	4 062	3 927	4 996	6 601
Zirconium						
Concentrates	tonnes	142 949	143 860	153 619	149 710	138 442
Metal	tonnes	60	94	56	55	65

Note(s):-
(a) Including refined

Sweden

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	21 650 322	22 647 111	21 755 752	21 488 963	20 036 785
Crushed rock	tonnes	49 326 880	54 737 031	62 313 089	70 517 845	64 047 058
Primary aluminium	tonnes	100 707	100 591	102 107	101 668	99 842
Cement clinker	tonnes	2 235 138	2 385 509	2 457 245	2 660 045	*2 700 000
Cement, finished	tonnes	2 544 647	2 712 810	2 731 000	2 952 000	...
Copper, mine	tonnes (metal content)	83 143	82 415	87 068	86 746	62 905
Copper, smelter	tonnes	175 475	174 459	168 763	129 951	148 835
Copper, refined	tonnes	214 181	235 620	223 482	229 241	213 894
Feldspar	tonnes	44 000	38 000	30 000	24 000	25 000
Gold, mine	kilograms (metal content)	5 900	6 564	6 564	6 848	5 159
Iron ore	tonnes	21 498 000	22 272 000	23 255 000	23 302 000	24 714 000
Pig iron	tonnes	3 816 000	3 992 000	3 844 000	3 701 000	3 947 000
Crude steel	tonnes	5 708 500	5 978 000	5 725 600	5 466 100	5 672 900
Ferro-alloys						
Ferro-chrome	tonnes	106 100	127 300	127 500	136 400	124 400
Ferro-silicon	tonnes	17 100	18 500	9 800	4 600	4 300
Lead, mine	tonnes (metal content)	50 962	54 347	60 445	55 644	63 224
Lead, refined	tonnes	73 340	73 548	72 760	70 239	69 730
Selenium metal	tonnes	107	131	122	135	130
Silver, mine	kilograms (metal content)	340 701	319 563	309 933	292 255	323 171
Sulphur and pyrites						
Recovered (a)	tonnes (sulphur content)	180 200	185 800	180 000	180 000	177 000
Recovered (b)	tonnes (sulphur content)	62 454	62 238	59 839	68 391	66 569
Talc	tonnes	7 000	8 000	7 000	6 000	7 000
Zinc, mine	tonnes (metal content)	185 884	197 034	215 691	210 029	214 576

Note(s):-
(a) From metal sulphide processing
(b) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	2 067 542	2 213 385	2 447 200	2 333 174	2 307 614
Aluminium and bauxite						
Alumina	tonnes	1 939	6 160	14 133	14 481	14 278
Unwrought	tonnes	101	22 096	9 390	910	735
Unwrought alloys	tonnes	75 903	105 752	88 311	112 575	89 591
Scrap	tonnes	109 170	79 433	69 166	67 879	107 946
Bentonite and fuller's earth						
Bentonite	tonnes	10 082	9 486	7 419	9 539	12 240
Cadmium						
Oxide	tonnes	120	139	140	...	322
Cement						
Portland cement	tonnes	1 064 305	867 450	1 295 834	1 208 231	845 235
Other cement	tonnes	2 818	2 492	2 555	12 144	15 237
Chromium						
Metal	tonnes	...	75	55	105	102
Cobalt						
Metal	tonnes	117	127	127	110	152
Copper						
Unwrought, refined	tonnes	77 216	81 878	99 824	86 726	65 926
Unwrought alloys	tonnes	7 104	5 040	5 247	6 443	8 837
Scrap	tonnes	35 982	44 366	43 816	45 456	54 673
Diatomite	tonnes	491	492	4 423	568	3 497
Feldspar	tonnes	23 847	23 752	16 515	15 880	14 383
Fluorspar	tonnes	8 981	8 702	8 206	7 450	7 764

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Gold						
Metal	kilograms	10 000	19 000	18 000	19 000	17 800
Waste & scrap	kilograms	...	20 000	1 000	32 000	65 700
Graphite	tonnes	302	260	195	230	273
Gypsum						
Crude & calcined	tonnes	5 993	7 343	7 832	9 954	12 694
Iodine	kilograms	4 000	—	4 000	40	48
Iron ore	tonnes	15 559 741	17 336 835	17 597 351	18 409 475	19 033 842
Iron, steel and ferro-alloys						
Pig iron	tonnes	118 378	116 550	99 496	145 733	152 911
Sponge & powder	tonnes	9 311	12 306	9 064	15 238	26 666
Ferro-chrome	tonnes	1 070	1 830	1 801	1 973	2 247
Ferro-silico-magnesium	tonnes	479	235	60	739	1 260
Ferro-manganese & ferro-silico-manganese	tonnes	1 159	1 605	3 456	2 584	3 859
Ferro-molybdenum	tonnes	71	87	158	157	304
Ferro-phosphorus	tonnes	463	281	294	706	1 128
Ferro-silicon	tonnes	182	441	731	1 968	2 892
Ferro-vanadium	tonnes	27	99	249	61	135
Other ferro-alloys	tonnes	585	2 280	1 171	1 289	216
Silicon metal	tonnes	2 790	6 387	6 049	2 321	1 474
Ingots, blooms, billets	tonnes	166 876	367 562	232 958	116 880	134 568
Scrap	tonnes	708 654	741 254	863 474	847 179	1 069 335
Kaolin	tonnes	8 791	15 544	18 473	15 735	18 229
Lead						
Ores & concentrates	tonnes	59 340	60 105	62 155	50 854	56 581
Unwrought	tonnes	71 217	68 215	70 042	76 777	65 733
Scrap	tonnes	237	554	307	703	734
Magnesite and magnesia						
Magnesia	tonnes	657	1 431	1 421	2 277	1 593
Manganese						
Metal	tonnes	352	196	143	176	131
Nickel						
Unwrought	tonnes	384	(a) 133	112	514	(a) 390
Scrap	tonnes	1 096	1 138	4 369	5 743	5 344
Oxides	tonnes	181	317	291	349	457
Phosphates	tonnes	51	5	392	969	1 623
Platinum metals						
Platinum and platinum metals	kilograms	£280 000	£1 037 000	£663 000	£1 514 000	£900 000
Waste & scrap	kilograms	27 000	29 000	25 000	280 000	242 500
Potash						
Sulphate	tonnes	127 687	70 066	54 841	10 191	84 414
Salt	tonnes	156 140	10 354	8 783	9 357	12 601
Silver						
Ores & concentrates	kilograms	...	...	...	...	59 400
Metal	kilograms	433 000	473 000	421 000	368 000	364 500
Sulphur and pyrites						
Sulphur	tonnes	9 572	4 542	16 883	12 071	5 168
Sulphur, sublimed & precipitated	tonnes	0	139	239	5 719	10 959
Talc	tonnes	8 061	9 388	10 080	7 556	9 415
Tin						
Unwrought (a)	tonnes	238	261	217	250	201
Scrap	tonnes	88	161	45	43	161
Titanium						
Metal	tonnes	1 004	1 737	1 955	1 461	2 667
Oxides	tonnes	11 713	13 912	14 306	20 409	17 047
Tungsten						
Ores & concentrates	tonnes	75	...	62	...	3 192
Metal	tonnes	334	102	414	296	234
Carbide	tonnes	68	114	37	491	446

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Zinc						
Ores & concentrates	tonnes	305 058	379 155	372 925	402 219	405 682
Unwrought (a)	tonnes	496	280	165	1 143	103
Scrap	tonnes	42 715	21 598	16 134	29 015	2 777

Note(s):-
(a) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	615 470	729 992	810 385	1 135 048	1 068 840
Aluminium and bauxite						
Bauxite	tonnes	3 317	28 758	3 171	2 846	30 099
Alumina	tonnes	196 834	205 734	191 504	201 496	43 101
Alumina hydrate	tonnes	54 825	66 156	62 549	56 535	94 218
Unwrought	tonnes	21 584	29 493	17 916	7 959	46 431
Unwrought alloys	tonnes	97 276	120 732	117 202	135 270	159 628
Scrap	tonnes	16 255	24 082	24 309	32 198	36 838
Antimony						
Metal	tonnes	269	234	199	337	546
Oxide	tonnes	232	328	377	296	319
Arsenic						
Metallic arsenic	tonnes	17	13	6	...	12
Barytes	tonnes	1 848	2 854	4 610	4 876	6 504
Bentonite and fuller's earth						
Bentonite	tonnes	140 176	82 414	48 564	125 491	184 313
Bismuth						
Metal	tonnes	8	13	11	8	5
Bromine	kilograms	0	5 000	13 000	9 000	2 800
Cadmium						
Metal	tonnes	402	330	282	388	491
Oxide	tonnes	26	71	35	...	25
Cement						
Cement clinkers	tonnes	1 399	24 491	14 601	13 238	29 344
Portland cement	tonnes	209 882	218 928	242 326	249 670	55 784
Other cement	tonnes	27 286	27 286	34 597	41 176	52 359
Chromium						
Ores & concentrates	tonnes	215 000	457 000	240 000	315 000	350 000
Metal	tonnes	823	1 903	1 150	1 639	2 145
Coal						
Anthracite	tonnes	99 008	7 304	13 013	28 506	25 832
Other coal	tonnes	3 081 407	3 059 218	3 187 798	3 003 919	3 154 331
Briquettes	tonnes	8 768	4 335	8 443	27 164	287
Cobalt						
Metal	tonnes	663	711	660	743	676
Copper						
Ores & concentrates	tonnes	300 566	340 858	311 085	267 753	420 050
Unwrought, unrefined	tonnes	3	2	15 452	35 496	10 495
Unwrought, refined	tonnes	48 468	34 912	40 106	41 036	31 535
Unwrought alloys	tonnes	2 947	2 762	2 926	3 944	5 867
Scrap	tonnes	52 091	76 672	50 940	54 483	81 015
Diamond						
Unsorted	carats	4 313	22 911	433	3 153	195
Gem, cut	carats	£3 456 000	£3 205 000	£2 406 000	£2 306 000	...
Industrial	carats	27 567	207 247	198 724	188 546	225 737
Dust	carats	£2 374 000	£2 823 000	£2 573 000	£2 259 000	£2 548 000
Diatomite	tonnes	4 143	5 475	5 096	6 095	6 976
Feldspar	tonnes	5 960	7 019	9 387	4 029	6 021
Fluorspar	tonnes	19 117	14 640	15 790	16 176	12 089

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Gold						
Metal	kilograms	£8 382 000	£8 498 000	£8 625 000	£10 124 000	£18 299 000
Waste & scrap	kilograms	—	...	£180 000	£7 000	£112 000
Graphite	tonnes	1 428	1 473	1 539	1 252	1 592
Gypsum						
Crude	tonnes	269 711	269 060	206 972	263 582	244 986
Calcined	tonnes	103 481	160 784	97 746	166 829	146 638
Iodine	kilograms	5 000	1 000	2 000	2 000	5 000
Iron ore						
Iron ore	tonnes	110 920	102 101	100 072	82 203	69 911
Burnt pyrites	tonnes	29 658	36 351	6 095	0	26
Iron, steel and ferro-alloys						
Pig iron	tonnes	24 894	29 369	38 223	43 492	59 661
Sponge & powder	tonnes	2 746	3 074	2 091	7 346	16 799
Ferro-chrome	tonnes	85 830	72 926	86 040	86 160	125 057
Ferro-silico-chrome	tonnes	1 094	2 521	2 030	1 370	3 104
Ferro-silico-magnesium	tonnes	1 060	932	914	763	5 986
Ferro-manganese	tonnes	37 190	32 782	43 005	49 295	75 409
Ferro-silico-manganese	tonnes	19 493	17 887	18 995	20 566	17 085
Ferro-molybdenum	tonnes	3 797	4 369	5 364	4 976	4 377
Ferro-nickel	tonnes	8 738	948	7 431	8 076	9 162
Ferro-niobium	tonnes	732	809	1 156	1 504	1 242
Ferro-phosphorus	tonnes	739	920	314	433	1 331
Ferro-silicon	tonnes	41 098	38 534	48 950	37 095	42 315
Ferro-titanium & ferro-silico-titanium	tonnes	1 405	1 627	3 212	1 681	691
Ferro-tungsten & ferro-silico-tungsten	tonnes	321	564	195	119	105
Ferro-vanadium	tonnes	1 059	1 375	1 316	1 202	1 005
Other ferro-alloys	tonnes	2 720	4 682	4 660	5 097	...
Silicon metal	tonnes	6 316	10 542	10 832	7 531	6 756
Ingots, blooms, billets	tonnes	495 734	491 102	294 616	108 821	137 032
Scrap	tonnes	351 024	271 041	254 358	279 956	242 167
Kaolin	tonnes	467 111	452 215	480 358	451 919	448 129
Lead						
Ores & concentrates	tonnes	19 693	26 142	5 085	10 476	—
Unwrought	tonnes	4 190	6 088	6 098	17 679	6 554
Scrap	tonnes	2 463	4 062	3 538	3 101	3 771
Lithium						
Oxides	tonnes	113	162	176	186	107
Carbonate	tonnes	186	208	259	215	236
Magnesite and magnesia						
Magnesia	tonnes	28 074	29 455	21 293	24 610	17 556
Manganese						
Ores & concentrates	tonnes	91	62	119	72	130
Metal	tonnes	3 618	2 641	2 632	2 380	3 012
Mercury	kilograms	3 022	4 000	3 000	6 000	10 600
Mica	tonnes	566	514	592	515	584
Molybdenum						
Ores & concentrates	tonnes	5 235	5 826	5 690	6 863	7 003
Metal	tonnes	252	458	280	139	281
Oxides	tonnes	784	594	392	1 133	780
Nickel						
Mattes, sinters etc.	tonnes	4 032	4 051	4 346	4 215	4 252
Unwrought	tonnes	25 423	27 687	26 931	28 101	25 303
Unwrought alloys	tonnes	857	1 076	1 324	1 414	356
Scrap	tonnes	12 543	10 523	8 946	9 158	9 118
Crude petroleum	tonnes	20 436 192	20 873 087	19 770 639	19 170 472	17 719 046
Phosphates	tonnes	18 346	129	156	4 275	280
Platinum metals						
Platinum and platinum metals	kilograms	£6 531 000	£4 985 000	£6 513 000	£4 509 000	£6 109 000
Waste & scrap	kilograms	339 000	273 000	577 000	618 000	731 700
Potash						
Sulphate	tonnes	884	2 819	4 911	10 191	1 004
Chloride	tonnes	33 748	68 457	43 106	44 941	27 470
Other potassic fertilisers	tonnes	9 862	4 409	1 119	4 109	4 886

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Rare earths						
Rare earth compounds	tonnes	75	58	26	20	56
Metals	tonnes	48	56	41	37	74
Salt	tonnes	828 845	929 193	738 931	1 054 982	744 328
Sillimanite	tonnes	14 155	5 470	5 086	5 568	6 381
Silver						
Ores & concentrates	kilograms	...	...	15 000	...	21 000
Metal	kilograms	111 000	161 000	151 000	137 000	162 900
Sulphur and pyrites						
Pyrites	tonnes	291	699	319	557	750
Sulphur	tonnes	89 505	61 305	71 337	82 246	94 449
Sulphur, sublimed & precipitated	tonnes	5 632	2 693	16	23	4
Talc	tonnes	45 509	43 288	45 376	44 669	48 746
Tin						
Unwrought	tonnes	421	468	551	697	623
Unwrought alloys	tonnes	379	256	210	141	97
Scrap	tonnes	71	39	60	37	14
Titanium						
Titanium minerals	tonnes	320	389	300	911	1 032
Metal	tonnes	1 707	1 856	1 382	2 294	2 623
Oxides	tonnes	44 721	44 812	50 099	62 841	65 872
Tungsten						
Metal	tonnes	470	559	502	563	546
Carbide	tonnes	665	747	925	738	876
Vanadium						
Metal	tonnes	49	46	20	40	...
Zinc						
Unwrought	tonnes	22 320	29 682	29 847	25 763	21 570
Unwrought alloys	tonnes	13 496	18 009	16 812	20 325	22 600
Zirconium						
Concentrates	tonnes	480	564	588	750	825
Metal	tonnes	172	82	91	134	219

Switzerland

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	...	26 000 000	46 500 000	50 000 000	...
Crushed rock	tonnes	...	3 000 000	5 300 000	5 700 000	...
Primary aluminium	tonnes	43 865	44 879	44 800	12 000	—
Cement, finished	tonnes	3 613 000	3 851 000	4 022 000	4 040 000	...
Gypsum	tonnes	*300 000	*300 000	*300 000	*300 000	*300 000
Pig iron	tonnes	*80 000	*80 000	*80 000	*80 000	*80 000
Crude steel	tonnes	*1 000 000	*1 000 000	1 158 000	1 252 000	1 264 000
Lead, refined	tonnes	9 600	9 300	9 600	*9 600	*9 000
Salt	tonnes	461 000	486 000	539 000	525 000	341 000

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	184 678	296 911	283 508	273 603	486 288
Aluminium and bauxite						
Unwrought (a)	tonnes	775	8 180	14 499	21 257	22 645
Scrap	tonnes	96 860	108 536	122 729	140 657	139 599
Asbestos	tonnes	0	0	0	0	290
Cement						
Cement clinkers	tonnes	106 617	106 263	121 014	103 367	114 075
Portland cement	tonnes	14 396	33 524	46 939	23 437	13 704
Other cement	tonnes	1 121	2 046	2 692	988	4 014
Chromium						
Metal	tonnes	66	319	249	530	74
Cobalt						
Metal	tonnes	104	95	140	105	94
Copper						
Unwrought	tonnes	1 163	1 872	10 691	1 036	1 002
Scrap	tonnes	56 398	69 243	74 878	74 079	75 542
Diamond						
Gem, rough	carats	74 141	139 400	195 614	119 619	4 360
Gem, cut	carats	427 033	338 524	500 591	543 079	559 591
Industrial	carats	66 354	18 185	13 934	76 604	12 100
Dust	carats	95 290 000	120 790 000	126 190 000	128 180 000	40 985 000
Gold						
Metal	kilograms	885 907	1 125 319	1 340 948	965 959	1 105 367
Waste & scrap	kilograms	14 039	55 166	2 823	2 802	102 745
Graphite	tonnes	745	335	326	225	384
Gypsum						
Calcined	tonnes	1 680	1 002	1 088	1 144	2 732
Iodine	kilograms	1 116	5 228	4 179	1 342	1 205
Iron, steel and ferro-alloys						
Sponge & powder	tonnes	1 247	1 679	2 222	2 233	2 537
Ferro-alloys	tonnes	907	1 261	867	616	653
Ingots, blooms, billets	tonnes	51 008	51 639	83 219	88 289	104 433
Scrap	tonnes	451 452	539 629	561 972	582 567	585 342
Kaolin	tonnes	69	408	246	433	786
Lead						
Unwrought	tonnes	7 086	5 407	4 657	7 966	7 383
Scrap	tonnes	2 267	1 320	2 932	3 124	4 860
Lithium						
Oxides	tonnes	78	80	78	69	75
Mercury	kilograms	7 793	316 631	171 790	87 136	140 336
Nickel						
Unwrought (a)	tonnes	125	49	73	154	113
Scrap	tonnes	880	1 106	1 403	1 669	1 750

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Platinum metals						
Platinum	kilograms	67 305	57 268	42 102	62 243	57 569
Palladium	kilograms	47 110	61 960	75 105	46 578	52 880
Other platinum metals	kilograms	203	1 703	2 047	292	636
Waste & scrap	kilograms	85 301	118 241	235 630	200 470	393 326
Salt	tonnes	52 482	41 044	30 461	62 318	55 916
Silver						
Metal	kilograms	1 544 676	1 085 657	1 044 080	930 397	1 201 402
Talc	tonnes	1 777	72	105	73	133
Tantalum and niobium						
Tantalum	tonnes	8	14	27	17	14
Tin						
Unwrought (a)	tonnes	112	72	29	160	112
Scrap	tonnes	73	107	157	130	123
Titanium						
Metal	tonnes	398	562	560	692	868
Oxides	tonnes	499	740	1 020	1 024	1 133
Tungsten						
Metal	tonnes	244	268	316	270	392
Zinc						
Scrap	tonnes	2 415	2 582	2 480	2 856	2 408

Note(s):-
(a) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	6 134 548	6 413 474	6 261 007	6 700 038	7 371 907
Aluminium and bauxite						
Bauxite	tonnes	5 881	8 066	9 929	5 901	5 850
Alumina	tonnes	93 357	87 235	88 358	21 431	10 745
Alumina hydrate	tonnes	15 340	16 945	16 823	18 333	17 875
Unwrought	tonnes	60 791	73 413	75 987	111 780	136 214
Unwrought alloys	tonnes	64 351	59 125	56 059	79 666	78 916
Scrap	tonnes	11 327	20 734	27 617	26 711	32 716
Antimony						
Ores & concentrates	tonnes	89	5 004	1 722	201	38
Metal	tonnes	50	93	58	56	57
Oxide	tonnes	927	1 174	1 026	1 141	1 461
Arsenic						
Metallic arsenic	tonnes	4	2	5	2	5
Barytes	tonnes	2 433	2 187	2 242	2 433	2 843
Bentonite and fuller’s earth						
Bentonite	tonnes	20 540	20 027	20 861	24 407	21 334
Fuller's earth	tonnes	1 541	1 641	1 844	916	...
Bismuth						
Metal	tonnes	15	6	15	6	8
Cadmium						
Metal	tonnes	4	30	5	7	3
Cement						
Cement clinkers	tonnes	47 050	64 882	71 542	115 001	15 292
Portland cement	tonnes	319 539	313 292	352 409	380 862	348 262
Other cement	tonnes	41 949	58 671	48 309	49 317	37 522
Chromium						
Ores & concentrates	tonnes	716	671	624	1 080	1 339
Metal	tonnes	110	141	127	162	114
Coal						
Anthracite	tonnes	6 146	7 396	6 640	7 978	9 539
Other coal	tonnes	79 125	169 472	93 584	143 425	214 684
Lignite	tonnes	24	455	34 897	86 762	84 654

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Cobalt						
Metal	tonnes	291	361	423	408	454
Copper						
Unwrought	tonnes	5 206	6 779	4 734	4 843	5 960
Unwrought alloys	tonnes	3 496	4 481	3 897	4 695	4 089
Scrap	tonnes	9 469	11 881	9 937	7 641	7 995
Diamond						
Gem, rough	carats	80 344	144 707	195 180	118 710	8 634
Gem, cut	carats	642 870	820 021	1 182 706	1 112 264	1 209 708
Industrial	carats	213 535	56 907	100 142	63 939	39 174
Dust	carats	103 005 000	126 815 000	142 000 000	127 740 000	59 930 000
Diatomite	tonnes	5 425	11 204	3 291	3 157	4 636
Feldspar	tonnes	7 229	8 347	7 977	6 219	8 056
Fluorspar	tonnes	413	991	714	704	533
Gold						
Metal	kilograms	1 218 361	1 048 386	1 655 691	1 498 693	1 667 153
Waste & scrap	kilograms	32 454	52 053	72 764	104 957	57 001
Graphite	tonnes	863	395	652	722	966
Gypsum						
Crude	tonnes	50 760	64 677	76 460	87 964	93 365
Calcined	tonnes	75 394	81 971	88 511	92 787	95 000
Iodine	kilograms	27 226	7 428	7 949	11 133	18 136
Iron ore						
Iron ore	tonnes	7 342	1 377	8 852	9 843	7 800
Burnt pyrites	tonnes	9 157	4 283	6 293	6 176	7 826
Iron, steel and ferro-alloys						
Pig iron	tonnes	22 120	22 954	24 628	24 497	28 095
Sponge & powder	tonnes	6 792	7 631	9 035	8 900	9 685
Ferro-chrome	tonnes	1 504	1 161	1 203	1 306	1 834
Ferro-manganese	tonnes	7 406	7 884	9 033	10 423	9 922
Ferro-silico-manganese	tonnes	4 444	6 481	4 341	3 717	5 992
Ferro-silicon	tonnes	5 417	5 194	4 630	7 122	5 287
Other ferro-alloys	tonnes	1 070	1 203	1 602	1 435	719
Silicon metal	tonnes	716	694	1 135	1 164	1 508
Ingots, blooms, billets	tonnes	17 132	20 896	38 694	47 524	50 301
Scrap	tonnes	412 584	544 911	390 607	499 914	475 542
Kaolin	tonnes	45 012	41 350	37 368	41 481	45 629
Lead						
Unwrought	tonnes	6 047	7 831	8 067	9 185	7 087
Lithium						
Oxides	tonnes	89	89	81	112	142
Magnesite and magnesia						
Magnesite	tonnes	225	294	168	394	1 024
Magnesia	tonnes	5 744	6 538	6 708	7 506	7 144
Manganese						
Metal	tonnes	501	484	486	444	778
Mercury	kilograms	9 354	9 704	5 846	5 333	6 687
Mica	tonnes	357	426	601	1 151	3 021
Molybdenum						
Metal	tonnes	26	25	31	21	20
Nickel						
Unwrought (a)	tonnes	1 392	1 333	1 401	1 706	1 787
Crude petroleum	tonnes	4 551 511	5 086 184	4 744 965	5 413 010	4 595 181
Platinum metals						
Platinum	kilograms	69 111	47 742	51 377	76 842	43 113
Palladium	kilograms	54 805	96 530	46 565	126 416	46 744
Other platinum metals	kilograms	816	3 725	780	1 078	913
Waste & scrap	kilograms	129 698	161 433	156 229	172 679	267 258
Potash						
Sulphate	tonnes	2 621	2 170	3 325	4 215	5 259
Chloride	tonnes	15 792	19 185	18 971	18 811	19 279
Other potassic fertilisers	tonnes	3 721	3 039	3 411	2 555	2 504
Rare earths						
Rare earth compounds	tonnes	30	29	34	38	34
Salt	tonnes	13 984	9 299	48 114	19 300	8 913
Sillimanite	tonnes	253	315	413	463	1 035

Switzerland

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Silver						
Ores & concentrates (b)	kilograms	*462 800	*141 000	*309 400	*792 000	*39 800
Metal	kilograms	746 184	1 082 664	1 484 207	1 306 866	754 108
Sulphur and pyrites						
Pyrites	tonnes	207	117	76	69	51
Sulphur	tonnes	25 968	24 940	24 977	19 369	20 982
Sulphur, sublimed & precipitated	tonnes	193	120	61	50	5
Talc	tonnes	11 490	9 579	10 254	10 786	10 360
Tin						
Unwrought (a)	tonnes	803	726	909	1 042	1 241
Titanium						
Metal	tonnes	535	735	1 273	1 357	1 352
Oxides	tonnes	18 689	19 349	19 055	18 805	20 455
Tungsten						
Metal	tonnes	139	170	235	146	257
Zinc						
Unwrought	tonnes	11 730	14 577	13 045	12 189	14 473
Unwrought alloys	tonnes	3 798	3 194	2 601	2 214	2 700
Zirconium						
Metal	tonnes	85	86	117	29	29

Note(s):-
(a) Including alloys
(b) BGS estimates, based on known exports from certain countries

Turkey

Production

Commodity	Units	2003	2004	2005	2006	2007
Bauxite	tonnes	364 306	365 836	356 480	771 227	863 404
Alumina	tonnes (Al_2O_3 content)	160 675	169 991	112 558	150 117	163 435
Primary aluminium	tonnes	63 140	64 002	59 000	60 000	63 400
Antimony, mine	tonnes (metal content)	*400	*700	*1 200	*1 200	*1 500
Barytes	tonnes	119 648	134 504	157 200	160 000	150 000
Bentonite and fuller's earth						
Bentonite	tonnes	831 146	643 153	582 735	*400 000	*400 000
Sepiolite	tonnes	*10 000	*10 000	*10 000	*10 000	*10 000
Borates	tonnes	1 324 000	1 727 000	2 087 000	2 373 345	*2 400 000
Cement clinker	tonnes	...	...	31 355 180	32 824 687	38 847 522
Cement, finished	tonnes	35 076 902	38 019 112	41 100 274	47 906 365	51 160 935
Chromium ores and concentrates	tonnes	229 294	506 421	858 729	1 059 901	1 678 932
Coal						
Anthracite	tonnes	3 090 458	2 842 952	2 785 505	3 070 793	2 702 331
Bituminous	tonnes	336 714	738 915	737 701	*740 000	...
Lignite	tonnes	43 749 420	43 754 159	60 867 574	61 010 000	58 421 000
Copper, mine	tonnes (metal content)	43 245	38 876	30 067	*30 000	*80 000
Copper, smelter	tonnes	18 400	34 700	27 700	26 300	17 900
Copper, refined	tonnes	36 900	63 800	94 900	105 800	99 600
Feldspar	tonnes	3 250 000	4 600 000	4 750 000	5 500 000	6 000 000
Fluorspar	tonnes	718	880	800	*800	*900
Gold, mine	kilograms (metal content)	5 370	3 260	—	2 205	4 208
Graphite	tonnes	942	*1 000	*1 100	*1 200	*1 200
Gypsum	tonnes	196 668	250 099	*250 000	*250 000	*250 000
Iron ore	tonnes	3 429 070	3 856 536	3 889 934	3 251 969	3 538 917
Pig iron	tonnes	5 693 764	5 835 889	5 398 500	2 846 280	6 235 000
Crude steel	tonnes	17 644 020	19 868 118	20 961 240	23 307 523	25 760 889
Ferro-alloys						
Ferro-chrome	tonnes	35 393	33 686	26 043	67 975	69 730
Ferro-silico-chrome	tonnes	6 715	5 560	6 695	7 310	6 624
Kaolin	tonnes	370 455	536 008	615 271	*600 000	*600 000
Lead, mine	tonnes (metal content)	17 483	18 792	11 341	14 000	14 000
Lead, refined	tonnes	*9 000	*9 000	*9 000	*9 000	*9 000
Magnesite	tonnes	3 224 278	3 732 952	2 372 206	2 088 033	*2 100 000
Manganese ore	tonnes	18 000	13 751	4 751	...	...
Nickel, mine	tonnes (metal content)	500	—	700	1 900	*6 000
Crude petroleum	tonnes	2 375 082	2 275 529	2 280 764	2 175 353	1 783 199
Natural gas	million m^3	276	344	484	307	248
Perlite	tonnes	136 683	133 829	156 935	*160 000	*160 000
Salt						
Rock salt	tonnes	10 205	6 100	512	...	...
Sea salt	tonnes	556 652	582 440	529 235	*500 000	*500 000
Other salt	tonnes	1 675 915	1 569 178	1 196 486	*1 200 000	*1 200 000
Silver, mine	kilograms (metal content)	158 000	122 000	219 000	220 000	*220 000
Strontium minerals	tonnes	*70 000	*60 000	*60 000	*12 000	*9 000
Sulphur and pyrites						
Pyrites	tonnes (sulphur content)	28 000	20 000	55 000	59 000	61 000
Recovered (a) (b)	tonnes (sulphur content)	94 000	68 000	76 000	73 000	73 000
Zinc, mine	tonnes (metal content)	40 000	39 000	56 000	59 000	71 000

Note(s):-
(1) Turkey is believed to produce diatomite and wollastonite

(a) From petroleum refining and/or natural gas
(b) Other

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	619 130	758 169	1 631 232	586 393	73 162
Aluminium and bauxite						
Bauxite	tonnes	12 560	4 420	1 531	89 764	254 689
Alumina	tonnes	25 574	29 915	45 914	73 707	142 557
Unwrought alloys	tonnes	2 833	7 702	6 138	9 072	13 012
Unwrought	tonnes	1 597	373	21 034	38 690	47 574
Scrap	tonnes	8 036	9 955	12 558	14 275	13 415
Antimony						
Ores & concentrates	tonnes	650	700	920	261	...
Metal	tonnes	7	25	63	—	—
Asbestos	tonnes	42 000	0	—	3	990
Barytes	tonnes	101 716	142 767	134 482	159 128	115 039
Bentonite and fuller's earth						
Bentonite	tonnes	153 691	210 328	211 926	84 595	22 237
Fuller's earth	tonnes	253	179	342	251	...
Cadmium						
Metal	tonnes	...	95	25	27	—
Cement						
Cement clinkers	tonnes	2 898 730	2 359 071	2 893 665	836 602	888 573
Portland cement	tonnes	6 749 791	7 907 130	6 713 088	3 277 480	4 323 666
Other cement	tonnes	96 793	147 792	261 816	112 683	11 538
Chromium						
Ores & concentrates	tonnes	363 699	575 030	834 034	887 689	1 265 036
Metal	tonnes	20	33	238	6	7
Coal						
Anthracite	tonnes	9 540	11 077	10 324	1 259	—
Copper						
Ores & concentrates	tonnes	151 667	180 609	145 118	68 286	36 046
Unwrought	tonnes	18 709	12 863	13 524	13 876	11 813
Scrap	tonnes	18 492	4 529	15 083	12 630	8 920
Diatomite	tonnes	11 294	14 581	11 045	6 986	...
Feldspar	tonnes	*2 900 000	*3 600 000	*3 800 000	*4 100 000	*4 100 000
Gold						
Metal	kilograms	11 455	9 845	29 624	13 581	12 068
Gypsum						
Crude	tonnes	1 282	7 859	4 346	26 683	—
Calcined	tonnes	308 189	434 910	477 710	481 313	544 954
Iodine	kilograms	213	118	21 250	125	5 742
Iron, steel and ferro-alloys						
Pig iron	tonnes	1 060	50 165	9 358	1 150	—
Ferro-chrome	tonnes	53 695	16 286	39 038	60 952	63 209
Other ferro-alloys	tonnes	1 111	5 092	1 356	1 747	7 122
Ingots, blooms, billets	tonnes	3 178 909	3 769 934	2 174 257	1 630 209	1 660 642
Scrap	tonnes	48 741	82 460	64 281	44 474	29 237
Kaolin	tonnes	299 843	267 817	177 881	192 298	132 834
Lead						
Ores & concentrates (a)	tonnes	18 619	29 423	30 226	18 415	34 715
Unwrought	tonnes	1 484	6 190	2 875	4 271	930
Magnesite and magnesia						
Magnesite	tonnes	45 534	39 670	41 353	5 880	12 468
Magnesia	tonnes	196 613	230 675	198 081	84 322	—
Manganese						
Ores & concentrates	tonnes	...	12 817	955	2 466	4 062
Mica	tonnes	546	15 975	565	430	—
Nickel						
Ores & concentrates	tonnes	43 600	3 511	52 062	91 828	175 712
Crude petroleum (b)	tonnes	*54 000	*29 000	*75 000	*545 000	*3 584 000
Salt	tonnes	43 317	30 898	22 167	17 095	11 164
Silver						
Metal	kilograms	947	2 731	27 323	8 932	10 700
Sulphur and pyrites						
Sulphur	tonnes	1 251	534	638	152	7 091
Sulphur, sublimed & precipitated	tonnes	141	75	127	170	15 376
Talc	tonnes	463	1 963	2 806	1 195	1 742

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Titanium						
Metal	tonnes	7	20	30	17	—
Vanadium						
Pentoxide	tonnes	32	900	940	—	24
Zinc						
Ores & concentrates	tonnes	97 605	110 692	138 288	144 662	123 956
Unwrought	tonnes	(c) 315	(c) 302	(c) 227	(c) 120	—
Scrap	tonnes	4 293	2 318	53	176	...

Note(s):-
(a) Complex lead-zinc ore
(b) BGS estimates, based on known imports into certain countries
(c) Including alloys

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	3 660	4 519	7 785	2 607	1 209
Aluminium and bauxite						
Bauxite	tonnes	39 129	34 592	46 016	52 627	53 202
Alumina	tonnes	26 096	19 341	19 665	23 179	12 713
Unwrought	tonnes	160 378	182 113	236 076	245 876	296 098
Unwrought alloys	tonnes	114 881	144 836	146 853	168 498	193 702
Scrap	tonnes	14 850	11 648	16 723	7 061	5 634
Antimony						
Metal	tonnes	141	87	40	46	37
Oxide	tonnes	294	460	377	135	106
Arsenic						
Metallic arsenic	tonnes	78	48	82	22	...
Asbestos	tonnes	14 645	13 509	12 373	4 909	...
Barytes	tonnes	121	258	1 983	137	...
Bentonite and fuller's earth						
Bentonite	tonnes	1 702	832	4 127	2 127	3 202
Fuller's earth	tonnes	104	157	159	93	...
Bismuth						
Metal	tonnes	4	6	7	8	—
Bromine	kilograms	(b) 75 080	(b) 149 960	105 000	24 426	77
Cement						
Cement clinkers	tonnes	170 275	375 619	567 256	1 209 618	88 104
Portland cement	tonnes	9 922	9 096	66 260	71 237	39 270
Other cement	tonnes	3 675	105	4 693	3 979	4 202
Chromium						
Ores & concentrates	tonnes	82 452	56 836	89 844	60 906	1 334
Metal	tonnes	19	85	26	14	18
Coal						
Anthracite	tonnes	340 165	397 125	413 333	502 178	530 393
Other coal	tonnes	15 215 711	16 033 118	16 126 628	14 658 368	13 850 371
Cobalt						
Metal	tonnes	157	170	164	92	14
Oxides	tonnes	108	134	139	81	19
Copper						
Ores & concentrates	tonnes	54 573	10 370	44 633	15 921	—
Unwrought, unrefined	tonnes	100	29 555	53 214	24 682	...
Unwrought, refined	tonnes	229 159	217 290	223 978	150 412	128 077
Unwrought alloys	tonnes	3 768	4 685	3 212	2 160	1 975
Scrap	tonnes	29 803	34 975	9 629	4 374	228
Diamond						
Gem	carats	180 307	207 903	124 043	91 528	123 105
Dust	carats	...	15 900 000	26 765 000	13 675 000	9 835 000
Diatomite	tonnes	1 736	1 211	1 442	657	...
Feldspar	tonnes	26 977	40 733	40 739	12 074	—
Fluorspar	tonnes	18 208	31 908	30 446	21 750	23 139

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Gold						
Metal	kilograms	225 021	262 519	403 415	157 792	155 471
Graphite	tonnes	7 429	10 212	11 956	6 300	6 095
Gypsum	tonnes	160 214	170 958	183 553	174 961	110 434
Iodine	kilograms	15 284	31 797	5 634	3 055	499
Iron ore						
Iron ore	tonnes	2 144 607	2 070 545	2 095 737	3 019 240	...
Burnt pyrites	tonnes	3 048 337	2 503 319	2 525 709	4 706	...
Iron, steel and ferro-alloys						
Pig iron	tonnes	306 901	286 589	396 658	333 981	338 641
Sponge & powder	tonnes	75 798	18 084	68 952	34 440	19 801
Ferro-manganese	tonnes	70 866	44 406	43 631	33 481	31 373
Ferro-silico-manganese	tonnes	178 594	189 294	159 496	216 036	236 039
Ferro-molybdenum	tonnes	816	838	1 253	750	481
Ferro-niobium	tonnes	189	211	433	113	...
Ferro-silicon	tonnes	126 532	82 543	57 501	49 319	59 958
Other ferro-alloys	tonnes	11 087	13 926	18 373	9 690	3 297
Silicon metal	tonnes	7 968	4 649	4 794	5 233	2 530
Ingots, blooms, billets	tonnes	1 618 384	1 531 529	1 816 973	1 504 374	1 930 627
Scrap	tonnes	12 818 350	12 892 546	13 010 728	12 860 533	13 335 810
Kaolin	tonnes	197 684	218 838	265 530	190 924	163 015
Lead						
Unwrought	tonnes	71 665	71 606	71 680	56 792	46 966
Lithium						
Oxides	tonnes	120	179	183	168	...
Carbonate	tonnes	278	417	433	440	408
Magnesite and magnesia						
Magnesia	tonnes	56 000	38 084	52 432	29 148	43 360
Manganese						
Metal	tonnes	137	495	300	200	...
Mercury	kilograms	8 152	6 044	1 443	2 019	...
Mica	tonnes	169	215	248	231	6
Molybdenum						
Metal	tonnes	4	10	4	3	2
Oxides	tonnes	84	130	82	0	...
Nickel						
Unwrought (a)	tonnes	2 419	3 353	3 321	1 423	1 695
Oxides	tonnes	162	144	128	44	...
Crude petroleum	tonnes	24 028 666	23 917 019	23 393 477	8 680 623	...
Phosphates	tonnes	610 286	291 245	373 134	211 810	...
Platinum metals						
Platinum and platinum metals	kilograms	378	231	216	122	3
Potash						
Sulphate	tonnes	51 467	59 381	39 198	19 373	57 661
Chloride	tonnes	107 412	130 748	135 433	78 671	96 038
Rare earths						
Rare earth compounds	tonnes	201	171	155	117	183
Salt	tonnes	202 349	307 039	320 147	285 694	35 382
Sillimanite	tonnes	3 486	5 110	5 504	2 939	6 987
Silver						
Metal	kilograms	199 226	269 009	409 844	108 588	996 239
Sulphur and pyrites						
Sulphur	tonnes	124 243	90 502	91 763	49 620	...
Sulphur, sublimed & precipitated	tonnes	4 899	138	110	43	...
Talc	tonnes	11 227	16 810	15 312	10 900	7 595
Tin						
Unwrought	tonnes	(a) 1 966	(a) 2 314	(a) 2 731	(a) 2 380	2 788
Titanium						
Titanium minerals	tonnes	5 591	10 435	6 755	2 941	...
Oxides	tonnes	68 613	85 832	92 136	104 103	108 932
Zinc						
Unwrought	tonnes	(a) 126 315	(a) 148 897	139 156	72 927	49 650
Unwrought alloys	tonnes	...	...	6 121	5 481	3 775

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Zirconium						
Concentrates	tonnes	3 996	3 881	4 581	1 118	980
Metal	tonnes	5	9	14	3	...

Note(s):-
(a) Including alloys
(b) May include some fluorine

United Kingdom

Production

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates						
Sand and gravel	tonnes	91 803 000	97 333 000	94 666 000	92 107 000	86 501 000
Crushed rock (a)	tonnes	140 417 000	147 067 000	141 636 000	145 578 000	148 534 000
Primary aluminium	tonnes	342 748	359 631	368 477	360 325	364 595
Barytes	tonnes	*57 000	*61 000	*64 000	*48 000	*53 000
Bentonite and fuller's earth						
Fuller's earth (b)	tonnes	33 900	27 540	6 200	—	—
Bromine	kilograms	*25 000 000	—	—	—	—
Cadmium	tonnes	22	—	—	—	—
Cement clinker	tonnes	10 146 000	10 402 000	10 074 000	10 069 000	10 227 000
Cement, finished	tonnes	11 215 000	11 405 000	11 216 000	11 469 000	11 887 000
Coal						
Bituminous (c)	tonnes	28 279 000	25 096 000	20 498 000	18 528 000	17 030 000
Feldspar (d)	tonnes	1 309	2 274	1 835	1 441	*1 400
Fluorspar	tonnes	*56 000	50 080	56 417	49 676	44 936
Gypsum	tonnes	*1 700 000	1 686 000	*1 700 000	*1 700 000	*1 700 000
Iron ore	tonnes	*500	*500	354	341	*300
Pig iron	tonnes	10 277 800	10 179 600	10 188 800	10 695 700	10 958 800
Crude steel	tonnes	13 128 500	13 765 700	13 238 900	13 904 600	14 312 200
Kaolin (e) (f)	tonnes	2 097 137	1 944 955	1 910 874	1 762 328	1 671 426
Lead, mine	tonnes (metal content)	*700	*500	*400	*400	*100
Lead, refined	tonnes	364 574	245 938	304 350	318 703	263 391
Nickel, smelter/refinery	tonnes	24 200	38 600	37 100	36 800	34 050
Crude petroleum	tonnes	99 161 460	88 834 864	78 821 976	71 432 543	71 484 525
Natural gas	million m^3	108 470	101 571	93 505	84 300	76 856
Potash						
Chloride	tonnes (K_2O content)	621 400	539 500	439 200	427 000	430 000
Salt						
Rock salt	tonnes	*1 700 000	*2 000 000	*2 000 000	*2 000 000	2 000 000
Brine salt	tonnes	*1 000 000	*1 000 000	*1 000 000	*1 000 000	*1 000 000
Salt in brine (g)	tonnes	*3 200 000	*2 800 000	*2 800 000	*2 800 000	*2 800 000
Sulphur and pyrites						
Recovered (h)	tonnes (sulphur content)	4 800	—	—	—	—
Recovered (i)	tonnes (sulphur content)	115 000	120 000	124 000	115 000	130 000
Talc	tonnes	6 494	3 881	6 000	4 325	2 850
Slab zinc	tonnes	16 600	—	—	—	—

Note(s):-
(1) United Kingdom is believed to produce arsenic
(2) In addition to the countries producing sillimanite minerals, synthetic mullite is known to be produced in United Kingdom

(a) Includes small quantities for other purposes in Northern Ireland
(b) Saleable production based on data from producing companies
(c) Including anthracite
(d) China stone
(e) Sales
(f) Dry weight
(g) Used for purposes other than salt-making
(h) From metal sulphide processing
(i) From petroleum refining and/or natural gas

Exports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	11 608 077	12 702 493	13 304 920	14 631 060	14 048 387
Aluminium and bauxite						
Bauxite	tonnes	...	6 576	4 237	28 636	4 276
Alumina	tonnes	(a) *3 300	5 766	4 336	9 979	9 016
Alumina hydrate (a)	tonnes	*26 300	*35 500	*20 600	*1 900	*5 400
Unwrought	tonnes	1 559	29 949	48 684	17 530	30 631
Unwrought alloys	tonnes	270 701	306 372	329 691	331 598	269 523
Scrap	tonnes	295 642	319 217	474 587	385 211	906 831
Antimony						
Metal	tonnes	65	88	54	27	21
Oxide	tonnes	1 413	663	621	397	379
Barytes	tonnes	69 094	12 873	16 334	4 250	9 242
Bentonite and fuller's earth						
Bentonite	tonnes	75 099	71 153	49 514	42 548	47 122
Fuller's earth	tonnes	254	124	778	1 102	...
Bismuth						
Metal	tonnes	2 239	2 633	2 426	2 703	2 588
Bromine	kilograms	5 307 678	1 126 043	234 977	1 137 544	1 469 781
Cadmium						
Metal	tonnes	187	27	79	7	76
Cement						
Cement clinkers	tonnes	60 920	82 936	134 992	91 357	28 432
Portland cement	tonnes	216 480	214 420	320 680	521 784	459 629
Other cement	tonnes	61 193	76 517	68 554	69 692	88 452
Chromium						
Ores & concentrates	tonnes	212	622	228	47	178
Metal	tonnes	4 173	4 776	4 547	5 123	6 777
Coal						
Anthracite	tonnes	180 382	172 486	169 252	137 353	123 549
Other coal	tonnes	352 620	439 930	380 426	354 281	419 193
Lignite	tonnes	2 629	2 335	2 321	2 748	1 965
Briquettes	tonnes	60 172	41 094	20 713	20 037	27 591
Cobalt						
Metal	tonnes	1 546	1 882	1 471	1 695	2 300
Oxides	tonnes	1 380	1 233	994	750	689
Copper						
Matte & cement	tonnes	2 723	79	41	515	16
Unwrought	tonnes	2 924	7 362	16 253	6 122	9 276
Unwrought alloys	tonnes	24 121	22 035	15 013	17 251	18 142
Scrap	tonnes	210 169	244 749	238 557	311 058	346 361
Diamond						
Unsorted	carats	9 744 443	6 394 541	16 818 545	3 544 216	5 307 857
Gem, rough	carats	104 300 972	78 613 304	76 400 064	88 991 279	84 573 134
Gem, cut	carats	828 103	1 592 715	5 330 874	2 341 635	477 463
Industrial	carats	12 177 638	22 821 714	21 647 850	13 652 233	4 754 029
Dust	carats	75 401 755	149 415 960	124 529 495	111 788 350	29 979 683
Diatomite	tonnes	1 003	2 123	708	687	1 238
Feldspar	tonnes	801	261	48	38	40
Fluorspar	tonnes	519	4 593	5 803	3 016	589
Gold						
Metal	kilograms	82 892	407 467	638 262	166 080	255 321
Waste & scrap	kilograms	1 074 829	471 657	541 399	313 712	282 298
Graphite	tonnes	4 158	4 348	2 685	2 979	3 065
Gypsum						
Crude	tonnes	2 601	3 903	2 299	2 679	1 248
Calcined	tonnes	39 515	49 945	54 356	63 533	57 988
Iodine	kilograms	169 145	107 007	197 086	314 659	368 785

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Iron, steel and ferro-alloys						
Pig iron	tonnes	1 459	957	1 387	5 407	15 892
Sponge & powder	tonnes	3 666	4 003	3 605	2 346	4 969
Ferro-chrome & ferro-silico-chrome	tonnes	1 711	2 384	6 238	4 066	2 973
Ferro-silico-magnesium	tonnes	...	316	542	653	917
Ferro-manganese	tonnes	434	1 554	661	473	1 136
Ferro-silico-manganese	tonnes	42	8 247	5 003	60	7
Ferro-molybdenum	tonnes	14 081	14 213	11 501	12 004	11 823
Ferro-nickel	tonnes	424	125	55	329	52
Ferro-niobium	tonnes	59	47	79	74	49
Ferro-phosphorus	tonnes	109	1 336	189	36	33
Ferro-silicon	tonnes	1 845	2 699	2 652	2 733	2 314
Ferro-titanium & ferro-silico-titanium	tonnes	14 676	20 703	17 361	17 645	19 515
Ferro-vanadium	tonnes	39	17	156	151	96
Other ferro-alloys	tonnes	6 240	3 892	5 473	3 655	2 925
Silicon metal	tonnes	2 699	1 555	2 466	6 963	11 325
Ingots, blooms, billets	tonnes	1 305 976	1 712 102	2 246 377	2 692 654	3 514 850
Scrap	tonnes	7 174 934	6 772 111	6 105 955	7 407 174	6 013 907
Kaolin (b)	tonnes	1 862 437	1 728 161	1 698 747	1 566 025	1 490 416
Lead						
Unwrought	tonnes	61 682	34 859	52 593	89 271	68 152
Unwrought alloys	tonnes	44 091	31 148	38 806	48 589	39 246
Scrap	tonnes	28 569	32 934	27 248	1 859	31 942
Lithium						
Oxides	tonnes	169	285	125	94	92
Carbonate	tonnes	193	160	203	271	158
Magnesite and magnesia						
Magnesite	tonnes	34	49	87	26	51
Magnesia	tonnes	26 248	24 796	20 077	19 036	16 371
Manganese						
Metal (a)	tonnes	*3 000	*3 100	*3 000	*2 000	*2 100
Mercury	kilograms	851	2 054	191 193	78 514	4 311
Mica	tonnes	4 774	9 377	4 050	4 593	3 820
Molybdenum						
Ores & concentrates	tonnes	84	180	179	166	78
Metal	tonnes	230	312	807	318	237
Nickel						
Mattes, sinters etc.	tonnes	200	964	196	517	40
Unwrought	tonnes	19 200	38 249	38 524	31 610	24 147
Unwrought alloys	tonnes	4 899	4 710	6 141	6 486	4 375
Scrap	tonnes	7 861	10 465	14 119	15 555	16 872
Crude petroleum	tonnes	69 617 507	60 743 679	50 619 044	47 864 601	47 058 702
Phosphates	tonnes	111	34	1 548	335	504
Platinum metals						
Platinum	kilograms	37 874	44 598	41 500	42 843	54 256
Palladium	kilograms	27 669	61 198	51 807	48 688	59 369
Other platinum metals	kilograms	9 631	12 610	17 852	23 353	31 484
Waste & scrap	kilograms	1 862 845	2 681 379	2 881 226	3 507 381	3 793 637
Potash						
Chloride	tonnes	*630 000	*510 000	*340 000	*430 000	*350 000
Other potassic fertilisers	tonnes	609	662	705	651	562
Rare earths						
Cerium compounds	tonnes	118	47	121	111	37
Other rare earth compounds	tonnes	1 105	1 157	1 189	954	1 089
Ferro-cerium & other pyrophoric alloys	tonnes	768	197	2	76	80
Metals	tonnes	16	10	26	29	143
Salt	tonnes	537 497	691 895	538 796	557 311	514 868
Sillimanite	tonnes	3 238	2 016	2 417	1 925	2 430
Silver						
Metal	kilograms	3 429 247	1 754 885	2 289 098	1 069 383	2 317 951
Sulphur and pyrites						
Sulphur	tonnes	476	700	431	756	23 476
Sulphur, sublimed & precipitated	tonnes	836	1 387	1 458	1 312	624
Talc	tonnes	3 325	3 317	5 244	4 626	2 389

Exports continued

Commodity	Units	2003	2004	2005	2006	2007
Tantalum and niobium						
Tantalum	tonnes	278	77	131	83	77
Tin						
Concentrates	tonnes	29	0	2	4	373
Unwrought	tonnes	283	524	1 608	8 395	4 085
Unwrought alloys	tonnes	2 152	885	442	698	696
Scrap	tonnes	4 499	7 353	20 603	35 252	27 329
Titanium						
Metal	tonnes	10 084	11 913	17 212	14 028	12 934
Oxides	tonnes	242 541	234 591	215 741	182 246	212 068
Tungsten						
Metal	tonnes	2 053	1 267	1 732	2 100	2 444
Carbide	tonnes	70	92	83	251	303
Vanadium						
Pentoxide	tonnes	...	...	...	...	697
Metal	tonnes	1 137	1 075	433	70	...
Zinc						
Unwrought	tonnes	3 106	1 581	1 661	5 325	5 932
Unwrought alloys	tonnes	21 770	26 260	38 267	37 120	33 799
Scrap	tonnes	15 436	9 710	9 881	4 571	7 543
Zirconium						
Concentrates	tonnes	418	505	699	902	1 096
Metal	tonnes	244	183	127	90	54

Note(s):-
(a) BGS estimates, based on known imports into certain countries
(b) Dry weight

Imports

Commodity	Units	2003	2004	2005	2006	2007
Primary aggregates	tonnes	1 494 230	1 543 380	2 160 513	2 905 198	2 806 448
Aluminium and bauxite						
Bauxite	tonnes	...	122 021	103 522	86 882	48 741
Alumina	tonnes	(a) *828 300	748 933	755 443	823 115	787 218
Alumina hydrate	tonnes	(a) *143 000	124 451	130 321	101 126	112 287
Unwrought	tonnes	163 573	116 545	114 189	169 259	201 262
Unwrought alloys	tonnes	129 451	118 398	87 063	122 748	93 145
Scrap	tonnes	105 061	78 309	116 285	137 626	158 827
Antimony						
Metal	tonnes	290	410	60	81	110
Oxide	tonnes	2 712	2 976	2 048	2 291	1 917
Arsenic						
Metallic arsenic	tonnes	155	165	3	49	70
Asbestos	tonnes	3	2 150	—	0	187
Barytes	tonnes	56 867	63 934	54 753	78 225	84 617
Bentonite and fuller's earth						
Bentonite	tonnes	198 434	187 750	151 179	173 483	157 388
Sepiolite	tonnes	55 483	51 044	65 565	72 340	...
Fuller's earth	tonnes	7 085	2 574	3 122	14 700	...
Bismuth						
Metal	tonnes	2 237	2 205	2 858	2 347	1 908
Bromine	kilograms	1 899 231	7 145 977	7 994 939	7 592 352	5 266 339
Cadmium						
Metal	tonnes	416	479	206	129	276
Cement						
Cement clinkers	tonnes	506 128	377 341	406 044	516 583	836 788
Portland cement	tonnes	1 714 946	2 033 772	1 645 088	1 397 025	1 534 683
Other cement	tonnes	61 131	64 289	37 705	26 790	26 215
Chromium						
Ores & concentrates	tonnes	107 161	130 841	122 042	74 907	103 551
Metal	tonnes	1 612	2 321	1 723	4 022	2 134

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Coal						
Anthracite	tonnes	334 883	197 788	187 388	125 011	135 941
Other coal	tonnes	31 538 546	35 958 449	43 890 778	49 544 012	43 024 560
Briquettes	tonnes	7 638	8 498	6 554	9 995	6 501
Cobalt						
Metal	tonnes	3 356	3 862	3 888	4 427	5 422
Oxides	tonnes	582	525	107	195	180
Copper						
Unwrought, unrefined	tonnes	14	122	1 978	264	7 401
Unwrought, refined	tonnes	245 152	214 067	181 767	183 727	46 820
Unwrought alloys	tonnes	6 160	8 070	6 191	6 743	6 202
Scrap	tonnes	17 378	15 731	42 264	19 744	21 852
Diamond						
Unsorted	carats	5 210 022	10 557 063	33 441 810	14 408 621	13 661 786
Gem, rough	carats	77 712 486	68 227 020	78 735 595	78 790 692	81 195 314
Gem, cut	carats	4 520 872	9 317 146	12 039 040	7 370 573	973 433
Industrial	carats	21 518 053	30 993 560	25 367 064	11 884 651	7 524 168
Dust	carats	92 290 565	126 277 015	125 510 400	199 882 920	198 484 150
Diatomite	tonnes	37 217	34 988	29 208	28 290	24 224
Feldspar	tonnes	25 764	31 601	23 139	17 098	26 751
Fluorspar	tonnes	21 360	25 092	4 051	6 620	3 875
Gold						
Metal	kilograms	1 414 697	1 053 100	460 239	781 840	1 012 362
Waste & scrap	kilograms	231 365	274 919	66 198	7 925	17 046
Graphite	tonnes	19 270	19 075	17 766	16 978	17 225
Gypsum						
Crude (b)	tonnes	47 751	64 043	627 595	369 714	196 613
Calcined	tonnes	639 059	163 025	133 522	92 069	52 678
Iodine	kilograms	825 813	802 782	1 092 633	1 019 543	1 225 368
Iron ore						
Iron ore	tonnes	16 121 350	15 298 713	16 204 615	16 370 705	17 435 472
Burnt pyrites	tonnes	19 230	2 436	1 911	1 282	131 230
Iron, steel and ferro-alloys						
Pig iron	tonnes	116 724	105 007	102 531	81 689	89 863
Sponge & powder	tonnes	21 503	21 059	21 914	34 768	11 766
Ferro-chrome	tonnes	68 405	112 234	63 478	52 494	46 975
Ferro-silico-chrome	tonnes	63	—	728	350	1 242
Ferro-silico-magnesium	tonnes	5 663	4 969	5 448	3 810	2 303
Ferro-manganese	tonnes	76 686	91 533	79 045	86 598	100 694
Ferro-silico-manganese	tonnes	53 421	63 633	57 136	59 985	56 036
Ferro-molybdenum	tonnes	434	836	861	640	515
Ferro-nickel	tonnes	16 437	14 628	11 325	13 169	14 960
Ferro-niobium	tonnes	1 148	1 236	1 175	1 098	1 490
Ferro-phosphorus	tonnes	2 124	1 687	3 261	386	2 070
Ferro-silicon	tonnes	75 469	71 973	58 225	64 610	66 838
Ferro-titanium & ferro-silico-titanium	tonnes	2 042	2 457	1 883	1 087	1 677
Ferro-tungsten & ferro-silico-tungsten	tonnes	60	10	36	134	33
Ferro-vanadium	tonnes	1 071	1 262	609	1 623	755
Other ferro-alloys	tonnes	2 195	2 275	2 427	2 131	3 215
Silicon metal	tonnes	100 472	100 233	77 103	29 512	25 787
Ingots, blooms, billets	tonnes	540 537	758 615	722 452	1 053 176	849 803
Scrap	tonnes	139 089	225 483	180 261	154 967	204 100
Kaolin	tonnes	72 719	126 501	84 750	198 524	73 014
Lead						
Ores & concentrates (c)	tonnes	*5 000	—	—	...	...
Unwrought , base bullion (d)	tonnes	168 228	127 970	173 910	120 871	119 726
Unwrought, other	tonnes	28 132	51 382	31 347	53 892	31 187
Scrap	tonnes	6 043	6 278	3 898	5 914	17 685
Lithium						
Oxides	tonnes	554	498	446	385	614
Carbonate	tonnes	687	490	657	650	779
Magnesite and magnesia						
Magnesite	tonnes	20 287	11 187	13 896	10 644	10 194
Magnesia	tonnes	82 100	83 539	78 843	64 896	57 905

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Manganese						
Ores & concentrates (e)	tonnes	2 102	2 585	698	4 229	1 569
Metal	tonnes	8 250	9 189	8 223	8 563	7 021
Mercury	kilograms	29 673	27 875	32 306	2 128	2 668
Mica						
Unmanufactured	tonnes	424	1 769	296	251	289
Ground	tonnes	8 327	6 286	6 684	5 856	6 705
Waste	tonnes	5 050	4 374	4 485	3 474	3 433
Molybdenum						
Ores & concentrates	tonnes	18 884	18 371	18 600	19 032	18 381
Metal	tonnes	1 169	1 854	2 877	3 445	1 390
Oxides	tonnes	7	2	630	635	513
Nickel						
Mattes, sinters etc.	tonnes	43 968	64 192	57 492	56 336	62 637
Unwrought	tonnes	34 162	45 264	24 019	17 414	21 044
Unwrought alloys	tonnes	31 491	2 238	1 629	2 883	2 947
Scrap	tonnes	20 038	8 957	10 927	7 975	10 376
Oxides	tonnes	47	103	277	59	49
Crude petroleum	tonnes	44 511 352	56 128 686	54 067 943	55 735 570	44 129 689
Phosphates	tonnes	1 242	11 586	30 177	7 803	23 052
Platinum metals						
Platinum	kilograms	13 827	47 735	51 553	23 472	201 163
Palladium	kilograms	48 106	24 666	30 576	37 226	84 031
Other platinum metals	kilograms	8 636	8 267	7 134	9 127	398 743
Waste & scrap	kilograms	367 327	617 417	1 271 315	1 148 802	1 456 413
Potash						
Fertiliser salts	tonnes	12 751	9 204	9 517	10 696	...
Chloride	tonnes	246 164	207 056	198 893	170 942	202 623
Other potassic fertilisers	tonnes	5 439	12 383	13 151	15 584	26 979
Rare earths						
Cerium compounds	tonnes	2 519	1 914	2 324	1 615	2 167
Other rare earth compounds	tonnes	471	775	775	600	664
Ferro-cerium & other pyrophoric alloys	tonnes	1	9	19	60	77
Metals	tonnes	115	135	166	88	88
Salt	tonnes	217 009	219 581	287 623	246 879	237 772
Sillimanite minerals						
Sillimanite	tonnes	22 649	24 348	39 650	10 268	10 239
Mullite	tonnes	8 656	12 392	10 430	7 468	12 036
Silver						
Metal	kilograms	2 484 101	2 105 057	1 485 290	7 316 639	5 518 256
Waste & scrap	kilograms	...	2 488 771	2 282 562	2 741 705	3 049 452
Sulphur and pyrites						
Sulphur, crude	tonnes	23 469	44 963	24 222	11 608	5 101
Sulphur, refined	tonnes	5 560	3 984	7 263	7 334	8 577
Sulphur, sublimed & precipitated	tonnes	544	675	577	1 297	1 073
Talc	tonnes	59 172	66 722	65 496	55 200	54 812
Tantalum and niobium						
Tantalum	tonnes	842	243	97	119	96
Tin						
Unwrought	tonnes	7 488	5 861	4 812	3 558	13 630
Unwrought alloys	tonnes	2 378	1 145	2 067	891	525
Scrap	tonnes	168	215	468	1 728	452
Titanium						
Ilmenite	tonnes	113 852	110 596	80 435	175 882	181 794
Other titanium minerals	tonnes	111 754	113 852	109 238	48 147	42
Titanium slag	tonnes	44 890	151	64 849	91 603	151 494
Metal	tonnes	25 126	27 401	27 938	30 267	30 905
Oxides	tonnes	74 138	74 787	67 102	71 528	74 708
Tungsten						
Metal	tonnes	1 932	1 903	3 204	4 607	2 925
Carbide	tonnes	1 232	838	974	913	1 409
Vanadium						
Pentoxide	tonnes	363	306	339	472	425
Metal	tonnes	256	338	812	407	...

Imports continued

Commodity	Units	2003	2004	2005	2006	2007
Zinc						
Ores & concentrates	tonnes	16 611	260	903	603	164
Unwrought	tonnes	171 219	139 477	135 840	119 676	122 458
Unwrought alloys	tonnes	13 796	15 960	16 128	15 666	13 201
Scrap	tonnes	172	228	188	334	30
Zirconium						
Concentrates	tonnes	39 285	32 917	19 519	13 729	11 007
Metal	tonnes	346	444	338	467	446

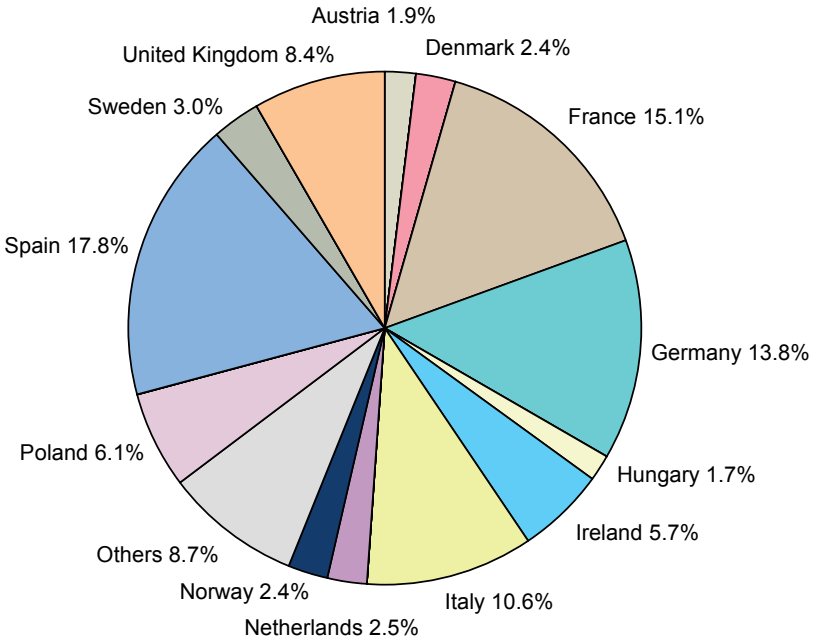
Note(s):-
(a) BGS estimates, based on known exports from certain countries
(b) Including calcined
(c) Pb content
(d) Includes a substantial precious metal content, mainly silver
(e) Including manganiferous iron ore

STATISTICAL INFORMATION BY COMMODITY

Primary aggregates

- Primary aggregates are sand, gravel and crushed rock aggregates that are widely used in the construction industry. The trade data presented here are for crushed rock combined with sand and gravel.
- Aggregates data are very difficult to establish with satisfactory precision. There are frequent inconsistencies in the way countries report aggregates production and trade. Different definitions for similar materials are commonplace, and many countries do not require production to be reported from quarries that have less than a certain number of employees.
- Aggregates are used primarily by the construction industry to build and maintain the physical infrastructure on which everyone depends: houses, offices, roads, schools, hospitals, railways, shops, flood defences, etc. Aggregates are either used directly, for example for drainage or fill purposes, or are used to manufacture concrete and asphalt.
- Spain was the largest EU32 producer of primary aggregates in 2007, with 500 million tonnes (17.8 per cent). Germany was the largest exporter in the EU32 countries, both in gross and net terms. Norway is a significant net exporter due to their low level of imports, and this contrasts with Belgium and the Netherlands which import considerably more aggregates than they export.

EU32 Production of aggregates 2007



Production of primary aggregates (sand and gravel and crushed rock)

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Sand and gravel (a)	27 287 331	29 395 685	29 065 350	27 281 864	29 230 545
Crushed rock (a)	26 333 481	27 687 041	25 093 602	26 536 938	25 248 136
Belgium					
Sand and gravel (b) (f)	9 245 757	8 787 817	8 330 239	8 636 966	*8 600 000
Crushed rock (b) (g)	36 772 879	36 980 382	38 826 735	39 937 651	*43 000 000
Bulgaria					
Sand and gravel	7 072 776	9 719 350	12 835 622	15 168 050	17 051 988
Crushed rock	3 986 616	5 447 430	8 121 646	8 781 475	11 135 159
Cyprus					
Crushed rock	10 700 000	11 600 000	12 064 112	12 198 513	13 129 470
Czech Republic					
Sand and gravel	15 267 650	15 703 358	15 672 765	16 931 536	*17 000 000
Crushed rock	27 934 515	28 846 776	30 221 600	32 731 255	34 254 056
Denmark					
Sand and gravel	50 800 000	57 300 000	69 500 000	72 508 000	68 255 000
Crushed rock	380 000	372 000	378 000	372 000	410 000

Production continued

tonnes

Country	2003	2004	2005	2006	2007
Estonia					
Sand and gravel	1 973 740	2 341 620	3 459 760	4 209 080	6 406 740
Crushed rock	4 082 700	5 426 600	6 828 600	8 298 400	8 855 800
Finland					
Sand and gravel	55 000 000	55 000 000	53 000 000	54 000 000	...
Crushed rock	40 000 000	43 000 000	45 000 000	46 000 000	...
France					
Sand and gravel	165 470 000	168 080 000	168 640 000	174 360 000	180 450 000
Crushed rock	217 400 000	223 170 000	222 780 000	233 090 000	242 950 000
Germany					
Sand and gravel	285 500 000	267 300 000	252 000 000	266 000 000	251 700 000
Crushed rock	124 047 000	125 600 000	122 244 000	138 700 000	135 400 000
Hungary					
Sand and gravel	40 530 145	46 354 829	69 027 609	46 458 296	34 815 891
Crushed rock	10 090 547	13 037 471	15 078 440	17 944 036	13 046 962
Ireland, Republic of					
Sand and gravel	40 000 000	*40 000 000	*40 000 000	*64 000 000	*64 000 000
Crushed rock	60 000 000	*60 000 000	*94 000 000	*96 000 000	*96 000 000
Italy					
Sand and gravel (a)	177 031 670	200 836 237	183 908 475	177 625 321	195 348 311
Crushed rock (a)	54 305 864	59 377 657	75 103 192	70 887 571	102 027 353
Latvia					
Sand and gravel	3 577 604	4 946 204	6 059 487	5 957 744	8 971 933
Crushed rock	...	414 305	586 607	582 081	552 145
Lithuania					
Sand and gravel	4 793 670	5 835 729	7 034 402	7 633 311	9 173 540
Crushed rock	2 896 045	3 683 266	4 757 023	5 259 535	6 424 791
Netherlands					
Sand and gravel	74 200 000	66 200 000	63 579 000	72 146 700	69 196 000
Norway					
Sand and gravel	15 000 000	15 000 000	15 000 000	13 418 000	14 855 000
Crushed rock	36 000 000	37 000 000	38 000 000	45 947 000	51 533 000
Poland					
Sand and gravel (c)	76 515 000	79 232 000	95 277 000	110 580 000	*124 000 000
Crushed rock	29 403 264	29 271 189	33 098 360	38 835 618	46 854 829
Portugal					
Sand and gravel	7 417 636	9 405 437	8 284 238	9 764 029	...
Crushed rock	70 994 473	73 264 403	73 343 159	65 428 239	...
Romania					
Sand and gravel	1 013 386	1 458 266	1 394 414	*1 800 000	*2 200 000
Slovakia					
Sand and gravel	3 453 058	4 892 089	6 807 116	7 522 034	*7 500 000
Crushed rock	9 212 400	9 717 300	13 834 800	14 088 600	*14 000 000
Slovenia					
Sand and gravel	11 012 000	12 373 000	12 432 000	17 873 000	21 548 000
Crushed rock	15 040 340	13 719 888	12 223 182	14 213 319	14 279 253
Spain					
Sand and gravel	118 746 034	113 947 729	125 299 480	...	...
Crushed rock	254 100 000	273 555 490	340 000 000	(d) 485 000 000	(d) 500 000 000
Sweden					
Sand and gravel	21 650 322	22 647 111	21 755 752	21 488 963	20 036 785
Crushed rock	49 326 880	54 737 031	62 313 089	70 517 845	64 047 058
Switzerland					
Sand and gravel	...	26 000 000	46 500 000	50 000 000	...
Crushed rock	...	3 000 000	5 300 000	5 700 000	...
United Kingdom					
Sand and gravel	91 803 000	97 333 000	94 666 000	92 107 000	86 501 000
Crushed rock (e)	140 417 000	147 067 000	141 636 000	145 578 000	148 534 000
EU32 Total	2 528 000 000	2 646 000 000	2 830 000 000	2 960 000 000	3 039 000 000

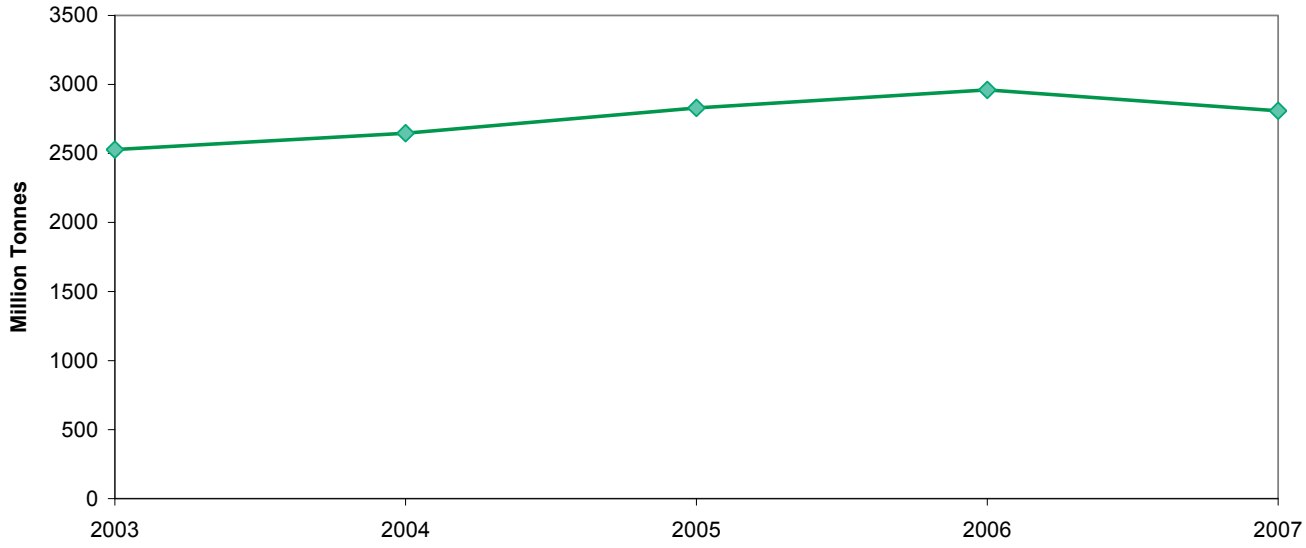
Note(s):-
(See over)

Production continued

Note(s):-
(1) So far as possible, these production statistics include construction sand; gravel, pebbles, shingle and flint; crushed stone used for concrete aggregates, roadstone, and other construction uses; granules, chippings and powders. Listed under Prodcom codes 14211190, 14211210, 14211230, 14211230, 14211250 and 14211290.
(2) Where official sources show more than one series for aggregates the higher series has generally been used in this compilation
(3) Where marine sands and gravels have been identified, these are included
(4) Information may be incomplete or absent due to reporting methods, confidentiality or lack of available information. All EU32 countries produce sand and gravel and crushed rock
(5) Production from many small operations is not officially compiled. The minimum number of employees for which establishments are required to report production varies between different countries and can also vary from year to year within a country
(6) Quantities of sand from sand and gravel operations may be discarded due to low demand. This may or may not be included in the statistics

(a) Sales
(b) Deliveries
(c) Includes an estimate for small producers
(d) Includes sand and gravel
(e) Includes small quantities for other purposes in Northern Ireland
(f) Includes construction sand and silica sand. Excludes gravel
(g) Includes gravel

EU32 Production of aggregates 2003 - 07



Exports of primary aggregates (sand and gravel and crushed rock)

tonnes

Country	2003	2004	2005	2006	2007
Austria	3 163 141	2 829 930	2 745 393	3 086 027	3 394 988
Belgium-Luxembourg	13 562 764	13 208 283	14 573 270	15 452 434	16 081 634
Bulgaria	214 135	384 420	160 032	282 018	330 088
Croatia	1 740 334	2 534 177	1 908 732	2 390 517	3 334 229
Cyprus	106 748	10	55	5 118	148 994
Czech Republic	464 898	344 850	468 540	772 913	716 787
Denmark	736 820	795 330	787 389	973 497	1 194 349
Estonia	469 343	487 863	522 792	563 697	573 530
Finland	446 404	422 709	580 815	735 655	837 957
France	10 116 439	9 389 763	8 492 936	8 928 358	8 383 027
Germany	19 811 898	21 817 271	21 698 651	25 912 337	29 024 954
Greece	12 670	108 042	43 306	48 990	49 781
Hungary	598 056	729 270	736 586	961 775	1 889 989
Ireland, Republic of	563 286	135 579	62 729	230 125	85 146
Italy	1 333 675	1 556 414	1 734 620	1 720 142	1 482 346
Latvia	12 108	10 278	13 178	11 618	32 783
Lithuania	228 171	460 569	957 488	871 522	1 053 802
Netherlands	*9 000 000	8 300 000	6 900 000	9 400 000	9 500 000
Norway	12 300 157	12 561 778	13 334 212	14 357 509	16 183 927
Poland	393 090	790 734	1 237 482	1 671 890	1 378 634
Portugal	31 257	53 451	138 939	101 721	120 914
Romania	35 924	23 073	63 110	51 793	111 803
Slovakia	328 547	(a) *552 000	(a) *796 000	(a) *644 000	(a) *740 000
Slovenia	137 354	166 176	221 830	324 830	437 208
Spain	1 647 138	1 694 285	1 546 315	2 489 305	2 042 075
Sweden	2 067 542	2 213 385	2 447 200	2 333 174	2 307 614
Switzerland	184 678	296 911	283 508	273 603	486 288
Turkey	619 130	758 169	1 631 232	586 393	73 162
United Kingdom	11 608 077	12 702 493	13 304 920	14 631 060	14 048 387

Note(s):-
(1) The figures in this table include construction sands, pebbles, gravel, shingle, flint, crushed rock, granules, chippings and powders covered by the Harmonised System codes 2505.90, 2517.10, 2517.41, 2517.49
(2) Includes marine dredged sand and gravel landed at foreign ports

(a) BGS estimates, based on known imports into certain countries

Imports of primary aggregates (sand and gravel and crushed

tonnes

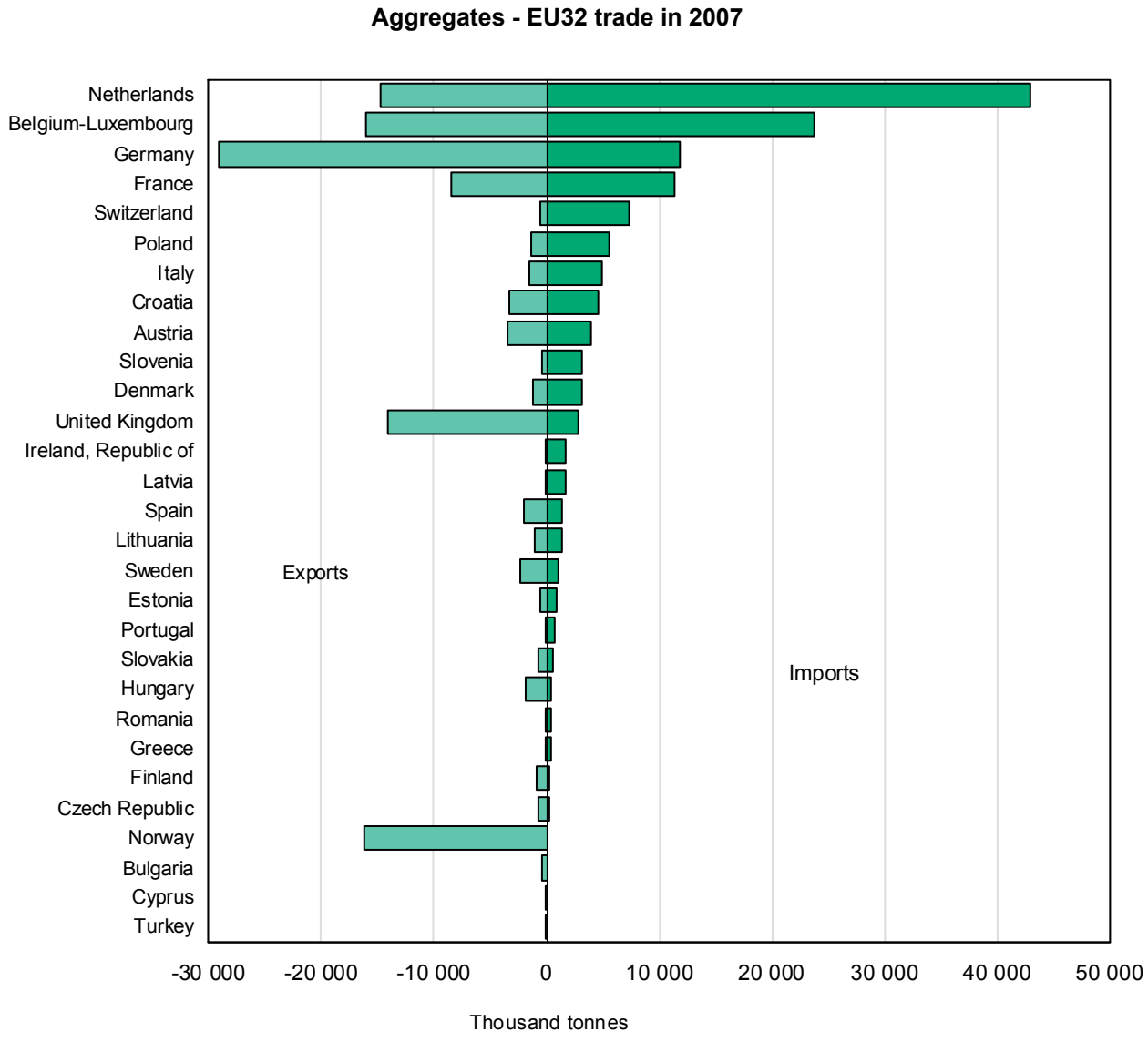
Country	2003	2004	2005	2006	2007
Austria	2 446 023	2 087 667	2 516 839	2 622 855	3 961 223
Belgium-Luxembourg	19 492 423	20 219 032	20 831 220	22 303 782	23 810 336
Bulgaria	24 578	20 303	17 200	19 384	41 782
Croatia	487 181	2 404 092	4 603 357	3 867 558	4 583 241
Cyprus	3 201	(a) *8 400	5 921	11 605	15 497
Czech Republic	206 018	509 217	574 008	690 730	252 049
Denmark	2 632 665	2 949 549	2 804 325	3 151 321	3 077 714
Estonia	464 516	456 144	739 618	932 688	929 218
Finland	47 702	75 016	43 488	254 665	326 347
France	8 239 025	9 431 953	10 264 292	12 064 403	11 381 954
Germany	11 870 353	11 127 947	11 563 984	11 147 034	11 913 688
Greece	324 882	199 144	22 026	45 081	341 376
Hungary	104 705	254 800	446 504	211 927	455 416
Ireland, Republic of	1 036 886	1 269 673	1 444 893	1 687 279	1 729 337
Italy	3 368 905	4 102 477	4 331 596	4 655 740	4 967 745
Latvia	676 383	629 613	1 320 287	1 412 127	1 663 783
Lithuania	993 051	1 069 921	1 289 117	1 214 058	1 333 772
Malta	3 828	8 880	4 529	2 520	29 929
Netherlands	45 300 000	37 100 000	40 800 000	43 000 000	33 600 000
Norway	71 837	85 471	67 562	66 708	72 906
Poland	1 527 892	1 756 513	1 775 291	2 976 252	5 566 874
Portugal	641 696	790 615	698 717	488 917	731 709

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Romania	213 091	370 184	197 911	332 191	352 576
Slovakia	208 515	294 267	682 608	665 844	633 400
Slovenia	541 189	532 614	364 091	863 881	3 113 823
Spain	1 156 484	1 190 670	1 305 835	762 652	1 396 928
Sweden	615 470	729 992	810 385	1 135 048	1 068 840
Switzerland	6 134 548	6 413 474	6 261 007	6 700 038	7 371 907
Turkey	3 660	4 519	7 785	2 607	1 209
United Kingdom	1 494 230	1 543 380	2 160 513	2 905 198	2 806 448

Note(s):-
(1) The figures in this table include construction sands, pebbles, gravel, shingle, flint, crushed rock, granules, chippings and powders covered by the Harmonised System codes 2505.90, 2517.10, 2517.41, 2517.49

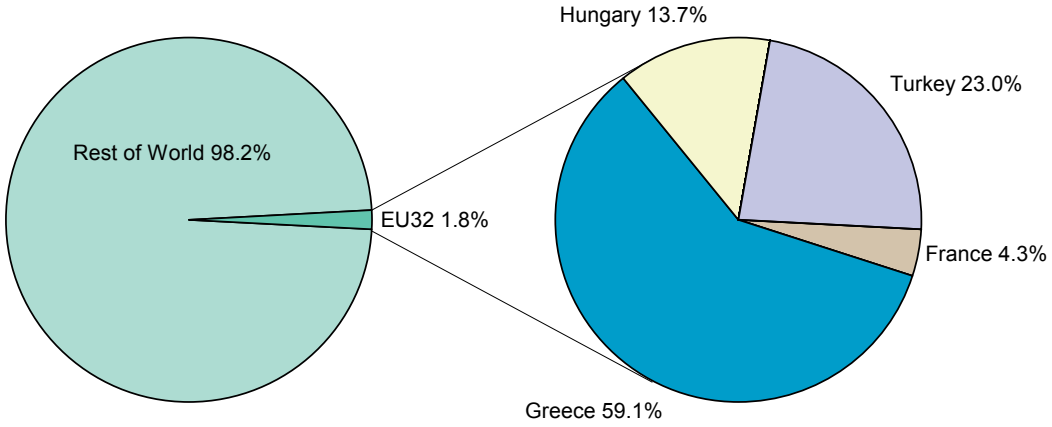
(a) BGS estimates, based on known exports from certain countries



Bauxite

- Bauxite is the only source of aluminium that is currently mined and is produced by deep chemical weathering of rocks in tropical to sub-tropical climates. There is limited EU32 production, leaving a very strong dependence on imports from countries outside the EU32.
- The chief use of bauxite is as a raw material for the production of alumina (aluminium oxide) the majority of which is converted to aluminium metal by electrolysis. Between 5 and 15 per cent of bauxite is non-metallurgical grade and most of this is calcined for use in the abrasive or refractory markets.
- Australia was the world's largest producer in 2007. Greece was the largest producer within the EU32, with 59 per cent of EU32 production.
- Metallurgical grade bauxite is generally traded on long-term contracts and typical prices are not published. Chinese refractory grade bauxite generally traded in the range US$125 to US$160 per tonne for the first half of 2007, before rising gradually to finish the year in the range US$180 to US$220 per tonne. In 2008 these prices have risen more sharply to reach US$550 to US$650 per tonne by August 2008 before falling slightly to end 2008 in the range US$410 to US$620 per tonne.

EU32 Production of bauxite 2007



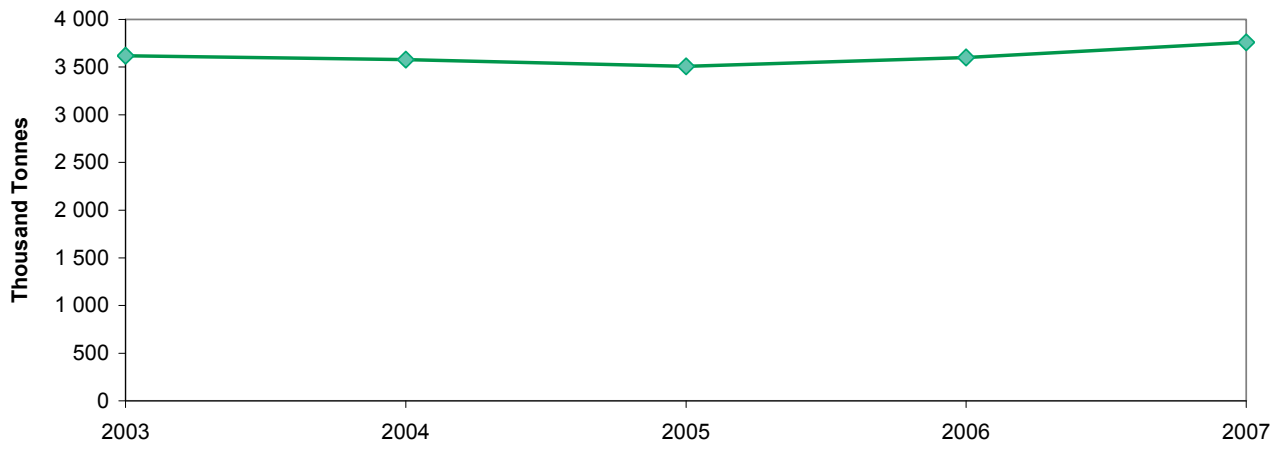
Production of bauxite

tonnes

Country	2003	2004	2005	2006	2007
France	170 000	170 000	175 000	160 000	*160 000
Greece	2 418 000	2 396 065	2 441 443	2 162 900	*2 220 000
Hungary	665 904	646 726	535 337	507 259	515 061
Turkey	364 306	365 836	356 480	771 227	863 404
EU32 Total	3 618 000	3 579 000	3 508 000	3 601 000	3 758 000

Note(s):-
(1) This table includes production of refractory bauxite

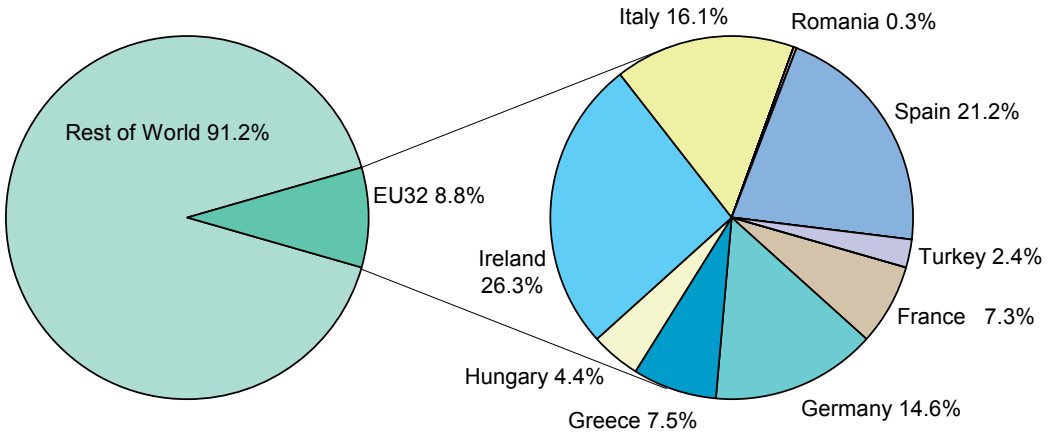
EU32 Production of bauxite 2003 - 07



Alumina

- Alumina (aluminium oxide) is an intermediate product in the manufacture of aluminium metal from raw bauxite ore. Alumina hydrate is a form of alumina containing combined water and used in the paper, petroleum, paint and other industries.
- China was the world's largest producer of alumina in 2007, overtaking Australia. The EU32 produced 6.9 million tonnes, representing 8.8 per cent of world production.
- Spot prices for metallurgical grade alumina were relatively stable throughout 2007, at about US$350 per tonne, in sharp contrast to the dramatic rise and fall that occurred the previous year. During 2008, however, prices rose to about US$450 per tonne by August, but then fell sharply as the global economic difficulties started to take effect, finishing the year at US$210 to US$240 per tonne.

EU32 Production of alumina 2007



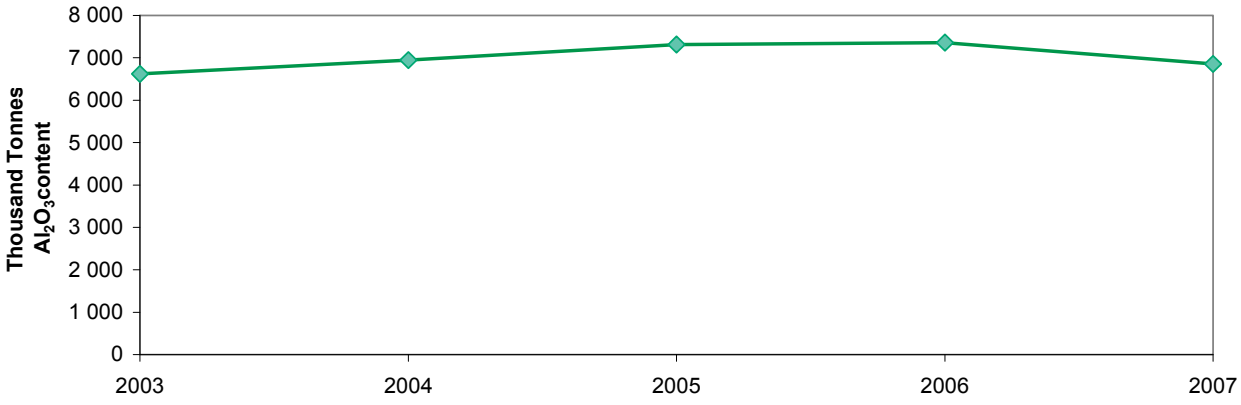
Production of alumina

tonnes (Al_2O_3 content)

Country	2003	2004	2005	2006	2007
France	*600 000	*600 000	*600 000	*636 000	*500 000
Germany	*830 000	*835 000	*830 000	*850 000	*1 000 000
Greece	496 000	514 000	511 000	510 000	516 000
Hungary	300 000	304 000	300 000	300 000	*300 000
Ireland, Republic of	1 500 000	*1 500 000	*1 800 000	1 800 000	1 800 000
Italy	1 021 000	1 064 000	1 070 000	1 090 000	1 100 000
Romania	332 853	560 243	689 329	622 083	23 097
Spain	1 380 000	*1 400 000	*1 400 000	*1 400 000	1 450 000
Turkey	160 675	169 991	112 558	150 117	163 435
EU32 Total	6 621 000	6 947 000	7 323 000	7 358 000	6 853 000

Note(s):-
(1) Where possible, figures in this table show the alumina equivalent (Al_2O_3) of total hydrate produced, whether or not calcined

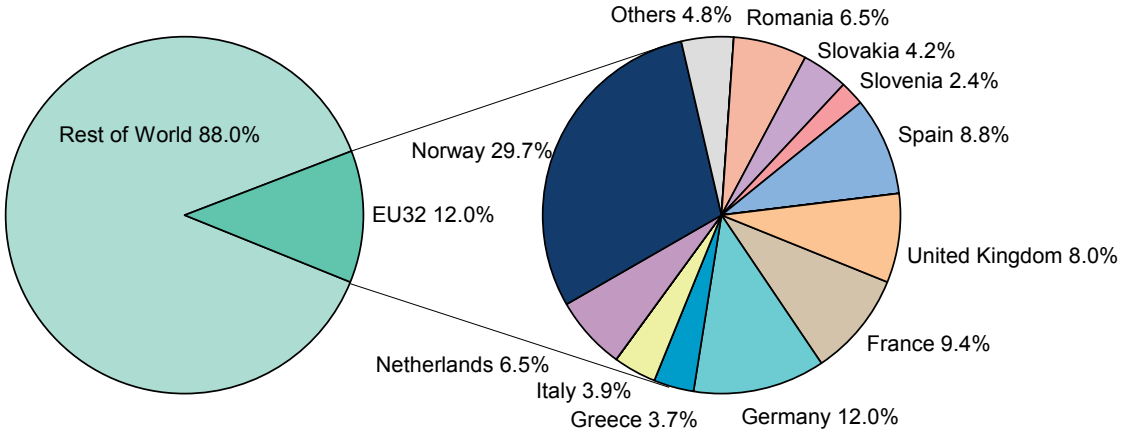
EU32 Production of alumina 2003 - 07



Aluminium metal

- Aluminium is a strong, light-weight metallic element that has many applications. The chief uses are in transportation, packaging, and construction.
- China was by far the world's largest producer in 2007, with 33 per cent of world production. The EU32 produced 4.6 million tonnes, representing 12 per cent of world production. Norway was the largest EU32 producer.
- The London Metal Exchange official daily spot price for aluminium ingot showed a generally increasing trend in the first part of 2007 reaching US$3000 per tonne by mid year. However, weaker demand saw the price fall below US$2500 by the end of 2007. This was followed by a sharp increase in the early part of 2008, reaching a peak of US$3200 by July 2008. However, since then it has fallen dramatically to finish 2008 at less than US$1500 per tonne as a result of a sharp decline in demand due to the global economic problems.

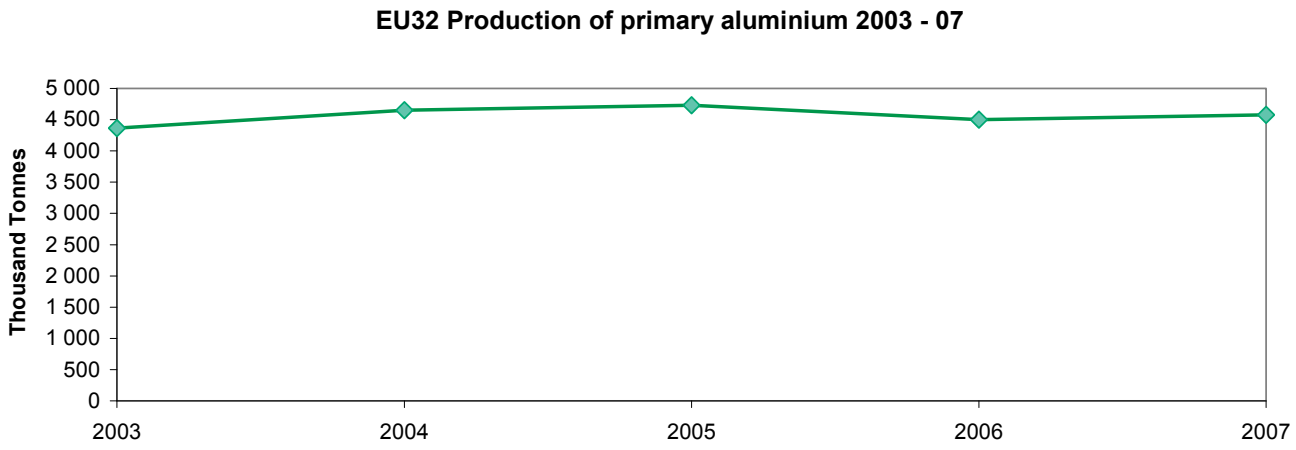
EU32 Production of primary aluminium 2007



Production of primary aluminium

tonnes

Country	2003	2004	2005	2006	2007
France	444 000	447 000	440 000	442 879	430 159
Germany	660 783	667 800	647 900	515 539	551 030
Greece	167 797	166 634	165 300	165 000	168 000
Hungary	35 000	34 400	31 000	300	—
Italy	191 400	195 400	192 900	194 200	179 500
Netherlands	282 800	330 000	333 820	285 317	296 900
Norway	1 180 200	1 318 000	1 391 000	1 383 000	1 362 000
Poland	57 145	58 931	54 508	57 620	58 736
Romania	196 844	222 347	258 000	277 382	297 940
Slovakia	132 089	156 893	158 400	158 289	190 237
Slovenia	109 800	120 700	120 642	118 682	111 016
Spain	389 100	397 500	395 000	367 400	405 100
Sweden	100 707	100 591	102 107	101 668	99 842
Switzerland	43 865	44 879	44 800	12 000	—
Turkey	63 140	64 002	59 000	60 000	63 400
United Kingdom	342 748	359 631	368 477	360 325	364 595
EU32 Total	4 397 000	4 685 000	4 763 000	4 500 000	4 578 000



Exports of bauxite, alumina and aluminium

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Unwrought	16 150	13 341	6 616	7 630	8 294
Unwrought alloys	87 528	122 693	125 796	119 058	111 571
Scrap	52 564	71 362	67 434	80 200	91 960
Belgium-Luxembourg					
Bauxite	98 961	54 734	46 717	53 680	75 904
Alumina	7 058	...	10 714	18 151	13 629
Unwrought	157 800	266 682	267 811	210 559	164 800
Unwrought alloys	40 919	42 010	38 889	29 871	268 119
Scrap	133 871	137 374	149 914	186 613	208 272
Bulgaria					
Unwrought alloys	1 971	4 616	5 254	11 692	10 290
Scrap	21 838	22 036	21 902	29 245	23 577
Croatia					
Bauxite	1 478	566	276	48	268
Scrap	10 914	12 024	15 927	19 832	20 886
Cyprus					
Scrap	2 966	3 699	4 578	4 880	4 745
Czech Republic					
Unwrought (a)	43 045	48 698	48 885	45 876	54 457
Scrap	33 410	43 223	39 297	53 986	61 067
Denmark					
Alumina	4 556	7 146	3 579	3 470	5 471
Unwrought alloys	17 538	14 019	23 509	31 768	36 831
Scrap	36 738	55 407	70 828	62 734	50 164
Estonia					
Unwrought (a)	11 986	5 479	2 414	3 013	8 083
Scrap	9 712	8 062	10 686	8 263	10 379
Finland					
Unwrought alloys	18 557	17 254	14 107	11 411	12 924
Scrap	16 720	22 946	21 053	25 921	38 364
France					
Bauxite	253	2 985	5 195	46 042	26 661
Alumina	188 951	232 762	255 392	224 866	276 207
Alumina hydrate	125 437	144 331	139 694	168 250	146 531
Unwrought	63 659	70 010	77 097	65 943	45 503
Unwrought alloys	75 318	78 047	95 700	148 253	136 803
Scrap	257 279	299 226	314 243	345 107	380 708
Germany					
Bauxite	26 666	30 647	28 087	30 772	36 361
Alumina	308 210	294 034	204 075	313 586	282 245
Alumina hydrate	472 091	528 700	527 900	717 433	672 561
Unwrought	48 570	58 365	60 757	72 132	61 090
Unwrought alloys	340 772	354 998	330 843	360 157	361 917
Scrap	556 405	544 522	583 987	675 261	770 042

Exports continued tonnes

Country	2003	2004	2005	2006	2007
Greece					
Bauxite	701 911	925 282	1 136 505	912 093	1 086 405
Alumina	358 955	404 852	439 374	457 726	715 003
Alumina hydrate	11 568	3 760	2 944	8 239	21 716
Unwrought	58 714	61 846	60 964	64 487	27 195
Unwrought alloys	8 880	8 597	15 017	18 804	67 732
Scrap	10 731	13 777	15 205	19 105	13 566
Hungary					
Alumina	125 433	170 664	142 470	170 030	178 984
Alumina hydrate	90 768	80 314	75 811	90 705	98 187
Unwrought (a)	16 231	25 475	22 635	28 884	27 580
Scrap	27 022	38 684	41 192	34 986	29 228
Ireland, Republic of					
Bauxite	9	5	472	9 210	11 167
Alumina	2 405 797	1 388 723	1 459 036	1 534 845	1 652 967
Alumina hydrate	51 149	44 645	85 062	115 676	10 011
Unwrought alloys	4 569	3 776	3 542	4 637	5 425
Scrap	12 307	15 367	16 475	18 784	22 397
Italy					
Bauxite	9 291	40 512	121 029	12 082	49 989
Alumina	682 587	606 416	651 704	748 594	696 603
Alumina hydrate	34 820	24 895	26 652	26 668	34 521
Unwrought	3 385	4 203	8 742	20 315	18 971
Unwrought alloys	31 082	43 578	57 573	73 137	104 361
Scrap	20 358	26 630	35 904	50 024	42 052
Latvia					
Unwrought alloys	34 081	39 368	34 697	18 180	19 281
Scrap	747	748	910	1 767	2 416
Lithuania					
Unwrought alloys	5 222	3 943	3 922	3 410	3 453
Scrap	15 140	11 953	7 210	5 640	5 701
Macedonia					
Scrap	840	1 107	2 105	2 788	1 795
Malta					
Scrap	868	1 008	1 142	1 221	1 136
Netherlands					
Bauxite	58 848	96 740	93 993	107 660	41 170
Alumina	51 228	267 947	264 116	301 767	542 794
Alumina hydrate	48 026	42 398	48 643	45 480	151 641
Unwrought	408 302	314 462	304 993	370 471	490 373
Unwrought alloys	227 283	320 583	304 675	341 439	341 670
Scrap	187 522	234 761	265 755	334 426	317 877
Norway					
Unwrought	150 101	150 479	147 295	126 841	113 285
Unwrought alloys	1 212 372	1 333 251	1 365 929	1 412 569	1 496 556
Scrap	37 566	39 742	38 218	42 804	41 296
Poland					
Unwrought (a)	52 132	70 740	81 962	80 266	78 187
Scrap	63 022	71 525	82 875	107 939	113 649
Portugal					
Unwrought alloys	111 732	105 837	140 505	152 591	130 636
Scrap	19 513	28 576	41 797	38 026	41 603
Romania					
Alumina	155 094	209 950	261 862	137 753	5 191
Unwrought	35 093	59 363	31 543	12 672	23 193
Unwrought alloys	14 998	20 145	7 711	10 110	9 080
Scrap	5 787	4 703	4 829	11 132	14 332
Slovakia					
Unwrought	3 098	6 827	15 302	66 893	61 319
Unwrought alloys	169 698	183 346	159 134	93 141	118 286
Scrap	5 722	7 594	8 042	9 876	10 421
Slovenia					
Bauxite	...	...	...	2 650	8 013
Alumina	18 072	24 277	205 606	237 366	243 062
Unwrought alloys	101 446	124 069	123 555	133 005	123 041
Scrap	11 619	14 971	21 103	27 584	30 132

Exports continued tonnes

Country	2003	2004	2005	2006	2007
Spain					
Bauxite	2 521	4 159	3 821	3 647	6 057
Alumina	369 353	491 808	561 125	511 992	539 739
Alumina hydrate	214 263	241 910	264 829	258 854	199 679
Unwrought	915	1 024	3 002	8 245	15 999
Unwrought alloys	87 356	102 146	111 992	128 262	125 008
Scrap	41 646	35 021	36 688	41 923	34 520
Sweden					
Alumina	1 939	6 160	14 133	14 481	14 278
Unwrought	101	22 096	9 390	910	735
Unwrought alloys	75 903	105 752	88 311	112 575	89 591
Scrap	109 170	79 433	69 166	67 879	107 946
Switzerland					
Unwrought (a)	775	8 180	14 499	21 257	22 645
Scrap	96 860	108 536	122 729	140 657	139 599
Turkey					
Bauxite	12 560	4 420	1 531	89 764	254 689
Alumina	25 574	29 915	45 914	73 707	142 557
Unwrought alloys	2 833	7 702	6 138	9 072	13 012
Unwrought	1 597	373	21 034	38 690	47 574
Scrap	8 036	9 955	12 558	14 275	13 415
United Kingdom					
Bauxite	...	6 576	4 237	28 636	4 276
Alumina	(b) *3 300	5 766	4 336	9 979	9 016
Alumina hydrate (b)	*26 300	*35 500	*20 600	*1 900	*5 400
Unwrought	1 559	29 949	48 684	17 530	30 631
Unwrought alloys	270 701	306 372	329 691	331 598	269 523
Scrap	295 642	319 217	474 587	385 211	906 831

Note(s):-
(1) Except where alumina hydrate is separately specified, national trade figures for alumina can be considered as inclusive of hydrate
(2) In this table the term 'unwrought' aluminium corresponds to item 7601 of the Harmonised System and comprises ingots, blocks, unwrought bars, etc.
(3) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) Including alloys
(b) BGS estimates, based on known imports into certain countries

Imports of bauxite, alumina and aluminium

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Bauxite	31 082	36 791	36 123	25 291	16 717
Alumina	43 318	23 636	41 269	45 777	49 728
Alumina hydrate	7 779	6 372	10 125	12 821	16 056
Unwrought	141 841	106 348	82 597	113 047	140 286
Unwrought alloys	184 478	229 607	214 611	235 053	250 209
Scrap	(b) *143 400	128 798	150 412	157 256	161 995
Belgium-Luxembourg					
Bauxite	102 691	82 208	87 376	59 874	85 963
Alumina	11 350	12 942	10 879	28 030	28 985
Alumina hydrate	43 941	33 798	37 831	45 723	46 815
Unwrought	382 266	513 835	497 013	451 309	485 128
Unwrought alloys	217 309	235 761	265 937	286 345	329 777
Scrap	146 723	157 812	158 799	197 942	380 317
Bulgaria					
Alumina	1 443	1 663	1 401	2 039	2 368
Unwrought (a)	28 194	35 515	40 748	66 644	59 467
Scrap	...	435	1 449	2 179	3 554

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Croatia					
Bauxite	71 335	48 302	112 007	80 441	115 367
Alumina	1 143	1 885	1 672	1 405	2 431
Unwrought	21 289	47 437	56 509	53 021	54 067
Unwrought alloys	7 329	9 672	14 915	18 893	22 039
Cyprus					
Unwrought alloys	7 697	10 858	9 898	12 481	13 868
Czech Republic					
Bauxite	13 871	20 922	24 315	24 829	26 865
Alumina	23 142	26 898	28 458	24 078	30 523
Alumina hydrate	12 767	17 215	10 898	9 782	7 834
Unwrought	66 747	75 289	69 977	74 392	82 910
Unwrought alloys	82 823	90 688	96 702	104 238	119 773
Scrap	24 336	28 542	34 226	48 937	63 508
Denmark					
Bauxite	11 297	13 801	9 148	9 025	6 572
Alumina	17 896	23 666	21 979	28 709	25 643
Unwrought (a)	65 386	75 233	70 617	79 573	86 389
Scrap	41 373	39 949	63 678	64 803	66 038
Estonia					
Unwrought (a)	10 428	5 859	1 686	7 021	3 035
Scrap	1 052	431	453	1 338	808
Finland					
Bauxite	6 027	4 782	3 661	6 366	4 909
Alumina	1 904	2 220	2 659	2 327	3 296
Alumina hydrate	24 958	37 361	28 300	31 024	37 163
Unwrought	3 534	3 295	4 057	1 145	1 213
Unwrought alloys	33 174	37 999	40 510	39 755	49 299
Scrap	23 445	18 901	15 537	14 906	19 051
France					
Bauxite	1 786 905	1 507 504	1 799 671	1 664 642	2 001 899
Alumina	704 393	644 513	655 246	667 146	710 029
Alumina hydrate	44 743	41 187	41 682	45 085	46 584
Unwrought	165 490	144 053	150 798	198 042	147 693
Unwrought alloys	324 997	369 795	366 369	394 929	449 505
Scrap	149 876	143 833	135 611	208 142	191 897
Germany					
Bauxite	1 907 966	2 119 259	2 435 244	2 143 631	3 141 693
Alumina	1 047 728	1 107 265	999 798	912 564	790 515
Alumina hydrate	225 998	204 721	231 124	219 035	266 042
Unwrought	796 479	628 038	648 764	754 311	786 506
Unwrought alloys	1 099 136	1 170 875	1 121 715	1 318 713	1 444 289
Scrap	462 320	462 580	438 066	539 367	613 084
Greece					
Bauxite	375 275	247 358	206 870	268 899	376 304
Alumina	889	905	1 049	71 073	283 255
Unwrought	98 093	116 074	121 266	125 541	125 327
Unwrought alloys	46 193	51 522	68 958	62 828	73 561
Scrap	15 127	16 631	18 083	20 030	50 470
Hungary					
Bauxite	164 930	189 528	279 660	243 873	319 681
Alumina	17 819	8 751	15 638	2 558	3 350
Unwrought	199 978	337 995	109 382	109 506	132 695
Unwrought alloys	27 925	32 021	54 362	72 573	149 299
Scrap	16 764	13 111	17 164	49 076	37 204
Ireland, Republic of					
Bauxite	3 418 940	3 740 006	3 606 983	3 368 967	4 144 231
Alumina	6 718	6 626	4 252	7 470	9 268
Unwrought (a)	6 503	6 603	4 092	2 756	1 261
Italy					
Bauxite	2 169 206	2 407 108	2 602 224	2 618 296	2 374 609
Alumina	123 514	142 931	147 537	137 469	148 384
Alumina hydrate	128 280	151 086	155 718	156 231	166 453
Unwrought	425 165	434 802	426 721	481 919	534 385
Unwrought alloys	446 358	468 500	463 411	504 142	545 052
Scrap	327 721	346 736	326 901	366 623	432 780

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Latvia					
Unwrought (a)	4 940	6 100	1 810	577	154
Scrap	22 149	27 340	16 970	6 505	6 837
Lithuania					
Alumina	6 673	10 388	13 079	11 176	13 304
Scrap	4 435	1 131	1 841	1 964	3 380
Macedonia					
Unwrought (a)	528	1 753	1 610	2 941	3 930
Scrap	33	120	492	496	663
Netherlands					
Bauxite	120 787	231 213	169 012	118 203	108 088
Alumina	634 626	671 167	654 487	440 195	706 255
Alumina hydrate	191 165	181 328	223 823	205 902	190 351
Unwrought	367 227	349 481	370 979	650 035	713 441
Unwrought alloys	216 251	249 182	287 504	321 582	358 930
Scrap	138 051	174 969	189 722	197 160	204 117
Norway					
Bauxite	22 147	9 035	16 601	11 384	3 446
Alumina	2 267 237	2 620 149	2 723 588	2 730 064	2 535 547
Alumina hydrate	42 487	42 775	45 957	43 721	48 560
Unwrought	277 122	325 514	328 722	352 293	435 126
Unwrought alloys	24 473	29 974	42 056	34 783	73 058
Scrap	113 228	70 430	20 806	26 326	32 024
Poland					
Bauxite	67 966	82 233	59 758	61 638	71 598
Alumina	120 733	124 274	102 845	114 800	120 768
Alumina hydrate	25 572	26 927	29 538	27 358	27 634
Unwrought	88 008	85 010	62 403	76 996	105 281
Unwrought alloys	94 090	119 305	140 792	167 914	192 930
Scrap	13 472	31 536	39 907	52 498	59 623
Portugal					
Alumina	10 152	9 257	6 250	7 760	9 325
Unwrought	7 903	10 903	13 941	16 292	16 859
Unwrought alloys	185 279	200 335	224 631	237 617	214 990
Scrap	1 755	4 214	2 651	1 487	3 994
Romania					
Bauxite	821 036	1 532 335	1 655 045	1 597 023	75 934
Alumina	223 466	125 902	29 350	43 594	499 302
Unwrought (a)	3 145	7 449	2 849	4 151	10 191
Scrap	5	43	565	436	3 833
Slovakia					
Bauxite	8 300	7 991	3 669	5 886	7 524
Alumina	253 825	366 784	307 756	314 576	311 914
Unwrought (a)	49 945	45 913	31 683	31 521	52 718
Scrap	10 593	13 701	12 567	8 550	8 748
Slovenia					
Bauxite	51 683	44 560	47 935	51 064	63 229
Alumina	252 351	264 319	450 273	480 454	466 163
Alumina hydrate	22 878	14 131	23 581	24 102	28 628
Unwrought	63 688	57 362	73 137	48 337	65 589
Unwrought alloys	40 332	43 403	46 782	60 484	58 215
Scrap	13 676	27 390	47 381	50 865	52 338
Spain					
Bauxite	2 781 769	3 329 441	3 224 101	3 007 043	3 547 201
Alumina	50 403	55 184	58 627	56 961	53 579
Alumina hydrate	14 595	30 429	43 246	49 725	49 451
Unwrought	116 742	91 382	110 257	95 436	122 303
Unwrought alloys	166 538	235 123	223 627	303 607	328 314
Scrap	66 466	86 553	99 459	103 839	123 074
Sweden					
Bauxite	3 317	28 758	3 171	2 846	30 099
Alumina	196 834	205 734	191 504	201 496	43 101
Alumina hydrate	54 825	66 156	62 549	56 535	94 218
Unwrought	21 584	29 493	17 916	7 959	46 431
Unwrought alloys	97 276	120 732	117 202	135 270	159 628
Scrap	16 255	24 082	24 309	32 198	36 838

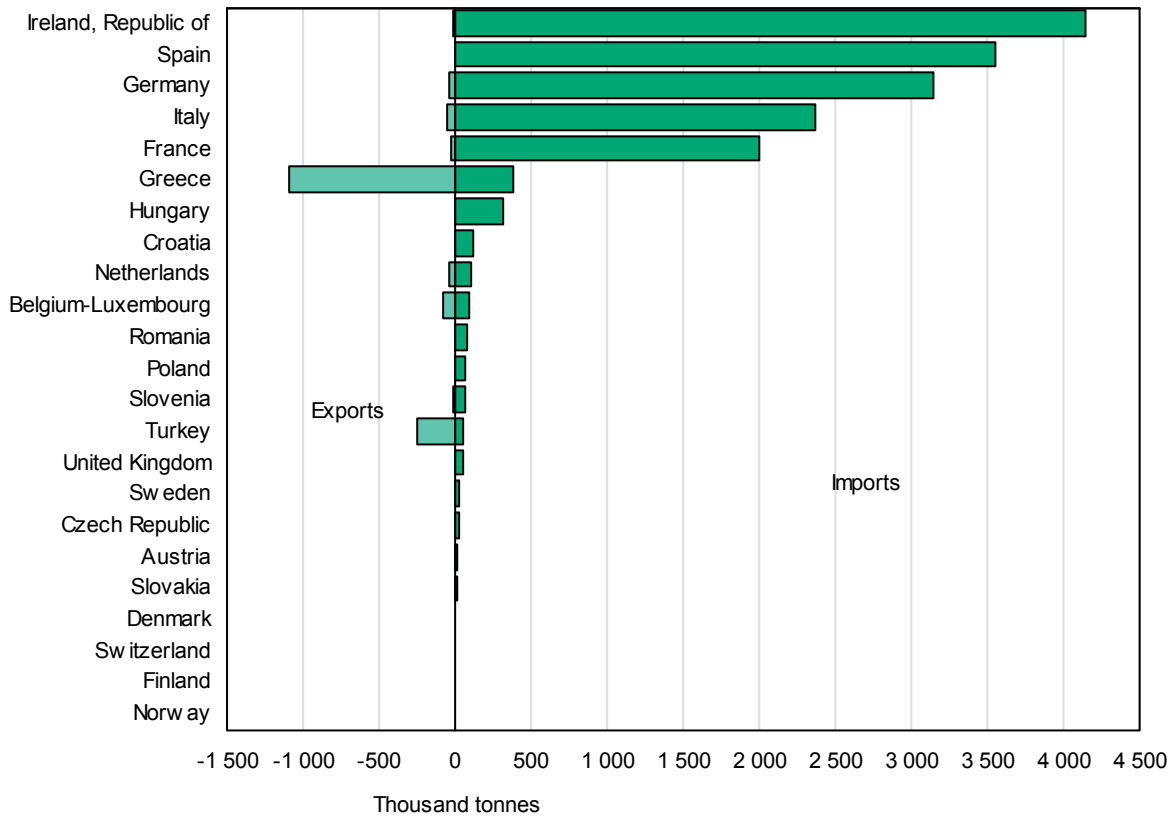
Imports continued tonnes

Country	2003	2004	2005	2006	2007
Switzerland					
Bauxite	5 881	8 066	9 929	5 901	5 850
Alumina	93 357	87 235	88 358	21 431	10 745
Alumina hydrate	15 340	16 945	16 823	18 333	17 875
Unwrought	60 791	73 413	75 987	111 780	136 214
Unwrought alloys	64 351	59 125	56 059	79 666	78 916
Scrap	11 327	20 734	27 617	26 711	32 716
Turkey					
Bauxite	39 129	34 592	46 016	52 627	53 202
Alumina	26 096	19 341	19 665	23 179	12 713
Unwrought	160 378	182 113	236 076	245 876	296 098
Unwrought alloys	114 881	144 836	146 853	168 498	193 702
Scrap	14 850	11 648	16 723	7 061	5 634
United Kingdom					
Bauxite	...	122 021	103 522	86 882	48 741
Alumina	(b) *828 300	748 933	755 443	823 115	787 218
Alumina hydrate	(b) *143 000	124 451	130 321	101 126	112 287
Unwrought	163 573	116 545	114 189	169 259	201 262
Unwrought alloys	129 451	118 398	87 063	122 748	93 145
Scrap	105 061	78 309	116 285	137 626	158 827

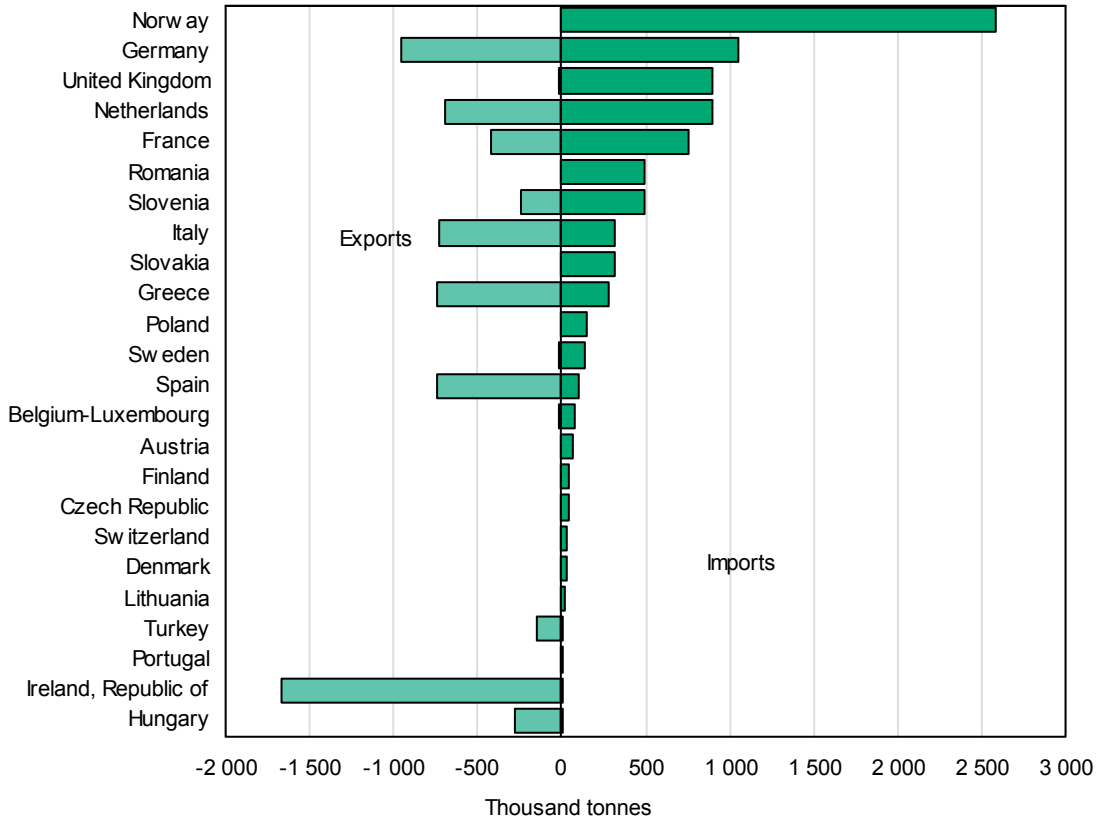
Note(s) :-
(1) Except where alumina hydrate is separately specified, national trade figures for alumina can be considered as inclusive of hydrate
(2) In this table the term 'unwrought' aluminium corresponds to item 7601 of the Harmonised System and comprises ingots, blocks, unwrought bars, etc.
(3) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) Including alloys
(b) BGS estimates, based on known exports from certain countries

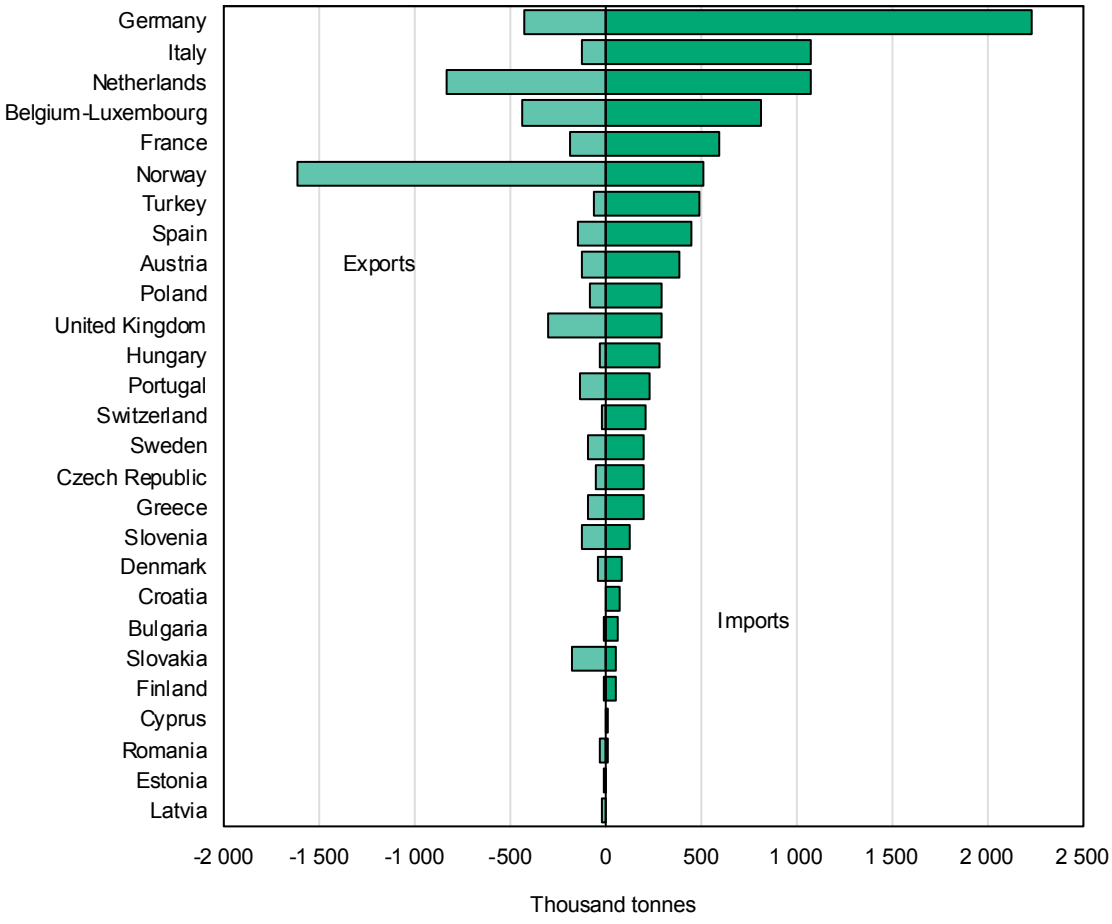
Bauxite - EU32 trade in 2007



Alumina and alumina hydrate - EU32 trade in 2007



Aluminium metal - EU32 trade in 2007



Antimony

- Antimony is a toxic metallic element with several specialised uses. It is frequently alloyed with lead, where it greatly increases hardness and strength. Antimony is also used in semi-conductors and its compounds form excellent flame-retardants in cable sheathes.
- China was by far the largest mine producer of antimony in 2007, with 88 per cent of world production. Antimony is also produced as a by-product of lead refining in many countries. Less than one per cent of world production of antimony is produced in the EU32.
- Antimony metal, minimum 99.65% Sb, and antimony oxide, a white powder, are the most commonly traded forms. In 2007 the price of antimony metal (free market in warehouse) averaged US$5539 per tonne and in 2008 this increased to an average of US$6090 per tonne.

Mine production of antimony

tonnes (metal content)

Country	2003	2004	2005	2006	2007
Turkey	*400	*700	*1 200	*1 200	*1 500

Note(s):-
(1) This table includes antimony content of antimonial lead alloys
(2) In addition, Hungary is believed to produce antimony

Exports of antimony

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	16	19	1 089	3	1
Belgium-Luxembourg					
Ores & concentrates	25	...	77	360	301
Metal	181	493	693	1 580	974
Oxide	12 063	12 443	11 526	12 661	11 643
Czech Republic					
Oxide	59	116	145	108	139
France					
Metal	8	79	186	53	19
Oxide	4 352	4 540	5 177	4 964	6 109
Germany					
Metal	27	12	15	30	141
Oxide	683	786	724	892	1 130
Greece					
Metal	49	3	141	160	143
Italy					
Ores & concentrates	7	100	274	250	355
Oxide	340	207	94	254	237
Netherlands					
Metal	315	212	570	886	308
Oxide	270	652	664	780	496
Portugal					
Metal	...	26	1	646	267
Spain					
Metal	41	409	13	21	17
Oxide	622	706	859	2 031	246
Turkey					
Ores & concentrates	650	700	920	261	...
Metal	7	25	63	—	—
United Kingdom					
Metal	65	88	54	27	21
Oxide	1 413	663	621	397	379

Imports of antimony

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	120	53	74	51	104
Oxide	207	316	263	271	277
Belgium-Luxembourg					
Metal	11 409	12 225	10 722	11 543	11 915
Oxide	1 615	1 708	1 735	2 524	2 342
Bulgaria					
Metal	52	47	...	34	100
Czech Republic					
Metal	45	14	72	82	64
Oxide	365	557	588	503	604
Finland					
Oxide	238	248	199	256	281
France					
Metal	5 241	8 486	7 766	8 919	8 568
Oxide	1 972	2 096	2 243	2 092	3 315
Germany					
Metal	149	178	148	421	612
Oxide	6 707	7 072	6 560	8 305	8 527
Greece					
Ores & concentrates	76	119	95	131	83
Metal	40	46	24	...	21
Hungary					
Oxide	150	186	180	139	192
Ireland, Republic of					
Metal	15	13	0	—	—
Italy					
Ores & concentrates	786	879	1 005	829	851
Metal	1 377	743	164	279	399
Oxide	4 314	5 528	5 543	6 061	5 950
Netherlands					
Metal	511	817	705	651	699
Oxide	1 481	2 932	3 717	35 127	3 783
Norway					
Metal	8	0	71	11	70
Oxide	351	775	305	507	337
Poland					
Metal	49	80	28	158	142
Oxide	920	1 042	1 231	1 338	1 315
Portugal					
Metal	10	6	5	2	6
Oxide	147	242	137	166	172
Romania					
Metal	65	62	55	43	68
Slovakia					
Oxide	161	116	118	82	104
Slovenia					
Metal	52	84	137	98	110
Spain					
Ores & concentrates	153	105	108	175	164
Metal	1 516	2 270	1 881	1 596	1 676
Oxide	519	5 656	808	984	1 146
Sweden					
Metal	269	234	199	337	546
Oxide	232	328	377	296	319
Switzerland					
Ores & concentrates	89	5 004	1 722	201	38
Metal	50	93	58	56	57
Oxide	927	1 174	1 026	1 141	1 461
Turkey					
Metal	141	87	40	46	37
Oxide	294	460	377	135	106
United Kingdom					
Metal	290	410	60	81	110
Oxide	2 712	2 976	2 048	2 291	1 917

Arsenic

- Arsenic is a toxic semi-metallic element produced and traded chiefly as 'white arsenic' (arsenic trioxide). Its principal uses are as compounds in wood preservatives and pesticides. Gallium arsenide is used in semi-conductors whilst arsenic metal has a number of minor uses.
- China was the largest producer of white arsenic in 2007 accounting for more than half of world production.
- In 2007 the price of metallic arsenic (min. 99% As) averaged US$77 per pound, and in 2008 it averaged US$73 per pound.

Production of white arsenic

tonnes

Country	2003	2004	2005	2006	2007
Belgium	*1 000	*1 000	*1 000	*1 000	*1 000
Portugal	*25	*15	*15	*15	*15

Note(s):-
(1) This table includes calculated trioxide equivalent of arsenic metal produced except where this would involve double counting
(2) In addition to the countries listed, Austria, Finland, Hungary, Spain and the United Kingdom are believed to produce arsenic

Exports of arsenic

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg					
Metallic arsenic	27	10	101	2 542	117
France					
Metallic arsenic	0	...	8	15	3
Germany					
Metallic arsenic	8	14	20	20	32
Italy					
Metallic arsenic	—	—	16	2	—
Netherlands					
Metallic arsenic	64	115	50	33	59

Note(s):-
(1) This table does not purport to be comprehensive: data relating to arsenic are not fully recorded by many countries

Imports of arsenic

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metallic arsenic	5	...	2	1	1
Belgium-Luxembourg					
Metallic arsenic	90	95	164	105	466
Czech Republic					
Metallic arsenic	20	8	9	11	10
France					
Metallic arsenic	4	9	21	20	19
Germany					
Metallic arsenic	5	4	2	...	...
Greece					
Metallic arsenic	16	21	35	16	9
Ireland, Republic of					
Metallic arsenic	47	...	158	125	137
Italy					
Metallic arsenic	111	84	54	52	64
Netherlands					
Metallic arsenic	61	110	85	20	19

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Poland					
White arsenic	32	...	...	...	...
Metallic arsenic	—	14	39	21	24
Spain					
Metallic arsenic	114	92	112	143	116
Sweden					
Metallic arsenic	17	13	6	...	12
Switzerland					
Metallic arsenic	4	2	5	2	5
Turkey					
Metallic arsenic	78	48	82	22	...
United Kingdom					
Metallic arsenic	155	165	3	49	70

Note(s):-
(1) This table does not purport to be comprehensive: data relating to arsenic are not fully recorded by many countries

Asbestos

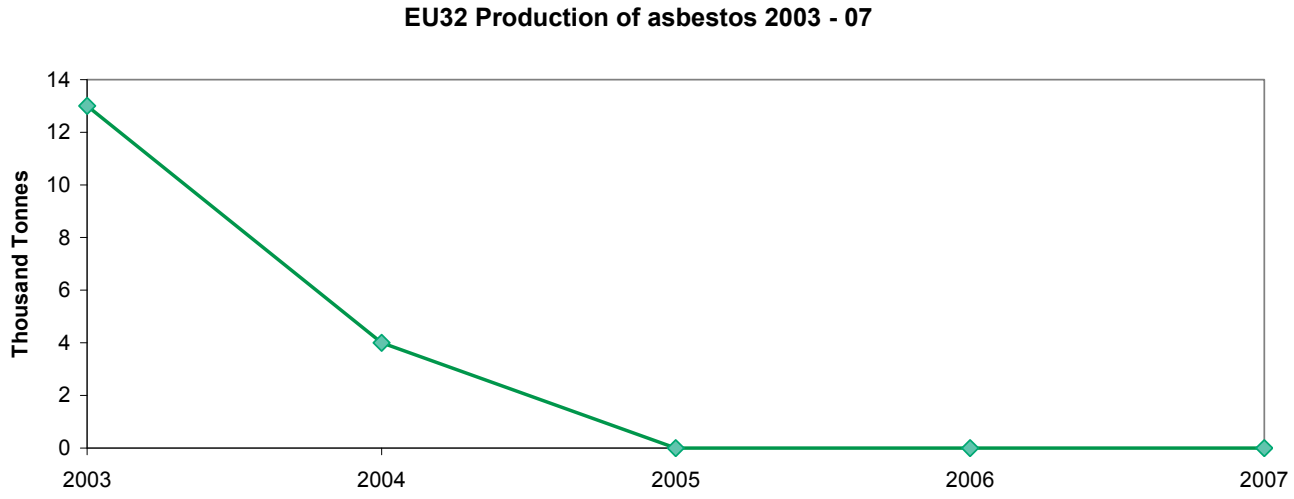
- Asbestos is a commercial term for six fibrous minerals of which chrysotile (white asbestos), the fibrous form of serpentine, is the only form of asbestos now worked. Asbestos was once highly sought after because of its unique combination of properties:
  - non-combustibility
  - resistance to heat, friction, corrosion and acid/alkali attack
  - good thermal and sound insulation qualities
  - good dialectric properties
- Airborne asbestos fibres are a serious hazard to health and virtually all industrial use of asbestos has now ceased in Europe, together with almost all production in the EU32. The largest producer in the world is Russia with 40 per cent of world production and China is the second largest with 20 per cent of world production.
- The price of asbestos (U.S. exports) was about US$473 per tonne in 2007, an increase of nearly five per cent compared to 2006. However during 2008 the price increased dramatically to average about US$868 per tonne, an increase of more than 80 per cent.

Production of asbestos

tonnes

Country	2003	2004	2005	2006	2007
Greece	*13 000	*4 000	—	—	—

Note(s):-
(1) In addition to the countries listed, Romania is believed to produce asbestos



Exports of unmanufactured asbestos

tonnes

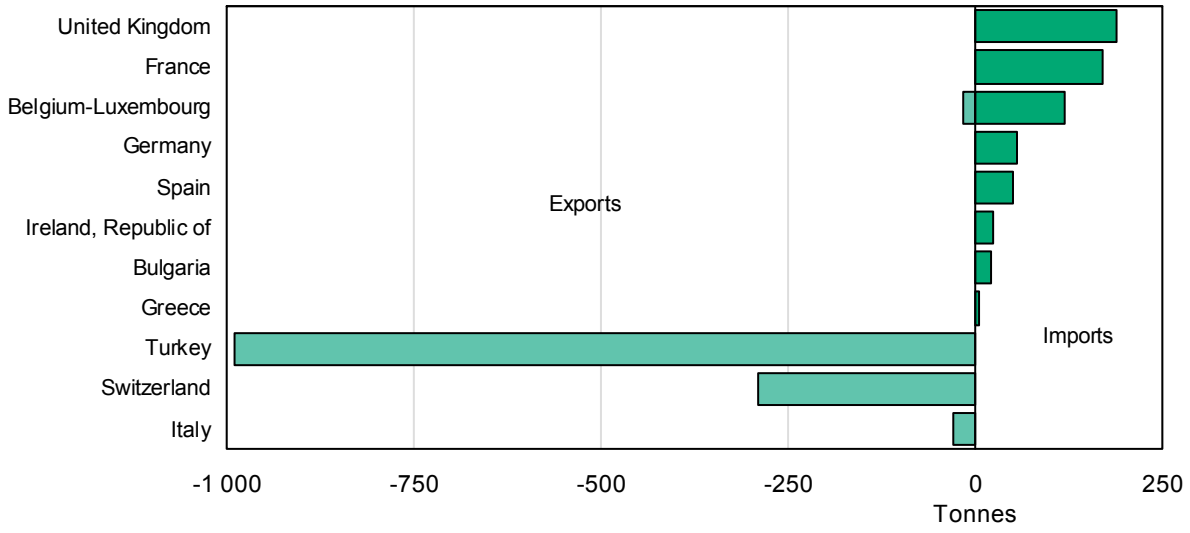
Country	2003	2004	2005	2006	2007
Belgium-Luxembourg	—	3	...	164	17
France	5	31	—	8	—
Greece	12 576	4 256	—	...	—
Italy	...	...	20	5	29
Malta	...	...	65	16	...
Switzerland	0	0	0	0	290
Turkey	42 000	0	—	3	990

Imports of unmanufactured asbestos

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg	1	63	...	1	120
Bulgaria	50	196	...	...	20
Croatia	1 958	3 251	2 429	...	...
Czech Republic	1 464	2 891	0	...	1
France	3	8	5	52	169
Germany	59	69	98	61	54
Greece	91	—	...	...	4
Hungary	574	...	...	...	...
Ireland, Republic of	—	475	2 794	2 700	23
Latvia	...	34	4	28	1
Portugal	1 568	474	356	...	...
Romania	11 859	13 036	9 077	3 272	...
Slovenia	...	10	25	...	...
Spain	130	192	23	20	50
Turkey	14 645	13 509	12 373	4 909	...
United Kingdom	3	2 150	—	0	187

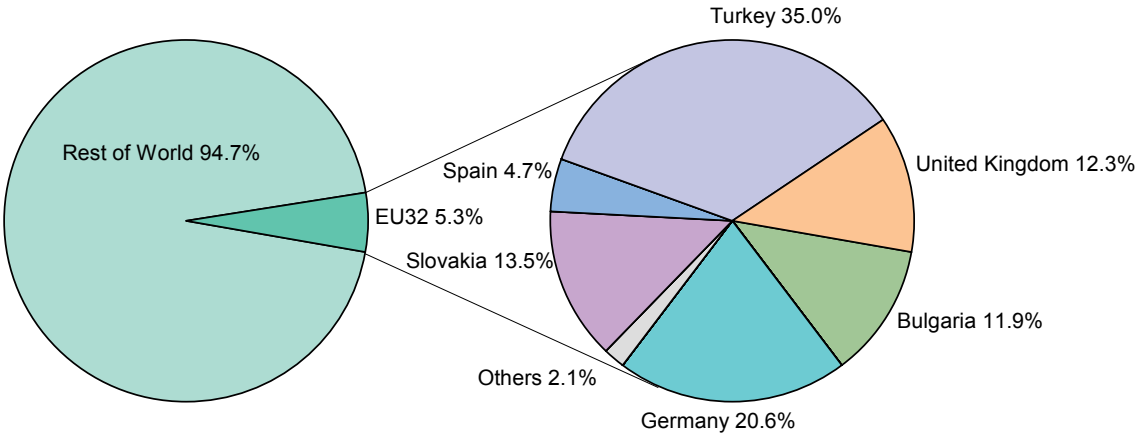
Asbestos - EU32 trade in 2007



Barytes

- Barytes (barium sulphate) is used in a variety of industries that utilise its properties of high specific gravity, softness, non-abrasiveness, chemical neutrality and brightness. About 88 per cent of barytes production is used in the manufacture and utilisation of drilling fluids in oil and gas exploration.
- The EU32 countries contributed five per cent of world barytes production in 2007. The largest producer amongst the EU32 is Turkey, which produced more than a third of the EU32 production. The largest world producer is China, which accounted for 53 per cent of world production in 2007.
- Two main grades of barytes are traded on world markets: paint grade (min. 99%) and drilling fluid grade (min. 95%). In 2007 and 2008 the price for paint grade micronised barytes delivered into the UK remained stable at an average of £145 per tonne. The average price for drilling fluid grade barytes delivered to Aberdeen remained stable in 2007 at £62.50 per tonne but increased in 2008 to £76 per tonne.

EU32 Production of barytes 2007

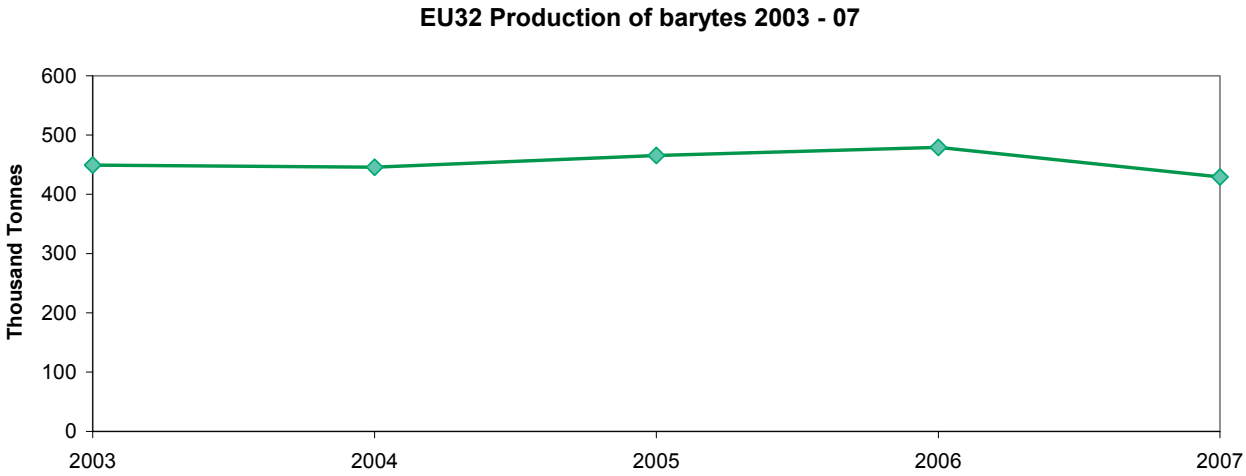


Production of barytes

tonnes

Country	2003	2004	2005	2006	2007
Bulgaria	91 200	75 400	76 600	74 500	50 900
France	81 100	81 000	*81 000	*40 000	—
Germany	109 506	93 624	88 591	85 524	88 265
Italy	12 214	12 258	7 312	*7 000	*7 000
Poland	3 030	3 183	2 357	2 034	*2 000
Slovakia	12 000	25 000	26 589	57 000	58 000
Spain	44 660	40 776	42 792	45 001	20 000
Turkey	119 648	134 504	157 200	160 000	150 000
United Kingdom	*57 000	*61 000	*64 000	*48 000	*53 000
EU32 Total	530 000	527 000	546 000	519 000	429 000

Note(s):-
(1) This table may include small quantities of witherite



Exports of barytes

tonnes

Country	2003	2004	2005	2006	2007
Austria	479	2 737	1 407	5 830	3 023
Belgium-Luxembourg	1 424	3 646	4 016	19 004	506
Bulgaria	91 215	75 393	76 644	74 523	50 922
Czech Republic	895	616	557	275	285
France (a)	*55 900	*75 900	*57 700	*36 300	*37 100
Germany	32 546	32 383	32 375	33 947	43 104
Italy	224	1 951	505	1 000	2 239
Netherlands	91 083	77 269	52 444	37 392	68 798
Norway	11 105	15 888	1 482	14 199	13 425
Slovakia	6 642	7 919	7 876	13 843	9 174
Spain	37 141	33 930	27 389	27 743	31 693
Turkey	101 716	142 767	134 482	159 128	115 039
United Kingdom	69 094	12 873	16 334	4 250	9 242

Note(s):-
(1) Trade in barytes is reported under item 2511 of the Harmonised System and is described as 'barytes and witherite'. However, only small quantities of witherite are traded

(a) BGS estimates, based on known imports into certain countries

Imports of barytes

tonnes

Country	2003	2004	2005	2006	2007
Austria	2 742	3 910	5 863	12 550	4 898
Belgium-Luxembourg	6 045	3 255	3 432	7 953	35 785
Croatia	1 053	1 878	715	893	98
Czech Republic	8 448	8 782	8 552	7 195	6 358
Denmark	39 341	36 133	28 788	58 303	38 096
Finland	3 119	3 559	3 931	4 498	5 018
France	23 009	28 748	31 965	24 471	40 760
Germany	218 811	226 706	231 471	272 526	320 702
Greece	791	858	996	1 065	1 255
Hungary	1 704	3 453	...	...	1 444
Ireland, Republic of	332	411	894	293	586
Italy	87 501	86 874	84 178	84 398	89 745
Netherlands	136 981	155 325	116 512	88 489	148 808
Norway	115 402	129 547	109 802	125 134	127 181
Poland	8 318	6 593	7 744	9 138	10 895
Portugal	3 589	2 630	5 382	3 099	1 934
Romania	2 943	9 943	5 747	7 604	14 040

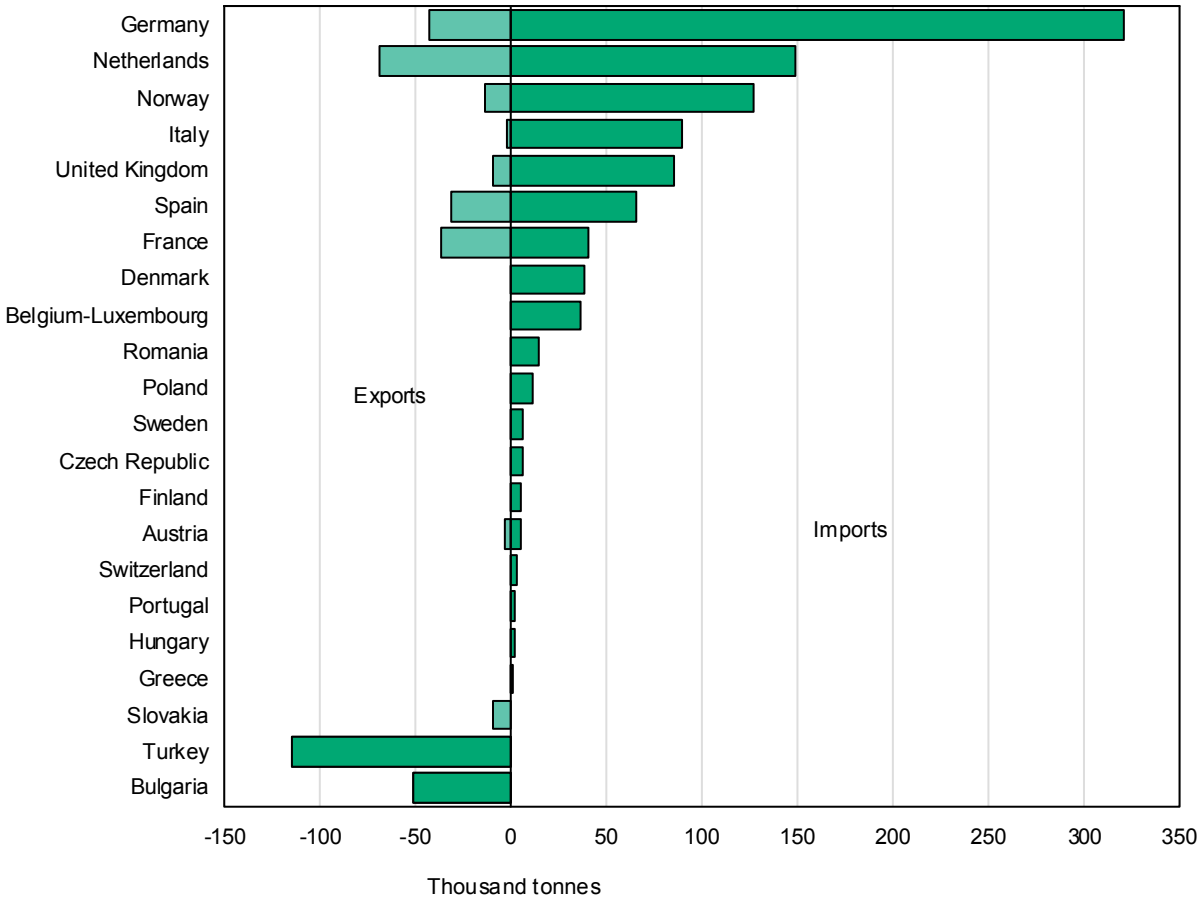
Imports continued

tonnes

Country	2003	2004	2005	2006	2007
Slovakia	956	927	814	872	147
Slovenia	931	896	845	1 044	585
Spain	50 596	59 378	47 923	50 743	65 569
Sweden	1 848	2 854	4 610	4 876	6 504
Switzerland	2 433	2 187	2 242	2 433	2 843
Turkey	121	258	1 983	137	...
United Kingdom	56 867	63 934	54 753	78 225	84 617

Note(s):-
(1) Trade in barytes is reported under item 2511 of the Harmonised System and is described as 'barytes and witherite'. However, only small quantities of witherite are traded

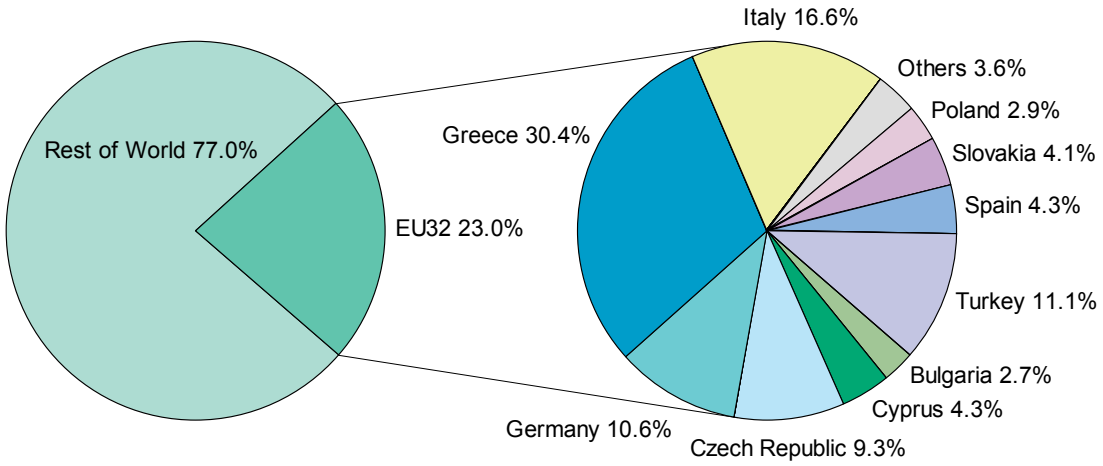
Barytes - EU32 trade in 2007



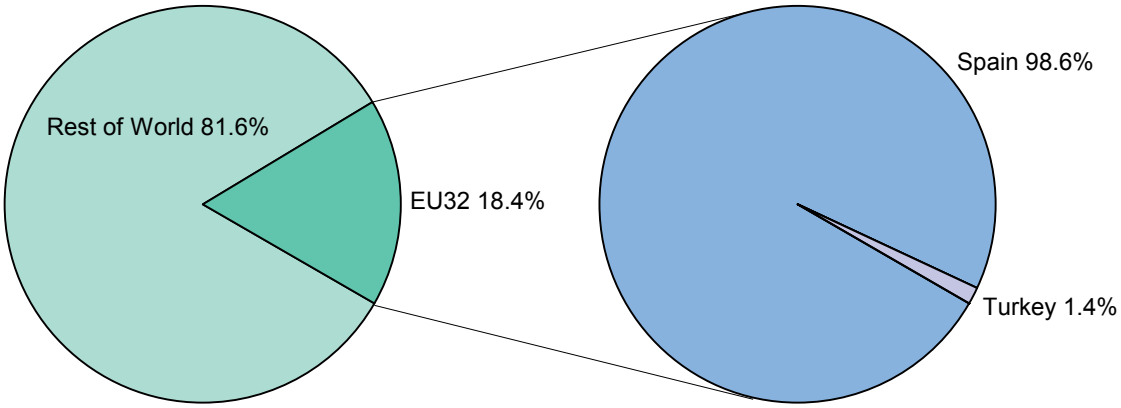
Bentonite and fullers earth

- Bentonites consist of montmorillonite (a clay mineral) that occurs as two main varieties — calcium bentonite and the more commercially important sodium bentonite. In the UK the name fuller's earth is given to calcium bentonite (and in the USA, attapulgite). Sepiolite is a fibrous clay that can be a substitute for bentonite. Calcium bentonite can be changed to sodium bentonite by the ion-exchange process. The main uses of bentonite and fuller's earth take advantage of their natural sorptive and thixotropic properties. They are used as additions to drilling muds, in making foundry moulds, pelletising iron ore and in the manufacture of cat litter.
- The EU32 countries produced 23 per cent of world bentonite in 2007. The world's largest producer was the USA with 32 per cent of world production. Greece is the largest producer of bentonite in the EU32 with 30 per cent of EU32 production. UK production of fuller's earth ceased in 2005 and there is no longer any significant production in the EU32. More than 90 per cent of world production now comes from the USA. Most of Europe's sepiolite production in 2007 came from Spain, with a smaller (estimated) contribution from Turkey.
- Bentonite is traded in a variety of forms. For example, cat litter grade traded at between US$32 to US$40 per tonne during 2007 and between US$36 to US$38 per tonne in 2008.
-

EU32 Production of bentonite 2007



EU32 Production of attapulgite and sepiolite 2007



Production of bentonite and fuller's earth

tonnes

Country	2003	2004	2005	2006	2007
Bulgaria					
Bentonite	145 500	224 900	181 200	134 500	99 000
Croatia					
Bentonite	13 568	15 674	17 391	16 410	19 578
Cyprus					
Bentonite	144 859	155 717	172 366	150 620	154 655

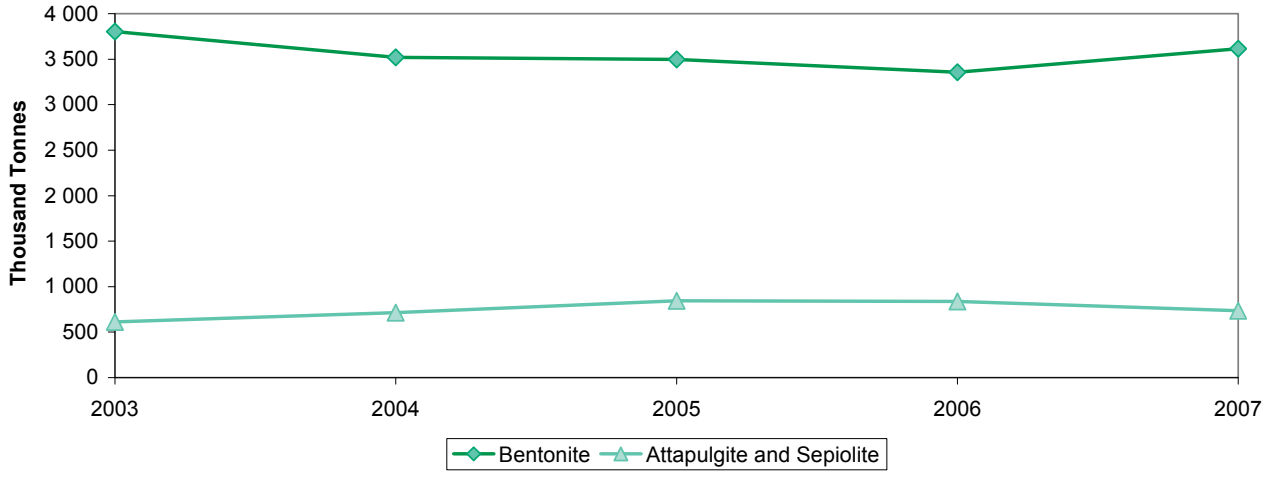
Production continued tonnes

Country	2003	2004	2005	2006	2007
Czech Republic					
Bentonite	199 000	224 000	216 000	267 000	335 000
Denmark					
Bentonite	16 303	18 352	18 515	19 211	20 093
Germany					
Bentonite	478 796	404 549	352 374	363 998	384 709
Greece					
Bentonite	1 156 642	1 030 556	1 124 795	*1 100 000	*1 100 000
Hungary					
Bentonite	87 200	9 300	4 900	6 635	54 231
Italy					
Bentonite	474 475	437 659	445 573	469 654	599 735
Fuller's earth	250	300	...	...	...
Macedonia					
Bentonite	6 013	16 373	14 958	20 353	22 509
Poland	31 648	66 143	86 331	97 900	105 943
Romania					
Bentonite	17 637	18 161	18 190	21 165	14 713
Slovakia					
Bentonite	98 000	98 000	97 000	136 000	149 000
Spain					
Bentonite	103 174	156 760	163 290	154 746	156 875
Attapulgite	18 975	20 796	20 565	20 933	24 284
Sepiolite	548 728	655 346	807 820	806 345	700 000
Turkey					
Bentonite	831 146	643 153	582 735	*400 000	*400 000
Sepiolite	*10 000	*10 000	*10 000	*10 000	*10 000
United Kingdom					
Fuller's earth (a)	33 900	27 540	6 200	—	—
EU32 Total					
Bentonite	3 804 000	3 519 000	3 496 000	3 358 000	3 616 000
Fullers Earth (b)	612 000	714 000	845 000	837 000	734 000

Note(s):-
(1) Bentonites consist of montmorillonite (one of the smectite group of clay minerals) and occur in two main varieties, calcium bentonite, the most commonly occurring, and sodium bentonite, industrially the more important
(2) Calcium bentonite can be converted to sodium bentonite by a sodium-exchange process
(3) In some countries, such as the United Kingdom, calcium bentonite is known as fuller's earth, a term which is also used to refer attapulgite, a mineralogically distinct clay mineral but exhibiting similar properties
(4) In addition to the countries listed, Austria is believed to produce bentonite and France may produce fuller's earth

(a) Saleable production based on data from producing companies
(b) Including attapulgite and sepiolite

EU32 Production of bentonite, attapulgite and sepiolite 2003 - 07



Exports of bentonite and fuller's earth

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Bentonite	9 246	8 242	10 173	8 112	5 589
Belgium-Luxembourg					
Bentonite	28 403	22 700	26 049	32 407	18 504
Fuller's earth	57	501	501	303	...
Bulgaria					
Bentonite	102 263	95 435	76 614	89 531	74 412
Cyprus					
Bentonite	71 460	81 596	85 724	159 472	156 871
Czech Republic					
Bentonite	17 439	62 012	85 093	86 296	97 358
Denmark					
Bentonite	16 821	17 279	17 066	19 214	19 495
France					
Bentonite	18 966	7 696	9 243	9 788	13 454
Fuller's earth	—	10	31	2	...
Germany					
Bentonite	57 237	50 477	71 977	77 368	81 272
Fuller's earth	299	860	1 540	1 378	...
Greece					
Bentonite	27 395	15 612	1 283	12 620	168
Fuller's earth	—	8	90	122	...
Hungary					
Bentonite	1 030	897	442	860	849
Italy					
Bentonite	221 353	257 596	245 515	272 438	296 809
Lithuania					
Bentonite	238	218	26	2 491	5 457
Macedonia					
Bentonite	5 698	3 973	4 346	4 747	4 181
Netherlands					
Bentonite	180 736	203 897	186 286	132 076	129 692
Fuller's earth	3 752	9 085	2 931	2 141	...
Poland					
Bentonite	1 999	1 365	12 061	15 851	19 107
Fuller's earth	660	431	404	580	...
Romania					
Bentonite	4 056	8 810	7 154	521	68
Slovakia					
Bentonite	66 954	85 341	76 014	105 273	89 517
Fuller's earth	856	*1 000	1 757	...	...
Spain					
Bentonite	74 277	80 410	75 450	73 767	72 278
Sepiolite	507 584	501 988	506 019	464 939	481 589
Fuller's earth	12 417	11 362	9 828	7 896	...
Sweden					
Bentonite	10 082	9 486	7 419	9 539	12 240
Turkey					
Bentonite	153 691	210 328	211 926	84 595	22 237
Fuller's earth	253	179	342	251	...
United Kingdom					
Bentonite	75 099	71 153	49 514	42 548	47 122
Fuller's earth	254	124	778	1 102	...

Note(s):-
(1) See notes 1-3 to production table
(2) The figures in this table refer to natural and sodium-exchanged bentonite, and fuller earth, Harmonised System codes 2508.10 and 2508.20
(3) Some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Harmonised System code 3802.90, e.g. Italy, but these are not included in this table
(4) From 2007 Harmonised System code 2508.20, used in this table for fuller's earth, is no longer available

Imports of bentonite and fuller's earth

tonnes

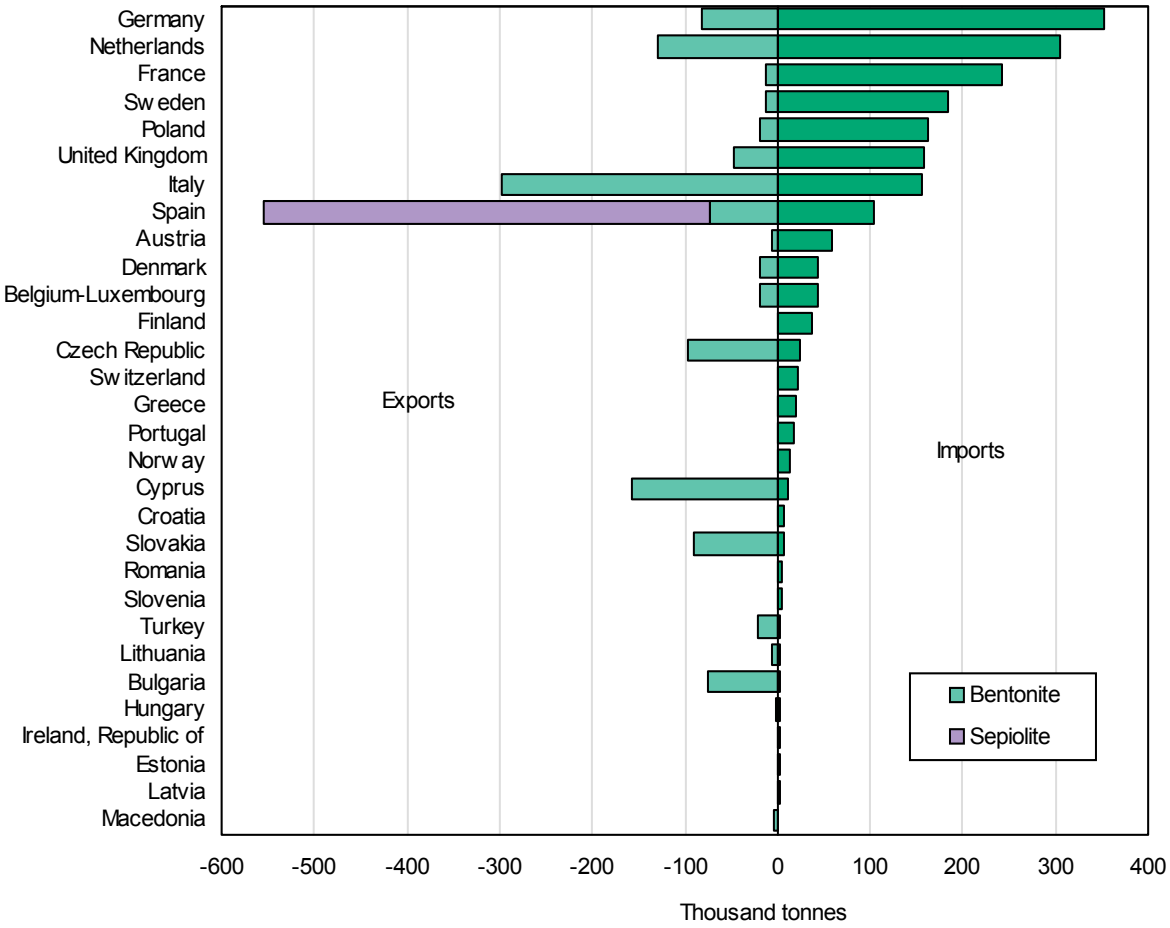
Country	2003	2004	2005	2006	2007
Austria					
Bentonite	47 358	53 871	58 344	60 667	58 727
Fuller's earth	560	615	374	427	...
Belgium-Luxembourg					
Bentonite	33 129	35 509	45 282	48 871	42 816
Fuller's earth	6 428	11 164	8 028	7 036	...
Bulgaria					
Bentonite	511	708	1 178	1 455	2 979
Fuller's earth	321	381	422	537	...
Croatia					
Bentonite	1 238	2 181	1 897	2 053	7 633
Cyprus					
Bentonite	20 519	18 052	3 057	9 063	10 556
Czech Republic					
Bentonite	11 795	19 852	14 776	18 452	23 559
Fuller's earth	702	564	1 290	1 039	...
Denmark					
Bentonite	46 516	37 253	47 386	49 695	43 555
Fuller's earth	40	107	137	921	...
Estonia					
Bentonite	1 628	1 356	2 014	2 223	1 995
Fuller's earth	221	260	132	145	...
Finland					
Bentonite	26 569	27 321	26 395	32 520	37 741
Fuller's earth	212	322	201	109	...
France					
Bentonite	170 540	220 260	163 999	220 996	243 350
Fuller's earth	3 701	17 907	18 445	23 522	...
Germany					
Bentonite	253 998	218 349	253 226	323 999	351 991
Fuller's earth	8 483	11 202	9 571	9 371	...
Greece					
Bentonite	14 280	8 902	22 164	14 573	19 780
Fuller's earth	898	633	844	811	...
Hungary					
Bentonite	5 371	4 963	2 794	4 850	2 933
Fuller's earth	543	251	281	...	...
Ireland, Republic of					
Bentonite	869	2 042	2 658	953	2 914
Italy					
Bentonite	139 576	153 410	138 973	121 697	155 568
Fuller's earth	10 982	5 760	7 893	8 208	...
Latvia					
Bentonite	1 710	1 917	1 629	1 544	1 850
Lithuania					
Bentonite	2 607	2 472	2 675	2 838	3 105
Netherlands					
Bentonite	298 369	358 305	199 692	281 144	305 364
Fuller's earth	76 241	76 177	70 482	80 511	...
Norway					
Bentonite	13 963	13 667	10 000	15 246	14 399
Fuller's earth	111	170	260	209	...
Poland					
Bentonite	93 915	126 127	115 208	153 266	162 424
Fuller's earth	1 263	1 749	2 566	2 564	...
Portugal					
Bentonite	14 208	17 907	16 881	17 640	18 480
Fuller's earth	936	662	483	379	...
Romania					
Bentonite	2 726	4 192	3 805	4 685	5 253
Fuller's earth	657	460	321	358	...
Slovakia					
Bentonite	3 912	6 040	6 863	6 916	7 145
Fuller's earth	1 014	866	1 082	886	...
Slovenia					
Bentonite	4 321	3 555	3 612	4 981	4 048

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Spain					
Bentonite	68 776	60 709	83 784	82 645	104 057
Fuller's earth	488	271	238	159	...
Sweden					
Bentonite	140 176	82 414	48 564	125 491	184 313
Switzerland					
Bentonite	20 540	20 027	20 861	24 407	21 334
Fuller's earth	1 541	1 641	1 844	916	...
Turkey					
Bentonite	1 702	832	4 127	2 127	3 202
Fuller's earth	104	157	159	93	...
United Kingdom					
Bentonite	198 434	187 750	151 179	173 483	157 388
Sepiolite	55 483	51 044	65 565	72 340	...
Fuller's earth	7 085	2 574	3 122	14 700	...

Note(s):-
(1) See notes 1-3 to production table
(2) The figures in this table refer to natural and sodium-exchanged bentonite, and fuller earth, Harmonised System codes 2508.10 and 2508.20
(3) Some countries are believed to include sodium-exchanged bentonite, often referred to as activated bentonite, under Harmonised System code 3802.90, e.g. Italy, but these are not included in this table
(4) From 2007 Harmonised System code 2508.20, used in this table for fuller's earth, is no longer available

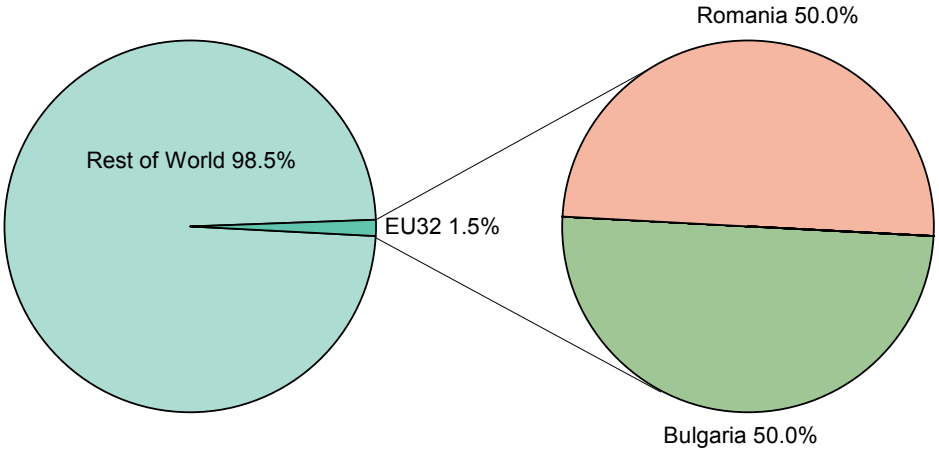
Bentonite and Sepiolite - EU32 trade in 2007



Bismuth

- Bismuth is a metallic element, chiefly used in its compound form, in pharmaceuticals and as metal in fusible (low-melting) alloys. It is also highly valued as a substitute for lead.
- China, Mexico and Peru are the world's largest producers of bismuth, with 79 per cent of world production in 2007 coming from these three countries. There is very little mine production in the EU32, although, bismuth is produced as a by-product of lead and zinc refining.
- The price of bismuth in 2007 increased from a low in January of US$6.97 per pound to a high in June of US$18.83 per pound before falling slightly towards the end of the year. In 2008, the price increased again to a high of US$16.63 per pound in April before falling to end the year at US$8.50 per pound.

EU32 Production of bismuth 2007



Mine production of bismuth

tonnes (metal content)

Country	2003	2004	2005	2006	2007
Bulgaria	*40	*40	*40	*40	*40
Romania	*40	*40	*40	*40	*40
EU32 Total	80	80	80	80	80

Note(s):-
(1) The figures in this table are in some instances derived from reported bismuth content of refined and impure metal plus recoverable in ores and concentrates exported
(2) Production for some countries may include bismuth produced from imported ores but it is thought that any resulting duplication is insignificant in the countries shown

Exports of bismuth

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	8	8	8	0	12
Belgium-Luxembourg					
Metal	20	0	*—	*—	355
France					
Metal	46	28	39	24	52
Germany					
Metal	152	275	371	534	901
Netherlands					
Metal	327	136	97	48	238
Spain					
Metal	10	2	9	118	32
United Kingdom					
Metal	2 239	2 633	2 426	2 703	2 588

Note(s):-
(1) The compounds recorded in this table are bismuth carbonate and/or bismuth nitrate

Imports of bismuth

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	128	114	62	114	42
Belgium-Luxembourg					
Metal	4	20	27	109	111
Czech Republic					
Metal	56	64	50	77	70
France					
Metal	629	830	1 029	547	382
Germany					
Metal	1 689	1 693	1 508	1 337	1 130
Greece					
Metal	17	23	6	6	11
Ireland, Republic of					
Metal	54	2	6	8	12
Italy					
Metal	151	175	203	251	316
Netherlands					
Metal	274	166	85	168	127
Poland					
Metal	4	6	14	14	15
Slovenia					
Metal	42	43	69	66	90
Spain					
Metal	188	206	179	297	190
Sweden					
Metal	8	13	11	8	5
Switzerland					
Metal	15	6	15	6	8
Turkey					
Metal	4	6	7	8	—
United Kingdom					
Metal	2 237	2 205	2 858	2 347	1 908

Note(s) :-
(1) The compounds recorded in this table are bismuth carbonate and/or bismuth nitrate

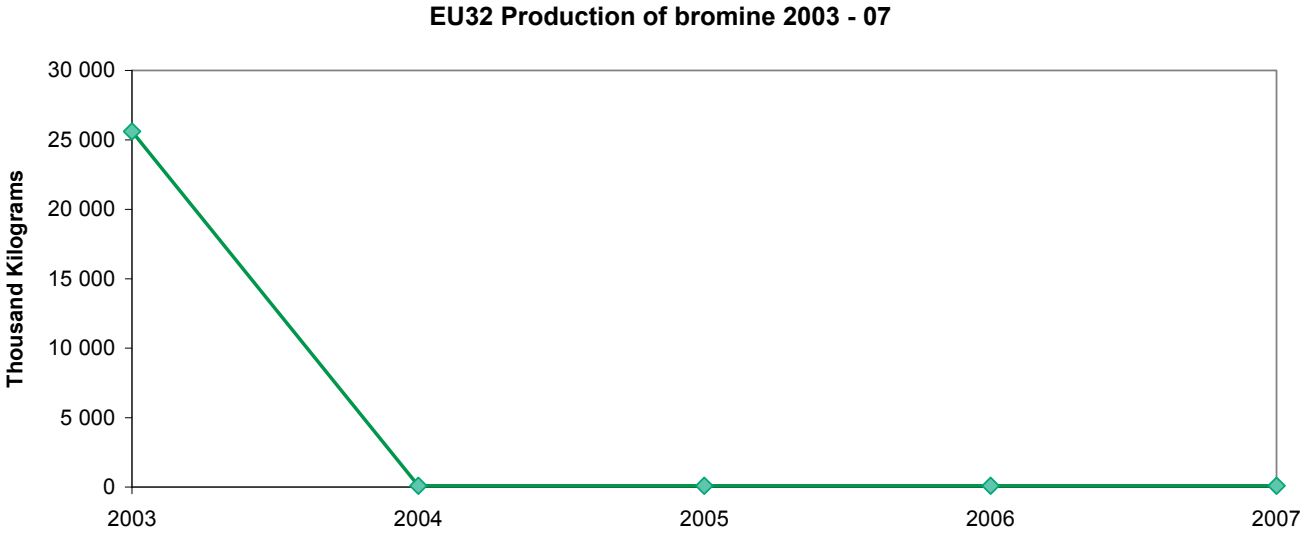
Bromine

- Bromine is the only non-metallic element that is liquid at room temperature. It is strongly reactive and hazardous in pure forms and has a wide range of uses including medicinal, fumigants, dyes, and pesticides.
- Bromine is almost entirely produced from processing sea-water. The two largest producers are the USA (51 per cent) and Israel (34 per cent), the latter taking advantage of the relatively high bromine content of the Dead Sea.
- The price of purified bromine was an estimated US$2.00 per kilogram in 2007.

Production of bromine

kilograms

Country	2003	2004	2005	2006	2007
Germany	*500 000	—	—	—	—
Spain	*100 000	*100 000	*100 000	*100 000	*100 000
United Kingdom	*25 000 000	—	—	—	—
EU32 Total	25 600 000	100 000	100 000	100 000	100 000



Exports of bromine

kilograms

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg	17 930 400	21 275 800	19 124 000	20 738 100	17 430 000
Germany	16 700	5 600	3 000	4 600	3 400
Italy	1 296	505	1 000	228 287	55 156
Netherlands (a)	5 221 557	1 001 471	1 388 695	1 333 583	1 475 500
Poland	...	...	3 000	5 500	9 400
Spain	479	291	1 000	192 339	418 531
United Kingdom	5 307 678	1 126 043	234 977	1 137 544	1 469 781

Note(s):-
(1) This table does not purport to be comprehensive: trade in bromine is not separately distinguished from other halogens by many countries

(a) May include some fluorine

Imports of bromine

kilograms

Country	2003	2004	2005	2006	2007
Austria	252 200	93 000	222 000	228 600	463 900
Belgium-Luxembourg	21 097 900	23 466 200	25 108 000	24 553 300	21 768 500
Czech Republic	26 817	8 121	1 174	5 066	7 700
Finland	56 506	71 251	71 000	36 158	100
France	13 225 500	12 595 900	13 989 000	13 971 600	12 146 400
Germany	1 835 400	1 626 600	1 304 000	801 100	607 500
Hungary	(a) 24 900	(a) 5 623	12 000	9 300	(a) 29 143
Ireland, Republic of	33 238	602	...	886	1 760
Italy	139 908	355 734	281 000	522 069	374 426
Netherlands (a)	981 870	147 994	5 019 459	3 037	5 100
Poland	2 000	(a) 9 348	6 000	16 100	14 300
Spain	122 194	73 493	53 000	82 351	77 578
Sweden	0	5 000	13 000	9 000	2 800
Turkey	(a) 75 080	(a) 149 960	105 000	24 426	77
United Kingdom	1 899 231	7 145 977	7 994 939	7 592 352	5 266 339

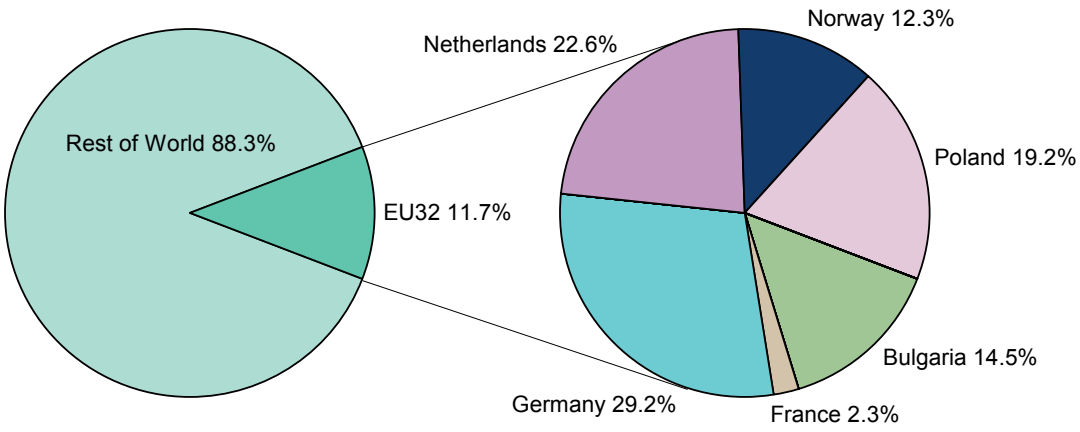
Note(s) :-
(1) This table does not purport to be comprehensive: trade in bromine is not separately distinguished from other halogens by many countries

(a) May include some fluorine

Cadmium

- Cadmium is a highly toxic metallic element mostly produced as a by-product of zinc refining. The bulk of cadmium in use is in nickel-cadmium (NiCd) rechargeable batteries. Other major uses are in pigments and in metal coatings.
- The two largest world producers in 2007 were China (20 per cent) and the Republic of Korea (15 per cent). The EU32 contributed 12 per cent of world production in 2007. Germany was the largest EU32 producer accounting for about 29 per cent of EU32 production.
- Prices for cadmium metal (min. 99.95% Cd) increased sharply in 2007 from a low in the range of US$1.84 to US$1.99 per pound in January to a high of US$5.82 to US$6.17 per pound by June, but then fell to US$3.30 to US$3.50 per pound by the end of the year. For the first half of 2008 the prices were stable, but fell sharply towards the end of the year to between US$0.63 to US$0.90 per pound.

EU32 Production of cadmium 2007

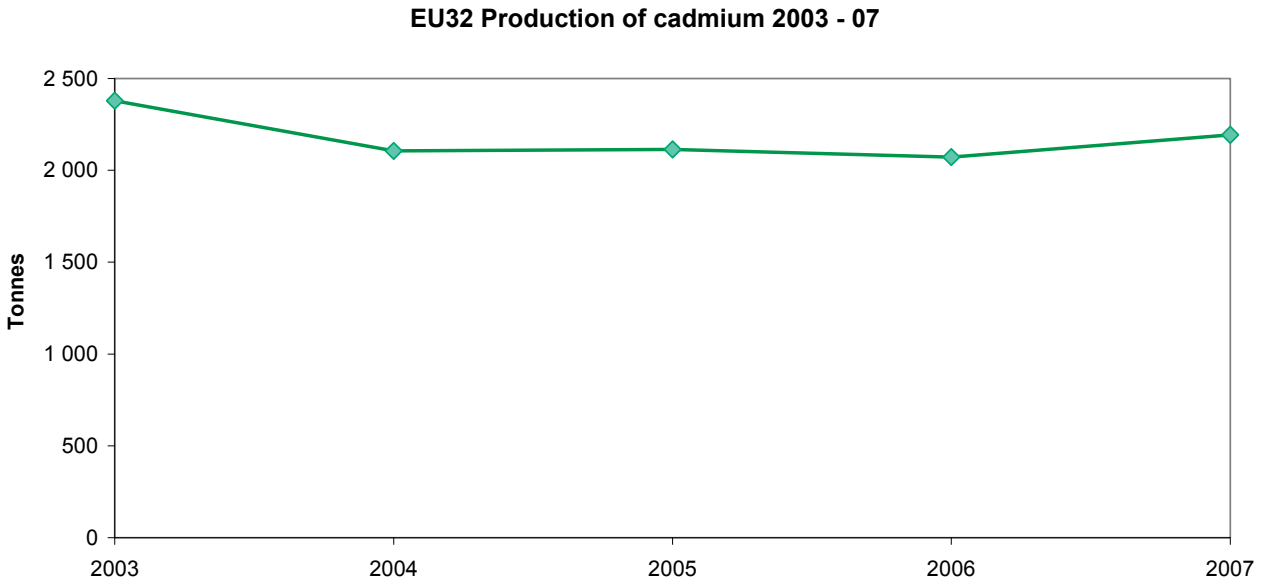


Production of cadmium

tonnes

Country	2003	2004	2005	2006	2007
Bulgaria	307	356	319	320	318
France	*120	*120	*100	*90	*50
Germany	640	*640	*640	*640	*640
Italy	22	—	—	—	—
Macedonia	75	—	—	—	—
Netherlands	495	493	494	524	495
Norway	323	141	153	125	269
Poland	375	356	408	373	421
United Kingdom	22	—	—	—	—
EU32 Total	2 400	2 100	2 100	2 100	2 200

Note(s):-
(1) Data in this table excludes secondary metal unless otherwise stated



Exports of cadmium

tonnes

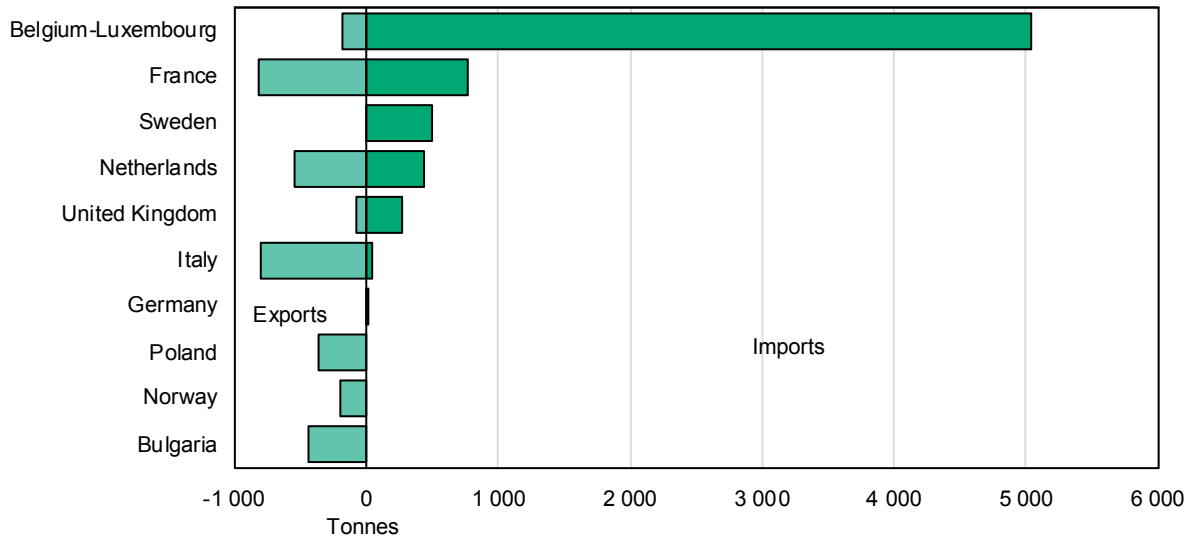
Country	2003	2004	2005	2006	2007
Belgium-Luxembourg					
Metal	1 018	746	639	298	181
Sulphide	10	15	29	7	...
Bulgaria					
Metal	344	378	316	369	434
France					
Metal	794	604	533	798	815
Germany					
Sulphide	5	6	14	4	...
Italy					
Metal	239	54	18	1	796
Macedonia					
Metal	818	500	...	...	...
Netherlands					
Metal	572	621	553	1 064	544
Norway					
Metal	237	304	132	90	205
Poland					
Metal	697	665	610	364	368
Sweden					
Oxide	120	139	140	...	322
Turkey					
Metal	...	95	25	27	—
United Kingdom					
Metal	187	27	79	7	76

Imports of cadmium

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg					
Metal	4 914	4 064	4 779	3 948	5 038
Oxide	65	61	26	...	2
Sulphide	18	—	29	13	...
Czech Republic					
Sulphide	20	19	21	14	...
France					
Metal	1 248	1 465	2 114	527	771
Oxide	839	743	584	...	885
Sulphide	20	5 802	6	—	...
Germany					
Metal	11	39	16	7	22
Oxide	143	139	231	...	423
Sulphide	8	6	18	9	...
Italy					
Metal	48	87	72	30	40
Oxide	62	96	55	...	1
Netherlands					
Metal	357	284	233	113	437
Spain					
Metal	23	22	2	19	...
Oxide	29	28	53	17	22
Sweden					
Metal	402	330	282	388	491
Oxide	26	71	35	...	25
Switzerland					
Metal	4	30	5	7	3
United Kingdom					
Metal	416	479	206	129	276

Cadmium metal - EU32 trade in 2007



Cement

- Cement is a manufactured product and is the essential basis of concrete and mortar. Its chief raw materials are limestone or chalk and clay/mudstone. In Europe it is the largest use of limestone after crushed rock aggregate.
- Cement is made by firing a mixture of limestone and clay in a kiln to produce 'cement clinker'. This is a mixture of calcium silicates and calcium aluminates, which is finely ground with the addition of five per cent gypsum/anhydrite to produce finished cement.
- Turkey and Italy are the largest producers of cement clinker, each with between 20 per cent and 24 per cent of EU32 production. Spain is normally the largest producer but data for 2007 was not available at the time of this compilation. There is significant international trade in both clinker and finished cement.

Production of cement clinker

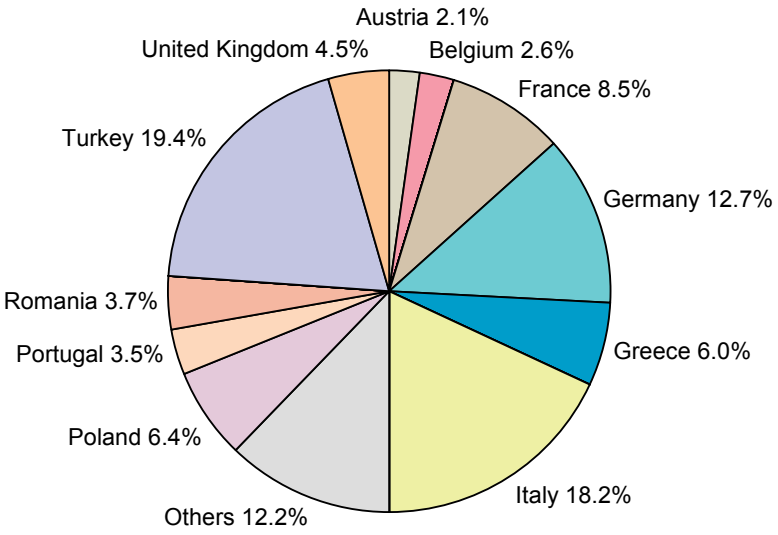
tonnes

Country	2003	2004	2005	2006	2007
Austria	...	...	90 053	188 588	221 684
Bulgaria	...	...	402 684	400 315	*400 000
Cyprus	56 034	68 865	37 891	97 846	—
Denmark	61 909	52 758	42 691	5 499	21 209
Estonia	559 500	622 900	635 500	704 700	1 042 800
France	16 313 000	17 157 000	17 332 000	17 731 000	18 046 000
Germany	21 513 000	26 281 000	24 315 000	24 921 000	26 992 000
Greece	15 016 562	12 185 001	12 442 361	...	11 298 626
Hungary	...	...	...	2 533 076	2 500 698
Italy	32 077 055	33 048 546	...	...	...
Latvia	*200 000	250 000	...	...	...
Luxembourg	770 000	847 000	834 000	816 000	817 000
Netherlands	800 000	825 000	...	...	...
Poland	8 647 397	9 620 601	9 468 410	11 219 940	13 167 950
Portugal (a)	845 594	1 082 678	1 450 646	1 484 856	1 513 487
Sweden	2 235 138	2 385 509	2 457 245	2 660 045	*2 700 000
Turkey	...	...	31 355 180	32 824 687	38 847 522
United Kingdom	10 146 000	10 402 000	10 074 000	10 069 000	10 227 000
EU32 Total	*146 000 000	*151 000 000	*150 000 000	*153 000 000	*164 000 000

Note(s):-
(1) The Czech Republic is also known to produce cement clinker

(a) Sales

EU32 Production of finished cement 2007

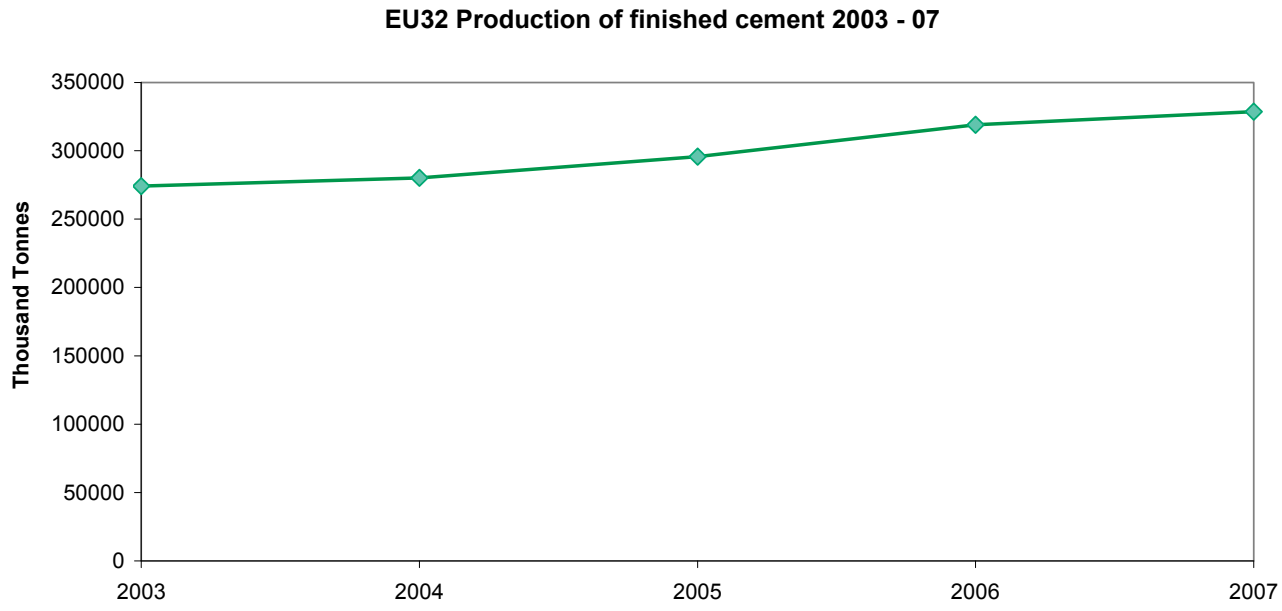


Production of finished cement

tonnes

Country	2003	2004	2005	2006	2007
Austria	*4 000 000	4 040 000	4 676 768	5 293 370	5 518 303
Belgium	6 553 000	6 216 000	6 587 000	6 965 000	6 930 000
Bulgaria	*2 410 000	*2 920 000	3 559 420	4 003 664	*4 290 000
Cyprus	1 636 879	1 688 917	1 804 645	1 786 488	1 882 096
Czech Republic	3 502 103	3 828 677	3 978 056	4 677 150	4 898 530
Denmark	2 580 427	2 892 831	2 880 554	2 937 132	2 871 402
Estonia	506 200	614 600	726 000	848 900	937 400
Finland (a)	1 186 000	1 295 000	1 347 000	1 684 507	1 771 000
France	19 655 000	20 962 000	21 277 000	22 268 000	22 268 000
Germany	32 700 000	31 900 000	30 600 000	33 630 000	33 382 000
Greece	18 741 977	15 040 760	15 403 230	*16 000 000	*15 700 000
Hungary	3 573 000	3 349 000	3 371 000	3 724 153	3 551 746
Ireland, Republic of	...	...	*4 900 000	*4 700 000	*4 700 000
Italy	43 580 047	45 342 868	46 400 000	47 400 000	*48 000 000
Latvia	295 205	283 645	280 000	*280 000	*280 000
Lithuania	596 857	753 069	832 076	1 065 367	1 105 365
Luxembourg	709 000	797 000	767 000	796 000	908 000
Netherlands	2 450 000	2 380 000	2 496 000	2 790 000	...
Norway	1 650 000	1 420 000	1 613 000	1 695 000	...
Poland	11 653 448	12 566 000	12 646 223	14 688 353	16 963 752
Portugal	8 485 826	8 839 048	(a) 8 426 830	(a) 8 326 687	(a) 9 178 735
Romania	5 991 962	6 238 584	7 032 100	8 198 090	9 844 706
Slovakia	3 147 478	3 158 308	3 498 685	3 592 509	3 718 410
Slovenia	1 370 000	1 186 000	1 200 000	1 269 000	*1 300 000
Spain	44 746 757	46 595 560	50 300 000	54 032 770	...
Sweden	2 544 647	2 712 810	2 731 000	2 952 000	...
Switzerland	3 613 000	3 851 000	4 022 000	4 040 000	...
Turkey	35 076 902	38 019 112	41 100 274	47 906 365	51 160 935
United Kingdom	11 215 000	11 405 000	11 216 000	11 469 000	11 887 000
EU32 Total	279 100 000	285 200 000	295 700 000	319 000 000	328 600 000

Note(s):-
(a) Sales



Exports of cement

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Cement clinkers	54 375	58 262	32 877	136 381	189 450
Portland cement	136 732	185 069	151 330	201 687	314 112
Other cement	42 712	40 830	53 951	38 926	59 361
Belgium-Luxembourg					
Cement clinkers	749 249	842 257	833 257	544 183	1 078 149
Portland cement	1 815 882	1 598 742	1 715 979	1 811 884	2 087 094
Other cement	592 657	616 066	612 642	609 236	606 807
Bulgaria					
Cement clinkers	602 632	392 414	338 505	293 031	353 996
Portland cement	568 083	460 281	455 824	334 013	52 803
Other cement	22 625	50	27	40	1 067
Croatia					
Cement clinkers	...	44 297	196 594	244 043	310 378
Portland cement	1 104 731	1 039 442	1 254 309	1 282 560	855 579
Other cement	76 973	95 310	92 074	89 957	94 185
Cyprus					
Cement clinkers	200 461	31 215	37 891	91 635	...
Portland cement	196 173	146 669	219 460	155 271	51 022
Czech Republic					
Cement clinkers	44 410	91 626	29 169	32 521	29 924
Portland cement	506 588	576 531	526 784	394 105	458 701
Other cement	11 476	3 216	34 046	67 930	151 422
Denmark					
Cement clinkers	65 962	85 967	54 542	11 981	9 673
Portland cement	1 164 923	1 127 638	1 235 477	1 290 816	1 094 730
Other cement	11 947	13 535	13 118	14 153	16 222
Estonia					
Cement clinkers	157 353	113 105	97 442	87 638	325 263
Portland cement	172 223	209 168	225 729	228 971	274 997
Finland					
Portland cement	837	11 449	3 367	647	982
France					
Cement clinkers	479 952	460 364	310 228	325 352	325 897
Portland cement	604 494	785 100	792 192	683 110	590 684
Other cement	144 523	112 828	102 222	113 145	13 999
Germany					
Cement clinkers	1 001 024	868 384	773 394	687 056	1 051 733
Portland cement	2 472 418	3 496 157	3 587 966	4 251 126	4 874 062
Other cement	1 196 558	1 580 315	1 876 289	1 852 990	2 086 591
Greece					
Cement clinkers	742 540	257 136	304 750	356 077	848 925
Portland cement	2 507 359	2 679 607	3 502 085	2 816 832	2 685 623
Other cement	110 674	170 640	242 957	181 529	207 665
Hungary					
Cement clinkers	41 006	78 590	27 328	—	—
Portland cement	440 285	244 276	274 262	257 050	177 191
Ireland, Republic of					
Cement clinkers	2 650	...	...	...	16 033
Portland cement	439 876	1 133 469	942 655	972 585	1 120 808
Other cement	14	850	10	1 489	1 596
Italy					
Cement clinkers	55 289	8 965	19 427	61 437	143 235
Portland cement	1 816 975	1 903 368	2 379 941	2 091 427	2 143 940
Other cement	181 086	130 920	130 120	660 595	536 324
Latvia					
Cement clinkers	...	...	184	326	35 307
Portland cement	42 644	26 144	10 762	5 528	43 951
Other cement	2	...	1	141	10 178
Lithuania					
Portland cement	212 730	247 918	299 782	246 350	154 649
Macedonia					
Cement clinkers	16 356	16 762	129 570	151 663	90 869
Portland cement	177 801	189 166	207 457	220 588	308 468

Exports continued

tonnes

Country	2003	2004	2005	2006	2007
Netherlands					
Cement clinkers	2 326	1 585	4 610	3 119	10 725
Portland cement	209 122	326 234	295 457	410 232	278 904
Other cement	53 743	30 013	18 513	134 225	12 931
Norway					
Cement clinkers (a)	*23 000	*100	*50 000	*65 000	*117 000
Portland cement (a)	*500 000	*413 000	*569 000	*369 000	*236 000
Poland					
Cement clinkers	87 470	226 981	256 621	856 035	181 690
Portland cement	262 290	341 112	460 479	402 741	313 361
Other cement	7 406	7 059	49 970	67 457	65 822
Portugal					
Cement clinkers	117 332	148 984	1 271 578	1 138 307	1 263 190
Portland cement	114 182	286 819	1 110 739	1 204 981	1 481 219
Other cement	6 081	13 267	17 301	11 364	58 931
Romania					
Cement clinkers	360 639	669 204	465 660	608 616	243 116
Portland cement	963 978	701 686	739 215	447 713	134 044
Slovakia					
Cement clinkers	27 695	4 768	26 549	27 092	30 800
Portland cement	1 476 998	1 470 728	1 433 926	1 372 554	1 346 692
Other cement	15 958	24 408	44 670	35 596	85 987
Slovenia					
Cement clinkers	7 589	18 577	58 765	21 440	2
Portland cement	166 323	101 842	56 776	73 187	55 803
Other cement	...	16 154	63 732	115 104	156 183
Spain					
Cement clinkers	18 350	9 491	13 259	28 809	37 343
Portland cement	1 585 078	1 681 953	1 713 572	1 386 652	1 358 857
Other cement	100 272	59 696	51 340	43 262	46 348
Sweden					
Portland cement	1 064 305	867 450	1 295 834	1 208 231	845 235
Other cement	2 818	2 492	2 555	12 144	15 237
Switzerland					
Cement clinkers	106 617	106 263	121 014	103 367	114 075
Portland cement	14 396	33 524	46 939	23 437	13 704
Other cement	1 121	2 046	2 692	988	4 014
Turkey					
Cement clinkers	2 898 730	2 359 071	2 893 665	836 602	888 573
Portland cement	6 749 791	7 907 130	6 713 088	3 277 480	4 323 666
Other cement	96 793	147 792	261 816	112 683	11 538
United Kingdom					
Cement clinkers	60 920	82 936	134 992	91 357	28 432
Portland cement	216 480	214 420	320 680	521 784	459 629
Other cement	61 193	76 517	68 554	69 692	88 452

Note(s):-
(a) BGS estimates, based on known imports into certain countries

Imports of cement

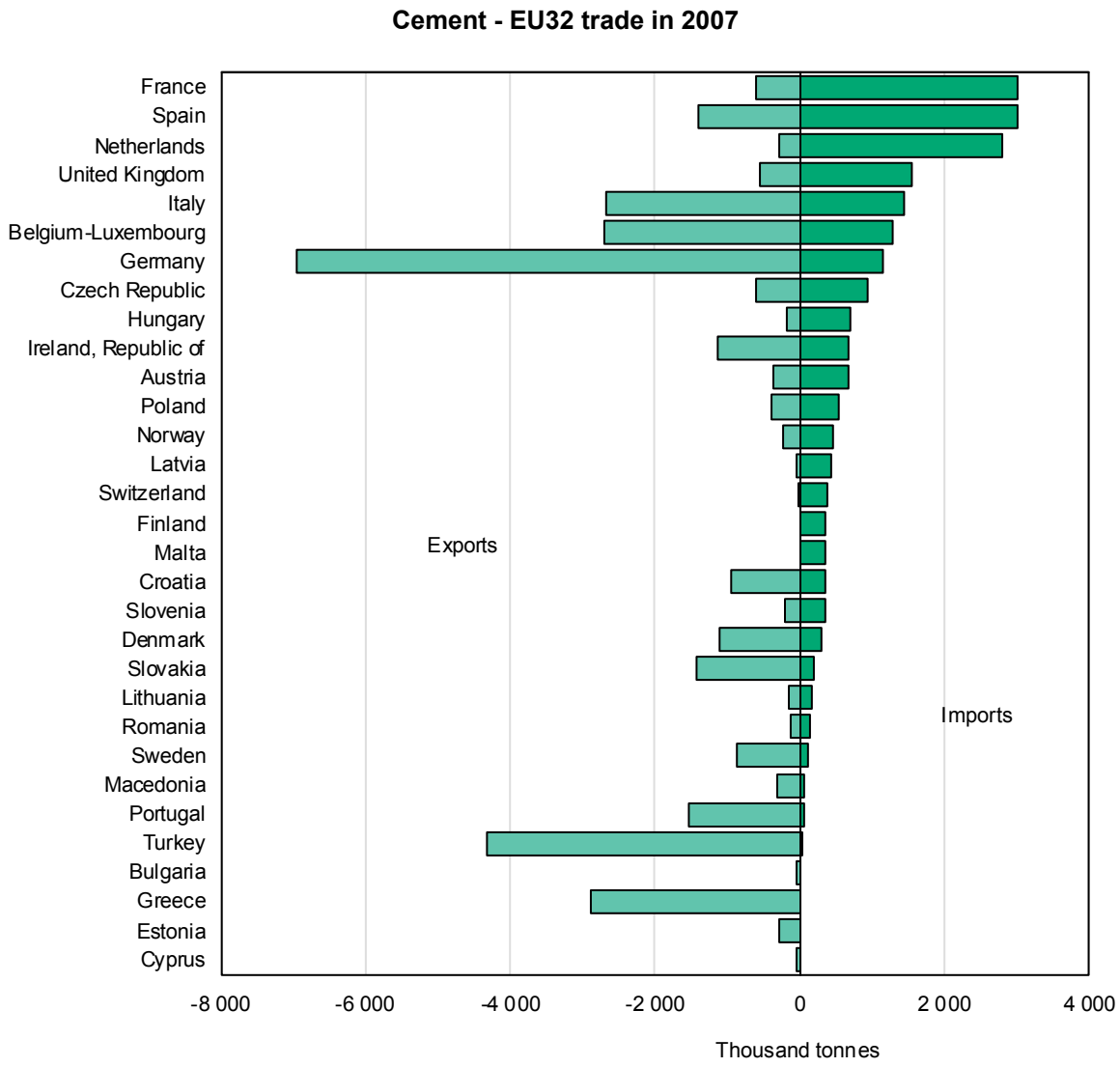
tonnes

Country	2003	2004	2005	2006	2007
Austria					
Cement clinkers	444 535	443 956	532 745	487 406	520 714
Portland cement	763 455	773 897	860 087	686 652	626 723
Other cement	17 434	51 811	43 083	31 100	39 568
Belgium-Luxembourg					
Cement clinkers	256 355	553 911	442 986	545 575	798 670
Portland cement	846 044	956 062	898 871	897 315	892 981
Other cement	292 756	314 515	275 177	277 825	391 850
Bulgaria					
Cement clinkers	3 815	23 048	180 254	586 194	123 806
Portland cement	33 810	51 493	23 787	9 127	5 690
Other cement	1 027	920	1 128	1 665	1 829
Croatia					
Cement clinkers	144 509	61 672	...	...	27 488
Portland cement	176 027	214 400	379 711	447 202	340 112
Other cement	1 782	287	1 569	5 547	5 242
Cyprus					
Cement clinkers	74 627	28 622	43 375	17 819	17 498
Portland cement	2 496	2 092	2 339	1 241	1 017
Czech Republic					
Cement clinkers	76 152	167 711	95 108	117 477	109 392
Portland cement	1 044 234	1 105 823	1 027 011	1 001 321	918 739
Other cement	28 197	24 799	38 434	38 439	30 602
Denmark					
Cement clinkers	23 222	22 506	31 634	46 600	35 555
Portland cement	185 757	187 982	230 842	274 151	243 348
Other cement	30 501	33 913	36 753	54 194	52 662
Estonia					
Cement clinkers	...	...	21 219	75 683	31 127
Portland cement	36 438	16 827	3 311	1 102	2 536
Finland					
Cement clinkers	67 297	28 129	17 594	95 730	314 436
Portland cement	438 363	423 958	383 260	380 296	341 748
Other cement	9 654	9 344	13 211	12 176	16 006
France					
Cement clinkers	793 933	865 213	946 642	1 010 056	1 739 962
Portland cement	1 090 120	1 114 684	1 271 478	1 556 864	1 793 027
Other cement	1 123 098	927 157	984 597	1 120 524	1 223 442
Germany					
Cement clinkers	325 302	370 454	289 600	235 023	92 757
Portland cement	906 718	1 002 404	934 865	794 716	833 311
Other cement	277 349	343 597	380 858	345 286	311 152
Greece					
Cement clinkers	5 243	1 237	1 494	50 907	45 388
Portland cement	302	1 754	425	3 237	3 603
Other cement	3 322	3 497	4 548	3 228	3 010
Hungary					
Cement clinkers	1 924	583	9 051	65 437	40 099
Portland cement	342 107	451 613	565 366	455 108	560 863
Other cement	536 445	579 735	508 067	375 337	144 824
Ireland, Republic of					
Cement clinkers	88 669	226 116	245 955	395 053	592 721
Portland cement	259 703	281 044	335 055	559 645	664 977
Other cement	4 105	9 132	8 958	9 079	16 409
Italy					
Cement clinkers	2 322 710	2 720 499	2 828 906	2 872 114	2 827 333
Portland cement	2 033 657	2 130 079	2 014 905	1 564 049	1 162 254
Other cement	168 008	146 033	152 325	184 862	287 190
Latvia					
Cement clinkers	...	...	38 589	43 774	29 438
Portland cement	138 488	204 353	234 862	322 187	431 482
Lithuania					
Cement clinkers	...	22 496	766	416	104 219
Portland cement	206 317	183 712	265 103	209 400	170 955
Macedonia					
Portland cement	60 849	81 250	59 679	44 542	69 220

Imports continued

tonnes

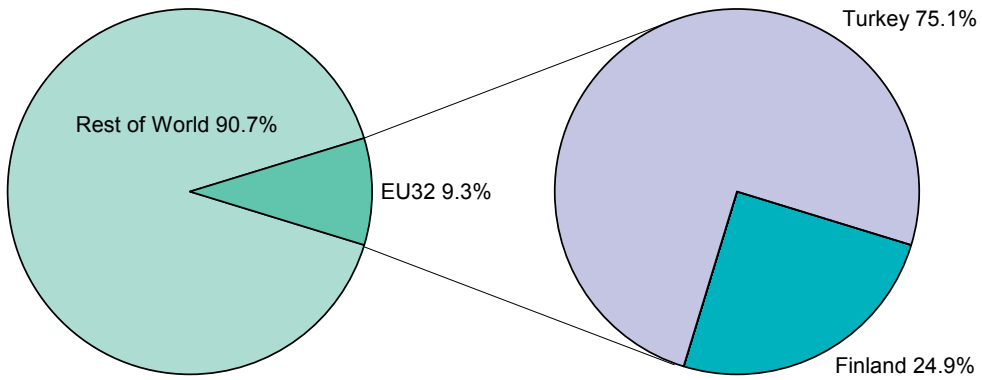
Country	2003	2004	2005	2006	2007
Malta					
Portland cement	275 736	179 533	334 107	389 690	356 365
Netherlands					
Cement clinkers	679 330	581 267	388 146	494 944	228 817
Portland cement	1 614 917	1 812 884	1 632 872	1 925 756	2 072 034
Other cement	826 513	774 050	846 622	1 452 353	722 635
Norway					
Cement clinkers	1 450	2 307	6 615	8 782	14 895
Portland cement	188 442	236 622	373 788	443 104	441 619
Other cement	5 026	10 738	12 319	14 147	19 062
Poland					
Cement clinkers	70 207	13 746	33 673	45 560	65 632
Portland cement	699 379	540 342	444 855	285 135	520 330
Other cement	16 352	2 323	5 537	5 700	22 982
Portugal					
Cement clinkers	7 715	8 775	17 084	140 673	331 025
Portland cement	1 225 167	1 066 969	669 272	356 040	45 012
Other cement	50 576	65 793	10 479	14 286	11 966
Romania					
Cement clinkers	8	3	50	280	500 794
Portland cement	123 332	228 506	167 686	102 759	142 476
Other cement	1 654	1 755	1 653	3 085	12 072
Slovakia					
Cement clinkers	34 550	33 021	68 894	42 666	52 608
Portland cement	113 926	85 834	88 403	98 625	123 589
Other cement	3 379	19 636	49 619	56 418	58 035
Slovenia					
Cement clinkers	95 002	61 151	1 343	11 970	145 638
Portland cement	205 345	219 779	215 513	249 749	328 312
Other cement	1 440	112	2 861	6 917	17 037
Spain					
Cement clinkers	5 897 219	6 266 470	7 852 531	9 108 499	10 894 888
Portland cement	2 606 300	2 549 086	2 845 856	2 771 668	2 929 208
Other cement	54 726	21 527	20 031	40 164	74 401
Sweden					
Cement clinkers	1 399	24 491	14 601	13 238	29 344
Portland cement	209 882	218 928	242 326	249 670	55 784
Other cement	27 286	27 286	34 597	41 176	52 359
Switzerland					
Cement clinkers	47 050	64 882	71 542	115 001	15 292
Portland cement	319 539	313 292	352 409	380 862	348 262
Other cement	41 949	58 671	48 309	49 317	37 522
Turkey					
Cement clinkers	170 275	375 619	567 256	1 209 618	88 104
Portland cement	9 922	9 096	66 260	71 237	39 270
Other cement	3 675	105	4 693	3 979	4 202
United Kingdom					
Cement clinkers	506 128	377 341	406 044	516 583	836 788
Portland cement	1 714 946	2 033 772	1 645 088	1 397 025	1 534 683
Other cement	61 131	64 289	37 705	26 790	26 215


Cement - EU32 trade in 2007
France
Spain
Netherlands
United Kingdom
Italy
Belgium-Luxembourg
Germany
Czech Republic
Hungary
Ireland, Republic of
Austria
Poland
Norway
Latvia
Switzerland
Finland
Malta
Croatia
Slovenia
Denmark
Slovakia
Lithuania
Romania
Sweden
Macedonia
Portugal
Turkey
Bulgaria
Greece
Estonia
Cyprus
Exports
Imports
-8 000
-6 000
-4 000
-2 000
0
2 000
4 000
Thousand tonnes

Chromium ores and concentrates

- Chromium is a hard metallic element that is an essential component of stainless steel and other alloy steels, where it is used in the form of the alloy ferro-chromium. It is also used extensively in superalloys and metal plating. Its compounds are important pigments and the natural mineral chromite is used in refractories.
- World production is dominated by South Africa, India and Kazakhstan which together produced 76 per cent of world chromium in 2007. Finland and Turkey are the only countries in Europe with significant chromium production, which amounted to 9 per cent of world production.
- The price of chromium metal (alumino-thermic, min. 99% in warehouse) increased during 2007 from the range of US$6200 per tonne to US$6500 per tonne in January to the range US$9000 to US$9300 by year end. The price increased further during 2008 to reach a high of between US$13 500 to US$14 000 in September, before falling to between US$9000 to US$9500 by the end of the year.

EU32 Production of chromium ores and concentrates 2007



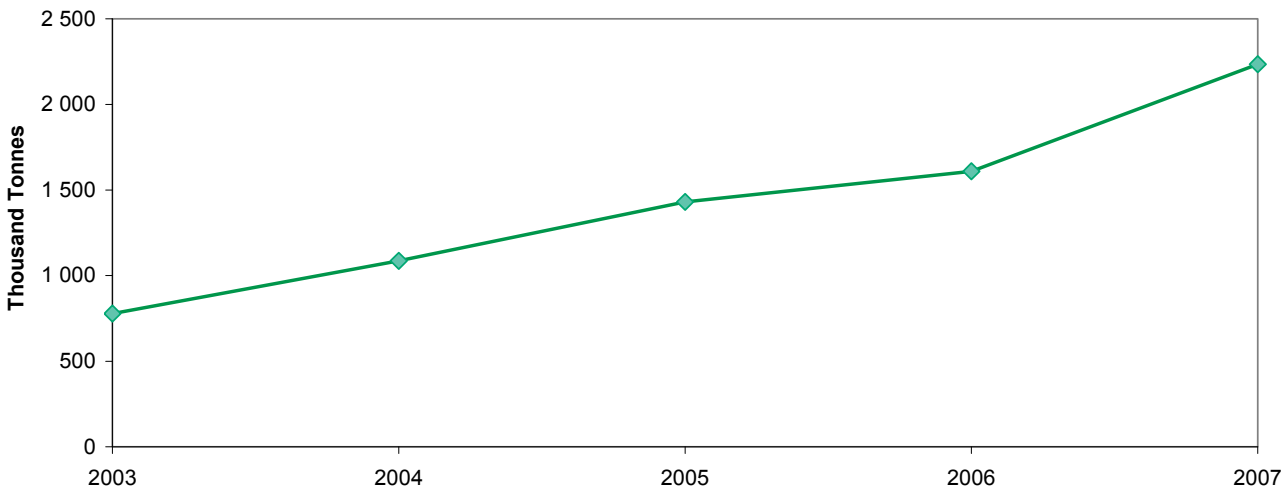
Production of chromium ores and concentrates

tonnes

Country	2003	2004	2005	2006	2007
Finland	549 000	580 000	572 000	549 000	556 000
Turkey	229 294	506 421	858 729	1 059 901	1 678 932
EU32 Total	778 000	1 086 000	1 431 000	1 609 000	2 235 000

Note(s):-
(1) In addition to the countries listed, Bulgaria is believed to produce chromite

EU32 Production of chromium ores and concentrates 2003 - 07



Exports of chromium

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Ores & concentrates	1 155	392	276	136	481
Metal	5 485	7 194	8 893	11 770	14 739
Belgium-Luxembourg					
Ores & concentrates	5 491	2 433	10 777	14 485	11 405
Metal	660	852	782	520	635
Czech Republic					
Ores & concentrates	28	236	523	645	800
Metal	338	364	109	2 104	946
Denmark					
Metal	521	661	703	855	549
Finland					
Ores & concentrates	612	708	841	1 570	2 492
France					
Ores & concentrates	2 879	2 928	2 340	2 013	2 391
Metal	4 498	7 182	8 074	6 457	7 225
Germany					
Ores & concentrates	3 666	12 691	14 188	24 185	20 629
Metal	2 096	1 256	1 478	2 877	3 114
Greece					
Ores & concentrates	...	21	249	726	—
Italy					
Ores & concentrates	2 638	3 803	4 673	5 446	3 980
Metal	1 993	4 184	1 070	111	1 666
Lithuania					
Ores & concentrates	...	...	948	2 213	1 156
Macedonia					
Ores & concentrates	1 383	247	46	...	1 835
Netherlands					
Ores & concentrates	52 636	58 623	72 062	74 909	78 433
Metal	1 817	2 655	3 543	4 430	2 125
Norway					
Metal	141	413	116	203	96
Poland					
Metal	181	82	...	...	1 556
Portugal					
Ores & concentrates	44	...	1 111	591	295
Slovakia					
Metal	2 289	2 362	1 876	1 735	1 116
Spain					
Ores & concentrates	947	2 113	1 314	1 908	1 529
Metal	1 126	905	709	990	779
Sweden					
Metal	...	75	55	105	102
Switzerland					
Metal	66	319	249	530	74
Turkey					
Ores & concentrates	363 699	575 030	834 034	887 689	1 265 036
Metal	20	33	238	6	7
United Kingdom					
Ores & concentrates	212	622	228	47	178
Metal	4 173	4 776	4 547	5 123	6 777

Note(s):-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

Imports of chromium

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Ores & concentrates	36 348	26 761	21 398	37 326	39 071
Metal	2 337	3 731	4 440	8 879	14 480
Belgium-Luxembourg					
Ores & concentrates	4 644	6 094	18 464	22 053	20 761
Metal	765	821	1 245	1 264	1 188
Bulgaria					
Ores & concentrates	480	812	997	1 440	969
Croatia					
Ores & concentrates	341	459	537	615	584
Metal	200	279	54	51	280
Czech Republic					
Ores & concentrates	10 674	11 365	12 440	11 380	13 936
Metal	66	60	149	123	281
Denmark					
Ores & concentrates	920	614	53	775	748
Metal	106	90	53	27	31
Finland					
Ores & concentrates	6 050	6 092	6 962	8 388	9 324
Metal	190	164	258	575	282
France					
Ores & concentrates	22 917	19 770	18 980	23 031	20 156
Metal	677	1 323	669	1 040	717
Germany					
Ores & concentrates	126 278	128 886	141 483	126 874	154 367
Metal	4 063	5 599	5 428	7 552	8 454
Greece					
Ores & concentrates	218	122	477	732	257
Hungary					
Ores & concentrates	593	367	388	306	492
Metal	82	68	0	289	27
Ireland, Republic of					
Metal	27	25	40	44	101
Italy					
Ores & concentrates	26 802	30 872	39 999	41 992	46 433
Metal	520	677	958	830	891
Macedonia					
Ores & concentrates	...	...	3	709	1 432
Netherlands					
Ores & concentrates	52 353	88 660	80 622	99 305	125 778
Metal	310	612	1 838	3 632	2 222
Norway					
Ores & concentrates (a)	*600	*400	*500	*500	*20
Metal	47	88	92	73	254
Poland					
Ores & concentrates	10 977	13 053	9 391	16 161	38 543
Metal	29	242	54	45	1 717
Portugal					
Ores & concentrates	2 062	1 547	2 599	2 845	3 339
Metal	14	18	18	336	55
Romania					
Ores & concentrates	2 701	2 562	2 828	1 675	1 856
Metal	70	58	245	958	78
Slovakia					
Ores & concentrates	12 624	24 479	12 475	11 252	16 819
Metal	179	2	55	11	20
Slovenia					
Ores & concentrates	340	406	446	1 414	986
Metal	26	31	122	97	85
Spain					
Ores & concentrates	5 799	3 947	10 262	5 906	6 437
Metal	921	1 519	1 308	1 830	1 483
Sweden					
Ores & concentrates	215 000	457 000	240 000	315 000	350 000
Metal	823	1 903	1 150	1 639	2 145

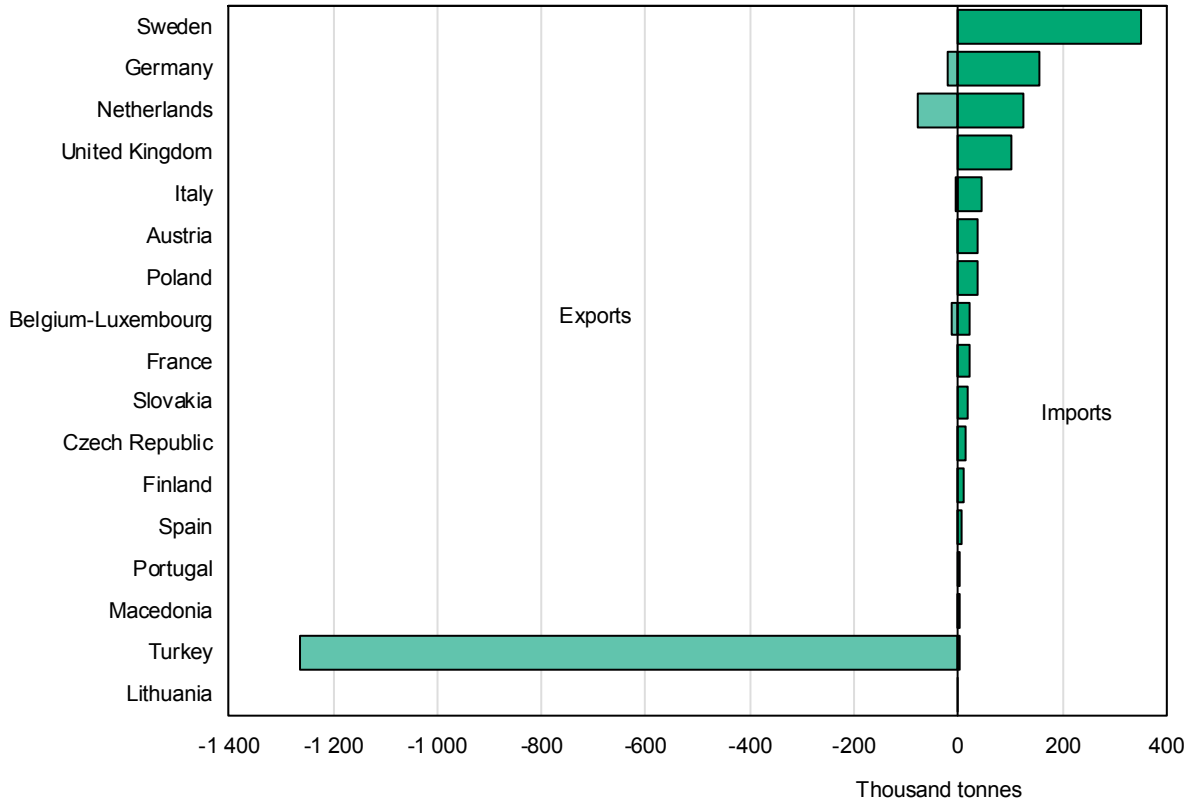
Imports continued tonnes

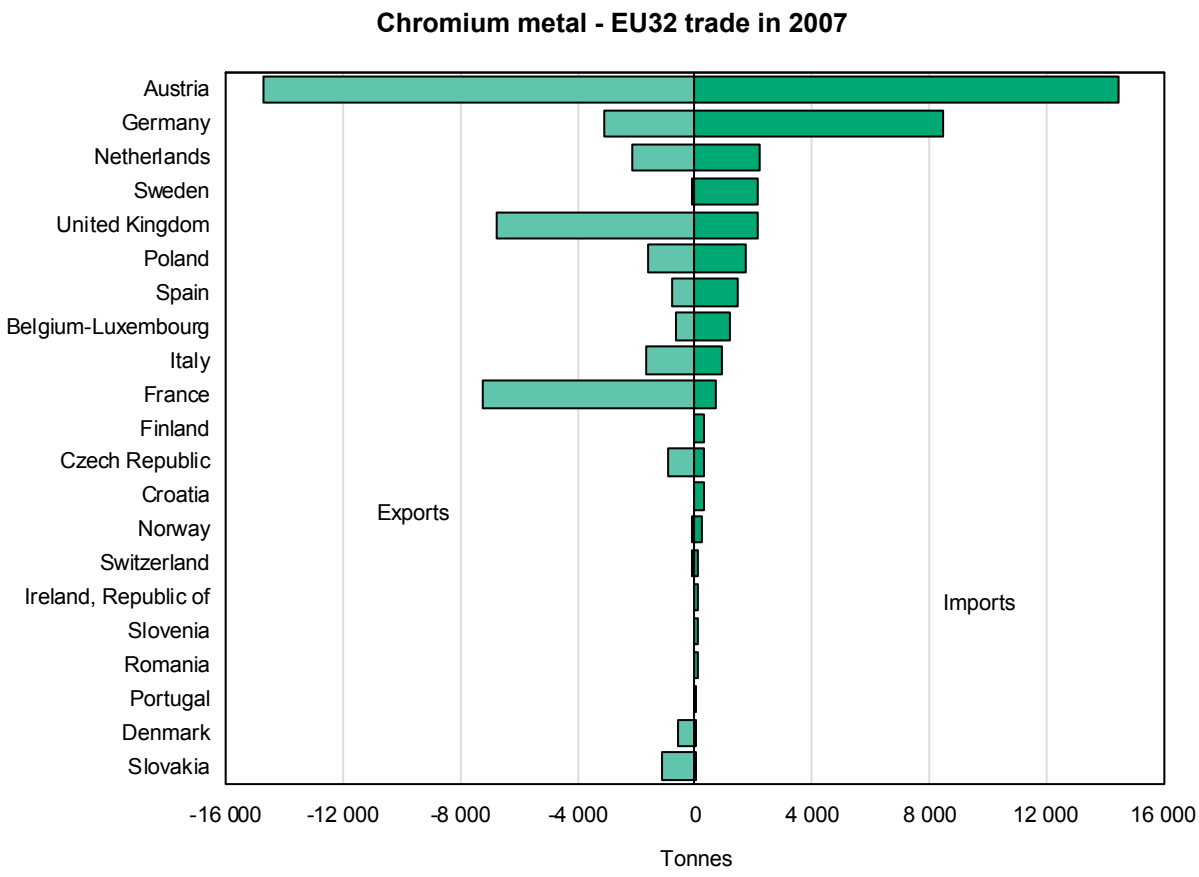
Country	2003	2004	2005	2006	2007
Switzerland					
Ores & concentrates	716	671	624	1 080	1 339
Metal	110	141	127	162	114
Turkey					
Ores & concentrates	82 452	56 836	89 844	60 906	1 334
Metal	19	85	26	14	18
United Kingdom					
Ores & concentrates	107 161	130 841	122 042	74 907	103 551
Metal	1 612	2 321	1 723	4 022	2 134

Note(s) :-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) BGS estimates, based on known exports from certain countries

Chromium ores and concentrates - EU32 trade in 2007

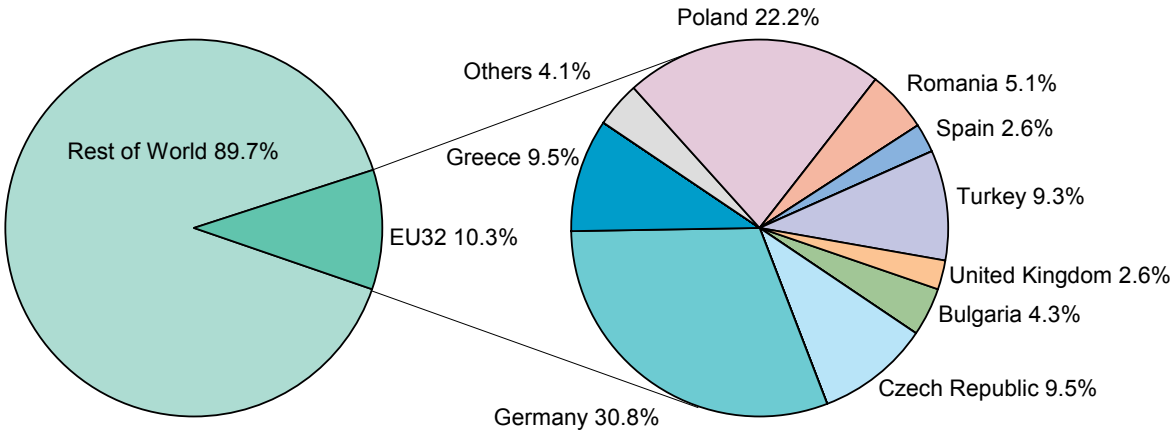



Chromium metal - EU32 trade in 2007
Austria
Germany
Netherlands
Sweden
United Kingdom
Poland
Spain
Belgium-Luxembourg
Italy
France
Finland
Czech Republic
Croatia
Norway
Switzerland
Ireland, Republic of
Slovenia
Romania
Portugal
Denmark
Slovakia
Exports
Imports
-16 000
-12 000
-8 000
-4 000
0
4 000
8 000
12 000
16 000
Tonnes

Coal

- Coal is a combustible rock, composed of lithified plant remains. It is an important source of energy throughout the world.
- Coal has two predominant end uses. Steam coal (or thermal coal) is burnt in power stations for electricity generation and is also used for other domestic and industrial purposes. Coking coal, which commands a higher price, is used in the steel industry to de-oxidise iron ore in the blast furnace. Both black coal (anthracite and bituminous) and brown coal (lignite) are used as steam coal; only bituminous coal is used as coking coal.
- In 2007 the EU32 countries produced 10 per cent of the world's coal (all types) of which more than half was contributed by Germany and Poland. Overall EU32 production fell by nearly 40 million tonnes (5.7 per cent) between 2003 and 2007, with the UK recording a decline in production of 40 per cent. In contrast, China, the world's largest coal producer, has seen an increase in production of 46 per cent between 2003 and 2007, amounting to nearly 800 million tonnes per year more.
- The pricing of coal is complex, based on coal type, net calorific value and content of impurities such as sulphur. The average price for imports of all types of coal to the UK has increased from £42 per tonne at the start of 2007 to £104 per tonne by September 2008.

EU32 Production of coal 2007



Production of coal

tonnes

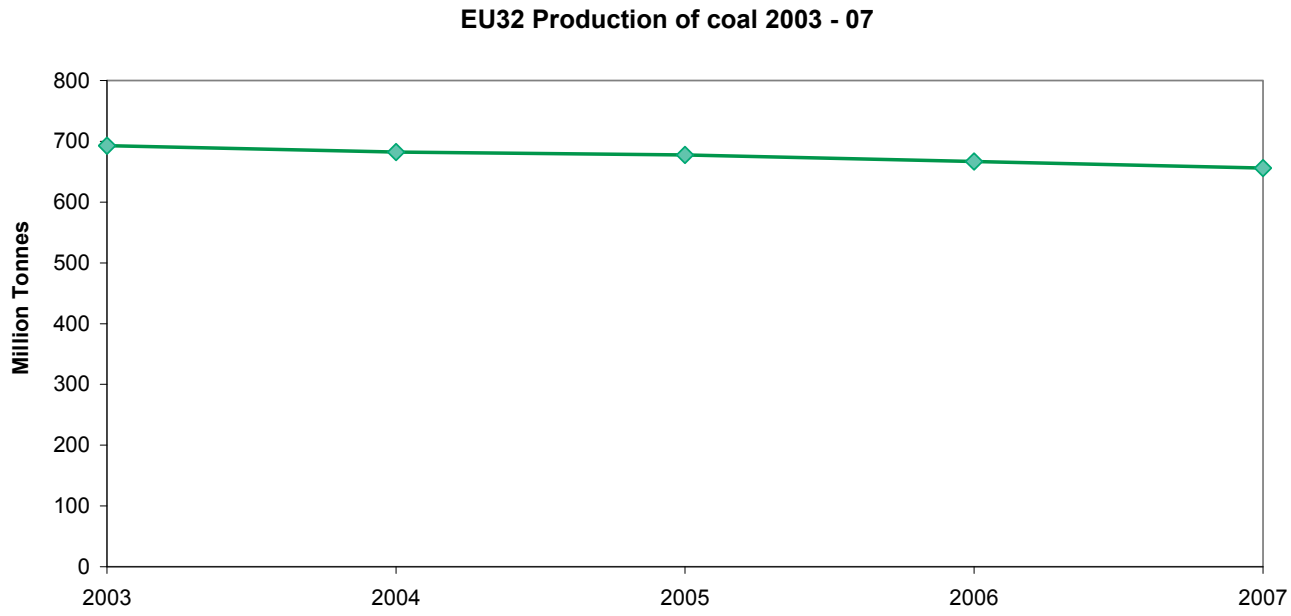
Country	2003	2004	2005	2006	2007
Austria (a)	1 152 389	235 397	13 931	7 854	13 992
Bulgaria					
Anthracite & bituminous	53 000	170 000	—	—	—
Brown coal & lignite	27 641 000	26 455 000	24 615 300	25 306 400	28 158 500
Czech Republic					
Bituminous	13 382 000	14 648 000	12 778 000	13 017 000	12 462 000
Lignite	470 000	450 000	467 000	459 000	437 000
Brown coal	49 920 000	47 840 000	48 658 000	48 915 000	49 134 000
France					
Anthracite & bituminous	1 728 000	200 000	—	—	—
Lignite	9 000	—	—	—	—
Germany					
Anthracite & bituminous	25 873 043	25 871 882	24 909 867	20 882 119	21 531 956
Brown coal	179 086 776	181 926 060	177 907 945	176 324 117	180 411 991
Greece					
Lignite	71 000 000	71 600 000	70 600 000	64 800 000	62 500 000
Hungary					
Bituminous	667 126	280 000	—	885 849	838 672
Lignite	8 563 697	8 470 258	8 153 968	8 467 220	8 351 563
Brown coal	4 128 000	2 500 000	1 426 000	1 431 700	1 342 000
Macedonia					
Lignite	7 200 793	7 129 535	6 879 726	6 650 182	6 569 220
Norway					
Bituminous (b)	2 944 000	3 018 500	1 667 000	2 359 000	3 223 000

Production continued tonnes

Country	2003	2004	2005	2006	2007
Poland					
Bituminous	103 016 400	100 087 100	97 903 730	95 222 512	88 313 369
Lignite	60 919 100	61 197 500	61 636 445	60 844 278	57 537 727
Romania					
Anthracite & bituminous	3 309 000	3 016 000	3 079 000	...	...
Lignite	30 871 000	29 726 895	28 491 480	32 753 526	(d) *33 200 000
Brown coal	250 000	220 157	62 609	*58 000	...
Slovakia					
Brown coal	3 076 100	2 578 273	2 513 030	2 208 590	1 859 000
Slovenia					
Lignite	4 222 000	4 195 953	3 945 100	3 932 842	4 037 766
Brown coal	607 786	611 349	594 456	587 912	483 417
Spain					
Anthracite	3 857 364	3 692 220	3 888 838	3 775 504	3 484 305
Bituminous	5 547 150	5 220 407	4 664 589	4 572 350	4 384 603
Sub-bituminous	3 182 572	3 426 001	3 354 014	3 221 083	3 130 758
Lignite	7 977 546	8 146 908	7 587 113	6 859 641	6 179 954
Turkey					
Anthracite	3 090 458	2 842 952	2 785 505	3 070 793	2 702 331
Bituminous	336 714	738 915	737 701	*740 000	...
Lignite	43 749 420	43 754 159	60 867 574	61 010 000	58 421 000
United Kingdom					
Bituminous (c)	28 279 000	25 096 000	20 498 000	18 528 000	17 030 000
EU32 Total	696 100 000	685 300 000	680 700 000	666 900 000	655 500 000

Note(s):-
(1) There is no international agreement as to the separate definition of lignite and brown coal. In some cases they are distinguished. Elsewhere both may be aggregated under one or other term

(a) Coal; all forms
(b) Spitzbergen: not including production from mines controlled by Russia
(c) Including anthracite
(d) Including brown coal



Exports of coal

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg					
Anthracite	999 793	1 399 280	1 463 646	1 521 523	1 454 115
Other coal	1 777 869	2 273 223	2 948 838	3 734 518	3 670 706
Briquettes	19 122	...	11 682	7 923	8 214
Czech Republic					
Hard coal (a)	5 668 451	5 706 798	5 260 739	6 690 917	6 732 974
Lignite	1 082 961	1 072 275	1 324 025	1 300 406	1 076 140
Briquettes	191 650	160 823	148 966	213 621	112 447
Denmark					
Hard coal (a)	6 665	7 380	86 739	54 338	75 866
France					
Anthracite	9 324	1 077	14 913	10 442	13 161
Other coal	74 343	93 265	68 197	128 523	200 682
Germany					
Hard coal	182 233	183 694	251 623	305 046	309 501
Lignite	71 777	430	73	27 801	140 400
Briquettes	156 180	87 022	74 952	83 990	72 008
Greece					
Hard coal (a)	49 146	16 229	11 673	15 852	25 717
Lignite	...	...	116	306	—
Briquettes	73 628	67 702	51 752	23 465	12
Hungary					
Lignite	13 966	81 047	366 132	—	—
Ireland, Republic of					
Briquettes	21 151	18 049	13 103	4 823	4 083
Italy					
Hard coal (a)	17 124	92 227	66 115	38 239	41 075
Netherlands					
Anthracite	206 426	161 320	165 918	196 407	158 572
Other coal	5 574 363	8 624 870	8 445 919	11 940 024	14 089 233
Briquettes	1 362	71 710	58 241	73 524	10 188
Poland					
Anthracite	71 646	8 599	23 331	31 200	30 256
Other coal	20 044 204	19 684 005	20 816 121	16 586 467	11 761 743
Lignite	35 824	26 929	8 211	317	—
Romania					
Hard coal	(a) 2 028	(a) 1 390	(a) 661	(a) 7 997	67 304
Slovakia					
Hard coal (a)	18	34 346	47 485	32 784	18 052
Slovenia					
Lignite	...	1 959	6 881	29 794	2 150
Spain					
Anthracite	47 185	48 710	49 563	74 826	101 968
Other coal	7 904	14 624	8 208	135 401	872 269
Turkey					
Anthracite	9 540	11 077	10 324	1 259	—
United Kingdom					
Anthracite	180 382	172 486	169 252	137 353	123 549
Other coal	352 620	439 930	380 426	354 281	419 193
Lignite	2 629	2 335	2 321	2 748	1 965
Briquettes	60 172	41 094	20 713	20 037	27 591

Note(s):-
(1) This table excludes bunker shipments

(a) Including anthracite

Imports of coal

tonnes

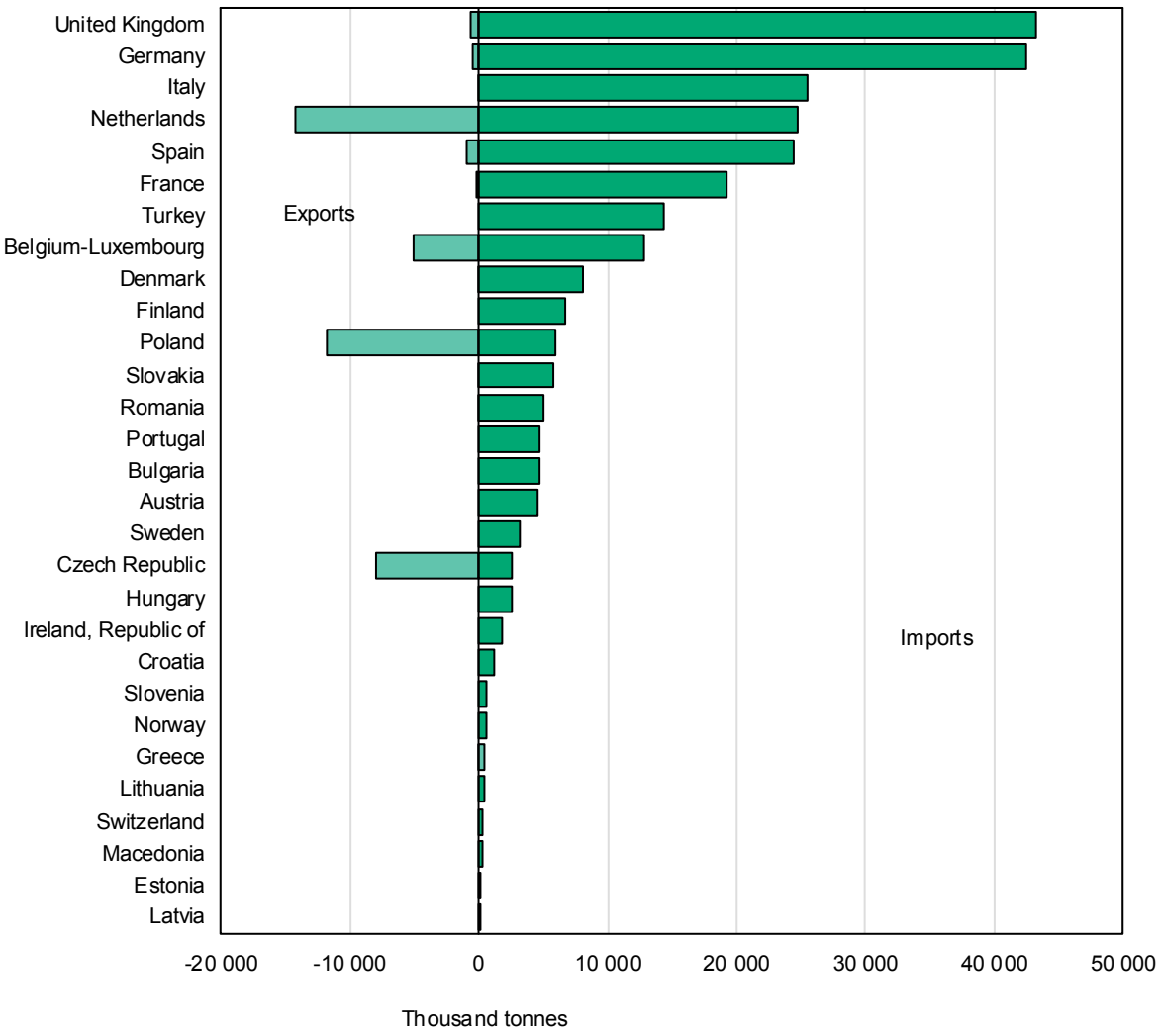
Country	2003	2004	2005	2006	2007
Austria					
Hard coal (b)	3 965 922	3 552 594	4 108 821	3 912 731	4 509 917
Lignite	59 077	38 833	2 139	2 294	53 331
Briquettes	84 343	83 035	96 318	101 389	12 877
Belgium-Luxembourg					
Anthracite	3 439 165	4 134 160	3 293 344	2 608 840	2 864 554
Other coal	8 342 288	9 728 235	8 997 265	10 534 424	9 679 689
Lignite	219 162	232 809	229 192	279 982	278 700
Briquettes	14 717	3 924	14 120	29 848	26 260
Bulgaria					
Anthracite	1 396 246	1 464 605	2 016 911	2 170 631	2 229 619
Other coal	3 038 589	2 784 512	2 270 525	2 221 526	2 415 165
Croatia					
Hard coal	1 034 849	1 218 407	957 899	1 082 446	1 101 803
Lignite	69 679	79 921	77 959	78 226	62 789
Briquettes	22 828	2 981	4 734	6 084	2 604
Cyprus					
Hard coal (b)	29	108	3	23 473	56 892
Briquettes	1 173	1 028	935	869	1 686
Czech Republic					
Anthracite	15 177	52 247	43 713	61 255	45 114
Other coal	1 265 727	1 642 568	1 192 214	1 896 977	2 507 091
Lignite	...	1 083	1 371	24 412	33 472
Denmark					
Anthracite	92 434	77 502	52 143	85 883	47 233
Other coal	9 126 099	7 487 269	5 881 938	9 234 248	8 034 596
Briquettes	15 451	9 851	15 865	3 473	171
Estonia					
Hard coal (b)	60 731	44 399	53 647	95 079	175 599
Finland					
Hard coal (b)	10 145 037	8 283 891	4 724 392	6 683 990	6 669 717
France					
Anthracite	1 557 639	2 076 592	3 266 840	3 018 025	3 532 378
Other coal	15 082 984	17 619 595	16 234 759	16 372 754	15 425 960
Lignite	41 784	40 405	34 396	36 436	51 589
Briquettes	68 883	75 872	116 845	147 381	174 170
Germany					
Anthracite	1 143 311	1 413 902	991 877	2 499 908	4 353 426
Other coal	25 164 977	31 047 441	29 452 512	35 218 836	37 993 445
Lignite	49 433	10 570	9 890	10 070	15 411
Briquettes	178 993	95 446	110 971	128 877	96 163
Greece					
Anthracite	51 753	37 633	35 475	39 250	59 007
Other coal	803 239	753 949	724 600	461 181	382 933
Hungary					
Hard coal (b)	1 108 289	1 347 232	1 298 122	1 765 117	1 950 139
Lignite	311 845	403 297	710 417	686 862	572 742
Briquettes	...	12 295	14 310	15 416	13 590
Ireland, Republic of					
Anthracite	164 270	100 792	60 325	68 190	33 175
Other coal	1 307 994	2 930 298	2 641 074	1 908 618	1 830 979
Briquettes	46 789	48 348	35 959	48 158	14 278
Italy					
Anthracite	243 578	338 706	369 840	282 831	406 331
Other coal	21 029 014	25 382 339	24 714 768	24 860 362	25 111 043
Briquettes	10 270	9 374	9 136	10 207	6 914
Latvia					
Hard coal (b)	123 844	94 896	115 720	159 787	153 806
Lithuania					
Hard coal (b)	294 938	260 684	290 058	391 032	356 342
Macedonia					
Hard coal	64 851	53 495	98 024	179 193	199 946
Lignite	7 005	...	2 242	3 920	1 532
Briquettes	198 246	190 519	188 634	103 508	63 805

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Netherlands					
Anthracite	363 692	293 892	186 936	218 516	62 577
Other coal	20 158 178	22 241 661	21 958 859	21 368 119	24 622 621
Lignite	23 782	18 294	30 769	22 548	29 517
Briquettes	24 574	15 510	58 737	83 734	68 765
Norway					
Anthracite (a)	84 858	71 785	92 673	55 914	76 744
Other coal (a)	586 775	693 106	575 921	472 129	*490 000
Poland					
Anthracite	49 745	168 095	263 929	295 026	449 362
Other coal	2 506 316	2 231 606	3 112 462	4 866 783	5 442 327
Portugal					
Anthracite	276 685	30 630	48 785	30 688	44 447
Other coal	5 084 416	5 241 255	5 386 968	5 630 721	4 733 158
Romania					
Anthracite	18 267	74 708	82 683	60 272	68 924
Other coal	3 251 154	3 584 413	3 681 406	3 398 344	4 421 709
Lignite	18 554	44 787	367 781	620 251	575 514
Slovakia					
Anthracite	13 823	61 361	111 906	38 147	176 682
Other coal	4 930 664	5 387 110	5 231 562	4 411 685	4 802 258
Lignite	805 556	717 562	700 503	877 582	725 586
Briquettes	1 803	20 243	33 049	10 863	5 604
Slovenia					
Hard coal (b)	54 168	38 849	51 173	47 221	83 100
Lignite	488 929	584 117	543 465	614 851	567 139
Spain					
Anthracite	2 015 985	2 376 019	2 534 019	2 508 261	1 019 341
Other coal	19 537 014	22 098 156	22 222 316	21 196 872	23 420 766
Sweden					
Anthracite	99 008	7 304	13 013	28 506	25 832
Other coal	3 081 407	3 059 218	3 187 798	3 003 919	3 154 331
Briquettes	8 768	4 335	8 443	27 164	287
Switzerland					
Anthracite	6 146	7 396	6 640	7 978	9 539
Other coal	79 125	169 472	93 584	143 425	214 684
Lignite	24	455	34 897	86 762	84 654
Turkey					
Anthracite	340 165	397 125	413 333	502 178	530 393
Other coal	15 215 711	16 033 118	16 126 628	14 658 368	13 850 371
United Kingdom					
Anthracite	334 883	197 788	187 388	125 011	135 941
Other coal	31 538 546	35 958 449	43 890 778	49 544 012	43 024 560
Briquettes	7 638	8 498	6 554	9 995	6 501

Note(s) :-
(a) Excludes coal imported from Spitzbergen
(b) Including anthracite

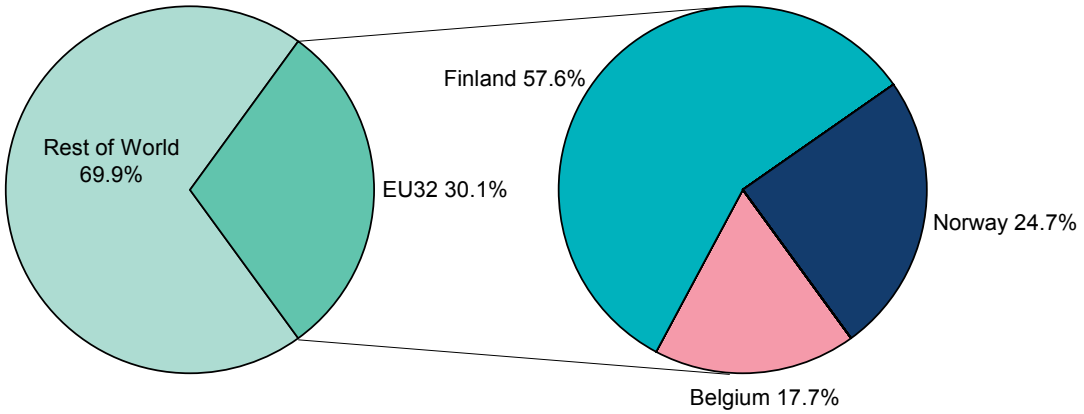
Coal - EU32 trade in 2007



Cobalt

- Cobalt is a magnetic, brittle, hard metallic element. Its chief uses are in alloy steels, superalloys, magnet alloys, batteries, catalysts and as the cement for carbides in tools. Cobalt compounds are used as pigments and paint-driers.
- Democratic Republic of Congo was the largest world producer in 2007 (25 300 tonnes, 41 per cent). Canada, Brazil, Australia, Zambia and Cuba also produced between 6.5 and 13.5 per cent each. Production in China (3.3 per cent) has stepped up in recent years with production more than doubling since 2003. There was no mine production within the EU32.
- China was the world's largest producer of cobalt metal, producing 25 per cent of the world total. Finland was the second largest producer (17 per cent), although this is based on imported materials.
- The cobalt price tends to be highly volatile, as a result of production being concentrated in so few countries and because of its status as a by-product metal. Throughout most of 2007 the price for cobalt metal (high grade, free market, in warehouse) ranged between US$24 and US$30 per pound but it climbed towards the end of the year to finish at between US$38 and US$40 per pound. The price peaked in March 2008 at between US$49 and US$52 per pound before falling by the end of the year to the range US$13 to US$16 per pound.

EU32 Production of cobalt metal 2007



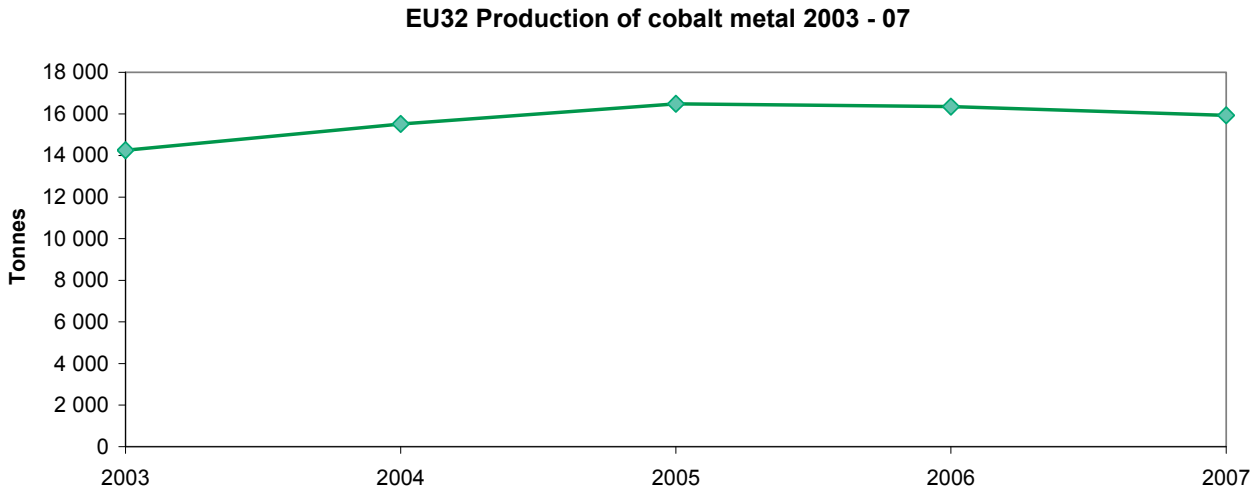
Production of cobalt metal

tonnes

Country	2003	2004	2005	2006	2007
Belgium	1 704	(a) 2 947	(a) 3 298	(a) 2 840	(a) 2 825
Finland	7 989	7 893	8 171	8 582	9 173
Norway	4 556	4 670	5 021	4 927	3 939
EU32 Total	14 200	15 500	16 500	16 300	15 900

Note(s):-
(1) In addition to the production listed above, several countries, including the United Kingdom, Finland and France, are known to produce substantial amounts of cobalt compounds

(a) Some metal production in China is recorded in Belgium



Exports of cobalt

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	85	22	5	10	19
Belgium-Luxembourg					
Ore	381	1 064	543	197	1 204
Metal	(a) *3 800	(a) *3 900	(a) *3 100	4 329	5 104
Oxides (a)	*6 900	*7 300	*5 500	*5 800	6 000
Estonia					
Metal	143	12	...	3	12
Finland					
Metal (a)	*4 200	*5 200	*5 800	*5 700	*5 700
Oxides (a)	*3 400	*2 100	*1 700	*2 200	*2 400
France					
Metal	502	675	699	709	1 006
Oxides	69	221	57	68	91
Germany					
Ore	...	367	171	...	457
Metal	1 116	1 441	1 395	1 602	2 067
Oxides	151	233	185	140	158
Ireland, Republic of					
Metal	79	32	42	43	45
Oxides	118	11	—	38	152
Italy					
Metal	174	236	97	224	168
Oxides	63	123	63	77	223
Netherlands					
Metal	2 247	1 954	1 326	587	1 579
Oxides	150	953	1 323	112	127
Norway					
Metal	4 635	4 744	4 997	4 990	4 030
Poland					
Metal	...	26	19	8	11
Slovenia					
Metal	14	40	42	16	31
Spain					
Metal	14	35	7	22	12
Oxides	8	33	59	30	56
Sweden					
Metal	117	127	127	110	152
Switzerland					
Metal	104	95	140	105	94
United Kingdom					
Metal	1 546	1 882	1 471	1 695	2 300
Oxides	1 380	1 233	994	750	689

Note(s):-
(a) BGS estimates, based on known imports into certain countries

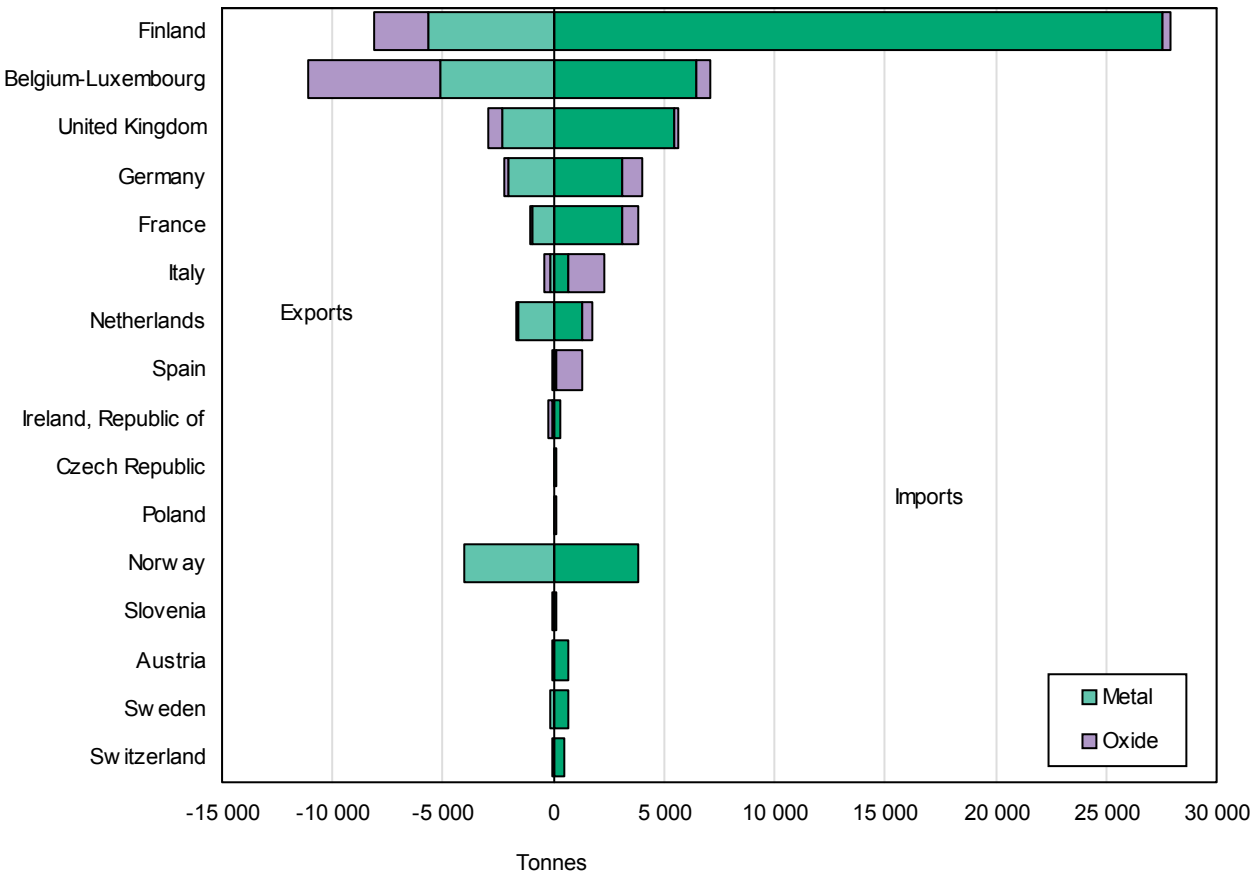
Imports of cobalt

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	30	585	694	438	631
Belgium-Luxembourg					
Ore	67	455	263	107	153
Metal (a)	*8 400	*7 000	*4 800	*4 300	*6 500
Oxides	800	1 103	(a) *1 300	(a) *500	(a) *600
Czech Republic					
Metal	54	81	75	84	108
Oxides	25	33	18	24	26
Estonia					
Metal	138	17	0	3	1
Finland					
Ore	41 707	80 202	54 794	31 186	26 449
Metal	(a) *100	(a) *700	1 759	26 928	27 590
Oxides	45	126	336	186	346
France					
Metal	1 813	*1 600	2 038	2 117	3 137
Oxides	533	522	474	562	658
Germany					
Metal	2 568	2 602	2 990	3 532	3 150
Oxides	439	448	542	759	898
Greece					
Metal	30	89	31	30	42
Ireland, Republic of					
Ore	18	30	28	35	571
Metal	282	273	390	464	298
Oxides	3	5	13	43	7
Italy					
Ore	495	122	5	11	17
Metal	449	440	468	587	626
Oxides	966	1 004	1 128	1 161	1 682
Netherlands					
Metal	551	1 340	1 532	1 511	1 270
Oxides	215	369	351	269	489
Norway					
Metal	4 773	9 629	5 775	6 362	3 871
Poland					
Metal	49	44	35	52	69
Oxides	16	37	121	63	18
Slovenia					
Metal	198	162	209	209	96
Spain					
Metal	171	181	158	180	121
Oxides	1 401	1 249	1 352	1 254	1 187
Sweden					
Metal	663	711	660	743	676
Switzerland					
Metal	291	361	423	408	454
Turkey					
Metal	157	170	164	92	14
Oxides	108	134	139	81	19
United Kingdom					
Metal	3 356	3 862	3 888	4 427	5 422
Oxides	582	525	107	195	180

Note(s) :-
(a) BGS estimates, based on known exports from certain countries

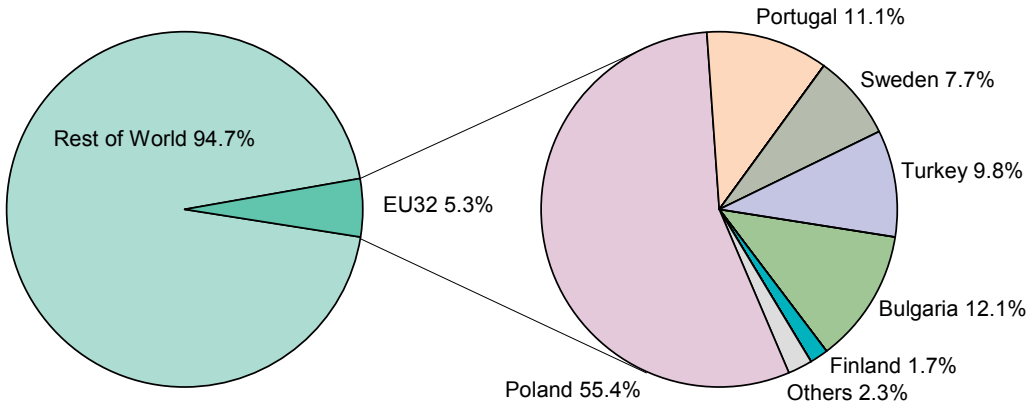
Cobalt - EU32 trade in 2007



Copper

- Copper is reddish, malleable and ductile metallic element with excellent thermal and electrical conductive qualities. It is a very important industrial material and is used in the electrical, electronics, transportation and construction industries.
- World mine production in 2007 was dominated by Chile (36 per cent) although many countries have some form of copper production. Chile (14 per cent of total) was also the third largest refined copper producer in the world after China (17 per cent) and Mexico (16 per cent). The EU32 countries contributed 5 per cent to the world mined copper total and 12 per cent to world refined copper production. Poland was the largest mine producer in the EU32 and second largest refined metal producer, after Germany where refined copper production is based on imported materials.
- Despite starting 2007 on a slight downward trend, copper prices rose above US$7000 per tonne for most of the year, reaching a peak of US$8300 per tonne in October before declining again to below US$6300 in December 2007. However this was short-lived as the price climbed again in early 2008 and reached an all-time record high of US$8985 per tonne in July. Following this, though, the deteriorating global economic climate has pushed the copper price down, along with many other commodities, to US$2770 per tonne by mid December 2008.

EU32 Mine production of copper 2007



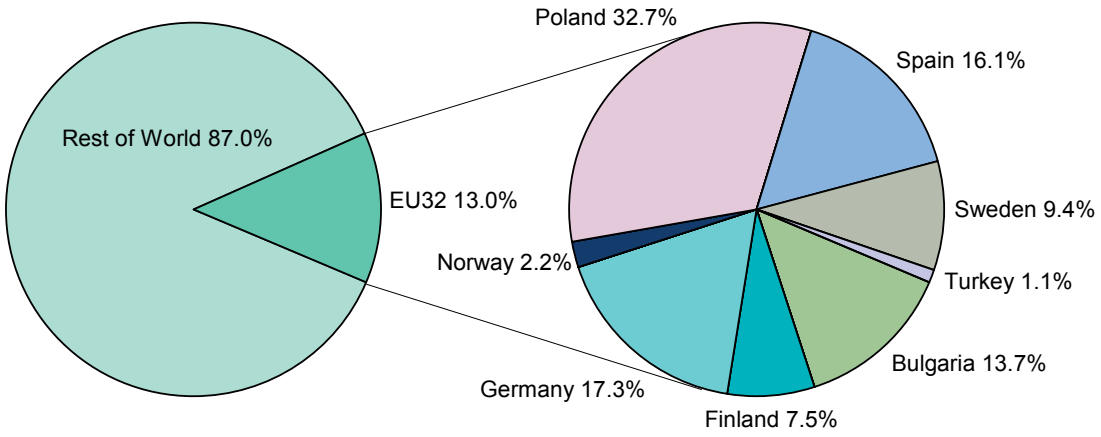
Mine production of copper

tonnes (metal content)

Country	2003	2004	2005	2006	2007
Bulgaria	91 600	79 600	82 700	99 000	99 000
Cyprus	2 500	—	—	900	2 900
Finland	14 900	15 500	15 000	13 000	13 600
Macedonia	618	—	4 799	7 054	7 029
Poland	503 544	530 768	511 799	497 200	451 900
Portugal	77 581	95 700	89 541	78 576	90 182
Romania	23 389	20 380	16 286	12 535	2 213
Spain	635	1 308	7 358	8 700	6 281
Sweden	83 143	82 415	87 068	86 746	62 905
Turkey	43 245	38 876	30 067	*30 000	*80 000
EU32 Total	841 000	865 000	845 000	834 000	816 000

EU32 Mine production of copper 2003 - 07

EU32 Smelter production of copper 2007



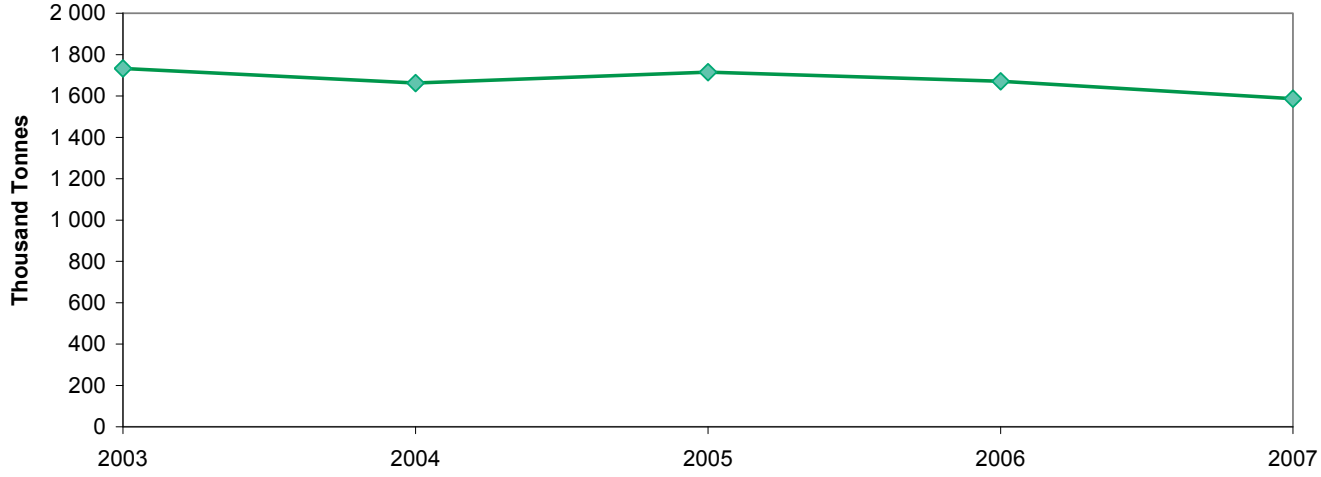
Smelter production of copper

tonnes

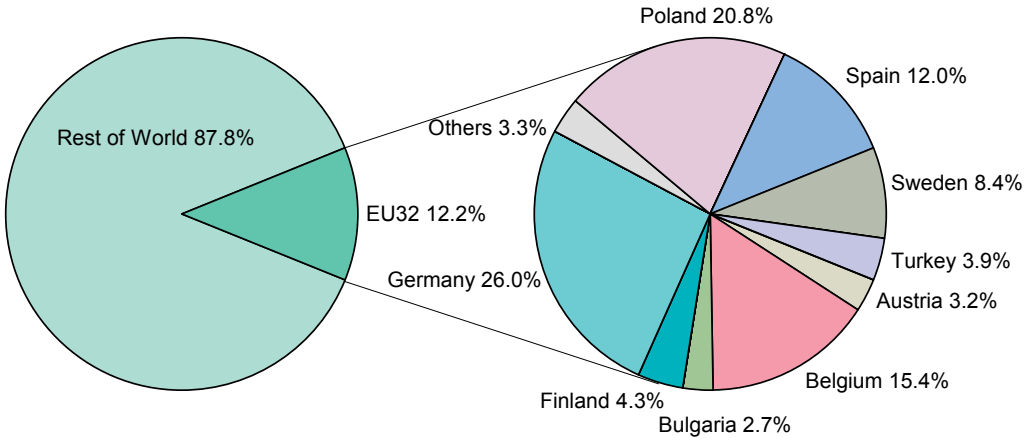
Country	2003	2004	2005	2006	2007
Bulgaria	199 300	215 800	225 000	217 000	217 600
Finland	160 596	151 647	157 933	164 306	118 911
Germany	288 800	278 600	257 200	273 800	275 300
Norway	35 851	35 643	38 681	39 700	34 200
Poland	559 960	547 228	555 681	555 907	518 303
Romania	4 473	61	—	—	—
Spain	290 282	224 249	284 215	263 662	256 300
Sweden	175 475	174 459	168 763	129 951	148 835
Turkey	18 400	34 700	27 700	26 300	17 900
EU32 Total	1 733 000	1 662 000	1 715 000	1 671 000	1 587 000

Note(s):-
(1) This table shows primary metal in the form of blister and anode produced from concentrates, and may include copper produced from scrap but this is excluded when it can be separately identified

EU32 Smelter production of copper 2003 - 07



EU32 Production of refined copper 2007



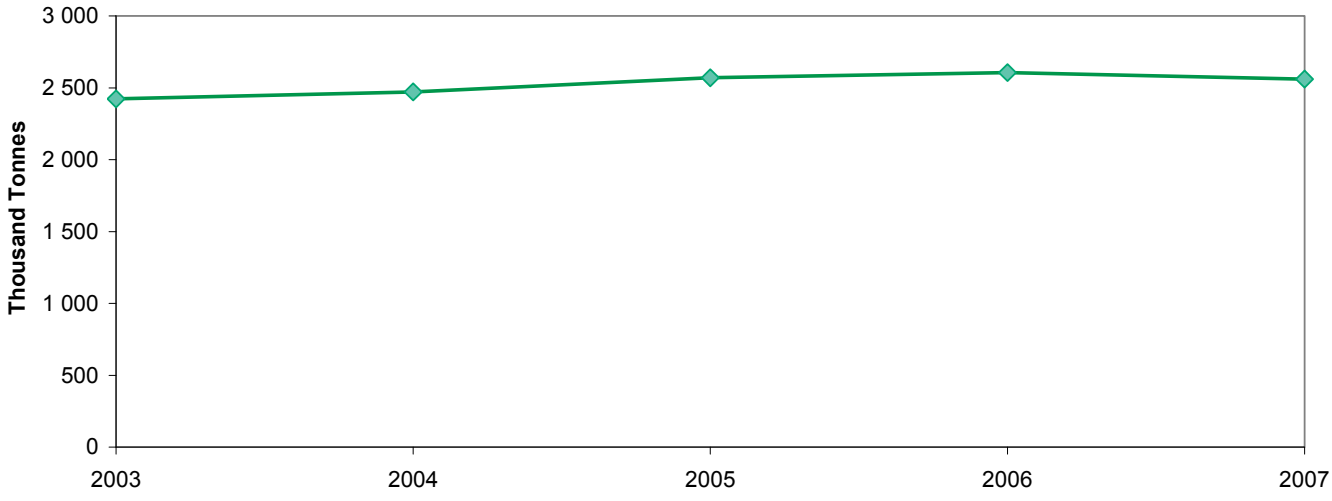
Production of refined copper

tonnes

Country	2003	2004	2005	2006	2007
Austria	65 100	74 200	72 300	72 600	81 400
Belgium	423 000	383 000	382 900	378 600	394 000
Bulgaria	45 900	55 300	60 100	65 500	70 000
Cyprus	2 552	1 344	—	880	3 012
Finland	135 713	132 384	132 126	137 961	109 870
Germany	597 531	652 600	638 800	662 338	665 517
Italy	26 700	33 600	32 200	36 400	28 600
Norway	35 852	35 643	38 681	39 700	34 200
Poland	529 616	550 066	560 256	556 625	532 975
Romania	16 739	24 526	20 739	21 583	18 589
Spain	293 495	228 466	313 105	299 146	308 100
Sweden	214 181	235 620	223 482	229 241	213 894
Turkey	36 900	63 800	94 900	105 800	99 600
EU32 Total	2 423 000	2 471 000	2 570 000	2 606 000	2 560 000

Note(s):-
(1) Figures relate to both primary and secondary refined copper, whether electrolytic or fire refined. Metal recovered from secondary materials by remelting alone is excluded

EU32 Production of refined copper 2003 - 07



Exports of copper

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Matte & cement	85	4 686	2 901	651	2 323
Unwrought	81 897	71 119	83 750	84 104	82 985
Unwrought alloys	907	580	604	2 509	1 239
Scrap	25 606	36 476	33 274	39 169	38 642
Belgium-Luxembourg					
Ores & concentrates	517	1 478	1 887	1 778	1 061
Matte & cement	...	493	401	1 026	1 104
Unwrought, unrefined	10 521	19 942	4 499	8 833	10 730
Unwrought, refined	336 637	169 556	241 363	236 804	199 650
Unwrought alloys	21 710	13 556	14 463	13 419	15 081
Scrap	152 584	169 397	177 787	163 418	194 666
Bulgaria					
Ores & concentrates	72 861	78 563	124 717	193 389	168 155
Matte & cement	4 356	6 718	5 750	4 818	6 335
Unwrought	218 482	219 415	219 009	210 520	185 012
Scrap	9 507	9 480	8 244	13 163	11 590
Croatia					
Scrap	7 497	9 613	10 814	12 105	12 378
Cyprus					
Unwrought	2 610	1 322	...	879	3 006
Scrap	1 266	2 221	2 548	2 684	2 122
Czech Republic					
Unwrought	978	7 834	4 251	12 651	10 301
Scrap	36 874	53 086	53 707	57 152	58 534
Denmark					
Scrap	39 487	38 573	27 227	31 076	31 569
Estonia					
Scrap	6 857	6 479	6 660	11 801	7 784
Finland					
Unwrought, unrefined	33 180	25 618	29 685	34 962	10 490
Unwrought, refined	34 333	27 650	40 170	55 239	32 956
Unwrought alloys	724	903	746	1 533	587
Scrap	19 693	23 543	30 577	31 182	32 872
France					
Unwrought	32 947	60 745	48 050	47 839	67 765
Unwrought alloys	6 585	11 940	9 851	9 680	13 140
Scrap	180 294	243 074	262 874	290 528	284 890
Germany					
Ores & concentrates	48 674	49 617	46 139	54 167	61 535
Matte & cement	899	944	536	101	24
Unwrought, unrefined	1 592	53	232	3 244	105
Unwrought, refined	117 566	137 238	149 083	146 137	117 596
Unwrought alloys	21 421	21 038	20 232	22 941	22 436
Scrap	363 762	373 809	439 134	465 264	480 700
Greece					
Unwrought, refined	1 414	1 894	1 242	2 541	1 944
Unwrought alloys	2 179	1 273	365	1 142	995
Scrap	9 460	8 517	15 126	16 889	14 669
Hungary					
Scrap	27 405	31 741	34 861	27 051	23 394
Ireland, Republic of					
Ores & concentrates	...	...	...	1 273	1 024
Scrap	17 824	16 118	13 152	15 784	9 836
Italy					
Matte & cement	561	366	107	1 511	2 244
Unwrought	13 371	22 988	6 387	13 567	22 424
Unwrought alloys	12 110	16 772	14 128	14 620	20 830
Scrap	53 184	97 964	110 711	102 463	120 231
Latvia					
Unwrought	100	384	503	2 734	3 272
Scrap	6 329	7 153	9 207	7 116	7 309
Lithuania					
Scrap	8 383	7 611	5 821	5 020	4 814

Exports continued tonnes

Country	2003	2004	2005	2006	2007
Macedonia					
Ores & concentrates	3 723	648	21 441	31 547	32 224
Scrap	1 065	1 413	1 926	3 190	2 277
Malta					
Scrap	2 099	1 461	1 242	1 036	1 790
Netherlands					
Unwrought	18 605	32 548	39 638	31 204	49 300
Scrap	109 595	140 909	207 551	306 132	229 090
Norway					
Unwrought	35 392	35 632	37 430	38 232	34 007
Unwrought alloys	1 195	988	1 707	1 141	1 161
Scrap	25 382	21 256	22 667	24 205	24 066
Poland					
Matte & cement	763	1 606	3 673	6 774	2 187
Unwrought	278 113	275 089	290 462	287 666	239 508
Unwrought alloys	5 329	5 007	6 183	6 205	6 397
Scrap	40 542	42 763	47 463	55 285	64 377
Portugal					
Ores & concentrates	286 781	346 534	375 312	328 296	399 589
Unwrought	747	1 165	9 356	918	227
Scrap	24 440	35 927	33 583	29 736	24 566
Romania					
Ores & concentrates	94 668	81 485	84 084	72 900	23 689
Matte & cement	218	3 482	...	2 818	11 569
Unwrought	1 185	815	614	735	125
Scrap	16 683	15 979	22 665	41 911	35 856
Slovakia					
Unwrought	7 094	15 680	19 130	27 178	34 232
Scrap	8 889	12 764	14 752	18 821	23 502
Slovenia					
Scrap	10 550	12 564	13 054	15 922	17 810
Spain					
Ores & concentrates	2 682	4 327	14 434	5 835	905
Unwrought, unrefined	37 437	50 901	62 269	45 906	37 210
Unwrought, refined	46 677	32 366	44 365	38 205	48 288
Unwrought alloys	9 747	11 724	9 810	10 590	12 679
Scrap	62 879	77 850	99 600	84 570	88 429
Sweden					
Unwrought, refined	77 216	81 878	99 824	86 726	65 926
Unwrought alloys	7 104	5 040	5 247	6 443	8 837
Scrap	35 982	44 366	43 816	45 456	54 673
Switzerland					
Unwrought	1 163	1 872	10 691	1 036	1 002
Scrap	56 398	69 243	74 878	74 079	75 542
Turkey					
Ores & concentrates	151 667	180 609	145 118	68 286	36 046
Unwrought	18 709	12 863	13 524	13 876	11 813
Scrap	18 492	4 529	15 083	12 630	8 920
United Kingdom					
Matte & cement	2 723	79	41	515	16
Unwrought	2 924	7 362	16 253	6 122	9 276
Unwrought alloys	24 121	22 035	15 013	17 251	18 142
Scrap	210 169	244 749	238 557	311 058	346 361

Note(s):-
(1) In this table the term 'unwrought' copper corresponds to items 7402, 7403, 7405 of the Harmonised System and includes both unrefined (including blister) and refined copper
(2) The term 'unwrought' as used here includes alloys unless these are separately specified. The term 'scrap' includes scrap alloys

Imports of copper

tonnes

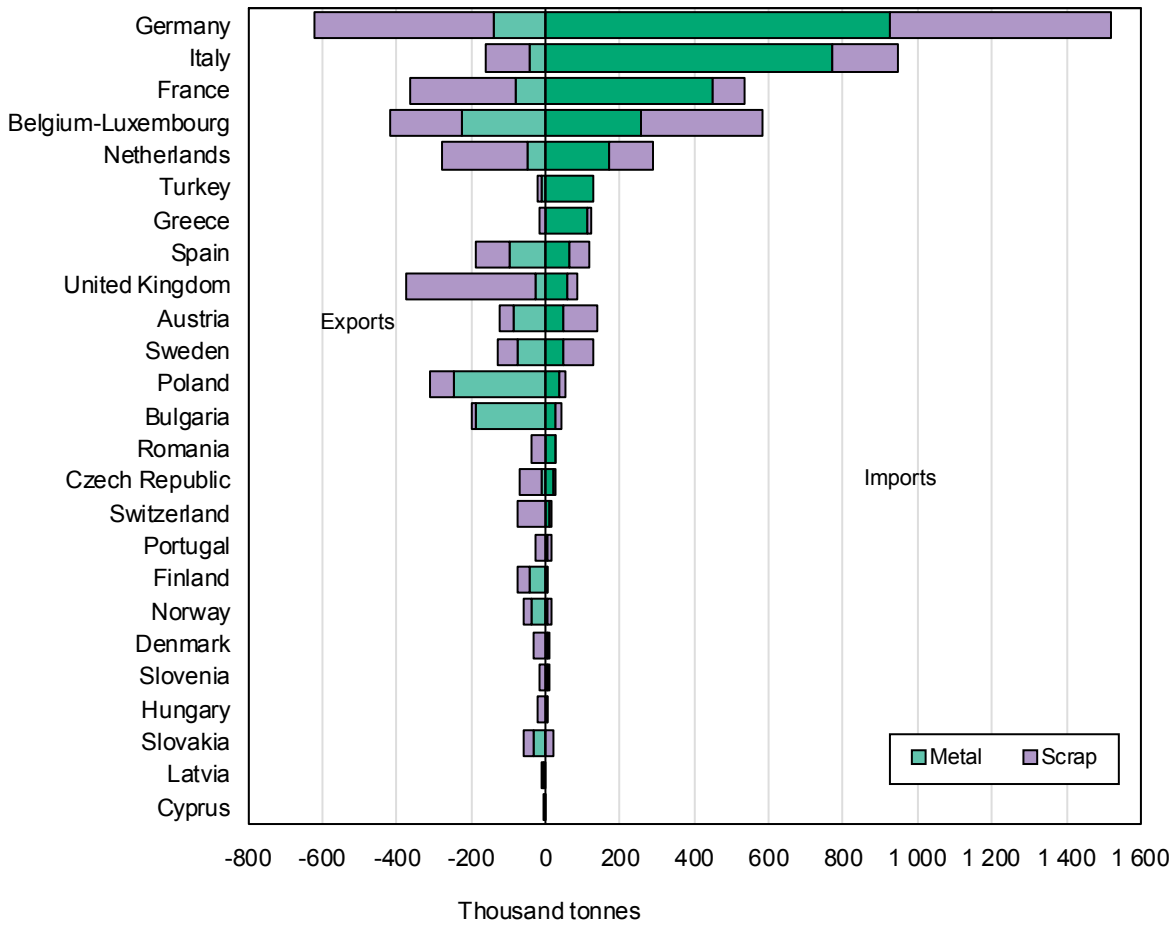
Country	2003	2004	2005	2006	2007
Austria					
Unwrought, unrefined	—	15 203	20 081	26 508	26 678
Unwrought, refined	29 479	18 429	21 176	29 298	20 614
Unwrought alloys	3 103	2 460	2 260	2 979	2 485
Scrap	82 015	87 807	82 787	88 684	91 043
Belgium-Luxembourg					
Ores & concentrates	161	1 003	5 225	17 263	21 137
Matte & cement	9	4 799	370	1 111	6 360
Unwrought, unrefined	291 190	291 111	237 645	267 505	224 439
Unwrought, refined	58 266	17 318	9 515	21 818	28 746
Unwrought alloys	1 641	1 510	1 906	1 083	3 324
Scrap	225 822	256 504	257 738	300 260	328 676
Bulgaria					
Ores & concentrates	454 875	561 613	632 255	581 055	539 325
Matte & cement	8 542	383	562	5 003	10 025
Unwrought	3 880	8 599	18 613	19 735	28 226
Scrap	2 722	2 935	5 094	7 784	12 899
Czech Republic					
Unwrought	6 326	5 644	4 551	8 321	18 911
Scrap	2 080	5 601	6 114	8 104	8 966
Denmark					
Unwrought	2 324	2 065	1 702	4 081	2 901
Scrap	18 332	16 446	13 827	14 646	9 187
Finland					
Ores & concentrates	543 488	528 930	504 658	544 149	448 119
Unwrought alloys	4 311	2 778	3 229	3 996	4 178
Scrap	2 472	1 735	2 423	1 259	2 644
France					
Matte & cement	1 651	386	19	20	293
Unwrought, unrefined	118	168	248	275	328
Unwrought, refined	578 525	590 304	516 881	506 721	431 897
Unwrought alloys	8 308	7 564	10 132	11 029	14 389
Scrap	70 422	78 853	75 464	97 462	90 195
Germany					
Ores & concentrates	880 332	1 141 843	1 149 088	1 148 316	1 300 491
Matte & cement	33 896	15 085	25 931	30 463	14 880
Unwrought, unrefined	17 319	11 635	36 671	41 589	31 830
Unwrought, refined	516 590	584 852	624 688	881 427	844 747
Unwrought alloys	38 410	24 066	26 657	36 770	48 261
Scrap	379 726	426 995	432 147	552 413	595 751
Greece					
Unwrought	107 425	120 088	90 557	106 404	105 722
Unwrought alloys	843	550	488	4 439	6 855
Scrap	1 979	1 864	930	2 141	10 148
Hungary					
Unwrought	14 327	11 365	3 269	2 175	2 492
Scrap	502	512	500	516	954
Italy					
Unwrought, unrefined	310	216	955	323	796
Unwrought, refined	650 757	700 101	652 089	774 140	746 482
Unwrought alloys	21 862	16 723	8 053	15 174	24 996
Scrap	164 700	128 501	124 737	214 289	177 546
Netherlands					
Unwrought, unrefined	2 867	10 185	10 485	18 333	18 130
Unwrought, refined	123 682	125 310	135 004	147 428	151 515
Unwrought alloys	1 326	2 172	1 904	2 214	3 379
Scrap	80 262	98 396	92 927	110 753	117 259
Norway					
Unwrought	1 190	2 594	3 190	3 133	3 650
Scrap	12 591	11 270	12 420	12 759	13 486
Poland					
Ores & concentrates	...	30	43 504	112 708	61 319
Matte & cement	...	...	312	5 053	10 062
Unwrought	2 257	3 071	7 118	40 899	35 420
Scrap	6 001	14 973	5 855	4 885	18 596

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Portugal					
Unwrought	6 245	7 740	4 572	5 752	5 309
Scrap	1 383	1 874	3 329	5 946	8 503
Romania					
Unwrought	2 225	7 255	9 723	12 794	25 093
Scrap	20	3 359	1 528	2 946	1 710
Slovakia					
Matte & cement	104	758	4 342	1 071	...
Unwrought	3 689	1 269	1 718	2 084	1 557
Scrap	8 448	20 776	19 977	17 973	17 476
Slovenia					
Unwrought	3 835	2 948	2 764	3 150	2 809
Scrap	3 787	3 743	5 762	9 000	10 431
Spain					
Ores & concentrates	1 052 115	776 980	1 040 099	1 100 338	1 001 284
Unwrought, unrefined	15 283	2 488	312	2 631	1 032
Unwrought, refined	33 781	74 277	69 039	62 982	56 237
Unwrought alloys	4 444	5 254	4 458	5 898	5 417
Scrap	57 315	112 934	84 824	89 252	56 754
Sweden					
Ores & concentrates	300 566	340 858	311 085	267 753	420 050
Unwrought, unrefined	3	2	15 452	35 496	10 495
Unwrought, refined	48 468	34 912	40 106	41 036	31 535
Unwrought alloys	2 947	2 762	2 926	3 944	5 867
Scrap	52 091	76 672	50 940	54 483	81 015
Switzerland					
Unwrought	5 206	6 779	4 734	4 843	5 960
Unwrought alloys	3 496	4 481	3 897	4 695	4 089
Scrap	9 469	11 881	9 937	7 641	7 995
Turkey					
Ores & concentrates	54 573	10 370	44 633	15 921	—
Unwrought, unrefined	100	29 555	53 214	24 682	...
Unwrought, refined	229 159	217 290	223 978	150 412	128 077
Unwrought alloys	3 768	4 685	3 212	2 160	1 975
Scrap	29 803	34 975	9 629	4 374	228
United Kingdom					
Unwrought, unrefined	14	122	1 978	264	7 401
Unwrought, refined	245 152	214 067	181 767	183 727	46 820
Unwrought alloys	6 160	8 070	6 191	6 743	6 202
Scrap	17 378	15 731	42 264	19 744	21 852

Note(s) :-
(1) In this table the term 'unwrought' copper corresponds to items 7402, 7403, 7405 of the Harmonised System and includes both unrefined (including blister) and refined copper
(2) The term 'unwrought' as used here includes alloys unless these are separately specified. The term 'scrap' includes scrap alloys

Copper - EU32 trade in 2007



Diamond

- Diamond is a polymorph of carbon and is the hardest substance known. It is used mainly in jewellery, abrasives and cutting tools.
- Africa (chiefly Botswana, Democratic Republic of Congo and South Africa) dominates world production with 55 per cent of all carats produced in 2007. However, Russia is the world's largest producing country (22.5 per cent of world production). Australia and Canada are also significant diamond producers. There is no mine production of diamond in the EU32 but production of synthetic diamonds is important and Europe is a world centre for diamond trading.
- Gem quality diamonds are valued on an individual basis that takes into account their unique qualities and are seldom priced at less than US$1000 per carat. Rough (i.e. uncut) diamonds typically average between US$72 to US$84 per carat. Prices for Industrial diamonds, which are predominantly synthetic, are typically about US$10 per carat.

Exports of diamond

carats

Country	2003	2004	2005	2006	2007
Austria					
Unsorted	£319 000	£477 000	£188 000	£211 000	£85 000
Gem, cut	£1 660 000	£1 665 000	£2 895 000	£3 157 000	£2 792 000
Dust	£190 000	£432 000	£406 000	£45 000	£115 000
Belgium-Luxembourg					
Unsorted	...	...	£785 000	£889 000	...
Gem, rough	131 000 000	154 000 000	147 000 000	128 000 000	135 000 000
Gem, cut	6 500 000	6 000 000	5 500 000	4 500 000	8 000 000
Industrial	10 500 000	7 000 000	5 500 000	2 000 000	5 000 000
Dust	38 000 000	42 500 000	40 000 000	35 500 000	27 000 000
France					
Unsorted	1 959	858	14 853	40 105	22 863
Gem	68 295	75 969	98 712	164 433	227 372
Dust	355 000	528 370	1 273 515	1 069 100	430 000
Germany					
Unsorted	£138 000	£663 000	£756 000	£21 000	£112 000
Gem	183 133	190 272	169 535	175 658	153 739
Industrial	6 918	7 997	5 255	7 510	8 720
Dust	23 751 975	54 314 035	42 628 300	27 074 465	3 340 725
Greece					
Gem, cut	1 895 000	55 000	1 840 000	325 000	500 000
Italy					
Gem, cut	64 018	99 218	119 462	105 514	131 174
Dust	36 863 653	49 921 702	49 139 151	18 028 081	65 975 744
Netherlands					
Unsorted	...	£1 883 000	£928 000	£1 564 200	£1 000 000
Gem, rough	£437 000	—	—	...	...
Gem, cut	£8 511 000	£9 806 000	£8 687 000	£16 579 000	£6 216 000
Industrial	£813 000	£188 000	£842 000	£4 146 000	£1 891 000
Dust	£776 000	£724 000	£44 000	£112 000	£82 000
Portugal					
Gem, rough	£3 650 000	£96 000	—	...	—
Gem, cut	£37 983 000	£45 779 000	£17 981 000	£8 000	£105 000
Spain					
Unsorted	£515 000	£792 000	£673 000	£531 000	£346 000
Gem, cut	£2 606 000	£1 855 000	£5 275 000	£61 119 000	£8 478 000
Industrial	£245 000	£212 000	£325 000	£331 000	£208 000
Dust	...	...	1 607 384	210 000	254 600
Switzerland					
Gem, rough	74 141	139 400	195 614	119 619	4 360
Gem, cut	427 033	338 524	500 591	543 079	559 591
Industrial	66 354	18 185	13 934	76 604	12 100
Dust	95 290 000	120 790 000	126 190 000	128 180 000	40 985 000

Exports continued — carats

Country	2003	2004	2005	2006	2007
United Kingdom					
Unsorted	9 744 443	6 394 541	16 818 545	3 544 216	5 307 857
Gem, rough	104 300 972	78 613 304	76 400 064	88 991 279	84 573 134
Gem, cut	828 103	1 592 715	5 330 874	2 341 635	477 463
Industrial	12 177 638	22 821 714	21 647 850	13 652 233	4 754 029
Dust	75 401 755	149 415 960	124 529 495	111 788 350	29 979 683

Note(s):-
(1) Carats have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
(2) See explanatory notes at the front of the volume regarding currency conversion
(3) In this table the term 'Dust' corresponds to item 7105.10 of the Harmonised System and includes both natural and synthetic diamond dust

Imports of diamond

carats

Country	2003	2004	2005	2006	2007
Austria					
Unsorted	£1 734 000	£1 193 000	£1 254 000	£1 101 000	£851 000
Gem, cut	£4 329 000	£4 660 000	£5 743 000	£5 892 000	£6 407 000
Industrial	£105 000	£631 000	£706 000	£841 000	£884 000
Dust	15 000 000	24 000 000	23 000 000	28 000 000	25 500 000
Belgium-Luxembourg					
Unsorted	841 372	785 589	1 082 340	1 063 171	1 364 021
Gem, rough	126 125 885	123 033 948	135 545 483	118 072 160	116 947 506
Gem, cut	3 709 408	1 101 124	121 222	81 913	52 357 584
Industrial	21 943 645	15 882 763	15 475 112	12 851 679	13 670 182
Dust	57 175 872	59 339 768	65 214 438	61 015 000	63 000 427
Czech Republic					
Gem, cut	...	...	2 755	18 182	5 837
Industrial	...	...	27 453	30 377	43 006
Dust	£858 000	£776 000	£956 000	£867 000	£884 000
Denmark					
Unsorted	...	£294 482	£597 000	£686 000	£928 000
Gem, cut	£10 290 000	£9 319 000	£6 506 000	£7 252 000	£8 476 000
Industrial	£151 161	£106 030	£80 942	£183 695	£388 000
Dust	531 702	485 358	696 038	769 511	1 046 604
Finland					
Unsorted	...	55 000	120 000	105 000	...
Gem, cut	...	235 000	355 000	440 000	...
Dust	365 000	320 000	450 000	620 000	682 850
France					
Unsorted	118 290	101 610	263 542	45 393	32 997
Gem, rough	31 958	38 855	21 896	33 887	68 532
Gem, cut	16 596	17 601	11 973	10 447	13 038
Industrial	210 815	539 791	355 505	332 077	439 860
Dust	10 500 000	11 327 446	10 013 030	10 037 456	8 361 221
Germany					
Gem	448 898	513 371	443 747	487 354	504 519
Industrial	458 671	763 745	1 572 864	1 554 184	1 090 017
Dust	77 071 290	96 561 025	63 878 900	53 291 240	47 242 440
Greece					
Unsorted	£340 000	£625 000	£597 000	£1 221 000	£1 102 000
Gem, rough	£166 000	£145 000	£357 000	£333 000	£349 000
Gem, cut	£1 130 000	£1 701 000	£1 893 000	£1 592 000	£2 388 000
Industrial	£456 000	£771 000	£959 000	£887 000	£1 823 000
Dust	6 205 000	8 390 000	19 475 000	10 550 000	17 573 974
Hungary					
Gem, cut	£868 000	£1 669 000	£849 000	£246 000	£52 000

Imports continued carats

Country	2003	2004	2005	2006	2007
Ireland, Republic of					
Unsorted	5 134	...	12 187	6 825	3 837
Gem, rough	3 716	9 409	577	740	732
Gem, cut	22 024	...	29 076	48 342	41 501
Industrial	380	...	92 204	278 592	397 060
Dust	21 465 552	...	30 924 437	200 868 966	268 092 682
Italy					
Unsorted	10 497	23 375	75 470	25 367	99 993
Gem, rough	6 207	11 171	13 115	5 535	1 481
Gem, cut	906 326	784 909	872 180	849 976	1 085 924
Industrial	397 953	178 996	121 628	102 112	194 739
Dust	113 159 858	130 785 430	141 433 010	160 140 116	171 988 444
Netherlands					
Unsorted	£1 858 000	£3 327 000	£344 000	£269 000	£299 000
Gem, rough	£828 000	£108 000	£79 000	£633 000	£320 000
Gem, cut	£13 846 000	£14 630 000	£14 764 000	£22 400 000	£13 947 000
Industrial	£940 000	£907 000	£2 009 000	£1 850 000	...
Dust	£687 000	£600 000	£425 000	£488 000	£544 000
Norway					
Unsorted	125 000	45 000	...	...	...
Poland					
Industrial	75 000	67 042	43 583	31 323	150 918
Dust	...	3 799 175	4 042 100	...	3 149 550
Portugal					
Gem, rough	£26 362 000	£18 757 000	£10 968 000	£925 000	£83 000
Gem, cut	£3 926 000	£11 608 000	£7 015 000	£2 940 000	£3 436 000
Industrial	£803 000	£669 000	£565 000	£381 000	£427 000
Dust	690 000	710 000	2 870 000	...	8 473 445
Slovenia					
Dust	...	...	1 136 505	£1 287 165	1 670 815
Spain					
Unsorted	£4 602 000	£5 431 000	£6 908 000	£4 616 000	£3 668 000
Gem, cut	£25 111 000	£41 732 000	£37 408 000	£47 084 000	£57 941 000
Industrial	£1 809 000	£1 412 000	£1 421 000	£2 701 000	£1 396 000
Dust	5 545 000	...	8 490 229	...	67 062 395
Sweden					
Unsorted	4 313	22 911	433	3 153	195
Gem, cut	£3 456 000	£3 205 000	£2 406 000	£2 306 000	...
Industrial	27 567	207 247	198 724	188 546	225 737
Dust	£2 374 000	£2 823 000	£2 573 000	£2 259 000	£2 548 000
Switzerland					
Gem, rough	80 344	144 707	195 180	118 710	8 634
Gem, cut	642 870	820 021	1 182 706	1 112 264	1 209 708
Industrial	213 535	56 907	100 142	63 939	39 174
Dust	103 005 000	126 815 000	142 000 000	127 740 000	59 930 000
Turkey					
Gem	180 307	207 903	124 043	91 528	123 105
Dust	...	15 900 000	26 765 000	13 675 000	9 835 000
United Kingdom					
Unsorted	5 210 022	10 557 063	33 441 810	14 408 621	13 661 786
Gem, rough	77 712 486	68 227 020	78 735 595	78 790 692	81 195 314
Gem, cut	4 520 872	9 317 146	12 039 040	7 370 573	973 433
Industrial	21 518 053	30 993 560	25 367 064	11 884 651	7 524 168
Dust	92 290 565	126 277 015	125 510 400	199 882 920	198 484 150

Note(s) :-
(1) Carats have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national figure has been converted to £ sterling
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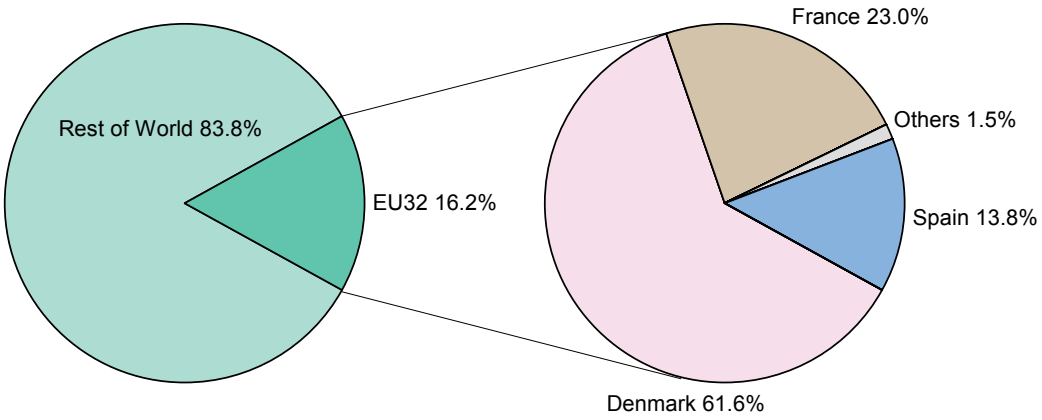
(3) In this table the term 'Dust' corresponds to item 7105.10 of the Harmonised System and includes both natural and synthetic diamond dust

Diatomite

- Diatomite is a siliceous sedimentary rock composed of the skeletons of fossilised diatoms (microscopic plants). Clay content of the rock has a strong control on the quality of the diatomite. Diatomite is valued for its high porosity, chemical inertness and ability to absorb liquids. It is used in industry within high-quality filters, as a filler and as an industrial absorbent
- The USA is the largest producer of diatomite, with 41 per cent of the world production. EU32 production has declined slightly in the last five years but still amounts to 16 per cent of world production. Production in the EU32 countries is dominated by Denmark, which produces 62 per cent of EU32 diatomite, although this is moler, an impure diatomite.
- Diatomite (US calcined filter-aids delivered to the UK) traded between £370 per tonne and £410 per tonne throughout 2007 and 2008.

EU32 Production of Diatomite 2007



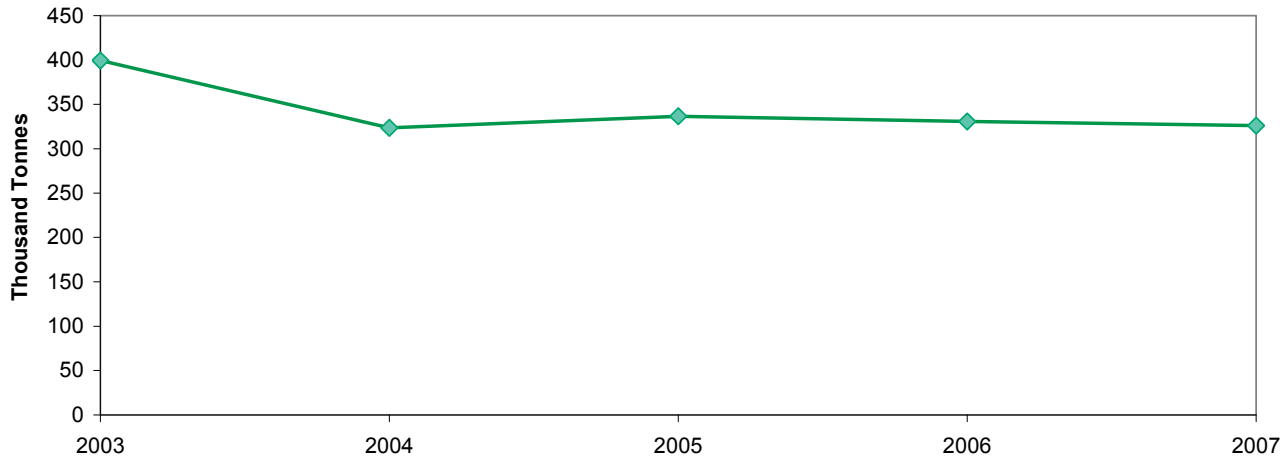
Production of diatomite

tonnes

Country	2003	2004	2005	2006	2007
Czech Republic	4 800	3 800	4 100	4 827	3 600
Denmark					
Moler (a)	221 000	188 000	209 000	196 000	201 000
France	*80 000	*75 000	*75 000	*75 000	*75 000
Hungary	1 770	1 640	2 190	495	1 424
Poland	700	800	500	600	—
Romania	33 296	20 626	1 402	1 719	15
Spain (b)	57 934	33 799	44 335	52 123	45 000
EU32 Total	400 000	324 000	337 000	331 000	326 000

Note(s):-
(a) Moler is an impure diatomite containing a large proportion of clay
(b) Including tripoli

EU32 Production of diatomite 2003 - 07



Exports of diatomite

tonnes

Country	2003	2004	2005	2006	2007
Austria	4 650	5 347	5 375	4 171	4 455
Belgium-Luxembourg	1 512	1 856	1 330	1 949	1 145
Czech Republic	5 083	4 734	4 247	4 566	1 094
Denmark (a)	*65 300	*75 800	*69 200	*71 500	*63 300
France	30 199	26 043	25 379	24 866	29 607
Germany	20 036	20 312	7 000	11 500	7 949
Hungary	284	452	12	44	44
Italy	1 217	1 745	1 138	1 110	3 884
Netherlands	1 212	1 569	804	1 395	348
Norway	79	81	1 362	281	566
Poland	...	536	455	527	774
Portugal	2 050	7 755	11	286	943
Spain	5 385	5 278	6 694	6 118	6 399
Sweden	491	492	4 423	568	3 497
Turkey	11 294	14 581	11 045	6 986	...
United Kingdom	1 003	2 123	708	687	1 238

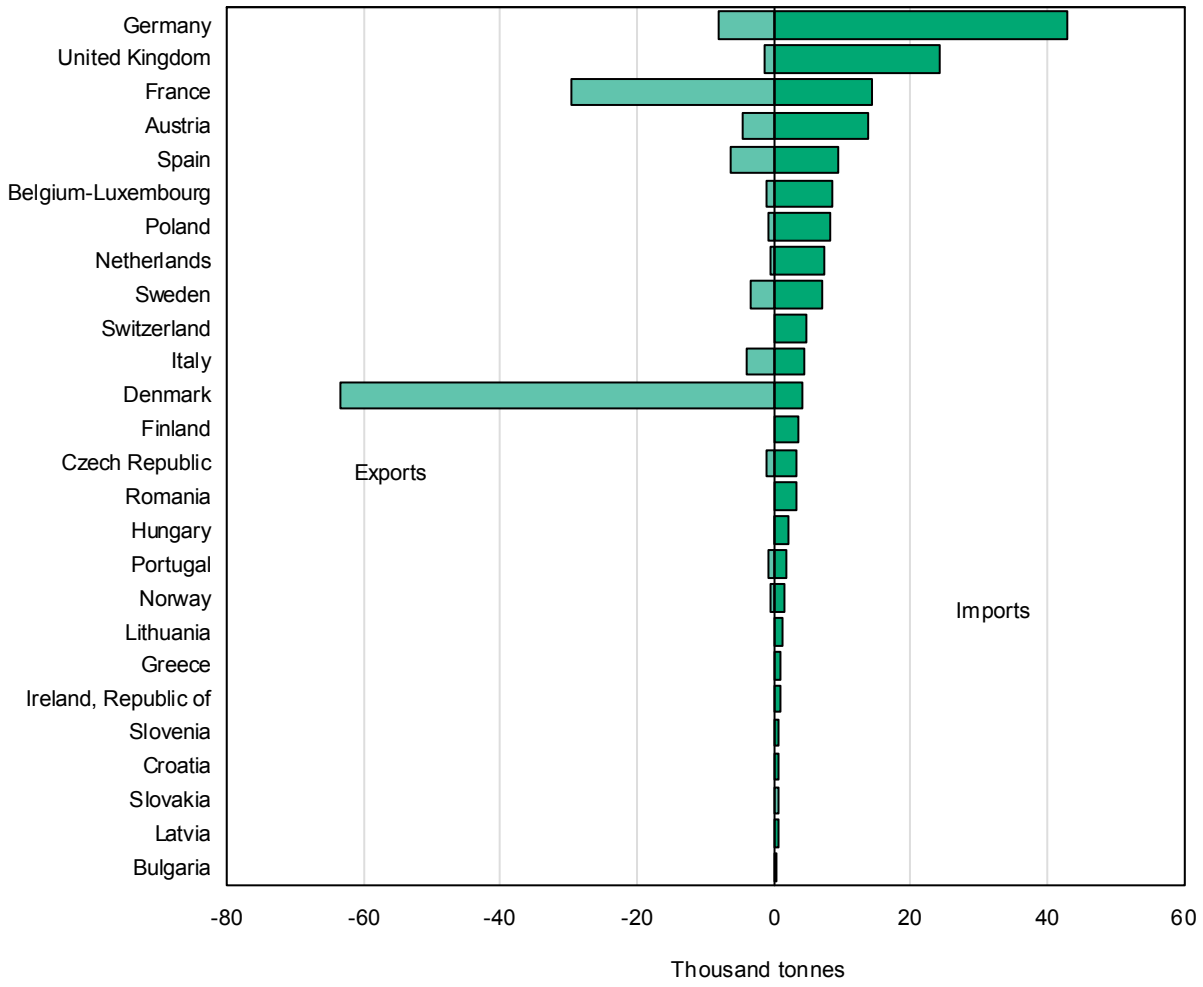
Note(s):-
(a) BGS estimates, based on known imports into certain countries

Imports of diatomite

tonnes

Country	2003	2004	2005	2006	2007
Austria	12 946	13 178	12 892	11 693	13 710
Belgium-Luxembourg	7 507	9 052	8 192	7 450	8 633
Bulgaria	1 139	1 292	1 312	1 156	436
Croatia	809	703	495	633	610
Czech Republic	1 562	1 969	2 263	2 288	3 318
Denmark	6 744	5 001	6 561	4 974	4 244
Finland	6 981	5 881	2 700	2 339	3 510
France	12 194	12 368	11 181	12 712	14 371
Germany	43 406	48 644	40 224	40 197	42 882
Greece	556	610	645	757	958
Hungary	1 593	1 390	1 158	1 476	2 111
Ireland, Republic of	729	594	641	943	859
Italy	10 429	14 744	9 141	5 179	4 487
Latvia	392	592	389	467	545
Lithuania	1 499	917	520	504	1 178
Netherlands	12 069	10 806	7 967	6 799	7 214
Norway	1 596	2 500	2 044	1 228	1 645
Poland	6 394	6 387	6 465	5 997	8 235
Portugal	3 223	2 263	3 946	3 432	1 731
Romania	3 267	3 294	3 183	3 707	3 254
Slovakia	1 067	865	675	698	549
Slovenia	450	730	846	738	686
Spain	10 575	7 004	5 186	7 281	9 447
Sweden	4 143	5 475	5 096	6 095	6 976
Switzerland	5 425	11 204	3 291	3 157	4 636
Turkey	1 736	1 211	1 442	657	...
United Kingdom	37 217	34 988	29 208	28 290	24 224

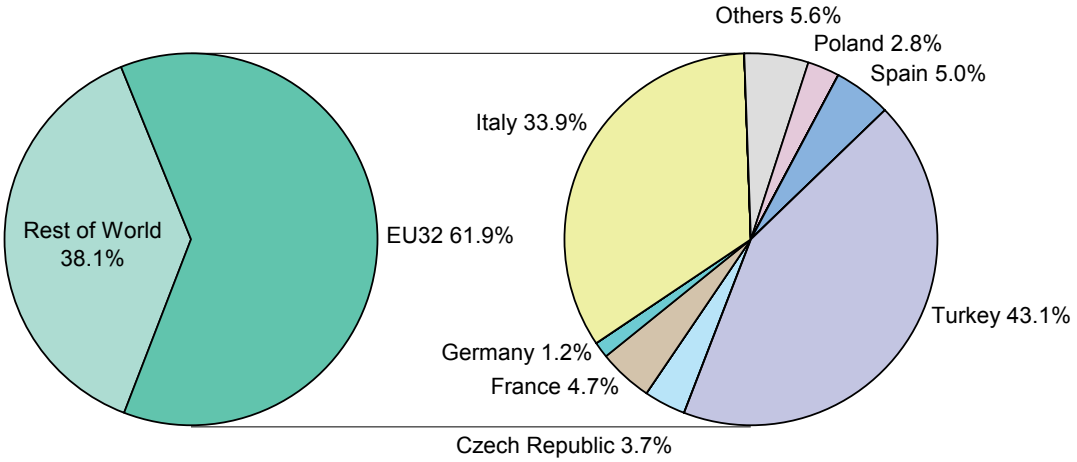
Diatomite - EU32 trade in 2007



Feldspar

- Feldspar is an abundant rock-forming alumino-silicate mineral. It is an essential component of glass and ceramic manufacture where it behaves as a flux and adds hardness, durability and resistance to corrosion.
- Turkey is the largest world producer (27 per cent) and Italy is the second largest world producer (21 per cent). Together, the EU32 countries accounted for 62 per cent of world feldspar production in 2007.
- Feldspar is traded in several forms, priced between US$22 per tonne (crude) and US$205 per tonne (micronised) throughout most of 2007 and 2008.

EU32 Production of feldspar 2007



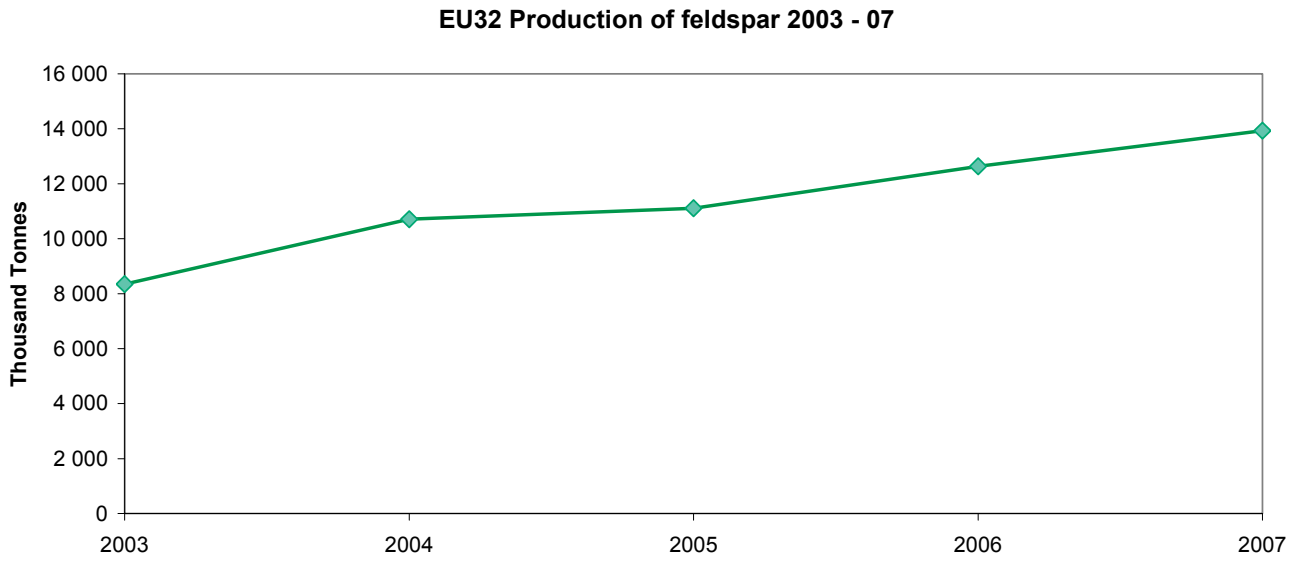
Production of feldspar

tonnes

Country	2003	2004	2005	2006	2007
Bulgaria	*35 000	86 608	72 867	93 091	*90 000
Czech Republic	421 000	488 000	472 000	487 000	514 000
Finland	59 362	44 495	42 783	43 187	48 980
France	654 000	628 000	651 000	*650 000	*650 000
Germany	233 028	182 842	168 640	167 332	171 303
Greece	102 800	88 274	100 586	*100 000	*100 000
Italy	2 343 722	3 251 264	3 334 848	4 019 495	4 726 908
Macedonia	25 640	22 921	27 076	38 124	32 814
Norway	70 000	67 000	*67 000	65 000	65 000
Poland	276 264	373 459	426 914	457 600	*388 500
Portugal	197 866	221 312	238 843	257 570	371 952
Romania	72 827	60 924	74 927	33 100	44 897
Spain	563 580	552 507	650 061	696 912	700 000
Sweden	44 000	38 000	30 000	24 000	25 000
Turkey	3 250 000	4 600 000	4 750 000	5 500 000	6 000 000
United Kingdom (a)	1 309	2 274	1 835	1 441	*1 400
EU32 Total	8 350 000	10 708 000	11 109 000	12 634 000	13 931 000

Note(s):-
(1) In addition to the countries listed, Slovakia is believed to produce feldspar

(a) China stone



Exports of feldspar

tonnes

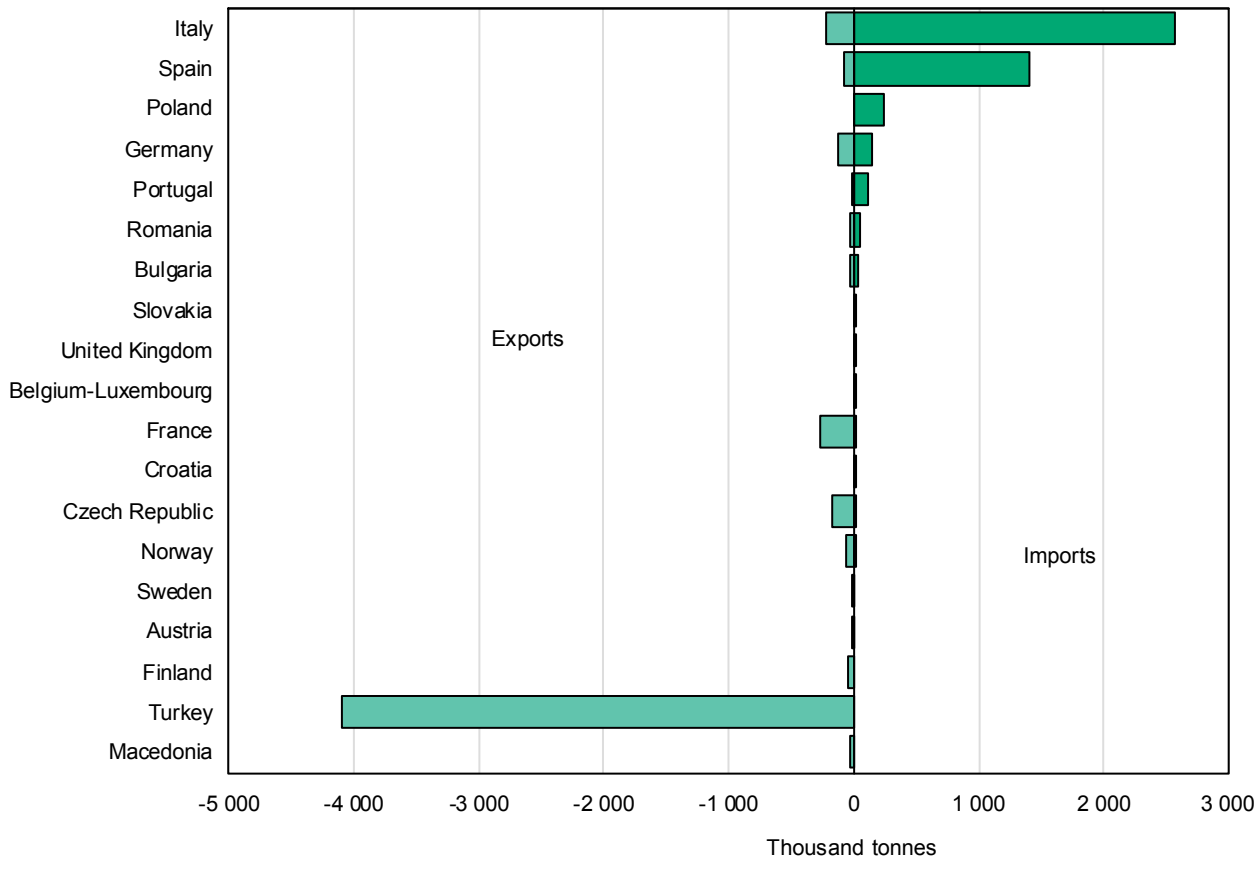
Country	2003	2004	2005	2006	2007
Austria	13 436	18 864	18 998	17 977	15 058
Bulgaria	612	1 131	452	6 159	22 519
Czech Republic	133 868	143 941	160 469	154 672	168 259
Finland	33 632	42 612	37 386	41 437	37 392
France	286 371	219 741	255 836	224 062	261 112
Germany	102 472	118 838	113 329	121 046	125 258
Greece	25 176	8 515	4 755	5 258	6 052
Italy	165 128	204 096	302 715	238 555	226 963
Macedonia	24 059	18 661	22 369	36 539	28 766
Netherlands	749	81	17	552	456
Norway	68 076	60 972	58 821	66 838	66 484
Poland	1 626	1 441	1 509	2 749	1 849
Portugal	5	—	1 546	862	4 048
Romania	33 265	28 820	28 859	20 563	25 102
Spain	65 385	71 993	66 427	77 348	74 461
Sweden	23 847	23 752	16 515	15 880	14 383
Turkey	*2 900 000	*3 600 000	*3 800 000	*4 100 000	*4 100 000
United Kingdom	801	261	48	38	40

Imports of feldspar

tonnes

Country	2003	2004	2005	2006	2007
Austria	1 083	418	1 549	2 220	3 816
Belgium-Luxembourg	30 225	30 969	25 876	21 483	26 151
Bulgaria	23 367	30 805	34 723	40 416	35 851
Croatia	11 894	13 713	17 011	15 986	16 212
Czech Republic	7 388	8 785	13 315	16 032	14 213
Denmark	3 904	3 878	3 868	2 590	3 145
Finland	104	257	380	796	1 023
France	37 538	44 615	85 460	54 106	20 974
Germany	50 809	70 064	101 931	126 834	143 596
Greece	5 216	499	3 032	439	478
Hungary	19 131	19 205	20 184	16 091	13 567
Italy	2 291 993	2 693 951	2 623 428	2 603 981	2 573 637
Lithuania	3 380	7 461	4 166	1 933	1 693
Netherlands	11 084	9 606	7 721	7 505	8 529
Norway	13 710	15 490	17 103	17 199	12 930
Poland	155 283	201 509	215 185	219 719	237 963
Portugal	79 521	96 049	115 286	98 106	108 150
Romania	41 385	38 470	39 448	31 433	48 999
Slovakia	48 100	39 689	36 989	30 726	27 548
Slovenia	8 605	10 045	5 852	5 813	6 877
Spain	760 473	955 039	1 231 861	1 422 514	1 407 350
Sweden	5 960	7 019	9 387	4 029	6 021
Switzerland	7 229	8 347	7 977	6 219	8 056
Turkey	26 977	40 733	40 739	12 074	—
United Kingdom	25 764	31 601	23 139	17 098	26 751

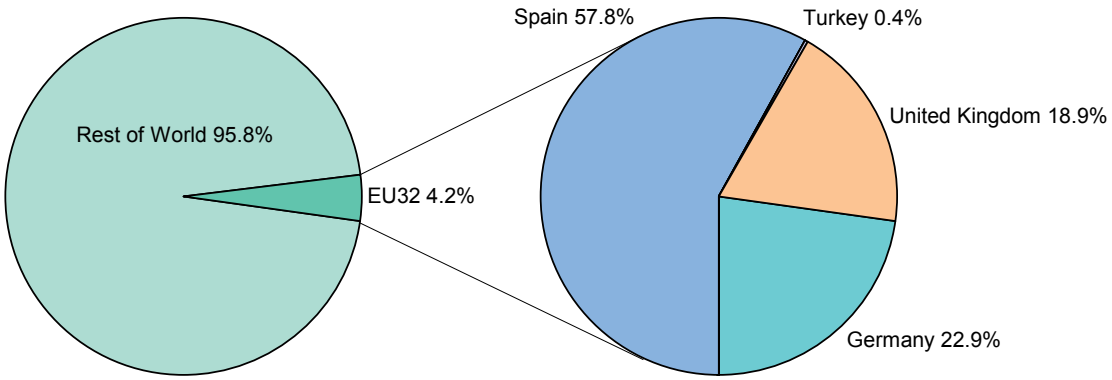
Feldspar - EU32 trade in 2007



Fluorspar

- Fluorspar is the commercial name for the mineral fluorite (calcium fluoride) and it is an important raw material source of fluorine. Most fluorspar production is used in the manufacture of hydrofluoric acid which is used primarily in the pharmaceutical and agrichemical industries. Fluorspar is also used in steel and aluminium manufacture.
- China dominated world production, producing 56 per cent of all fluorspar in 2007. The EU32 countries represent four per cent of world fluorspar production, a reduction from previous years due to the cessation of output from France and Italy. Spain was the largest EU32 producer with 58 per cent of EU32 production.
- During 2007 the average price for fluorspar increased by 30 per cent on the previous year with Chinese acidspar filtercake (c.i.f. US Gulf Port) priced at US$305 to US$310 per tonne. However, a shortfall in supply outside of China in 2008 and the increases in freight charges saw an acceleration in price increases with the average for the year calculated at 60 per cent higher than 2007. Chinese acidspar filtercake (c.i.f. US Gulf Port) in December 2008 was priced in the range US$530 to US$550 per tonne.

EU32 Production of fluorspar 2007

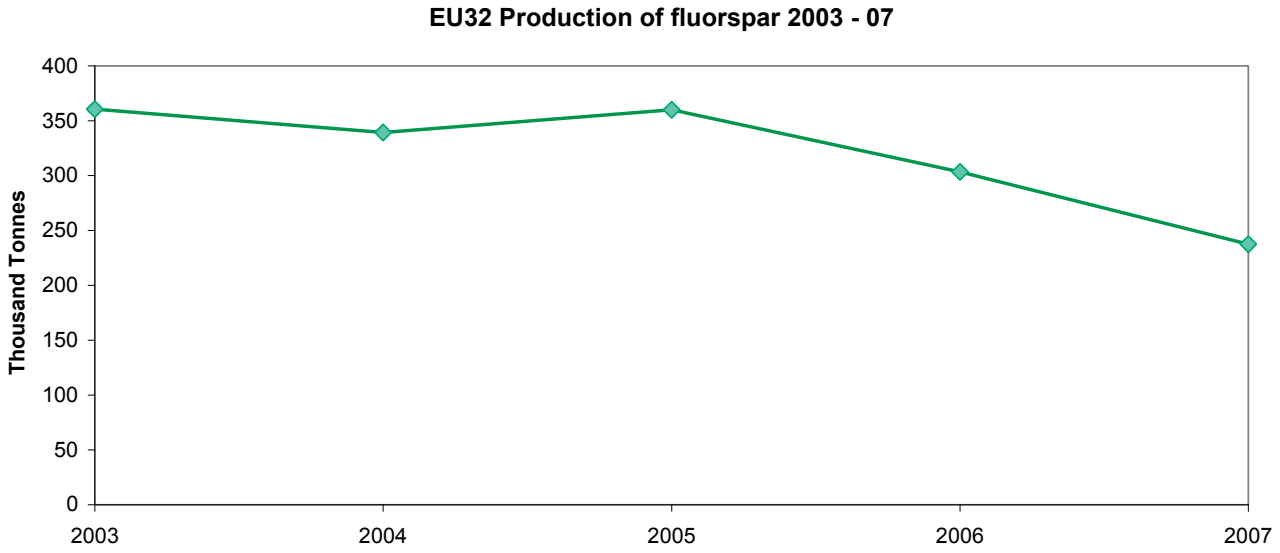


Production of fluorspar

tonnes

Country	2003	2004	2005	2006	2007
France	90 000	70 000	53 000	*40 000	—
Germany	33 289	33 203	35 364	53 009	54 359
Italy	26 387	24 339	70 326	*15 000	—
Romania	*15 000	*15 000	—	—	—
Spain	139 266	145 694	144 126	144 845	137 310
Turkey	718	880	800	*800	*900
United Kingdom	*56 000	50 080	56 417	49 676	44 936
EU32 Total	361 000	339 000	360 000	303 000	238 000

Note(s):-
(1) In addition to the countries listed, Bulgaria is believed to produce fluorspar



Exports of fluorspar

tonnes

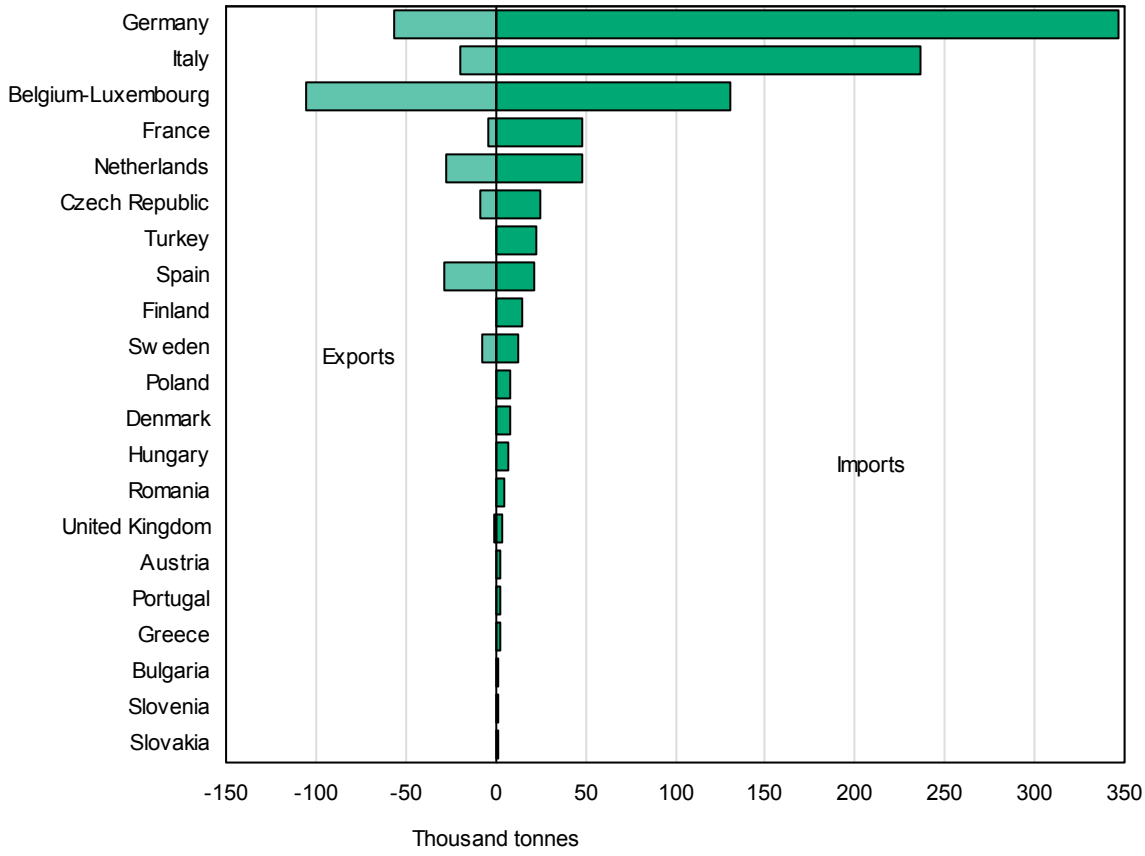
Country	2003	2004	2005	2006	2007
Belgium-Luxembourg	22 639	4 208	26 395	110 965	105 822
Czech Republic	23 471	10 073	8 677	9 954	8 415
France	18 519	12 002	6 821	28	3 770
Germany	17 105	17 594	24 061	35 207	56 023
Italy	28 222	20 607	28 699	16 710	19 281
Netherlands	19 186	3 019	37 113	1 587	27 213
Spain	1 745	2 221	4 434	10 518	29 117
Sweden	8 981	8 702	8 206	7 450	7 764
United Kingdom	519	4 593	5 803	3 016	589

Imports of fluorspar

tonnes

Country	2003	2004	2005	2006	2007
Austria	2 125	3 078	2 561	2 722	2 517
Belgium-Luxembourg	33 622	10 571	70 149	123 392	130 437
Bulgaria	2 143	1 882	1 210	2 321	1 326
Croatia	152	204	143	124	149
Cyprus	8 901	5	...	498	1
Czech Republic	16 628	28 408	24 009	24 637	24 915
Denmark	12 406	16 005	15 124	12 635	8 218
Finland	18 672	17 069	16 597	15 011	15 064
France	7 006	10 457	21 526	34 972	48 758
Germany	234 067	302 071	264 896	293 737	346 581
Greece	10 579	20 720	10 681	2 855	2 232
Hungary	3 907	4 366	...	2 801	7 460
Italy	226 780	212 975	249 756	237 597	236 797
Latvia	242	240	216	204	220
Macedonia	207	172	92	218	380
Netherlands	63 896	108 312	45 073	7 836	48 089
Poland	5 858	7 501	6 290	7 834	8 682
Portugal	574	158	1 633	2 530	2 423
Romania	5 547	4 117	6 285	3 915	4 738
Slovakia	1 965	1 574	1 615	1 543	908
Slovenia	1 113	1 178	1 031	1 184	1 017
Spain	8 538	15 006	8 575	29 134	21 430
Sweden	19 117	14 640	15 790	16 176	12 089
Switzerland	413	991	714	704	533
Turkey	18 208	31 908	30 446	21 750	23 139
United Kingdom	21 360	25 092	4 051	6 620	3 875

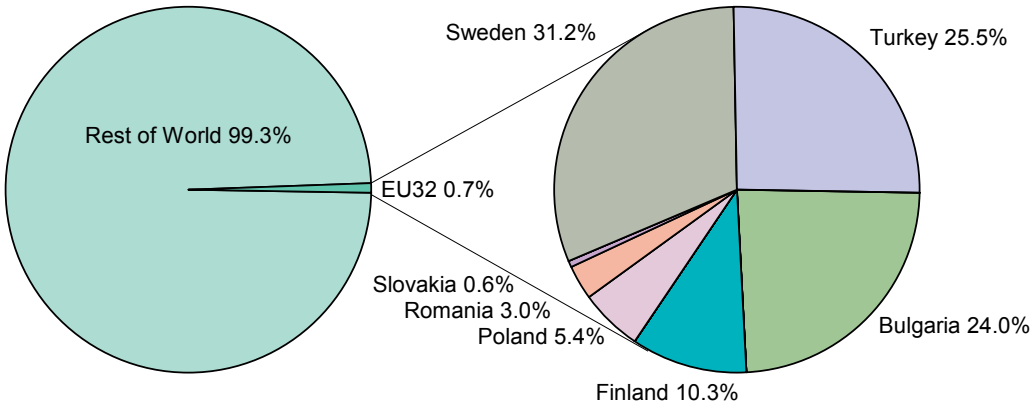
Fluorspar - EU32 trade in 2007



Gold

- Gold is a soft, malleable metallic element unaffected by air or most reagents. It is highly valued as an investment commodity, in jewellery and in specialist electronic applications.
- China, South Africa, Australia, and the USA were the four largest gold producers in 2007, each producing more than 200 000 kilograms and their combined total being 43 per cent of world production. In the EU32 Sweden (31 per cent), Turkey (25 per cent) and Bulgaria (24 per cent) were the largest producers in 2007, although the EU32 countries produced less than 1 per cent of world output in 2007. In Europe gold is chiefly a by-product of base metal mining.
- The gold market can be volatile and is subject to several key influences (the strongest of which seem to be investor confidence and the US dollar). The gold price continued its upward trend during 2007, despite some fluctuations, reaching a peak of US$841 per troy ounce in November and finishing the year at US$833 per troy ounce. The price continued strongly into 2008 with factors such as the weak US dollar and rising oil prices pushing it up to an all-time high of US$1011 per troy ounce in March 2008. Global economic turmoil ensured that gold prices fluctuated considerably throughout the rest of the year, touching a low of US$740 per troy ounce in September before finishing the year at US$880 per troy ounce.

EU32 Production of gold 2007



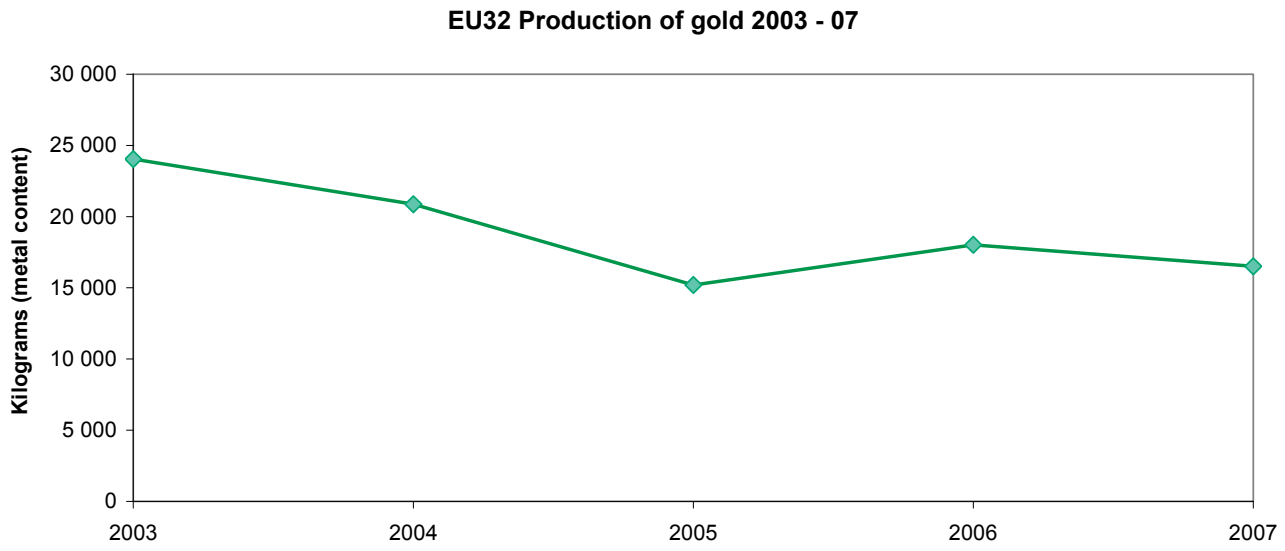
Mine production of gold

kilograms (metal content)

Country	2003	2004	2005	2006	2007
Bulgaria	2 270	2 431	3 868	3 818	3 964
Finland	*1 200	*1 300	*1 300	*1 300	*1 700
France	1 470	—	—	—	—
Italy	*100	—	—	—	...
Poland (a)	356	527	713	1 700	891
Romania	1 878	1 430	*500	*500	*500
Slovakia	79	107	109	84	92
Spain	5 417	5 248	2 145	1 565	—
Sweden	5 900	6 564	6 564	6 848	5 159
Turkey	5 370	3 260	—	2 205	4 208
EU32 Total	24 000	21 000	15 000	18 000	17 000

Note(s):-
(1) In several countries substantial amounts of gold produced in small operations are not recorded in the official statistics used when compiling this table
(2) Greece and Norway are believed to produce gold

(a) Metal production



Exports of gold

kilograms

Country	2003	2004	2005	2006	2007
Austria					
Metal	10 900	11 500	8 500	11 100	14 900
Waste & scrap	2 500	2 900	5 500	600	17 300
Belgium-Luxembourg					
Metal	500	1 200	100	300	16 200
Waste & scrap	...	...	458 400	438 000	128 400
Czech Republic					
Metal	5 113	12 247	1 100	4 100	3 900
Waste & scrap	1 349	31	600	700	6 100
Denmark					
Metal	824	803	1 064	1 253	366
Waste & scrap	343	1	120	3 531	600
Estonia					
Waste & scrap	8 812	1	3	...	1
Finland					
Waste & scrap	929	368	778	886	200
France					
Metal	34 720	31 890	20 053	24 302	20 229
Waste & scrap	33 700	70 500	29 600	29 600	29 300
Germany					
Metal	36 400	36 500	47 600	65 200	71 250
Waste & scrap	651 000	170 065	30 600	7 500	14 800
Greece					
Metal	4 714	15	3	311	900
Hungary					
Metal	...	828	628	470	871
Ireland, Republic of					
Metal	£784 000	£1 076 000	£942 000	£1 400 000	£1 678 000
Waste & scrap	£1 520 000	£1 672 000	£1 429 000	£1 313 000	£902 000
Italy					
Metal	36 047	44 180	60 480	55 847	56 360
Netherlands					
Metal	8 094	24 557	11 603	19 634	22 468
Waste & scrap	276 600	62 212	72 427	98 813	4 433
Norway					
Metal	2 527	2 293	2 415	2 337	2 601
Waste & scrap	174	127	137	182	426
Poland					
Metal	249	...	100	1 100	300
Waste & scrap	8 477	4 074	1 100	1 600	700
Portugal					
Waste & scrap	126	...	4 800	400	1 100

Exports continued — kilograms

Country	2003	2004	2005	2006	2007
Slovakia					
Metal	325	274	268	569	300
Waste & scrap	1 012	357	986	1 000	1 600
Slovenia					
Metal	681	254	101	100	106
Waste & scrap	1 012	1 649	—	3 700	—
Spain					
Metal	4 793	6 490	3 520	3 679	23 667
Waste & scrap	784	2 908	38	2 636	92
Sweden					
Metal	10 000	19 000	18 000	19 000	17 800
Waste & scrap	...	20 000	1 000	32 000	65 700
Switzerland					
Metal	885 907	1 125 319	1 340 948	965 959	1 105 367
Waste & scrap	14 039	55 166	2 823	2 802	102 745
Turkey					
Metal	11 455	9 845	29 624	13 581	12 068
United Kingdom					
Metal	82 892	407 467	638 262	166 080	255 321
Waste & scrap	1 074 829	471 657	541 399	313 712	282 298

Note(s):-
(1) In this table the term 'metal' includes both unwrought and partly worked gold and alloys but excludes gold coin
(2) Kilograms have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
(3) See explanatory notes at the front of the volume regarding currency conversions

Imports of gold

kilograms

Country	2003	2004	2005	2006	2007
Austria					
Metal	26 500	17 300	22 100	9 300	30 900
Waste & scrap	200	200	1 800	300	100
Belgium-Luxembourg					
Metal	9 100	12 400	14 400	9 600	18 300
Waste & scrap	(a) *889 000	(a) *117 000	(a) *37 000	147 100	361 400
Croatia					
Metal	5 034	1 193	1 083	992	1 608
Cyprus					
Metal	4 561	313	359	340	292
Czech Republic					
Metal	1 596	1 957	769	1 570	8 813
Waste & scrap	338	1 911	13 000	15 000	46 200
Denmark					
Metal	1 968	1 948	2 095	1 643	2 350
Estonia					
Metal	2 570	74	234	1 200	900
Finland					
Metal	1 230	1 332	949	931	100
Waste & scrap	90 780	67 582	22 981	4	...
France					
Metal	31 186	24 446	28 834	23 605	23 567
Waste & scrap	12 500	...	5 200	1 500	1 100
Germany					
Metal	40 100	49 800	56 500	54 600	8 100
Waste & scrap	1 153 500	1 375 800	1 923 600	1 821 100	1 304 700
Greece					
Metal	8 276	37 484	56 572	60 999	48 500
Waste & scrap	79 288	—	...	126	...
Hungary					
Metal	41	1 514	1 380	235	229

Imports continued — kilograms

Country	2003	2004	2005	2006	2007
Ireland, Republic of					
Metal	£9 565 000	£7 480 000	£7 227 000	£7 213 000	£6 263 000
Waste & scrap	2 322	4 880	2 567	904	47
Italy					
Metal	281 157	274 841	250 938	204 012	206 914
Waste & scrap	1 685	3 612	904	810	17 885
Lithuania					
Waste & scrap	...	(a) *16 000	114 600	12 470	2
Malta					
Metal	3 927	3 607	14 001	7 900	6 800
Netherlands					
Metal	10 318	16 275	24 679	22 744	21 706
Waste & scrap	1 044	1	1	93	19 174
Norway					
Metal	1 599	1 253	2 099	1 739	1 448
Waste & scrap	776	987	1 049	1 304	1 455
Poland					
Metal	588	2 301	100	400	6 100
Portugal					
Metal	1 893	655	6 074	5 234	300
Slovakia					
Metal	421	417	123	11 200	92 400
Slovenia					
Metal	612	382	374	100	600
Waste & scrap	256	363	4 219	1 600	100
Spain					
Metal	27 662	29 702	20 594	15 072	6 641
Waste & scrap	411	5 018	139	233	2 352
Sweden					
Metal	£8 382 000	£8 498 000	£8 625 000	£10 124 000	£18 299 000
Waste & scrap	—	...	£180 000	£7 000	£112 000
Switzerland					
Metal	1 218 361	1 048 386	1 655 691	1 498 693	1 667 153
Waste & scrap	32 454	52 053	72 764	104 957	57 001
Turkey					
Metal	225 021	262 519	403 415	157 792	155 471
United Kingdom					
Metal	1 414 697	1 053 100	460 239	781 840	1 012 362
Waste & scrap	231 365	274 919	66 198	7 925	17 046

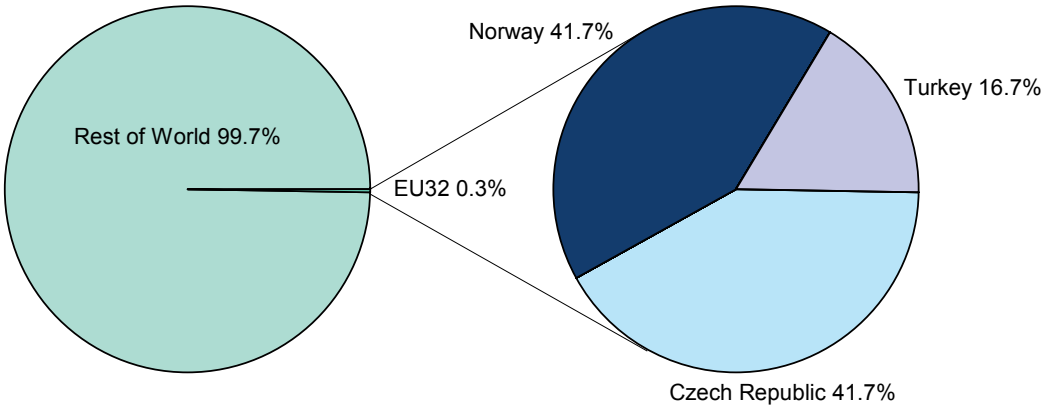
Note(s) :-
(1) In this table the term 'metal' includes both unwrought and partly worked gold but excludes gold coin
(2) Kilograms have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
(3) See explanatory notes at the front of the volume regarding currency conversions

(a) BGS estimates, based on known exports from certain countries

Graphite

- Graphite is a stable form of pure carbon. It is soft, has low friction and is inert. The major use of graphite is in refractories that can withstand the temperature of molten metals and slags. The graphite imparts high thermal shock resistance, useful in furnace components and crucibles. Other uses include lubricants and in brake linings.
- There is only minor production from the EU32 countries. This has declined steadily since 1997 and production in 2007 dropped by a further 53 per cent compared to 2006. China was the largest world producer in 2007 with 86 per cent of the world total.
- Graphite is traded in several different forms with prices depending largely on flake size. During 2007 graphite traded between US$410 and US$990 per tonne, increasing in 2008 to US$451 and US$1350 per tonne.

EU32 Production of graphite 2007



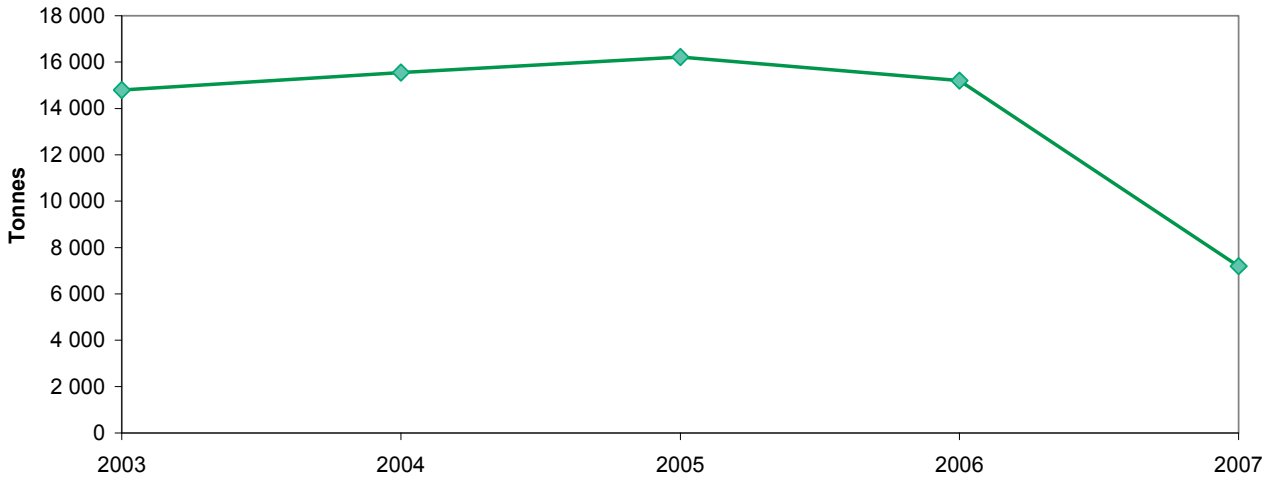
Production of graphite

tonnes

Country	2003	2004	2005	2006	2007
Czech Republic	9 000	5 000	3 000	5 000	3 000
Germany	2 840	3 155	2 638	—	—
Norway	1 000	6 000	9 000	9 000	3 000
Romania	1 014	395	486	—	—
Turkey	942	*1 000	*1 100	*1 200	*1 200
EU32 Total	15 000	16 000	16 000	15 000	7 000

Note(s):-
(1) This table includes all forms of amorphous and crystalline graphite but excludes synthetic material

EU32 Production of graphite 2003 - 07



Exports of graphite

tonnes

Country	2003	2004	2005	2006	2007
Austria	4 574	5 094	7 082	7 416	7 460
Belgium-Luxembourg	9 097	581	834	460	438
Czech Republic	4 058	3 924	3 489	3 518	4 029
Finland	0	0	0	2	46 162
France	167	122	225	85	163
Germany	11 746	14 783	14 241	20 777	23 993
Italy	222	625	274	442	401
Netherlands	5 209	5 987	3 240	2 991	4 308
Spain	9 288	27 634	11 972	6 356	8 728
Sweden	302	260	195	230	273
Switzerland	745	335	326	225	384
United Kingdom	4 158	4 348	2 685	2 979	3 065

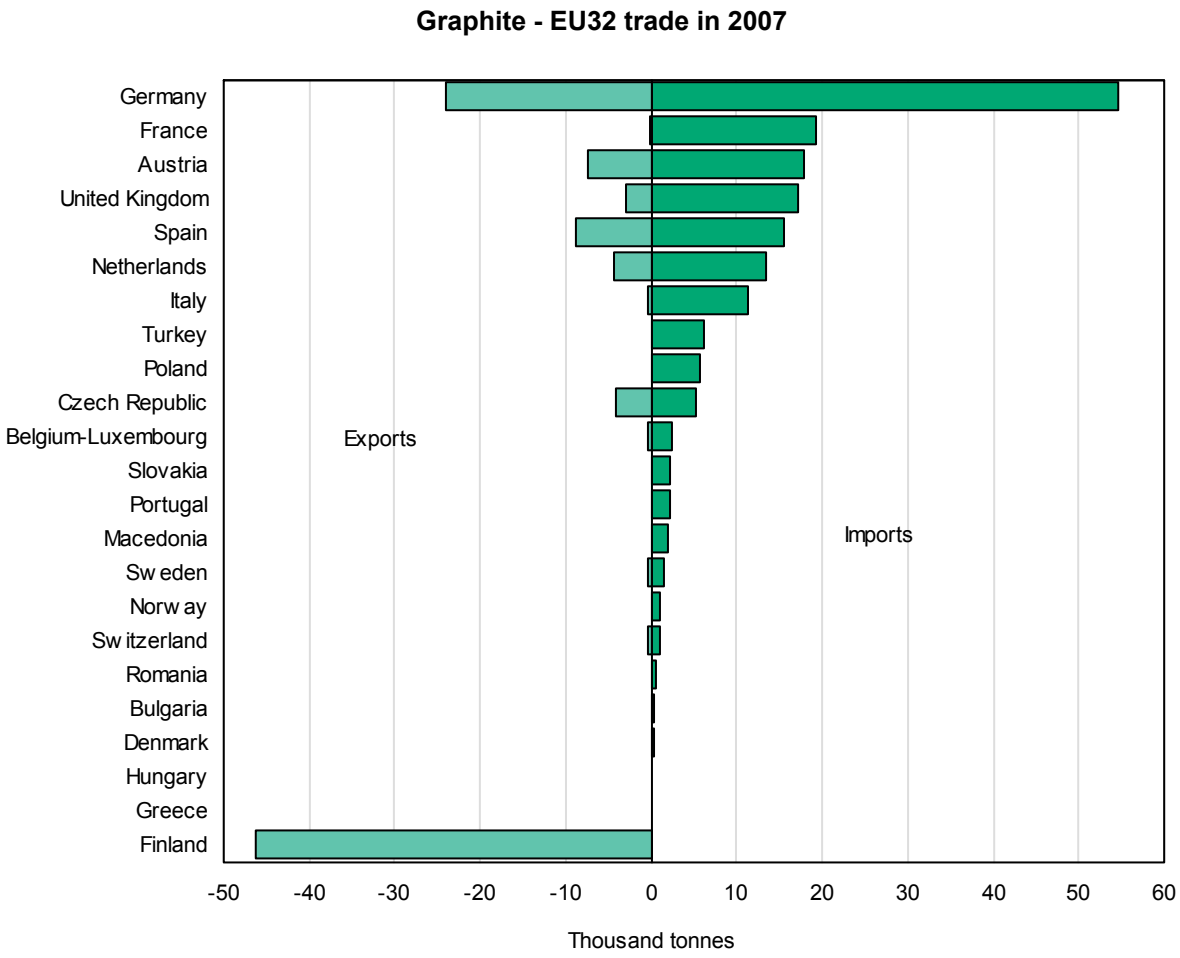
Note(s):-
(1) This table excludes synthetic graphite

Imports of graphite

tonnes

Country	2003	2004	2005	2006	2007
Austria	4 971	7 229	13 655	10 704	17 757
Belgium-Luxembourg	12 414	3 301	3 040	1 836	2 323
Bulgaria	492	420	319	433	250
Czech Republic	2 765	3 663	4 787	3 485	5 301
Denmark	567	478	288	268	212
Finland	197	168	84	63	62
France	11 149	15 083	20 449	19 430	19 250
Germany	41 161	53 602	55 843	45 884	54 627
Greece	77	127	91	83	111
Hungary	517	234	191	192	178
Ireland, Republic of	248	288	177	23	73
Italy	10 845	10 699	11 102	11 548	11 362
Macedonia	...	...	107	648	1 969
Netherlands	10 208	18 139	15 205	12 339	13 463
Norway	502	548	423	296	980
Poland	3 150	3 089	3 028	3 658	5 701
Portugal	1 129	1 317	1 722	1 954	2 210
Romania	387	315	548	488	542
Slovakia	2 209	1 667	1 031	1 382	2 246
Slovenia	155	155	112	161	108
Spain	7 363	9 402	8 334	10 143	15 582
Sweden	1 428	1 473	1 539	1 252	1 592
Switzerland	863	395	652	722	966
Turkey	7 429	10 212	11 956	6 300	6 095
United Kingdom	19 270	19 075	17 766	16 978	17 225

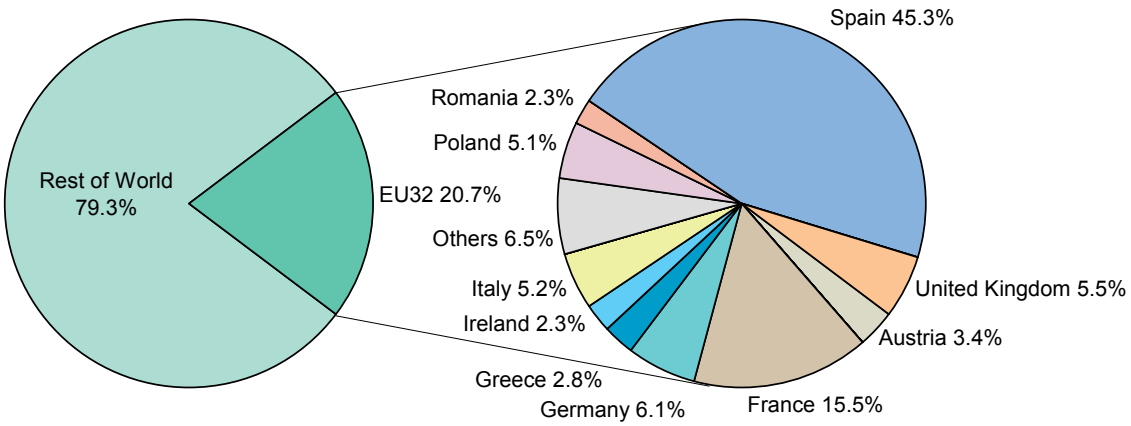
Note(s) :-
(1) This table excludes synthetic graphite


Graphite - EU32 trade in 2007
Germany
France
Austria
United Kingdom
Spain
Netherlands
Italy
Turkey
Poland
Czech Republic
Belgium-Luxembourg
Slovakia
Portugal
Macedonia
Sweden
Norway
Switzerland
Romania
Bulgaria
Denmark
Hungary
Greece
Finland
Exports
Imports
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
Thousand tonnes

Gypsum

- Gypsum (calcium sulphate) is a common mineral that chiefly occurs as beds or seams in sedimentary rocks. Anhydrite is a similar mineral without combined water and is considered in the following tables with gypsum. Calcined gypsum is chiefly used (80 per cent) to make building and decorative plaster. It is used as an additive to cement, in farming as a soil conditioner, as a filler and in the chemical industry.
- The EU32 produced 21 per cent of world natural gypsum in 2007. The largest EU32 producer is Spain which accounted for 45 per cent of EU32 production (or 9 per cent of the world total). China was the largest gypsum producer in the world in 2007 with 23 per cent of the world total; however, the USA is also a significant producer (with 15 per cent).
- The overall trade situation with gypsum is becoming difficult to follow as large quantities of synthetic gypsum are made during the desulphurisation of coal-fired power station fumes and this competes with natural gypsum production.
- The price of crude gypsum (ex-mine US) averaged US$7.50 per tonne in 2007 and US$7.25 per tonne in 2008.

EU32 Production of gypsum 2007



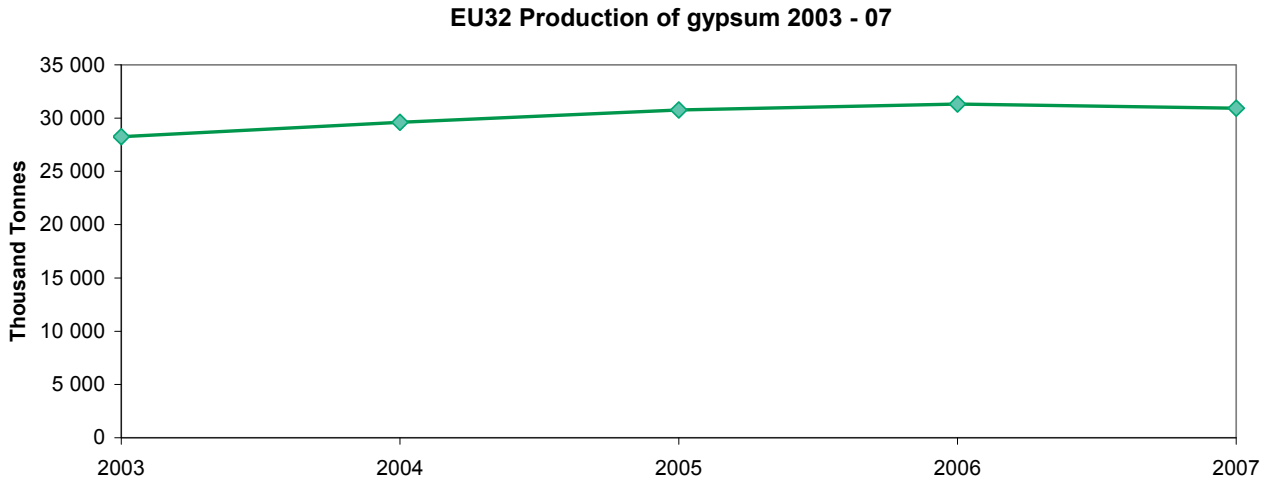
Production of gypsum

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Gypsum	889 727	920 809	911 162	936 072	1 006 416
Anhydrite	113 823	117 318	106 032	135 380	57 428
Bulgaria	165 500	175 900	187 700	215 800	234 300
Croatia	166 340	193 263	196 133	170 351	170 721
Cyprus	300 000	255 000	215 500	270 000	330 000
Czech Republic	76 000	68 000	24 000	19 000	66 000
France	*5 600 000	*5 700 000	4 902 498	*4 800 000	*4 800 000
Germany (a)	1 748 000	1 579 000	1 644 000	1 771 000	1 898 000
Greece	731 785	856 606	865 216	*860 000	*860 000
Hungary (a)	62 000	55 000	19 000	30 000	26 000
Ireland, Republic of	*600 000	*650 000	*700 000	*700 000	*700 000
Italy	1 783 903	1 615 287	*1 600 000	1 600 000	*1 600 000
Latvia (a)	159 133	225 742	*220 000	*230 000	*230 000
Macedonia	150 618	165 416	190 232	267 760	255 500
Poland					
Gypsum	1 030 693	970 786	1 048 000	1 172 000	(a) 1 581 299
Anhydrite	197 000	196 000	195 000	181 000	...
Portugal	419 799	461 212	389 180	366 599	...
Romania	409 516	490 372	532 867	615 072	706 704
Slovakia (a)	93 800	127 100	107 500	126 200	151 000
Spain	11 366 375	12 533 972	14 453 053	14 596 559	14 000 000
Switzerland	*300 000	*300 000	*300 000	*300 000	*300 000
Turkey	196 668	250 099	*250 000	*250 000	*250 000
United Kingdom	*1 700 000	1 686 000	*1 700 000	*1 700 000	*1 700 000
EU32 Total	28 300 000	29 600 000	30 800 000	31 300 000	31 300 000

Note(s):-
(1) Some countries produce large quantities of synthetic gypsum. Where possible, this output is excluded from the table.

(a) Including anhydrite



Exports of gypsum

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Crude	21 562	22 732	21 433	30 002	89 128
Calcined	97 840	100 444	94 207	99 013	121 473
Belgium-Luxembourg					
Crude	64 538	91 110	46 691	62 303	54 953
Calcined	2 556	175 496	2 709	4 707	4 271
Bulgaria					
Crude & calcined	1 868	2 231	2 347	2 439	1 439
Croatia					
Crude & calcined	# 4 775	5 796	4 890	6 349	4 808
Cyprus					
Crude & calcined	184 389	215 297	73 741	152 621	203 109
Czech Republic					
Crude	92 133	90 750	33 307	46 837	105 394
Calcined	4 718	5 563	4 272	6 249	5 973
Denmark					
Crude	83 754	81 318	111 720	165 656	197 920
Calcined	65 842	13 837	25 474	356 443	1 740
Finland					
Crude & calcined	981	440	451	267	168
France					
Crude	335 780	324 894	250 845	321 789	414 428
Calcined	297 326	311 437	350 955	349 703	356 716
Germany					
Crude	142 263	197 613	259 631	391 494	423 152
Calcined	1 070 873	1 033 057	991 946	1 471 660	1 703 212
Greece					
Crude	112 510	106 082	88 187	116 442	47 694
Calcined	390	549	926	752	1 842
Hungary					
Crude & calcined	1 180	1 305	2 648	6 408	8 626
Ireland, Republic of					
Crude	873	919	1 022	1 054	1 058
Calcined	33 382	40 636	42 212	40 027	37 914
Italy					
Crude	1 032	8 040	12 641	141	17 748
Calcined	38 778	42 223	41 404	69 272	27 123
Latvia	58 186	24 782	48 896	109 404	74 627
Macedonia					
Crude & calcined	22 609	15 408	9 779	9 488	10 167
Netherlands					
Crude	32 752	37 920	53 351	32 425	49 394
Calcined	7 905	11 088	61 508	70 005	17 744
Norway					
Crude	27 287	30 825	49 443	40 784	51 128

Exports continued — tonnes

Country	2003	2004	2005	2006	2007
Poland					
Crude & calcined	24 706	29 467	33 277	40 832	56 003
Portugal					
Calcined	1 351	1 424	1 332	4 280	8 335
Romania	10 539	14 277	15 089	14 283	13 507
Slovenia					
Crude & calcined	352	164	993	9 502	36 039
Spain					
Crude	2 732 211	2 820 367	3 228 806	3 568 327	3 335 273
Calcined	473 180	470 437	391 274	306 791	274 781
Sweden					
Crude & calcined	5 993	7 343	7 832	9 954	12 694
Switzerland					
Calcined	1 680	1 002	1 088	1 144	2 732
Turkey					
Crude	1 282	7 859	4 346	26 683	—
Calcined	308 189	434 910	477 710	481 313	544 954
United Kingdom					
Crude	2 601	3 903	2 299	2 679	1 248
Calcined	39 515	49 945	54 356	63 533	57 988

Note(s):-
(1) In this table the term 'crude' may include some anhydrite

Imports of gypsum

tonnes

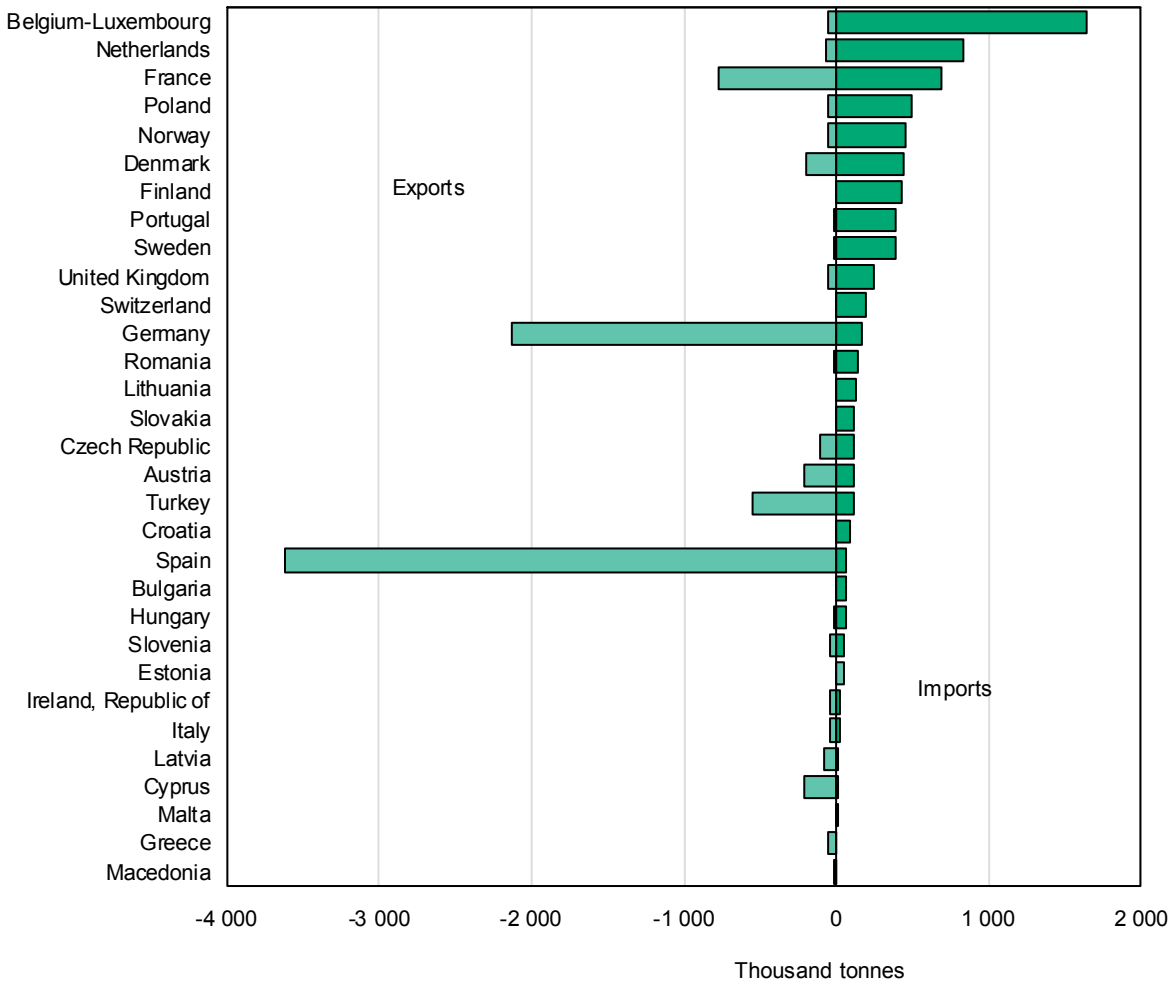
Country	2003	2004	2005	2006	2007
Austria					
Crude	23 705	16 985	15 280	11 057	14 651
Calcined	59 897	70 261	66 118	61 713	97 281
Belgium-Luxembourg					
Crude	524 938	713 502	768 702	811 923	1 118 788
Calcined	290 348	366 504	460 067	449 433	521 942
Bulgaria					
Crude	38 119	49 426	18 684	10 088	8 240
Calcined	22 615	35 558	49 163	56 869	58 880
Croatia					
Crude	35 732	14 974	41 665	25 095	48 775
Calcined	33 419	37 499	33 316	37 052	37 034
Cyprus					
Crude & calcined	468	74	3 501	9 849	12 932
Czech Republic					
Crude	20 266	29 328	19 253	38 983	70 972
Calcined	32 810	43 894	37 637	43 282	45 167
Denmark					
Crude	282 006	283 604	317 736	330 476	388 662
Calcined	36 882	38 650	45 691	52 788	53 647
Estonia					
Crude & calcined	23 314	80 834	20 957	40 876	46 336
Finland					
Crude	231 517	278 645	341 680	310 245	423 355
Calcined	7 066	7 010	7 517	9 958	8 588
France					
Crude	266 857	311 411	361 820	588 367	580 341
Calcined	45 214	85 845	60 358	68 652	111 325
Germany					
Crude	100 269	102 596	66 590	79 798	80 449
Calcined	91 143	116 628	73 647	85 665	93 275
Greece					
Crude	362	826	801	88	123
Calcined	1 361	13 614	5 270	14 233	4 624

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Hungary					
Crude & calcined	59 741	64 726	60 336	65 546	66 039
Ireland, Republic of					
Crude	373	536	1 056	2 064	7 487
Calcined	2 228	6 015	20 024	22 500	22 676
Italy					
Crude	1 947	5 024	6 134	5 285	6 814
Calcined	17 681	22 515	22 076	20 028	21 088
Latvia					
Crude & calcined	3 232	2 931	3 563	9 960	13 670
Lithuania					
Crude	1 495	39 653	58 859	71 649	78 185
Calcined	45 996	16 245	20 990	36 588	47 112
Macedonia					
Crude & calcined	495	819	1 165	1 106	1 080
Malta					
Crude & calcined	3 180	5 310	5 980	7 529	6 309
Netherlands					
Crude	132 882	176 349	155 519	227 950	402 915
Calcined	387 829	492 478	686 085	483 249	430 550
Norway					
Crude	49 398	109 069	119 962	117 892	128 045
Calcined	295 160	259 001	274 006	287 568	328 003
Poland					
Crude	101 589	163 227	150 622	175 567	283 724
Calcined	123 919	100 886	91 356	150 619	216 536
Portugal					
Crude	60 120	82 603	79 370	96 070	75 794
Calcined	338 228	340 665	361 284	307 953	320 174
Romania	48 336	37 805	69 027	118 652	144 131
Slovakia					
Crude & calcined	121 461	110 803	116 252	110 237	117 977
Slovenia					
Crude	48 336	39 062	29 388	31 312	38 588
Calcined	11 349	7 429	7 429	8 167	7 936
Spain					
Crude	65 152	43 004	47 585	59 656	53 028
Calcined	142 719	14 462	32 078	20 440	14 129
Sweden					
Crude	269 711	269 060	206 972	263 582	244 986
Calcined	103 481	160 784	97 746	166 829	146 638
Switzerland					
Crude	50 760	64 677	76 460	87 964	93 365
Calcined	75 394	81 971	88 511	92 787	95 000
Turkey	160 214	170 958	183 553	174 961	110 434
United Kingdom					
Crude	47 751	64 043	627 595	369 714	196 613
Calcined	639 059	163 025	133 522	92 069	52 678

Note(s) :-
(1) In this table the term 'crude' may include some anhydrite

Gypsum - EU32 trade in 2007



Iodine

- Iodine is a bluish-black lustrous, solid, non-metal with antiseptic and other medicinal properties, used in sanitation, animal feed and pharmaceutical products. It is also a catalyst.
- World production is dominated by Chile (59 per cent). The EU32 produces no iodine.
- Crude iodine crystals (drums, 99.5% min) traded in the range of US$25.00 to US$26.50 per kilogram during 2007 and most of 2008, increasing to the range US$28.50 to US$30.00 per kilogram by the end of the year.

Exports of iodine

kilograms

Country	2003	2004	2005	2006	2007
Austria	100	100	...	600	300
Belgium-Luxembourg	4 904 400	3 646 100	3 460 200	3 272 600	2 633 100
Bulgaria	50	...	1 199	781	51 610
Czech Republic	330	537	1 000	800	1 000
Denmark	199	6 921	3 058	6 301	100
France	30 900	30 500	40 900	51 300	91 100
Germany	583 100	640 400	465 800	340 600	183 200
Ireland, Republic of	9 600	—	1 462	—	1 944
Italy	2 065	3 080	14 499	7 067	2 613
Lithuania	827	7 502	33	4 800	20
Netherlands	527 769	58 633	59 228	76 080	517 872
Norway	1 509	—	—	17	7 200
Poland	...	...	100	200	1 300
Spain	27 811	31 156	21 089	7 356	7 689
Sweden	4 000	—	4 000	40	48
Switzerland	1 116	5 228	4 179	1 342	1 205
Turkey	213	118	21 250	125	5 742
United Kingdom	169 145	107 007	197 086	314 659	368 785

Imports of iodine

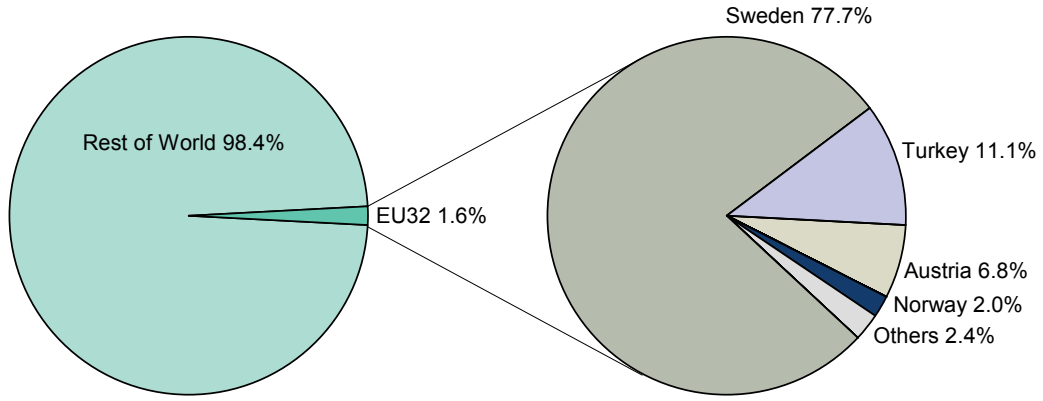
kilograms

Country	2003	2004	2005	2006	2007
Austria	85 500	124 100	92 700	173 600	145 500
Belgium-Luxembourg	4 817 700	3 419 800	3 332 800	3 513 200	2 774 500
Bulgaria	11 250	6 755	5 080	3 990	6 500
Cyprus	8 685	226	67	125	9
Czech Republic	29 637	31 428	28 400	31 600	32 300
Denmark	21 037	9 080	13 249	16 398	110 285
Finland	4 879	27 020	6 209	2 066	3 400
France	1 563 800	1 317 700	1 685 200	1 929 100	1 687 900
Germany	1 318 400	1 422 800	1 302 300	1 205 800	1 102 600
Greece	2 593	1 673	2 247	2 153	500
Hungary	...	...	6 700	1 800	4 400
Ireland, Republic of	8 712	18 215	11 921	9 705	10 318
Italy	1 167 573	1 127 906	854 831	1 033 737	1 231 082
Lithuania	1 050	1 796	6 929	500	400
Netherlands	632 000	357 225	21 015	158 145	1 870
Norway	1 105 811	1 294 934	1 748 110	1 919 848	1 785 526
Poland	23 875	18 687	10 200	18 700	18 800
Portugal	28 807	14 717	12 000	1 400	900
Romania	423	833	1 054	1 107	2 700
Spain	784 718	710 814	781 787	790 641	582 029
Sweden	5 000	1 000	2 000	2 000	5 000
Switzerland	27 226	7 428	7 949	11 133	18 136
Turkey	15 284	31 797	5 634	3 055	499
United Kingdom	825 813	802 782	1 092 633	1 019 543	1 225 368

Iron ore

- There are two main commercial ores of iron — magnetite and haematite (both iron oxides). Iron is also recovered from pyrites (FeS_2). Iron ore is mined, processed and smelted chiefly to produce steel in integrated steel plants. Pig iron, for use as iron, is a minor part of production.
- The largest world producer in 2007 was China (35 per cent) where output has increased by 171 per cent since 2003. EU32 iron ore production was only 1.6 per cent of the world total in 2007 and Sweden is the largest EU32 producer (78 per cent of EU32 production); Sweden and Norway are the only net exporters in the EU32 countries.
- Iron ore is usually traded on fixed term contracts which are negotiated annually. However, the spot market price for iron ore increased by 30 per cent during 2007, to levels higher than the contract prices, thus encouraging major producers to sell more through this method. Prices continued to rise through the first part of 2008 as a result of high demand, mainly from China, reaching a high in September 2008 when contract prices for iron ore fines reached US$145 per unit, before falling towards the end of the year.

EU32 Production of iron ore 2007

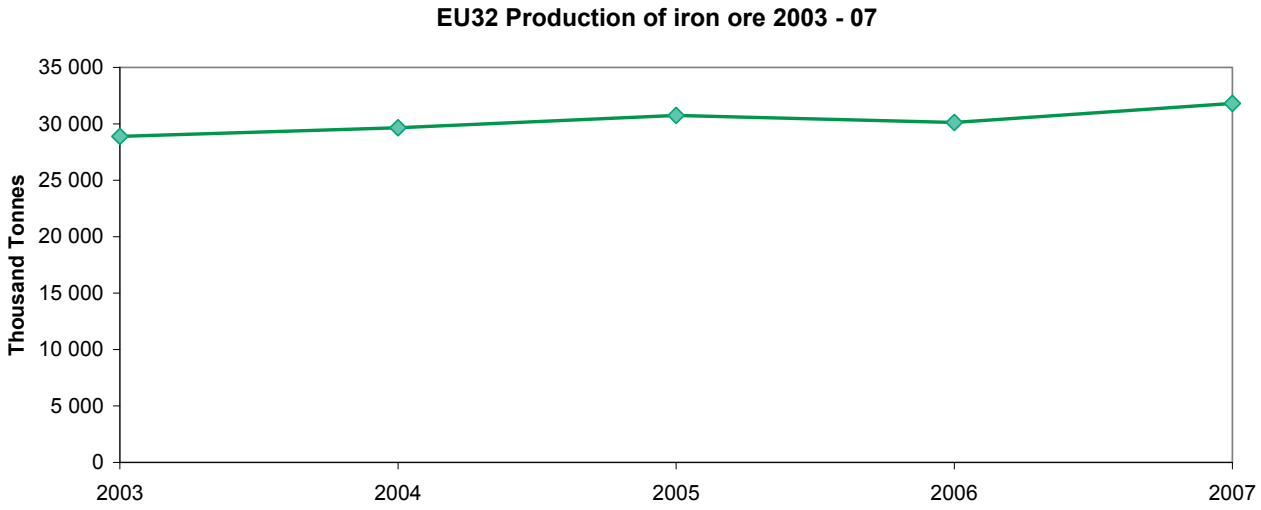


Production of iron ore

tonnes

Country	2003	2004	2005	2006	2007
Austria (a)	2 124 787	1 889 419	2 047 950	2 091 995	2 152 825
Bulgaria	466 100	82 700	—	—	—
Germany (b) (c)	429 170	412 238	362 106	416 000	421 700
Norway	410 000	586 100	713 000	620 000	630 000
Romania	244 000	231 417	220 788	122 684	...
Slovakia	287 000	305 072	258 500	311 000	349 000
Spain	571	10 879	—	—	—
Sweden	21 498 000	22 272 000	23 255 000	23 302 000	24 714 000
Turkey	3 429 070	3 856 536	3 889 934	3 251 969	3 538 917
United Kingdom	*500	*500	354	341	*300
EU32 Total	28 889 000	29 647 000	30 748 000	30 116 000	31 807 000

Note(s):-
(a) Including micaceous iron oxide
(b) Including manganiferous iron ore
(c) Used as aggregate in the construction industry



Exports of iron ore

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg	43 752	23 450	81 560	43 555	41 440
Finland					
Burnt pyrites	...	52	59 433	67 503	146 844
France	43 473	38 413	106 849	76 097	69 375
Germany					
Iron ore	9 376	8 756	7 023	18 294	17 770
Burnt pyrites	6 491	3 241	7 257	6 623	7 491
Italy					
Burnt pyrites	30 848	11 086	9 410	4 407	1 544
Netherlands	20 881	1 384 740	1 977 963	2 491 191	2 710 120
Norway					
Iron ore	530 851	648 583	721 975	720 582	739 731
Burnt pyrites	62 315	117 389	14 730	2 658	...
Slovakia	76 957	135 398	8 581	141 448	4 353
Spain					
Burnt pyrites	105 203	171 292	230 985	90 432	69 590
Sweden	15 559 741	17 336 835	17 597 351	18 409 475	19 033 842

Imports of iron ore

tonnes

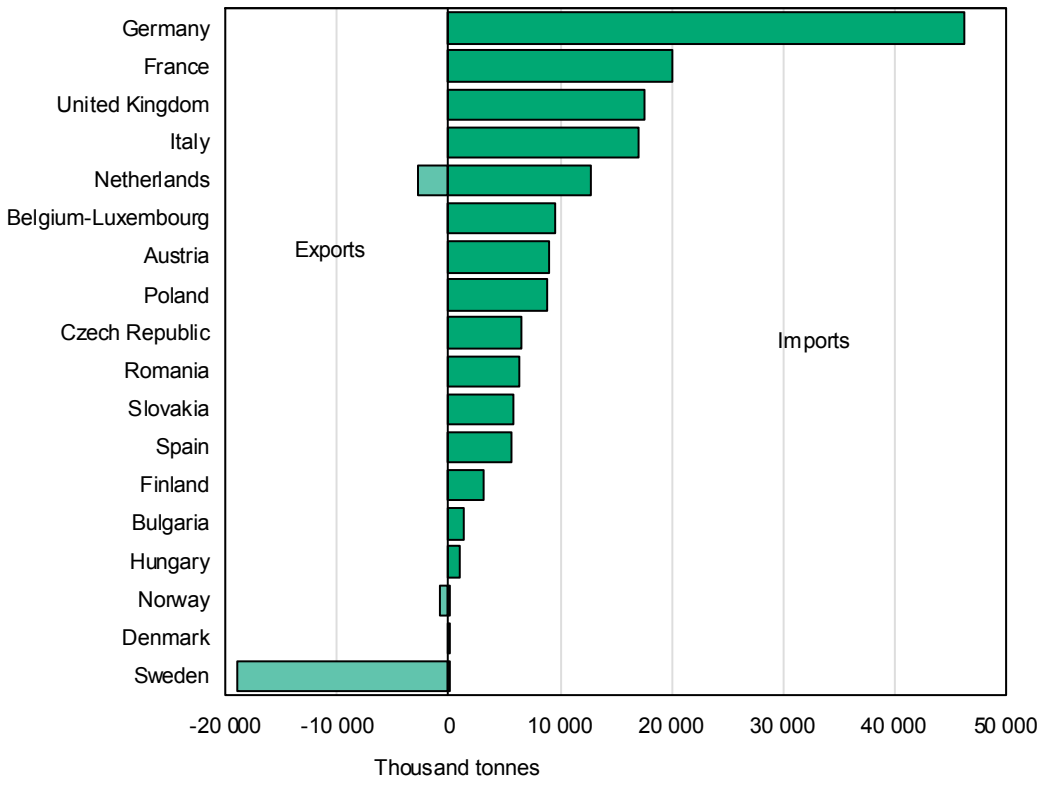
Country	2003	2004	2005	2006	2007
Austria	5 691 360	5 783 359	7 423 015	8 411 888	9 061 777
Belgium-Luxembourg	11 577 845	10 655 707	9 384 885	11 387 165	9 583 806
Bulgaria					
Iron ore	1 850 563	1 570 605	1 050 925	1 305 110	919 785
Burnt pyrites	128 640	357 898	437 710	450 004	464 580
Croatia					
Burnt pyrites	14 098	10 708	12 305	11 349	11 916
Czech Republic	8 221 566	7 636 968	6 576 885	7 984 718	6 578 115
Denmark					
Iron ore	4 908	4 356	8 450	4 318	87 945
Burnt pyrites	53 136	80 853	86 399	81 341	13 157
Finland					
Iron ore	4 212 158	3 921 507	4 215 633	3 481 019	3 156 096
Burnt pyrites	26 163	63	—	—	—
France					
Iron ore	18 890 174	20 777 700	19 506 894	19 463 057	20 065 037
Burnt pyrites	3 348	65	160	3 451	2 107

Imports continued

tonnes

Country	2003	2004	2005	2006	2007
Germany					
Iron ore	33 876 167	43 317 039	39 061 160	44 850 286	46 194 376
Burnt pyrites	56 249	37 194	20 496	36 299	570
Greece					
Burnt pyrites	132	4 601	180	5 701	98
Hungary	1 864 033	1 063 931	1 210 543	987 544	966 633
Italy					
Iron ore	8 842 872	10 578 006	11 244 293	17 844 641	17 013 076
Burnt pyrites	6 445 903	6 136 765	6 307 527	...	...
Latvia	...	...	...	3 919	46 109
Netherlands					
Iron ore	8 740 391	12 622 628	12 285 177	10 833 565	12 693 210
Burnt pyrites	22 545	26 717	—	...	...
Norway	178 025	495 047	526 713	216 372	179 727
Poland					
Iron ore	6 817 467	8 627 650	5 785 200	8 571 004	8 746 836
Burnt pyrites	1 764 657	2 303 655	1 003 456	...	...
Romania	6 977 977	6 609 026	6 601 393	6 117 270	6 259 705
Slovakia	5 704 522	2 745 925	5 510 508	6 406 019	5 853 880
Spain	5 765 648	6 118 975	6 248 366	5 511 245	5 719 061
Sweden					
Iron ore	110 920	102 101	100 072	82 203	69 911
Burnt pyrites	29 658	36 351	6 095	0	26
Switzerland					
Iron ore	7 342	1 377	8 852	9 843	7 800
Burnt pyrites	9 157	4 283	6 293	6 176	7 826
Turkey					
Iron ore	2 144 607	2 070 545	2 095 737	3 019 240	...
Burnt pyrites	3 048 337	2 503 319	2 525 709	4 706	...
United Kingdom					
Iron ore	16 121 350	15 298 713	16 204 615	16 370 705	17 435 472
Burnt pyrites	19 230	2 436	1 911	1 282	131 230

Iron ore - EU32 trade in 2007



Production of pig iron

tonnes

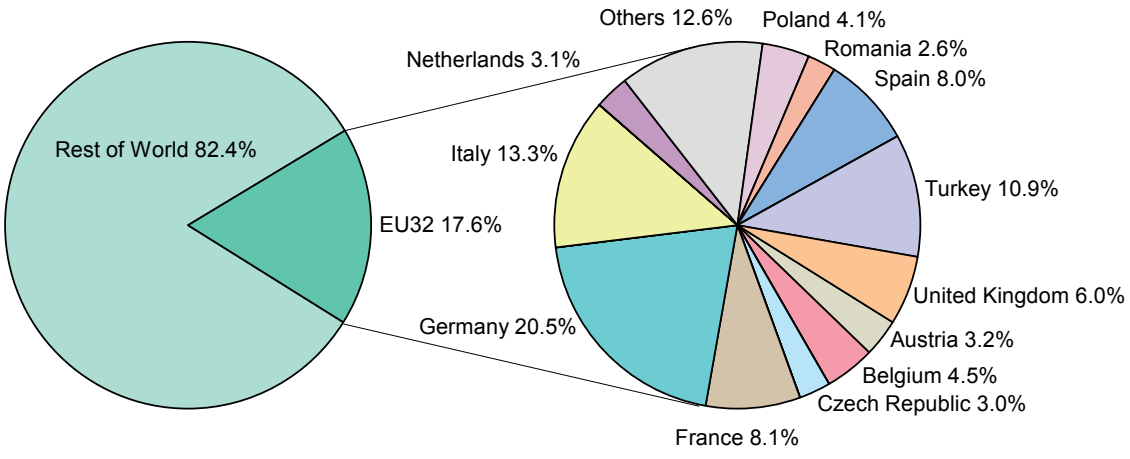
Country	2003	2004	2005	2006	2007
Austria	4 676 742	4 846 740	5 444 000	5 547 000	5 808 000
Belgium	7 812 593	8 224 000	7 254 000	7 516 000	6 577 000
Bulgaria	1 386 000	1 200 000	1 100 000	1 100 000	1 100 000
Czech Republic	5 207 000	5 385 000	4 627 000	5 192 000	5 287 000
Finland	3 092 051	3 036 566	3 056 165	3 157 894	2 915 130
France	12 615 893	13 087 705	12 595 584	12 873 900	12 327 637
Germany	30 071 000	30 628 000	29 294 000	30 940 000	31 700 000
Hungary	1 332 000	1 350 000	1 329 000	1 336 000	1 393 655
Italy	10 123 000	10 566 000	11 392 000	11 500 000	11 100 000
Netherlands	5 846 000	6 011 000	6 031 000	5 417 000	6 400 000
Norway	*110 000	*100 000	*100 000	*100 000	*100 000
Poland	5 585 094	6 292 341	4 476 831	5 332 632	5 804 418
Romania	4 101 409	4 243 956	4 097 998	3 945 975	3 923 234
Slovakia	3 892 000	3 765 000	3 681 000	4 145 000	4 012 000
Spain	3 645 000	4 036 000	4 160 000	3 432 000	4 400 000
Sweden	3 816 000	3 992 000	3 844 000	3 701 000	3 947 000
Switzerland	*80 000	*80 000	*80 000	*80 000	*80 000
Turkey	5 693 764	5 835 889	5 398 500	2 846 280	6 235 000
United Kingdom	10 277 800	10 179 600	10 188 800	10 695 700	10 958 800
EU32 Total	119 360 000	122 860 000	118 150 000	118 860 000	124 070 000

Note(s):-
(1) The data in this table include sponge iron and direct reduced iron (DRI), where these have been separately identified

Crude steel

- Crude steel is the end result of smelting iron ore. It is produced in a wide variety of forms including slabs, coils, bars, rods and plates — depending on customer requirements. Steel is a ubiquitous product and has a multitude of applications. Alloying with other metals changes the fundamental properties of crude steel to meet specialised requirements. Recycled, or secondary, steel is a significant part of EU32 and world total steel production.
- The majority of industrialised countries in the world produce steel. In 2007 the largest producer was China (36 per cent of the world total) with production 120 per cent higher than in 2003. In the EU32 the largest producer was Germany, which produced 20 per cent of EU32 steel output.
- Prices for hot-rolled coil steel remained relatively stable throughout 2007 at about US$600 per tonne but increased during the first half of 2008 to about US$1100 per tonne. However once the global economic conditions started to take effect the price dropped, finishing the year at about US$500 per tonne.

EU32 Production of crude steel 2007

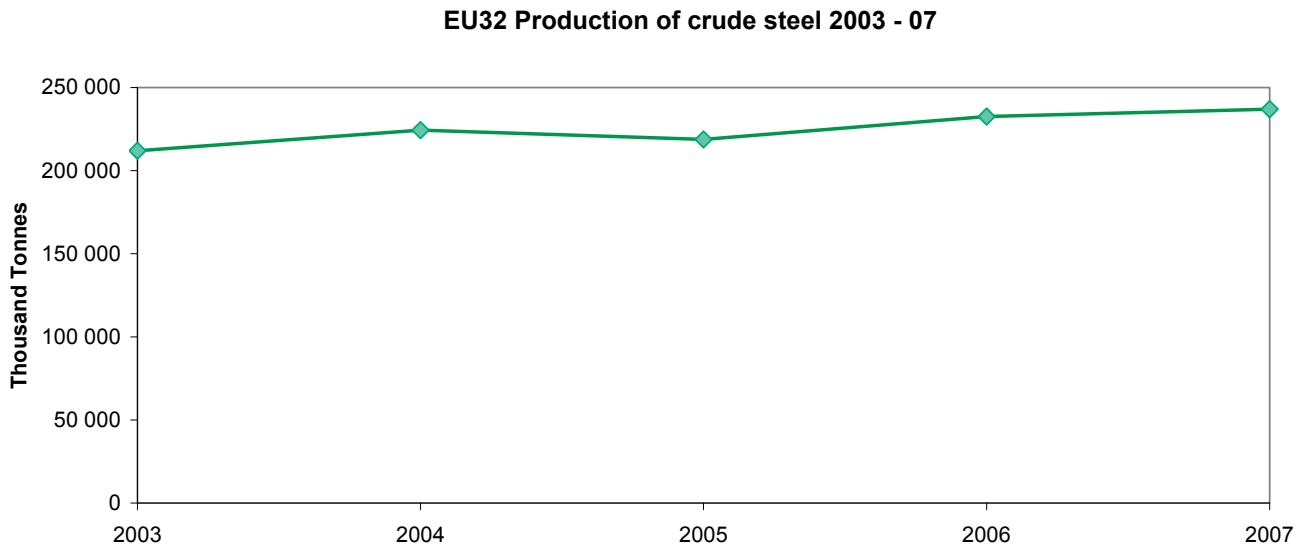


Production of crude steel

tonnes

Country	2003	2004	2005	2006	2007
Austria	6 261 000	6 529 000	7 031 000	7 129 000	7 577 000
Belgium	11 114 775	11 697 000	10 422 000	11 631 000	10 692 000
Bulgaria	1 950 000	2 106 000	1 969 000	2 124 000	2 050 000
Croatia	43 380	85 947	73 640	80 516	76 252
Czech Republic	6 783 000	7 033 000	6 189 000	6 862 000	7 059 000
Finland	4 766 203	4 832 427	4 738 446	5 053 714	4 430 726
France	19 757 864	20 770 252	19 480 777	19 852 125	19 249 862
Germany	44 809 000	46 377 000	44 524 000	47 224 000	48 550 000
Greece	1 701 000	1 967 000	2 266 000	2 416 000	2 554 000
Hungary	2 044 526	1 944 017	2 004 250	2 089 000	2 227 000
Italy	27 058 000	28 603 000	29 349 000	31 625 000	31 506 000
Latvia	546 000	550 000	550 000	550 000	550 000
Luxembourg	2 675 000	2 684 000	2 194 000	2 802 000	2 858 000
Macedonia	306 635	319 873	321 170	326 484	370 317
Netherlands	6 561 000	6 848 000	6 919 000	6 372 000	7 368 000
Norway	703 000	725 000	705 000	684 000	708 000
Poland	9 107 384	10 578 482	8 335 898	9 991 638	9 831 723
Portugal	1 000 000	1 400 000	1 400 000	1 400 000	1 400 000
Romania	5 692 496	6 076 600	6 280 000	6 266 036	6 261 376
Slovakia	4 588 000	4 454 000	4 485 000	5 093 000	5 082 000
Slovenia	541 000	566 000	583 000	628 000	638 000
Spain	16 407 000	17 700 000	17 825 000	18 391 000	18 998 000
Sweden	5 708 500	5 978 000	5 725 600	5 466 100	5 672 900
Switzerland	*1 000 000	*1 000 000	1 158 000	1 252 000	1 264 000
Turkey	17 644 020	19 868 118	20 961 240	23 307 523	25 760 889
United Kingdom	13 128 500	13 765 700	13 238 900	13 904 600	14 312 200
EU32 Total	211 897 000	224 458 000	218 729 000	232 521 000	237 047 000

Note(s):-
(1) Unless otherwise indicated, these figures include production from scrap
(2) Small amounts of steel are believed to be produced in Estonia and Lithuania



Ferro-alloys

- Ferro-alloys are alloys between iron and a number of metals which are used exclusively as additives to steel with the object of modifying its properties. Silicon metal is included within the ferro-alloys table as it is used for the same purpose.
- Ferro-alloy production is usually undertaken close to the mine site or at distant locations where cheap energy supplies are available.
- China is the largest world producer but South Africa is the largest exporter – predominantly of ferro-chrome. In the EU32, Norway is the largest producer and exporter, based on imported metal ores and indigenous resources of silica.

Production of ferro-alloys

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Ferro-molybdenum	4 400	4 700	5 000	5 000	5 000
Ferro-nickel	2 000	1 900	2 500	2 500	3 000
Ferro-vanadium	5 300	5 800	6 250	6 250	6 500
Belgium					
Ferro-vanadium	...	...	...	...	...
Bulgaria					
Ferro-silicon	*8 000	*8 000	*8 000	*8 000	*8 000
Czech Republic					
Ferro-vanadium	*3 000	*3 400	*2 700	*2 800	*1 700
Finland					
Ferro-chrome	250 000	264 492	234 881	243 350	241 760
France					
Ferro-manganese & spiegeleisen	356 192	110 072	109 111	139 533	98 066
Ferro-silico-manganese	60 700	64 100	52 300	63 300	*50 000
Ferro-silicon	*100 000	*100 000	*100 000	*100 000	*100 000
Silicon metal	*85 000	*85 000	*85 000	*85 000	*85 000
Germany					
Ferro-chrome	18 318	24 857	22 672	26 710	22 030
Other ferro-alloys	*30 000	*30 000	*30 000	*30 000	*30 000
Silicon metal	27 870	28 773	29 349	29 865	29 379
Greece					
Ferro-nickel	90 000	91 000	*96 000	*89 000	*94 000
Italy					
Ferro-manganese	25 000	38 000	32 000	*30 000	*30 000
Ferro-silico-manganese	*100 000	108 000	99 000	96 600	87 000
Macedonia					
Ferro-nickel	5 629	5 313	8 141	10 942	15 321
Ferro-silicon	49 905	66 769	71 249	59 023	78 892
Norway					
Ferro-manganese	*130 000	*130 000	*130 000	*130 000	*130 000
Ferro-silico-manganese	*250 000	*260 000	*290 000	*310 000	*280 000
Ferro-silicon	*350 000	389 599	*165 000	*80 000	...
Other ferro-alloys	*50 000	*60 000	*60 000	*60 000	*62 000
Silicon metal	*150 000	193 566	178 572	*150 000	*140 000
Poland					
Ferro-manganese	979	46 898	7 782	4 089	2 093
Ferro-silico-manganese	5 000	29 600	10 242	3 310	15 590
Ferro-silicon	92 687	83 552	65 118	13 034	58 538
Other ferro-alloys	188	1 419	3 663	4 488	6 255
Romania					
Ferro-manganese	—	191	18 625	3 777	—
Ferro-silico-manganese	141 899	194 754	100 957	66 476	33 585
Slovakia					
Ferro-chrome	1 924	1 784	867	19	—
Ferro-silico-manganese	52 733	64 862	47 843	59 128	...
Ferro-silicon	41 539	34 684	16 512	16 155	...
Other ferro-alloys	44 589	68 096	48 161	65 498	...
Slovenia					
Ferro-silicon	*12 000	*18 000	*11 000	*9 000	*1 000

Production continued — tonnes

Country	2003	2004	2005	2006	2007
Spain					
Ferro-manganese	*35 000	*35 000	*35 000	*35 000	*35 000
Ferro-silico-manganese	*100 000	*100 000	*100 000	*100 000	*100 000
Ferro-silicon	*60 000	*60 000	*60 000	*60 000	*60 000
Silicon metal	*25 000	*25 000	*25 000	*25 000	*25 000
Sweden					
Ferro-chrome	106 100	127 300	127 500	136 400	124 400
Ferro-silicon	17 100	18 500	9 800	4 600	4 300
Turkey					
Ferro-chrome	35 393	33 686	26 043	67 975	69 730
Ferro-silico-chrome	6 715	5 560	6 695	7 310	6 624

Exports of iron, steel and ferro-alloys

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Pig iron	5 833	6 585	6 614	5 695	6 958
Ferro-alloys	17 202	5 999	9 476	10 218	9 100
Silicon metal	751	598	628	1 884	5 166
Ingots, blooms, billets	256 981	334 124	484 431	303 284	286 765
Scrap	842 323	1 099 278	1 024 301	1 140 091	1 279 775
Belgium-Luxembourg					
Pig iron	227 815	225 486	201 577	230 490	275 411
Sponge & powder	18 741	29 127	15 850	19 750	36 997
Ferro-chrome	39 778	32 998	31 851	38 401	54 201
Ferro-silico-chrome	10 381	7 214	9 107	17 169	15 141
Ferro-silico-magnesium	79	39	11	52	6 744
Ferro-manganese	16 246	9 621	11 674	11 122	16 126
Ferro-silico-manganese	38 032	41 307	29 858	41 422	52 431
Ferro-molybdenum	...	19 219	22 420	22 679	20 153
Ferro-silicon	18 856	31 000	21 812	39 501	68 385
Other ferro-alloys	9 672	6 523	6 689	6 498	1 988
Silicon metal	8 227	6 078	9 095	6 765	5 869
Ingots, blooms, billets	395 499	368 589	639 936	859 247	1 089 364
Scrap	2 310 658	2 851 040	2 712 683	3 052 438	3 268 578
Bulgaria					
Pig iron	29	114	51	44 549	62 032
Ferro-silico-manganese	3 405	4 034	1 501	3 638	6 845
Ferro-silicon	4 402	1 329	1 499	3 345	4 972
Other ferro-alloys	238	283	72	180	2 072
Silicon metal	15	11	15	11	2 374
Ingots, blooms, billets	355 397	277 332	97 757	163 020	135 710
Scrap	572 559	769 559	784 778	722 261	677 347
Croatia					
Scrap	235 322	279 852	318 840	398 070	427 540
Cyprus					
Scrap	41 926	46 316	55 240	65 998	63 662
Czech Republic					
Pig iron	50 125	55 687	15 526	17 599	31 182
Ferro-silicon	5 905	7 342	5 396	6 516	8 254
Ferro-vanadium	3 012	3 417	2 613	2 763	1 685
Other ferro-alloys	802	5 772	14 358	15 078	8 704
Silicon metal	778	4 488	512	1 040	1 118
Ingots, blooms, billets	249 522	267 912	251 513	324 619	587 296
Scrap	1 178 514	1 930 343	1 351 676	1 456 061	1 678 565
Denmark					
Ferro-silicon	325	20 935	23 295	14 611	64
Other ferro-alloys	855	187	139	238	701
Ingots, blooms, billets	8 119	16 223	1 203	2 199	12 820
Scrap	1 310 175	1 564 469	1 402 982	1 414 060	1 263 987

Exports continued tonnes

Country	2003	2004	2005	2006	2007
Estonia					
Pig iron	(f) *3 400	...	(f) *200	...	(f) *1 360
Ferro-alloys	23 420	1 238	665	672	159
Ingots, blooms, billets	911	762	...	425	5 985
Scrap	376 554	358 185	440 622	592 372	572 216
Finland					
Pig iron	86	0	8 040	3 045	...
Ferro-chrome	33 499	35 780	39 341	37 663	100 022
Ingots, blooms, billets	501 945	624 170	436 083	284 313	185 229
Scrap	374 778	315 977	286 494	220 124	253 732
France					
Pig iron	153	679	350	113 729	89 768
Sponge & powder	6 231	5 221	6 465	13 059	17 948
Ferro-chrome	1 456	1 074	857	875	1 217
Ferro-silico-magnesium	5 262	5 521	6 829	2 165	16 377
Ferro-manganese	28 094	14 360	7 181	7 483	8 049
Ferro-silico-manganese	53 270	63 483	76 021	53 278	41 110
Ferro-molybdenum	300	538	547	673	481
Ferro-niobium	926	521	240	596	948
Ferro-silicon	65 871	65 881	69 551	63 432	50 334
Ferro-titanium & ferro-silico-titanium	1 463	1 305	1 542	1 992	2 292
Other ferro-alloys	32 324	29 320	27 432	22 699	357
Ingots, blooms, billets	3 420 829	3 833 258	3 914 427	3 071 836	2 650 976
Scrap	4 990 462	5 578 148	4 955 474	6 019 890	6 210 854
Germany					
Pig iron	56 571	112 911	82 834	180 939	145 453
Sponge & powder	95 612	148 734	175 291	197 636	147 303
Ferro-chrome	30 640	22 758	26 472	36 289	39 892
Ferro-silico-magnesium	5 551	13 887	14 254	12 142	24 051
Ferro-manganese	8 937	13 776	12 660	24 659	14 733
Ferro-silico-manganese	10 306	9 286	2 928	9 748	8 684
Ferro-molybdenum	2 054	2 597	3 867	3 499	3 636
Ferro-nickel	94	625	31	115	2 116
Ferro-niobium	713	1 076	1 448	1 130	1 149
Ferro-phosphorus	691	786	936	977	839
Ferro-silicon	60 016	61 239	53 979	53 963	51 343
Ferro-titanium & ferro-silico-titanium	2 478	3 069	5 263	4 795	6 011
Ferro-tungsten & ferro-silico-tungsten	268	178	176	423	480
Ferro-vanadium	653	600	528	268	558
Other ferro-alloys	15 369	12 691	10 652	10 720	...
Silicon metal	16 141	18 064	—	—	—
Ingots, blooms, billets	2 563 182	2 104 580	1 950 158	2 171 036	2 496 951
Scrap	6 718 904	6 956 839	6 692 022	7 605 306	7 770 479
Greece					
Ferro-alloys	1 742	5 528	1 044	511	340
Ingots, blooms, billets	2 908	64 105	48	13 899	121 989
Scrap	56 047	59 502	37 164	126 188	34 584
Hungary					
Ferro-alloys	436	701	234	—	829
Ingots, blooms, billets	32 452	24 042	24 923	14 731	36 548
Scrap	618 827	887 069	761 464	658 499	567 923
Ireland, Republic of					
Scrap	292 971	347 479	352 028	398 587	478 562

Exports continued — tonnes

Country	2003	2004	2005	2006	2007
Italy					
Pig iron	40 069	41 068	15 740	22 114	50 789
Sponge & powder	130	62	163	194	1 097
Ferro-chrome	7 290	8 411	3 753	8 276	5 411
Ferro-silico-magnesium	1 673	3 163	30	93	2 061
Ferro-manganese	6 322	8 857	10 380	8 670	14 562
Ferro-silico-manganese	1 392	3 167	3 511	4 086	7 048
Ferro-molybdenum	352	162	90	174	68
Ferro-nickel	...	...	3 967	173	239
Ferro-silicon	3 287	3 594	5 035	4 457	7 113
Other ferro-alloys	...	...	996	1 986	84
Silicon metal	583	1 667	3 931	3 304	4 576
Ingots, blooms, billets	546 474	402 967	698 402	958 626	983 369
Scrap	173 616	211 385	185 688	190 139	240 735
Latvia					
Ingots, blooms, billets	...	...	...	2 626	4 371
Scrap	6 415	64 936	217 361	313 455	245 958
Lithuania					
Ferro-alloys	...	...	13 293	17 952	15 437
Scrap	618 231	677 727	599 084	681 692	661 349
Macedonia					
Ferro-silico-manganese	53	138	1 673	6 682	48 258
Ferro-nickel	17 304	16 260	34 419	45 058	71 189
Ferro-silicon	44 583	67 929	74 450	62 794	30 139
Scrap	26 935	61 690	85 745	98 763	124 200
Malta					
Scrap	23 093	12 424	5 252	19 012	28 083
Netherlands					
Pig iron	7 377	31 821	40 552	28 806	134 324
Sponge & powder	15 255	15 794	46 464	22 899	543
Ferro-chrome	38 469	70 272	81 105	92 920	94 048
Ferro-silico-chrome	68	18	508	299	25
Ferro-silico-magnesium	121	751	4 195	...	...
Ferro-manganese	25 842	53 367	49 203	28 423	42 958
Ferro-silico-manganese	20 830	16 109	13 994	14 118	21 432
Ferro-molybdenum	1 610	2 712	4 304	5 652	5 579
Ferro-nickel	4 112	9 855	23 252	42 421	42 331
Ferro-niobium	131	47	126	217	1 439
Ferro-phosphorus	4 447	12 515	12 173	7 910	...
Ferro-silicon	27 511	27 328	95 845	97 120	106 764
Ferro-titanium & ferro-silico-titanium	213	660	6 235	4 281	3 706
Ferro-tungsten & ferro-silico-tungsten	264	193	624	477	2 010
Ferro-vanadium	2 838	2 901	22 495	5 855	7 263
Other ferro-alloys	10 519	5 925	9 700	5 683	7 719
Silicon metal	15 957	10 319	40 393	56 525	15 237
Ingots, blooms, billets	239 603	309 454	152 593	378 061	1 111 462
Scrap	3 242 779	3 859 394	4 140 362	4 786 987	4 500 919
Norway					
Pig iron (a)	*118 400	*123 600	*66 800	*149 400	*119 800
Ferro-chrome (a)	*1 900	*600	*200	200	*100
Ferro-manganese (a)	*214 100	*336 800	*274 200	*287 500	*329 400
Ferro-silico-manganese	255 243	264 163	289 497	306 932	280 028
Ferro-silicon	194 246	256 018	179 503	90 556	155 198
Other ferro-alloys	53 913	59 696	55 564	58 033	...
Silicon metal	151 476	176 458	168 790	152 514	144 607
Ingots, blooms, billets	160 127	148 514	151 882	180 500	176 755
Scrap	263 510	270 903	267 051	337 088	290 644
Poland					
Pig iron	16 023	57 696	4 917	19 286	7 481
Ferro-manganese & ferro-silico-manganese	1 451	66 666	22 713	11 954	20 412
Ferro-silicon	84 406	85 538	64 974	16 023	46 923
Other ferro-alloys	86	195	915	1 630	2 364
Ingots, blooms, billets	975 777	1 585 494	1 249 618	964 361	1 575 099
Scrap	1 804 181	1 973 116	1 426 831	1 197 827	1 199 620

Exports continued — tonnes

Country	2003	2004	2005	2006	2007
Portugal					
Ingots, blooms, billets	33 032	184 547	159 868	79 697	138 692
Scrap	201 189	259 297	330 536	479 017	378 043
Romania					
Pig iron	6 367	3 339	...	1	5
Sponge & powder	6 886	9 187	12 522	12 851	17 832
Ferro-silico-manganese	124 557	179 788	142 617	41 000	33 529
Other ferro-alloys	2 529	3 891	8 657	3 561	872
Ingots, blooms, billets	130 415	161 438	100 515	87 685	183 551
Scrap	2 386 017	2 394 490	1 661 747	1 862 498	1 963 213
Slovakia					
Pig iron	37 145	73 303	31 261	50 497	10 588
Ferro-manganese	37 139	57 440	41 918	59 475	49 723
Ferro-silico-manganese	54 945	66 902	51 623	73 050	62 898
Ferro-silicon	42 018	40 135	29 130	25 240	16 437
Other ferro-alloys	10 013	11 834	10 741	8 033	13 604
Ingots, blooms, billets	125 822	286 072	289 090	654 743	508 620
Scrap	497 645	544 714	390 620	524 597	404 401
Slovenia					
Pig iron	770	574	752	3 511	14 942
Ferro-silicon	18 679	25 894	24 290	26 859	15 277
Other ferro-alloys	15 741	11 820	27 120	22 497	24 205
Silicon metal	188	1 608	252	3 006	1 875
Ingots, blooms, billets	13 311	15 327	12 647	12 273	31 849
Scrap	113 448	186 726	225 627	222 403	245 869
Spain					
Pig iron	2 751	3 258	12 709	4 202	12 491
Sponge & powder	4 447	4 914	4 397	4 030	6 404
Ferro-chrome	369	551	775	1 024	2 461
Ferro-manganese	62 260	82 733	101 850	91 018	71 345
Ferro-silico-manganese	44 214	40 130	42 916	32 806	33 636
Ferro-molybdenum	342	60	331	317	70
Ferro-silicon	13 140	19 332	11 843	7 759	18 323
Other ferro-alloys	891	558	992	493	1 170
Silicon metal	11 035	13 254	16 742	16 566	16 175
Ingots, blooms, billets	182 247	130 079	118 414	114 897	91 085
Scrap	103 413	205 298	140 200	137 273	162 371
Sweden					
Pig iron	118 378	116 550	99 496	145 733	152 911
Sponge & powder	9 311	12 306	9 064	15 238	26 666
Ferro-chrome	1 070	1 830	1 801	1 973	2 247
Ferro-silico-magnesium	479	235	60	739	1 260
Ferro-manganese & ferro-silico-manganese	1 159	1 605	3 456	2 584	3 859
Ferro-molybdenum	71	87	158	157	304
Ferro-phosphorus	463	281	294	706	1 128
Ferro-silicon	182	441	731	1 968	2 892
Ferro-vanadium	27	99	249	61	135
Other ferro-alloys	585	2 280	1 171	1 289	216
Silicon metal	2 790	6 387	6 049	2 321	1 474
Ingots, blooms, billets	166 876	367 562	232 958	116 880	134 568
Scrap	708 654	741 254	863 474	847 179	1 069 335
Switzerland					
Sponge & powder	1 247	1 679	2 222	2 233	2 537
Ferro-alloys	907	1 261	867	616	653
Ingots, blooms, billets	51 008	51 639	83 219	88 289	104 433
Scrap	451 452	539 629	561 972	582 567	585 342
Turkey					
Pig iron	1 060	50 165	9 358	1 150	—
Ferro-chrome	53 695	16 286	39 038	60 952	63 209
Other ferro-alloys	1 111	5 092	1 356	1 747	7 122
Ingots, blooms, billets	3 178 909	3 769 934	2 174 257	1 630 209	1 660 642
Scrap	48 741	82 460	64 281	44 474	29 237

Exports continued tonnes

Country	2003	2004	2005	2006	2007
United Kingdom					
Pig iron	1 459	957	1 387	5 407	15 892
Sponge & powder	3 666	4 003	3 605	2 346	4 969
Ferro-chrome & ferro-silico-chrome	1 711	2 384	6 238	4 066	2 973
Ferro-silico-magnesium	...	316	542	653	917
Ferro-manganese	434	1 554	661	473	1 136
Ferro-silico-manganese	42	8 247	5 003	60	7
Ferro-molybdenum	14 081	14 213	11 501	12 004	11 823
Ferro-nickel	424	125	55	329	52
Ferro-niobium	59	47	79	74	49
Ferro-phosphorus	109	1 336	189	36	33
Ferro-silicon	1 845	2 699	2 652	2 733	2 314
Ferro-titanium & ferro-silico-titanium	14 676	20 703	17 361	17 645	19 515
Ferro-vanadium	39	17	156	151	96
Other ferro-alloys	6 240	3 892	5 473	3 655	2 925
Silicon metal	2 699	1 555	2 466	6 963	11 325
Ingots, blooms, billets	1 305 976	1 712 102	2 246 377	2 692 654	3 514 850
Scrap	7 174 934	6 772 111	6 105 955	7 407 174	6 013 907

Note(s):-
(1) In this table the term 'ingots, blooms, billets' corresponds to items 7206, 7207, 7218 and 7224 of the Harmonised System which includes those of alloy and high carbon steel

(a) BGS estimates, based on known imports into certain countries

Imports of iron, steel and ferro-alloys

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Pig iron	34 462	66 196	51 982	40 133	69 614
Sponge & powder	12 042	10 917	25 214	20 542	31 775
Ferro-chrome	32 874	43 438	41 046	34 196	49 977
Ferro-silico-magnesium	969	627	678	522	1 746
Ferro-manganese	34 748	39 026	37 865	29 385	38 857
Ferro-silico-manganese	11 795	6 817	26 572	22 456	30 340
Ferro-molybdenum	1 066	1 011	617	1 632	1 370
Ferro-niobium & ferro-niobium-tantalum	1 669	934	899	955	956
Ferro-phosphorus	1 645	1 433	1 749	1 520	1 692
Ferro-silicon	36 918	47 223	32 445	25 609	26 180
Ferro-titanium & ferro-silico-titanium	1 427	961	1 121	1 081	793
Ferro-tungsten & ferro-silico-tungsten	712	589	535	677	796
Ferro-vanadium	643	587	256	100	186
Other ferro-alloys	1 017	1 279	1 554	1 611	7
Silicon metal	9 822	9 127	11 698	12 937	16 581
Ingots, blooms, billets	99 393	156 796	108 004	132 901	208 910
Scrap	936 512	1 017 497	1 113 082	1 089 942	1 371 393

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg					
Pig iron	291 507	396 174	330 709	560 116	552 212
Sponge & powder	26 084	107 639	48 915	102 543	33 539
Ferro-chrome	198 691	215 638	220 896	342 280	452 118
Ferro-silico-chrome	12 392	7 435	9 587	19 190	17 149
Ferro-silico-magnesium	327	993	1 656	2 040	12 168
Ferro-manganese	54 564	49 305	60 564	54 402	65 987
Ferro-silico-manganese	54 676	56 622	60 454	69 526	149 121
Ferro-molybdenum	5 141	4 317	5 199	5 929	5 405
Ferro-nickel	32 673	51 796	61 454	73 384	90 808
Ferro-niobium	719	712	849	936	3 252
Ferro-phosphorus	1 124	1 237	1 700	1 607	2 185
Ferro-silicon	63 474	93 591	79 901	109 389	150 254
Ferro-titanium & ferro-silico-titanium	2 069	1 677	2 141	3 016	3 553
Ferro-vanadium	412	568	650	338	615
Other ferro-alloys	3 788	7 520	7 807	7 209	157
Silicon metal	15 579	15 136	18 563	20 117	17 307
Ingots, blooms, billets	3 894 592	2 814 705	3 452 850	2 876 977	3 500 081
Scrap	3 896 924	4 413 160	3 761 788	4 297 928	7 416 312
Bulgaria					
Pig iron	45 935	14 228	19 624	15 278	26 932
Ferro-manganese	5 152	5 116	5 540	6 133	7 981
Other ferro-alloys	9 232	7 441	6 539	9 172	9 619
Silicon metal	232	663	585	9 734	873
Ingots, blooms, billets	116 005	280 895	275 001	417 485	462 348
Scrap	74 445	90 491	108 450	188 698	295 555
Croatia					
Pig iron	14 821	15 175	15 270	16 994	17 011
Ferro-alloys	2 421	2 980	2 893	3 031	3 027
Silicon metal	350	510	261	61	48
Ingots, blooms, billets	18 523	3 562	12 421	27 291	20 953
Scrap	5 361	7 156	18 407	17 563	29 553
Czech Republic					
Pig iron	72 151	88 014	88 549	150 032	108 715
Sponge & powder	21 478	5 661	6 130	10 136	20 580
Ferro-chrome	13 193	16 248	16 772	20 492	34 123
Ferro-manganese	24 154	27 051	30 921	32 355	35 500
Ferro-silico-manganese	55 989	59 361	53 258	57 857	52 153
Ferro-molybdenum	1 346	1 710	1 744	1 889	2 025
Ferro-silicon	26 721	34 812	34 114	36 361	41 482
Ferro-vanadium	225	395	564	429	440
Other ferro-alloys	8 745	9 817	10 959	10 316	7 994
Silicon metal	4 095	8 401	2 589	4 986	6 584
Ingots, blooms, billets	268 231	352 672	484 450	409 753	445 181
Scrap	506 094	593 330	392 135	560 676	521 779
Denmark					
Pig iron	5 678	14 844	12 720	18 128	18 349
Sponge & powder	6 471	103 479	29 188	80 148	61 079
Ferro-silicon	2 495	3 564	2 548	4 069	1 887
Other ferro-alloys	532	975	1 345	3 093	2 390
Silicon metal	1 521	1 061	659	1 540	705
Ingots, blooms, billets	588 317	598 552	551 407	588 053	780 837
Scrap	237 035	250 551	313 558	238 142	213 776
Estonia					
Ferro-alloys	16 840	2 132	2 125	1 815	1 240
Silicon metal	1 827	574	125	105	156
Scrap	35 654	85 689	111 930	64 110	53 155

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Finland					
Pig iron	41 213	30 453	27 160	45 364	53 901
Sponge & powder	28 412	16 906	969	779 146	880 575
Ferro-chrome	9 395	6 562	7 404	17 926	9 650
Ferro-silico-magnesium	620	615	...	623	3 989
Ferro-manganese	16 237	15 805	14 728	14 828	18 138
Ferro-silico-manganese	41 466	40 800	38 375	38 440	34 994
Ferro-molybdenum	2 776	2 709	2 293	1 948	1 892
Ferro-nickel	71 996	60 213	47 531	53 741	54 106
Ferro-niobium	494	470	478	493	570
Ferro-phosphorus	506	570	489	550	560
Ferro-silicon	37 976	32 507	25 723	36 659	31 814
Ferro-titanium & ferro-silico-titanium	1 632	2 063	1 912	1 558	1 707
Ferro-vanadium	238	250	243	249	311
Other ferro-alloys	2 514	3 263	4 016	3 380	...
Silicon metal	1 601	2 097	1 306	1 402	1 318
Ingots, blooms, billets	196 611	253 730	51 678	5 138	7 649
Scrap	781 633	865 142	756 267	1 013 675	687 887
France					
Pig iron	254 512	237 824	249 585	183 755	195 466
Sponge & powder	148 215	151 090	184 661	219 813	147 662
Ferro-chrome	260 231	224 722	192 129	159 940	106 513
Ferro-silico-chrome	1 524	59	122	677	8
Ferro-silico-magnesium	1 840	1 524	920	928	26 899
Ferro-manganese	46 048	96 276	55 239	57 240	63 487
Ferro-silico-manganese	73 362	61 446	58 403	49 287	45 827
Ferro-molybdenum	4 643	5 474	5 235	5 223	5 650
Ferro-nickel	28 974	10 966	9 229	4 487	6 373
Ferro-niobium	2 286	2 297	2 722	2 597	2 785
Ferro-phosphorus	2 160	2 942	2 536	2 360	2 528
Ferro-silicon	70 729	62 260	71 269	64 727	52 945
Ferro-titanium & ferro-silico-titanium	4 828	4 768	6 448	9 037	10 009
Ferro-tungsten & ferro-silico-tungsten	485	346	523	839	597
Ferro-vanadium	1 063	1 031	1 351	1 396	1 432
Other ferro-alloys	12 253	14 204	24 126	17 608	...
Silicon metal	16 489	19 299	25 257	21 813	19 659
Ingots, blooms, billets	1 595 528	1 803 335	1 621 219	1 557 219	1 998 943
Scrap	3 019 857	3 449 108	2 819 160	3 319 269	3 197 843
Germany					
Pig iron	221 451	342 152	320 481	422 525	655 022
Sponge & powder	142 967	180 615	156 048	193 503	249 673
Ferro-chrome	478 203	440 993	454 703	458 070	484 276
Ferro-silico-chrome	8 354	11 367	1 429	12 867	14 426
Ferro-silico-magnesium	1 103	1 722	6 831	23 761	25 758
Ferro-manganese	178 917	175 176	170 967	195 387	217 428
Ferro-silico-manganese	144 637	172 164	172 967	181 726	210 703
Ferro-molybdenum	10 369	13 214	15 594	17 473	18 423
Ferro-nickel	82 618	90 614	157 091	150 789	169 677
Ferro-niobium	3 197	3 864	4 361	6 063	6 176
Ferro-phosphorus	4 728	4 131	4 985	5 575	6 519
Ferro-silicon	231 346	237 700	238 120	214 736	274 783
Ferro-titanium & ferro-silico-titanium	8 862	6 845	10 302	13 492	15 339
Ferro-tungsten & ferro-silico-tungsten	486	400	600	990	1 512
Ferro-vanadium	5 471	4 006	4 843	5 171	5 711
Other ferro-alloys	19 536	16 901	13 323	13 698	...
Silicon metal	120 821	130 408	156 690	184 499	190 933
Ingots, blooms, billets	1 306 210	1 945 817	2 331 264	2 578 298	3 095 162
Scrap	4 364 130	5 411 710	5 026 286	5 592 745	5 920 061

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Greece					
Pig iron	10 844	15 494	6 415	9 172	10 461
Ferro-manganese	2 454	2 604	1 293	640	2 654
Ferro-silico-manganese	19 505	23 808	31 657	31 524	38 321
Ferro-silicon	7 353	7 899	6 339	4 694	18 783
Other ferro-alloys	792	1 591	1 148	1 315	1 562
Silicon metal	1 140	1 055	1 126	1 408	1 383
Ingots, blooms, billets	211 021	229 854	90 412	120 241	250 572
Scrap	1 138 900	1 178 451	1 545 912	1 517 545	1 637 437
Hungary					
Pig iron	19 312	14 429	8 808	14 821	13 285
Ferro-manganese	11 503	9 152	2 898	15 611	4 311
Ferro-silicon	5 530	5 295	5 013	4 821	5 907
Other ferro-alloys	4 089	4 376	5 417	4 980	5 703
Silicon metal	4 686	5 196	2 260	4 847	2 982
Ingots, blooms, billets	91 664	82 336	102 861	38 956	29 820
Scrap	112 463	62 753	45 860	65 136	87 369
Ireland, Republic of					
Pig iron	4 808	3 812	3 215	2 710	939
Ferro-alloys	224	286	474	397	464
Silicon metal	431	367	221	286	430
Ingots, blooms, billets	1 291	1 487	1 637	7 928	8 319
Scrap	786	1 277	1 137	3 650	4 179
Italy					
Pig iron	1 209 778	1 304 367	1 729 086	1 791 165	2 235 376
Sponge & powder	316 524	206 956	424 810	468 825	465 834
Ferro-chrome	368 649	400 159	428 716	464 364	419 392
Ferro-silico-magnesium	6 601	7 826	5 409	6 809	16 751
Ferro-manganese	69 901	79 827	84 920	95 010	108 976
Ferro-silico-manganese	150 805	182 945	174 391	216 632	229 755
Ferro-molybdenum	4 954	7 289	7 294	7 469	7 433
Ferro-nickel	59 367	82 107	141 603	129 870	91 651
Ferro-niobium	1 408	1 403	2 457	2 194	2 783
Ferro-phosphorus	662	830	987	547	721
Ferro-silicon	130 582	119 820	141 789	147 121	154 797
Ferro-titanium & ferro-silico-titanium	3 065	3 379	3 978	3 922	4 230
Ferro-tungsten & ferro-silico-tungsten	123	229	208	307	385
Ferro-vanadium	1 759	1 890	1 945	1 839	2 521
Other ferro-alloys	7 863	8 411	11 799	9 727	...
Silicon metal	48 298	46 108	49 129	51 696	57 854
Ingots, blooms, billets	2 510 222	3 874 346	4 310 404	5 792 203	5 991 974
Scrap	4 380 744	5 606 124	5 367 259	5 668 405	5 242 020
Latvia					
Pig iron	79 359	75 448	54 639	57 696	65 437
Ferro-manganese	1 710	3 576	3 119	3 281	3 021
Ferro-silicon	2 993	6 620	3 876	2 550	3 086
Other ferro-alloys	6 217	6 044	5 227	6 046	15 320
Silicon metal	5 638	2 220	1 711	1 409	656
Ingots, blooms, billets	172 092	195 467	206 550	145 037	158 649
Scrap	174 272	171 941	161 538	266 616	294 904
Lithuania					
Ferro-chrome	3	6	5 211	6 140	9 705
Ferro-silico-manganese	...	...	3 153	6 864	5 983
Other ferro-alloys	398	562	3 047	1 413	437
Ingots, blooms, billets	971	2 351	4 279	5 260	6 011
Scrap	30 508	82 325	74 816	103 878	64 661
Macedonia					
Pig iron	1 130	1 484	1 970	3 781	2 467
Ferro-alloys	2 842	4 907	2 786	2 860	3 737
Ingots, blooms, billets	...	137 447	226 286	359 029	501 134
Scrap	61 164	129 487	264 067	277 360	310 410

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Netherlands					
Pig iron	63 821	71 664	107 828	122 097	158 199
Sponge & powder	71 606	59 030	131 170	251 304	244 874
Ferro-chrome	68 424	176 862	170 806	204 637	325 741
Ferro-silico-chrome	6	616	621	1 125	674
Ferro-silico-magnesium	1 305	2 196	2 779	3 733	...
Ferro-manganese	72 916	112 073	115 972	102 493	105 789
Ferro-silico-manganese	54 901	33 492	30 114	47 986	81 034
Ferro-molybdenum	1 800	5 282	5 100	7 554	11 826
Ferro-nickel	9 213	38 872	39 305	17 866	16 878
Ferro-niobium	16	16	51	159	465
Ferro-phosphorus	1 421	(a) ...	11 714	9 470	...
Ferro-silicon	110 329	153 435	145 459	122 016	160 792
Ferro-titanium & ferro-silico-titanium	2 083	4 272	11 496	11 005	10 730
Ferro-tungsten & ferro-silico-tungsten	405	625	1 148	2 928	1 186
Ferro-vanadium	3 565	3 608	5 100	4 409	4 132
Other ferro-alloys	1 276	3 484	—	12 079	12 829
Silicon metal	43 195	36 792	52 931	69 104	68 719
Ingots, blooms, billets	124 817	302 637	322 908	390 652	269 481
Scrap	1 751 693	2 250 964	2 030 115	2 321 144	1 669 159
Norway					
Pig iron	14 639	8 823	10 841	12 813	11 335
Sponge & powder	45 271	38 519	13 729	320	2 355
Ferro-chrome	571	860	1 251	1 440	1 303
Ferro-manganese	5 921	9 703	6 154	5 328	10 639
Ferro-silico-manganese	3 560	933	1 071	2 729	1 034
Ferro-silicon	19 180	11 684	25 663	26 931	43 350
Other ferro-alloys	2 228	1 885	1 877	3 392	135
Silicon metal	13 424	17 653	26 714	37 439	39 961
Ingots, blooms, billets	101 819	150 611	142 986	161 778	195 928
Scrap	381 683	416 062	345 634	313 184	267 085
Poland					
Pig iron	86 108	150 163	239 240	220 163	228 445
Sponge & powder	34 091	34 456	24 490	12 448	10 282
Ferro-chrome	8 073	10 352	10 863	12 318	14 113
Ferro-manganese	37 530	46 414	29 230	35 508	42 352
Ferro-silico-manganese	53 968	64 985	51 197	63 332	79 942
Ferro-molybdenum	829	1 138	1 178	1 168	1 527
Ferro-silicon	27 132	29 551	22 769	24 986	24 846
Ferro-vanadium	228	393	313	480	445
Other ferro-alloys	6 322	7 454	11 871	15 521	11 233
Silicon metal	10 586	9 967	9 243	11 935	13 946
Ingots, blooms, billets	85 027	191 722	298 314	569 057	679 404
Scrap	96 426	278 271	238 113	289 956	313 907
Portugal					
Pig iron	12 763	16 089	19 713	15 149	17 468
Ferro-silico-magnesium	...	...	1 028	1 005	6 070
Ferro-manganese	779	889	885	816	1 281
Ferro-silico-manganese	5 757	1 742	10 021	12 779	9 835
Ferro-silicon	2 339	1 881	3 028	3 341	3 355
Other ferro-alloys	3 894	2 981	8 171	9 800	1 241
Ingots, blooms, billets	5 829	7 167	10 538	14 494	84 769
Scrap	353 646	292 753	653 988	1 056 949	1 075 517
Romania					
Pig iron	11 535	3 702	19 339	9 872	53 779
Ferro-manganese	17 534	14 859	14 245	23 409	20 410
Ferro-silicon	13 246	14 245	21 742	19 395	26 142
Other ferro-alloys	38 631	63 198	52 467	35 841	42 735
Silicon metal	5 888	3 401	2 813	8 947	1 192
Ingots, blooms, billets	510 940	559 793	448 454	633 196	922 499

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Slovakia					
Pig iron	14 998	29 498	39 400	59 145	59 778
Sponge & powder	11 704	11 141	13 832	24 994	51 560
Ferro-manganese	17 534	14 858	14 245	23 409	20 410
Ferro-silicon	13 246	14 245	21 742	19 395	26 142
Other ferro-alloys	5 258	6 775	8 547	11 678	15 575
Silicon metal	7 593	8 199	6 279	5 416	6 004
Ingots, blooms, billets	17 534	15 927	10 753	17 086	20 708
Scrap	389 383	241 718	197 550	243 822	257 815
Slovenia					
Pig iron	19 260	27 783	32 217	70 254	102 973
Ferro-chrome	17 438	21 299	23 307	26 992	23 645
Ferro-silicon	6 184	7 729	13 486	17 937	14 017
Other ferro-alloys	11 337	15 226	34 506	21 181	18 697
Silicon metal	6 483	10 171	6 393	9 945	7 654
Ingots, blooms, billets	3 312	3 199	3 505	3 444	11 479
Scrap	316 188	386 832	434 585	434 330	363 362
Spain					
Pig iron	434 682	593 588	806 327	793 050	652 786
Sponge & powder	593 176	670 063	516 423	641 804	611 893
Ferro-chrome	579 714	221 156	200 543	253 172	1 123 216
Ferro-silico-magnesium	3 979	6 183	5 256	2 891	7 289
Ferro-manganese	27 846	19 817	16 489	14 406	24 599
Ferro-silico-manganese	56 110	75 061	66 531	42 326	48 205
Ferro-molybdenum	4 042	3 456	6 327	10 473	5 863
Ferro-nickel	60 141	58 664	59 113	92 147	75 625
Ferro-niobium	348	491	906	515	8 283
Ferro-phosphorus	2 020	2 072	2 036	1 771	2 554
Ferro-silicon	56 258	56 736	39 623	52 215	71 487
Ferro-titanium & ferro-silico-titanium	1 017	1 212	1 880	796	1 276
Ferro-vanadium	1 050	1 077	824	515	1 189
Other ferro-alloys	930	3 095	6 546	4 586	82
Silicon metal	3 677	5 660	4 160	2 837	3 640
Ingots, blooms, billets	1 524 971	1 495 840	1 219 342	1 601 769	1 733 247
Scrap	6 389 902	7 093 195	6 975 101	7 437 224	6 316 516
Sweden					
Pig iron	24 894	29 369	38 223	43 492	59 661
Sponge & powder	2 746	3 074	2 091	7 346	16 799
Ferro-chrome	85 830	72 926	86 040	86 160	125 057
Ferro-silico-chrome	1 094	2 521	2 030	1 370	3 104
Ferro-silico-magnesium	1 060	932	914	763	5 986
Ferro-manganese	37 190	32 782	43 005	49 295	75 409
Ferro-silico-manganese	19 493	17 887	18 995	20 566	17 085
Ferro-molybdenum	3 797	4 369	5 364	4 976	4 377
Ferro-nickel	8 738	948	7 431	8 076	9 162
Ferro-niobium	732	809	1 156	1 504	1 242
Ferro-phosphorus	739	920	314	433	1 331
Ferro-silicon	41 098	38 534	48 950	37 095	42 315
Ferro-titanium & ferro-silico-titanium	1 405	1 627	3 212	1 681	691
Ferro-tungsten & ferro-silico-tungsten	321	564	195	119	105
Ferro-vanadium	1 059	1 375	1 316	1 202	1 005
Other ferro-alloys	2 720	4 682	4 660	5 097	...
Silicon metal	6 316	10 542	10 832	7 531	6 756
Ingots, blooms, billets	495 734	491 102	294 616	108 821	137 032
Scrap	351 024	271 041	254 358	279 956	242 167
Switzerland					
Pig iron	22 120	22 954	24 628	24 497	28 095
Sponge & powder	6 792	7 631	9 035	8 900	9 685
Ferro-chrome	1 504	1 161	1 203	1 306	1 834
Ferro-manganese	7 406	7 884	9 033	10 423	9 922
Ferro-silico-manganese	4 444	6 481	4 341	3 717	5 992
Ferro-silicon	5 417	5 194	4 630	7 122	5 287
Other ferro-alloys	1 070	1 203	1 602	1 435	719
Silicon metal	716	694	1 135	1 164	1 508
Ingots, blooms, billets	17 132	20 896	38 694	47 524	50 301
Scrap	412 584	544 911	390 607	499 914	475 542

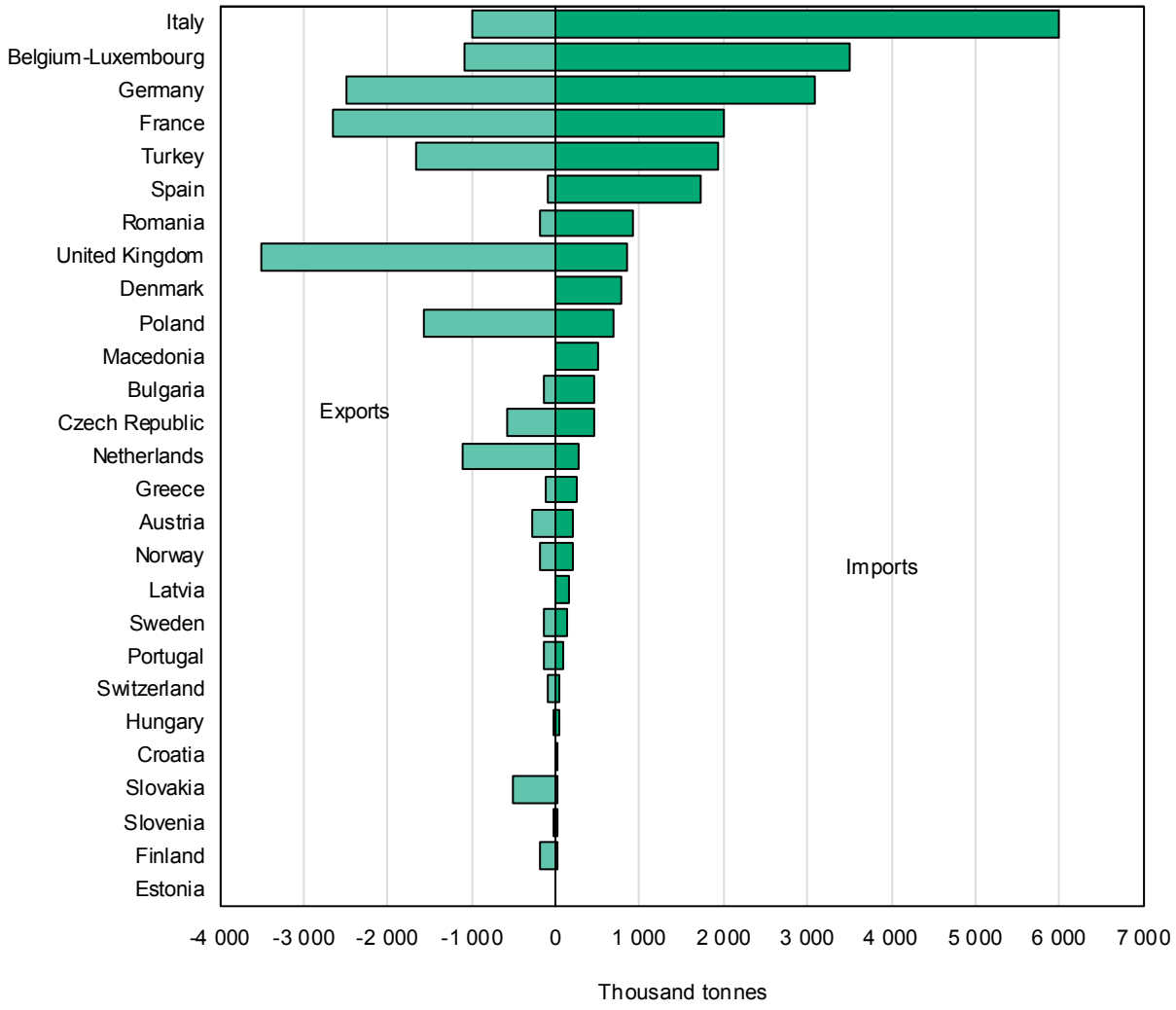
Imports continued tonnes

Country	2003	2004	2005	2006	2007
Turkey					
Pig iron	306 901	286 589	396 658	333 981	338 641
Sponge & powder	75 798	18 084	68 952	34 440	19 801
Ferro-manganese	70 866	44 406	43 631	33 481	31 373
Ferro-silico-manganese	178 594	189 294	159 496	216 036	236 039
Ferro-molybdenum	816	838	1 253	750	481
Ferro-niobium	189	211	433	113	...
Ferro-silicon	126 532	82 543	57 501	49 319	59 958
Other ferro-alloys	11 087	13 926	18 373	9 690	3 297
Silicon metal	7 968	4 649	4 794	5 233	2 530
Ingots, blooms, billets	1 618 384	1 531 529	1 816 973	1 504 374	1 930 627
Scrap	12 818 350	12 892 546	13 010 728	12 860 533	13 335 810
United Kingdom					
Pig iron	116 724	105 007	102 531	81 689	89 863
Sponge & powder	21 503	21 059	21 914	34 768	11 766
Ferro-chrome	68 405	112 234	63 478	52 494	46 975
Ferro-silico-chrome	63	—	728	350	1 242
Ferro-silico-magnesium	5 663	4 969	5 448	3 810	2 303
Ferro-manganese	76 686	91 533	79 045	86 598	100 694
Ferro-silico-manganese	53 421	63 633	57 136	59 985	56 036
Ferro-molybdenum	434	836	861	640	515
Ferro-nickel	16 437	14 628	11 325	13 169	14 960
Ferro-niobium	1 148	1 236	1 175	1 098	1 490
Ferro-phosphorus	2 124	1 687	3 261	386	2 070
Ferro-silicon	75 469	71 973	58 225	64 610	66 838
Ferro-titanium & ferro-silico-titanium	2 042	2 457	1 883	1 087	1 677
Ferro-tungsten & ferro-silico-tungsten	60	10	36	134	33
Ferro-vanadium	1 071	1 262	609	1 623	755
Other ferro-alloys	2 195	2 275	2 427	2 131	3 215
Silicon metal	100 472	100 233	77 103	29 512	25 787
Ingots, blooms, billets	540 537	758 615	722 452	1 053 176	849 803
Scrap	139 089	225 483	180 261	154 967	204 100

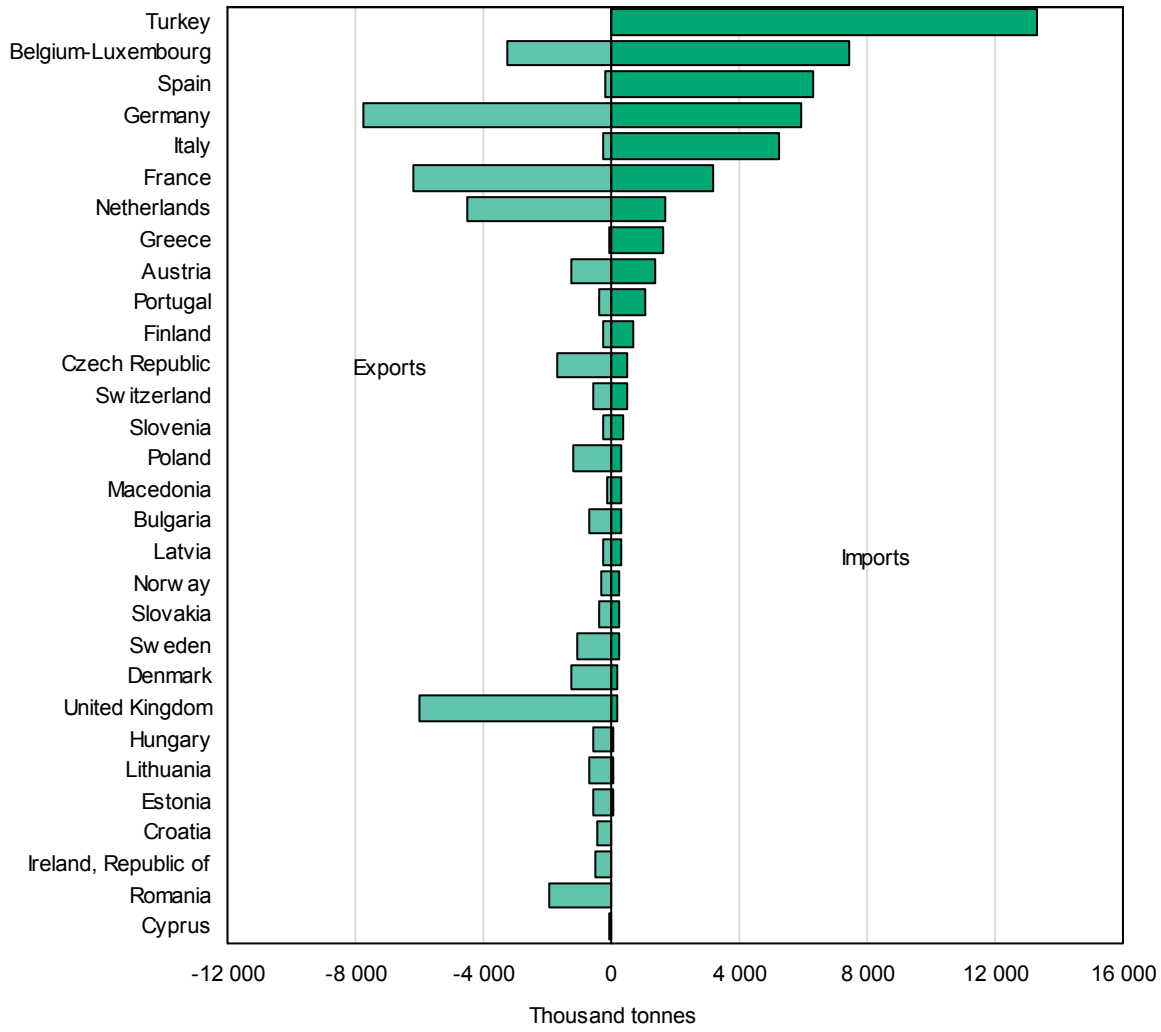
Note(s) :-
(1) In this table the term 'ingots, blooms, billets' corresponds to items 7206, 7207, 7218 and 7224 of the Harmonised System which includes those of alloy and high carbon steel

(a) Included with 'other ferro-alloys'

Iron and steel ingots, blooms and billets - EU32 trade in 2007



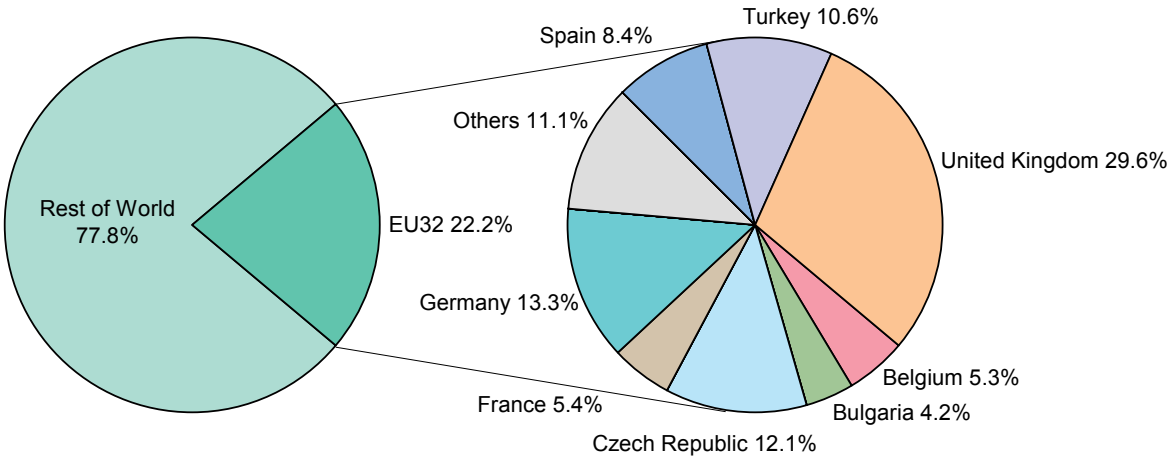
Iron and steel scrap - EU32 trade in 2007



Kaolin

- Kaolin is the market name for the clay mineral kaolinite. Unlike ceramic and refractory clays, kaolinite is usually processed to eliminate impurities and to tailor the product for end-use. Kaolin has many industrial applications: the main ones are in the manufacture of paper, ceramics, rubber, plastics, paint, cement and glass-fibres. Paper manufacture is the largest end-use of kaolin, up to 30 per cent of printing paper can be kaolin.
- Kaolin production is fairly stable in the EU32 countries, which in 2007 produced 22 per cent of world kaolin. The UK is the largest producer and exporter in the EU32 and is fourth biggest producer in the world.
- Kaolin is traded in several different forms; throughout 2007 and 2008 ceramic grade, bulk refined kaolin, ex-works France, ranged from €65 to €168 per tonne.

EU32 Production of kaolin 2007



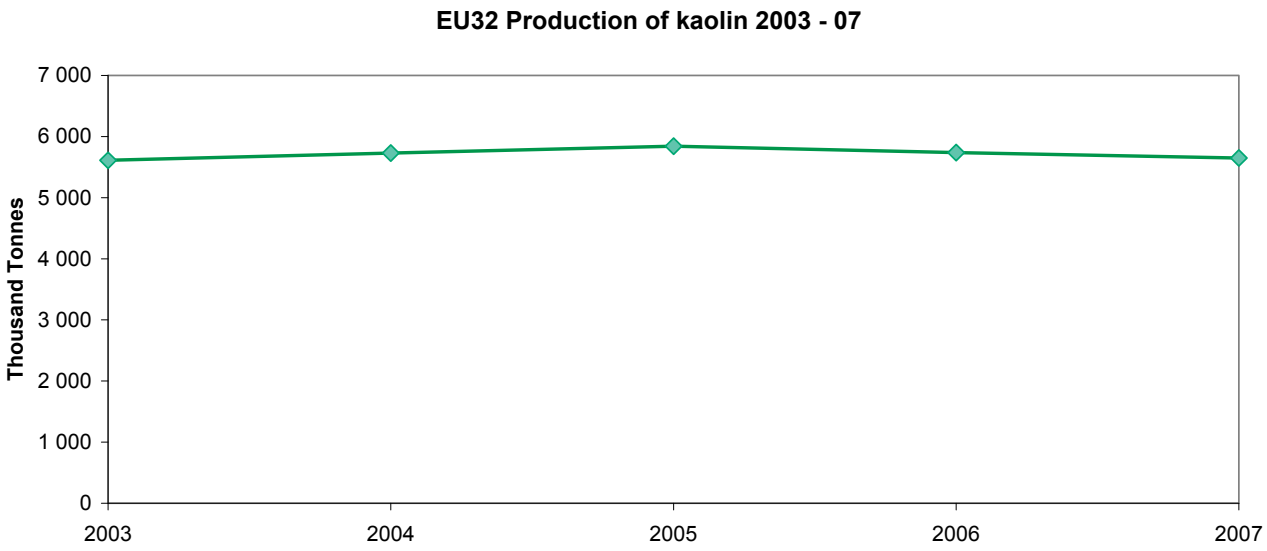
Production of kaolin

tonnes

Country	2003	2004	2005	2006	2007
Austria	15 034	16 345	16 410	17 431	16 929
Belgium	*300 000	*300 000	*300 000	*300 000	*300 000
Bulgaria	*120 000	*190 000	*200 000	*240 000	*240 000
Czech Republic (a)	591 000	596 000	649 000	673 000	682 000
France	335 000	316 000	319 464	*300 000	307 253
Germany (b)	738 123	*740 000	*750 000	*750 000	*750 000
Greece	59 680	53 438	49 912	*50 000	*50 000
Hungary	...	3 300	1 300	1 350	2 136
Italy	224 755	246 608	183 804	*180 000	*180 000
Poland (c)	106 761	130 596	159 207	148 579	153 670
Portugal	169 669	152 077	164 072	167 792	*170 000
Romania	25 741	22 338	26 772	11 063	6 879
Slovakia	31 000	46 000	31 000	58 000	46 000
Spain (c)	427 193	437 990	463 398	476 327	475 000
Turkey	370 455	536 008	615 271	*600 000	*600 000
United Kingdom (d) (e)	2 097 137	1 944 955	1 910 874	1 762 328	1 671 426
EU32 Total	5 600 000	5 700 000	5 800 000	5 700 000	5 700 000

Note(s):-
(1) In addition to the countries listed Denmark is believed to produce kaolin

(a) Beneficiated
(b) Washed and dried
(c) Washed
(d) Sales
(e) Dry weight



Exports of kaolin

tonnes

Country	2003	2004	2005	2006	2007
Austria	1 870	2 277	3 019	3 649	2 292
Belgium-Luxembourg	539 940	664 743	777 451	628 479	612 062
Bulgaria	124 396	114 399	124 899	149 559	160 372
Croatia	4 362	351	15	35	32
Czech Republic	441 545	483 636	268 850	261 019	173 251
Denmark	583	461	637	443	351
Finland	10 032	8 111	7 378	8 373	10 597
France	1 613 484	484 554	421 927	968 538	412 284
Germany	359 926	369 141	301 870	463 804	507 867
Greece	976	131	129	472	276
Hungary	2 388	7 180	6 252	3 781	3 762
Italy	37 357	29 995	40 800	17 287	16 265
Netherlands	335 299	307 337	441 248	431 027	416 108
Poland	10 408	9 941	6 194	7 177	10 401
Portugal	10 131	11 383	31 484	46 494	70 580
Slovakia	87	475	2 332	10 946	12 546
Spain	172 414	154 667	192 735	213 955	199 541
Sweden	8 791	15 544	18 473	15 735	18 229
Switzerland	69	408	246	433	786
Turkey	299 843	267 817	177 881	192 298	132 834
United Kingdom (a)	1 862 437	1 728 161	1 698 747	1 566 025	1 490 416

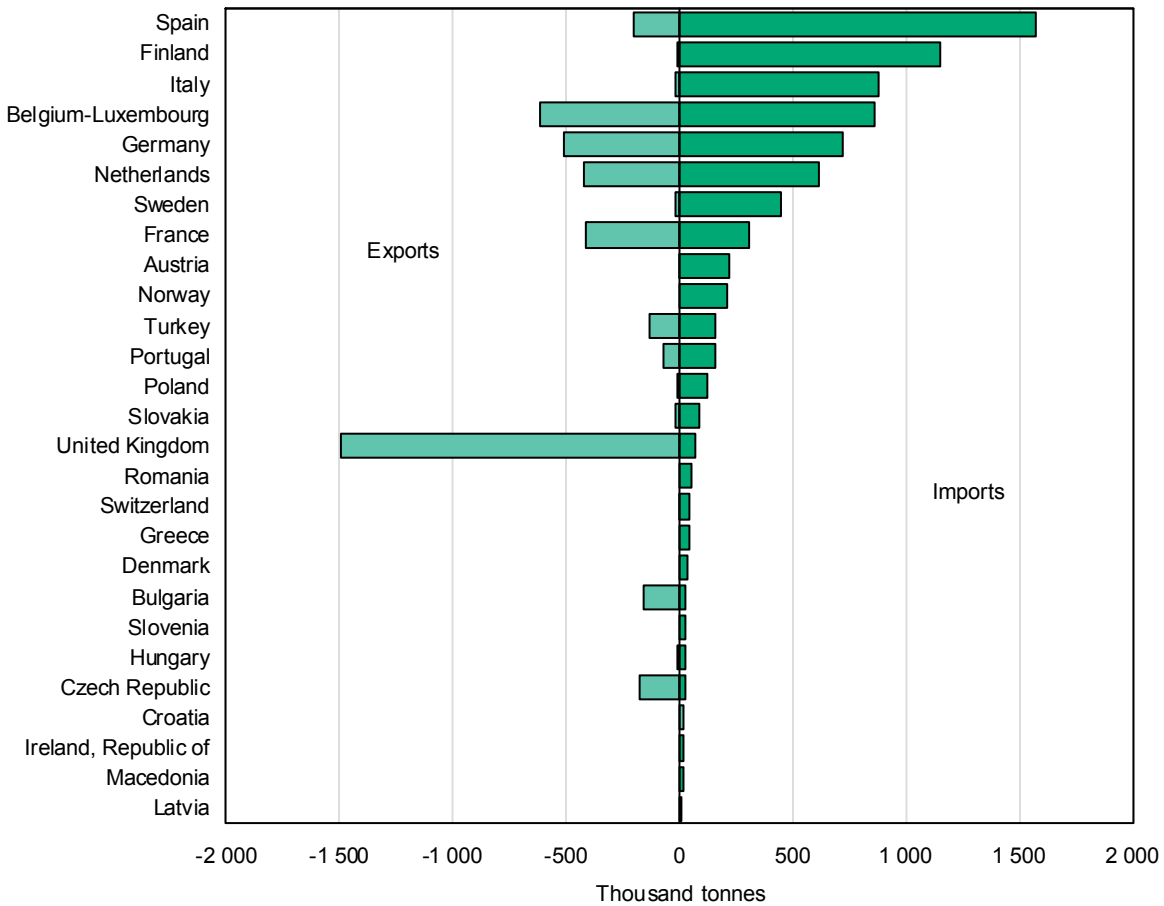
Note(s):-
(a) Dry weight

Imports of kaolin

tonnes

Country	2003	2004	2005	2006	2007
Austria	228 674	249 353	234 906	222 007	218 813
Belgium-Luxembourg	890 277	1 023 999	962 536	868 255	862 714
Bulgaria	36 360	75 425	76 231	91 831	29 717
Croatia	6 303	6 472	7 941	16 423	21 845
Cyprus	487	299	154	184	341
Czech Republic	15 466	14 034	16 895	22 962	23 461
Denmark	20 987	13 056	14 117	19 572	35 288
Estonia	907	964	1 058	1 090	3 214
Finland	1 305 240	1 301 806	1 144 335	1 261 699	1 155 041
France	325 358	349 353	338 848	320 425	311 060
Germany	771 902	774 307	803 001	809 329	717 102
Greece	52 833	56 380	54 293	68 083	40 298
Hungary	28 472	23 417	33 075	25 282	25 168
Ireland, Republic of	19 186	22 213	22 764	19 647	19 322
Italy	947 116	939 832	956 948	978 378	881 968
Latvia	4 962	5 096	5 016	5 422	11 071
Lithuania	577	701	802	1 399	568
Macedonia	6 240	6 966	19 414	9 797	16 849
Netherlands	560 878	646 638	564 518	627 768	612 720
Norway	241 975	237 725	250 879	241 976	208 709
Poland	81 181	89 139	90 931	94 257	122 245
Portugal	135 681	124 508	143 943	137 656	154 891
Romania	82 981	71 987	55 653	54 862	51 347
Slovakia	88 513	76 440	94 705	100 551	87 956
Slovenia	29 449	28 782	25 928	24 389	28 363
Spain	999 504	1 209 303	1 366 226	1 506 142	1 571 143
Sweden	467 111	452 215	480 358	451 919	448 129
Switzerland	45 012	41 350	37 368	41 481	45 629
Turkey	197 684	218 838	265 530	190 924	163 015
United Kingdom	72 719	126 501	84 750	198 524	73 014

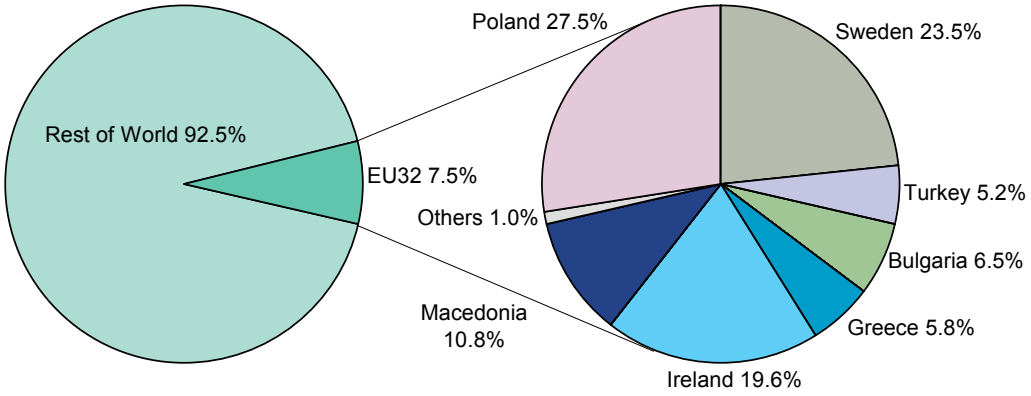
Kaolin - EU32 trade in 2007



Lead

- Lead is a very soft, highly malleable, ductile metallic element with low electrical conductivity. It is also very dense and strongly resistant to corrosion, although it tarnishes rapidly in air. The main use is in lead-acid batteries, but lead is also widely used in architecture, plumbing, ordinance, solder, radiation shielding and insecticides.
- China was the world's largest mine producer (38 per cent) and refiner of lead (34 per cent) in 2007, although many countries also refine this metal. In the EU32 the largest mine producer of lead was Sweden (23 per cent) followed by the Republic of Ireland (20 per cent). The largest producers of refined lead, based on imported materials and recycling, were Germany (22 per cent) and the UK (16 per cent).
- The London Metal Exchange (LME) price for lead (cash, monthly average) started 2007 at US$1665 per tonne but increased significantly to a peak of US$3719 per tonne by October, before falling back to US$2595 per tonne by the end of the year. During 2008 the price increased again to a high of US$3079 per tonne in February but has been on a generally decreasing trend since then. By the end of 2008 lead was trading at US$962 per tonne.

EU32 Mine production of lead 2007



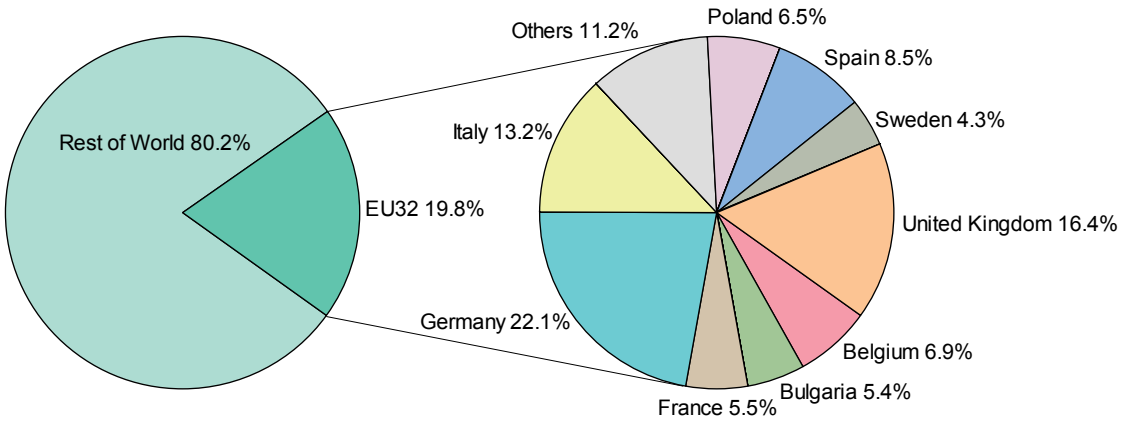
Mine production of lead

tonnes (metal content)

Country	2003	2004	2005	2006	2007
Bulgaria	19 950	*19 400	*18 500	*16 000	*17 600
Greece	2 000	—	3 000	10 400	15 700
Ireland, Republic of	50 300	63 800	72 200	61 800	52 700
Italy	2 700	800	*800	*800	*800
Macedonia	—	—	—	9 349	29 221
Poland	87 100	86 000	78 980	77 450	74 200
Portugal	—	—	—	—	1 000
Romania	15 747	18 297	11 610	6 269	784
Spain	1 765	—	—	—	—
Sweden	50 962	54 347	60 445	55 644	63 224
Turkey	17 483	18 792	11 341	14 000	14 000
United Kingdom	*700	*500	*400	*400	*100
EU32 Total	248 700	261 900	257 300	252 100	269 300

EU32 Mine production of lead 2003 - 07

EU32 Production of refined lead 2007



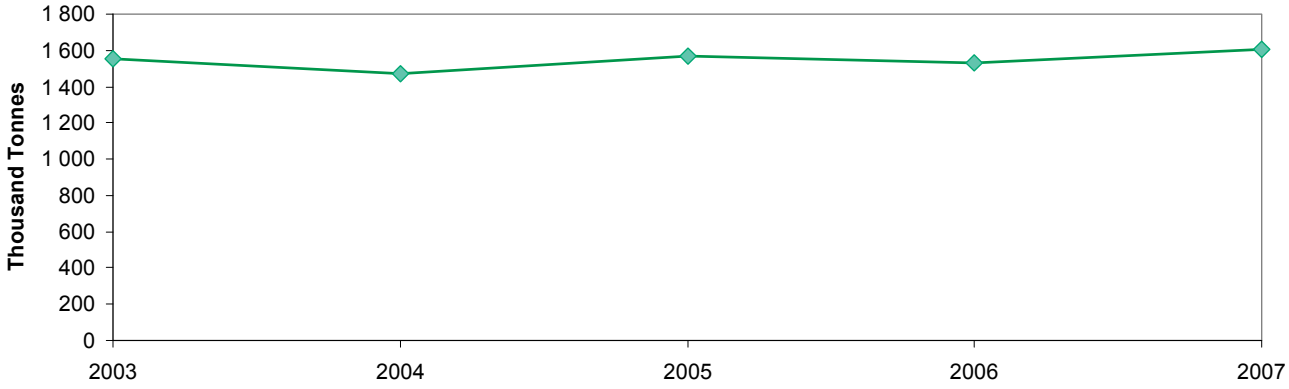
Production of refined lead

tonnes

Country	2003	2004	2005	2006	2007
Austria	*20 000	*26 000	*24 000	*22 000	*22 000
Belgium	65 000	86 000	103 000	101 000	110 000
Bulgaria	69 000	66 000	81 000	76 000	87 000
Czech Republic	*26 000	*25 000	26 000	26 100	26 000
Estonia	—	3 000	*7 000	*7 000	*10 000
France	91 000	89 000	*90 000	*88 000	*88 000
Germany	356 900	359 200	341 700	321 500	355 081
Greece	*4 000	*3 000	*6 000	*6 000	*11 000
Ireland, Republic of	7 800	19 600	22 500	21 700	22 500
Italy	214 100	201 600	211 000	190 500	211 800
Macedonia	6 357	3 591	—	—	—
Netherlands	*17 000	*17 000	*17 000	*16 000	*16 000
Poland	74 300	73 900	81 000	73 000	104 200
Portugal	4 000	4 000	3 000	3 000	5 000
Romania	28 000	37 600	37 900	29 133	34 369
Slovenia	*15 000	*15 000	*15 000	*15 000	*15 000
Spain	99 100	105 600	110 000	129 000	136 000
Sweden	73 340	73 548	72 760	70 239	69 730
Switzerland	9 600	9 300	9 600	*9 600	*9 000
Turkey	*9 000	*9 000	*9 000	*9 000	*9 000
United Kingdom	364 574	245 938	304 350	318 703	263 391
EU32 Total	1 554 000	1 473 000	1 572 000	1 532 000	1 605 000

Note(s):-
(1) Figures relate to both primary and secondary refined lead and include the lead content of antimonial lead. Metal recovered from materials by remelting alone is excluded

EU32 Production of refined lead 2003 - 07



Exports of lead

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Unwrought	8 988	14 504	10 746	13 129	13 629
Scrap	65	252	1 514	1 027	1 018
Belgium-Luxembourg					
Ores & concentrates	84 545	109 580	96 610	113 576	96 059
Unwrought	104 827	93 316	110 372	98 077	111 344
Scrap	6 307	12 736	9 142	15 071	20 780
Bulgaria					
Ores & concentrates	13 029	10 370	6 165	10 900	23 417
Unwrought	61 799	54 686	69 825	65 400	66 384
Croatia					
Scrap	750	853	794	1 057	3 590
Cyprus					
Scrap	2 073	1 711	1 212	129	488
Czech Republic					
Unwrought	7 112	7 230	8 665	10 359	16 707
Scrap	2 926	3 059	4 948	6 648	6 855
Denmark					
Unwrought	3 011	1 930	1 312	1 071	721
Scrap	1 885	1 805	3 067	2 954	1 685
Estonia					
Unwrought	412	3 846	7 774	6 054	10 091
Scrap	520	1 414	153	184	323
Finland					
Scrap	159	884	3 589	2 421	605
France					
Unwrought	12 868	6 182	6 920	25 933	14 936
Scrap	27 789	27 003	24 683	21 854	29 544
Germany					
Ores & concentrates	31 512	3 423	102	475	467
Unwrought	129 550	120 361	122 120	126 790	136 609
Scrap	15 468	12 412	11 064	8 390	17 799
Greece					
Unwrought	107	3 003	4 017	3 292	9 913
Scrap	276	240	848	1 256	769
Hungary					
Scrap	1 237	2 377	2 987	3 286	2 369
Ireland, Republic of					
Ores & concentrates	56 141	84 115	92 813	129 748	108 645
Italy					
Unwrought	26 711	28 295	18 244	8 143	8 008
Scrap	5 652	1 262	2 477	3 806	7 661
Lithuania					
Scrap	3 239	6 613	7 848	6 118	11 776
Macedonia					
Ores & concentrates	4 172	0	233	16 371	47 209
Unwrought	7 458	1 135	54	...	70
Scrap	370	1 468	935	2 511	2 622
Netherlands					
Ores & concentrates	1 526	2 730	17 161	27 068	2 897
Unwrought	23 942	34 426	24 382	11 133	14 824
Scrap	8 732	12 395	11 950	16 067	21 822
Norway					
Scrap	987	601	1 013	892	974
Poland					
Ores & concentrates	86 395	94 126	92 226	73 902	70 970
Unwrought	42 518	39 287	44 008	68 635	34 455
Scrap	2 408	963	1 652	2 168	3 120
Portugal					
Unwrought	2 367	1 988	1 269	2 018	3 092
Scrap	3 502	3 452	4 127	9 471	9 961
Romania					
Ores & concentrates	30 390	25 092	25 012	18 104	10 501
Unwrought	23 388	20 894	22 120	18 786	23 289
Scrap	964	1 689	3 295	4 389	4 659

Exports continued — tonnes

Country	2003	2004	2005	2006	2007
Slovakia					
Unwrought	3 124	2 119	1 662	98	221
Slovenia					
Unwrought	5 136	4 701	5 818	6 524	8 860
Scrap	631	568	572	843	1 415
Spain					
Ores & concentrates	5 057	6 057	2	29	130
Unwrought	6 219	8 301	9 805	7 830	9 242
Scrap	7 028	6 399	9 128	6 460	7 023
Sweden					
Ores & concentrates	59 340	60 105	62 155	50 854	56 581
Unwrought	71 217	68 215	70 042	76 777	65 733
Scrap	237	554	307	703	734
Switzerland					
Unwrought	7 086	5 407	4 657	7 966	7 383
Scrap	2 267	1 320	2 932	3 124	4 860
Turkey					
Ores & concentrates (a)	18 619	29 423	30 226	18 415	34 715
Unwrought	1 484	6 190	2 875	4 271	930
United Kingdom					
Unwrought	61 682	34 859	52 593	89 271	68 152
Unwrought alloys	44 091	31 148	38 806	48 589	39 246
Scrap	28 569	32 934	27 248	1 859	31 942

Note(s):-
(1) In this table the term 'unwrought' lead corresponds to item 7801 of the Harmonised System and comprises base bullion, pigs, unwrought bars, etc.
(2) The term 'unwrought' as used here includes alloys unless these are separately specified

(a) Complex lead-zinc ore

Imports of lead

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Unwrought	37 927	39 533	23 062	29 184	27 015
Scrap	2 672	2 192	1 068	890	661
Belgium-Luxembourg					
Ores & concentrates	80 203	117 597	134 300	120 136	108 165
Unwrought	20 874	27 042	18 807	15 081	36 620
Scrap	28 028	26 904	26 699	41 070	55 153
Bulgaria					
Ores & concentrates	64 751	74 163	83 398	100 736	92 929
Unwrought	1 759	5 558	10 723	11 305	15 854
Scrap	816	441	1 227	1 346	3 338
Croatia					
Unwrought	988	1 460	1 492	1 415	911
Czech Republic					
Unwrought	55 699	73 472	69 135	67 850	66 060
Scrap	908	1 348	4 147	4 411	6 519
Denmark					
Unwrought	816	2 072	2 135	2 322	1 033
Scrap	2 237	2 366	2 288	2 209	2 228
Finland					
Unwrought	2 753	2 582	2 854	1 571	2 283
France					
Unwrought	103 439	91 979	109 426	121 930	118 384
Scrap	30 508	34 513	33 818	32 705	34 169
Germany					
Ores & concentrates	193 156	202 309	171 533	161 113	211 132
Unwrought	159 860	112 975	108 533	134 805	138 978
Scrap	9 075	11 757	15 419	18 141	30 313

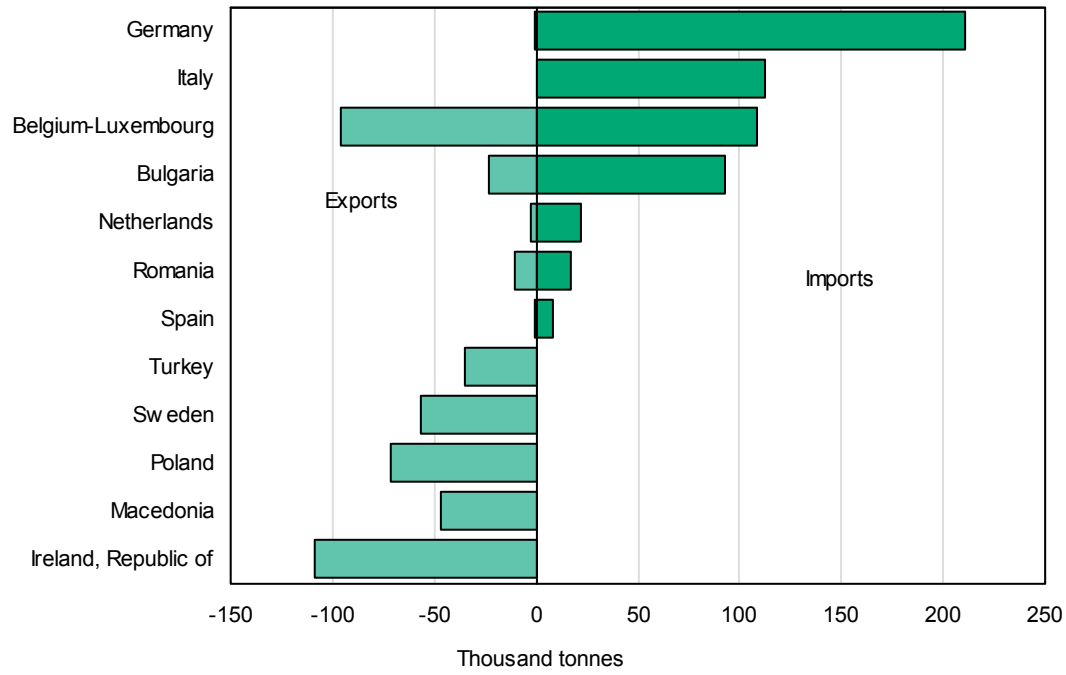
Imports continued tonnes

Country	2003	2004	2005	2006	2007
Greece					
Unwrought	4 633	28 460	5 112	5 401	11 792
Scrap	5 496	1 284	85	138	2 071
Hungary					
Unwrought	7 148	4 545	5 028	4 063	5 802
Ireland, Republic of					
Unwrought	28 438	26 896	30 999	28 386	35 675
Scrap	7 798	18 290	28 530	31 794	25 828
Italy					
Ores & concentrates	86 985	99 015	107 685	65 610	111 999
Unwrought	88 333	114 546	72 181	112 069	114 471
Scrap	3 669	3 877	3 333	4 097	7 107
Macedonia					
Unwrought	411	1 150	1 146	857	331
Netherlands					
Ores & concentrates	1 535	4 281	9 268	13 186	22 303
Unwrought	66 405	83 391	36 051	24 272	22 419
Scrap	8 034	7 818	9 700	17 508	22 006
Norway					
Unwrought	2 024	2 970	4 882	4 749	7 055
Poland					
Unwrought	47 030	50 189	53 095	56 504	44 235
Scrap	...	602	794	1 633	1 256
Portugal					
Unwrought	15 624	18 885	21 198	17 523	14 704
Romania					
Ores & concentrates	14 899	26 920	31 085	13 288	17 064
Unwrought	1 111	1 667	1 620	1 400	835
Slovenia					
Unwrought	13 604	12 854	10 262	8 897	12 761
Scrap	538	1 223	1 382	2 946	5 191
Spain					
Ores & concentrates	329	1 845	1 526	2 299	8 188
Unwrought	129 925	154 828	174 618	147 423	157 485
Scrap	21 943	27 866	30 499	30 625	42 629
Sweden					
Ores & concentrates	19 693	26 142	5 085	10 476	—
Unwrought	4 190	6 088	6 098	17 679	6 554
Scrap	2 463	4 062	3 538	3 101	3 771
Switzerland					
Unwrought	6 047	7 831	8 067	9 185	7 087
Turkey					
Unwrought	71 665	71 606	71 680	56 792	46 966
United Kingdom					
Ores & concentrates (a)	*5 000	—	—	...	...
Unwrought , base bullion (b)	168 228	127 970	173 910	120 871	119 726
Unwrought, other	28 132	51 382	31 347	53 892	31 187
Scrap	6 043	6 278	3 898	5 914	17 685

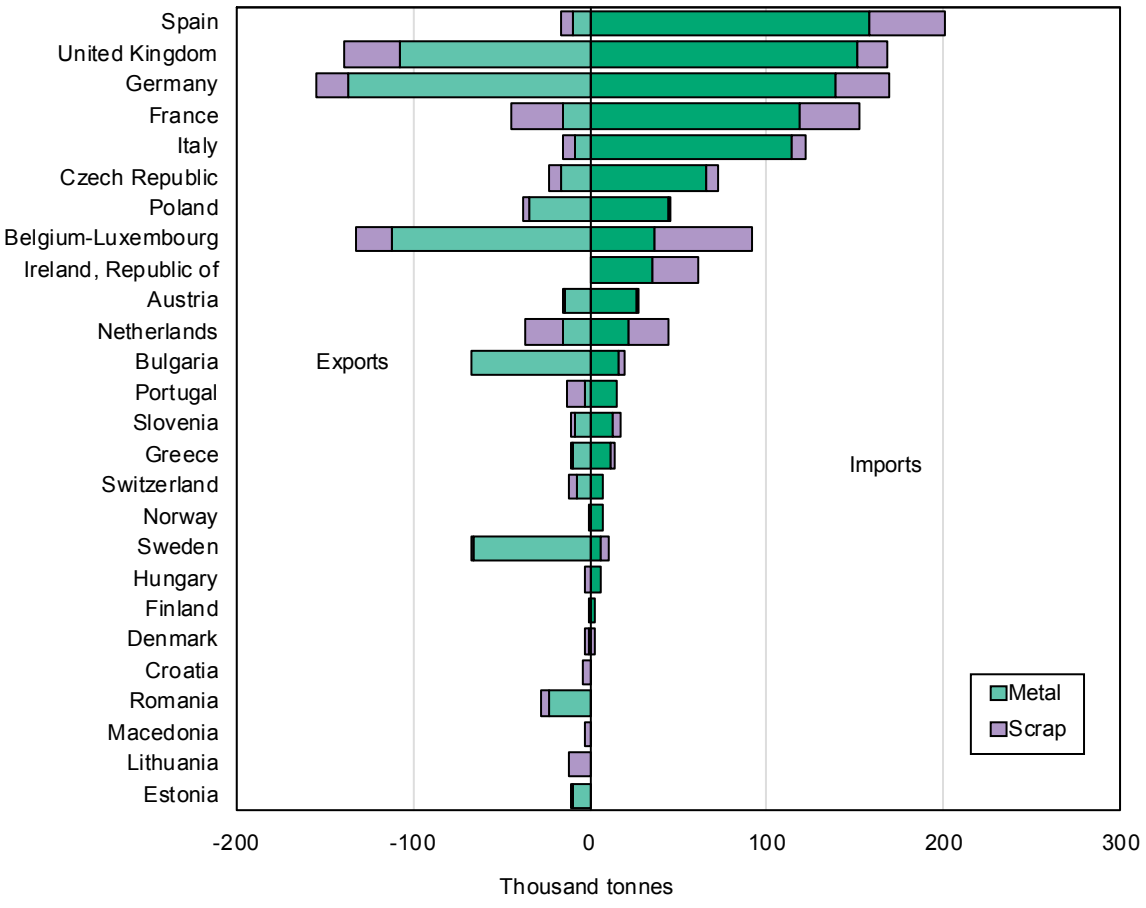
Note(s) :-
(1) In this table the term 'unwrought' lead corresponds to item 7801 of the Harmonised System and comprises base bullion, pigs, unwrought bars, etc.
(2) The term 'unwrought' as used here includes alloys unless these are separately specified

(a) Lead content
(b) Includes a substantial precious metal content, mainly silver

Lead ore - EU32 trade in 2007



Lead - EU32 trade in 2007



Lithium minerals

- Lithium is a very light metallic element. It is mainly used as lithium compounds that act as fluxes in the ceramics and glass industries, and in lubricants. The metal is an important alloying agent in primary aluminium. Lithium is increasingly being used in rechargeable batteries.
- Lithium is produced in only a few countries of which Australia was the largest lithium mineral producer in 2007 (approximately 46 per cent of world production). Chile was the largest producer by lithium content (56 per cent of world production). In the EU32 Portugal and Spain are the only countries producing lithium minerals.
- The lithium minerals spodumene and petalite, with lithium carbonate, are the usual traded forms. Prices were stable throughout most of 2007 ranging between US$165 to US$490 per tonne for mineral concentrates, depending on the grade, and US$2.70 to US$3.00 per pound for lithium carbonate. However at the end of 2007 the price for spodumene concentrate jumped to the range US$600 to US$680 per tonne and has remained there throughout 2008. The lithium carbonate price has remained constant.

Production of lithium minerals

tonnes

Country	2003	2004	2005	2006	2007
Portugal					
Lepidolite	24 606	28 696	26 185	28 497	34 755
Spain					
Lepidolite	6 333	3 226	6 751	8 339	9 000

Exports of lithium

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg					
Oxides	982	1 837	1 545	1 236	1 370
Carbonate	4 000	10 053	4 999	5 107	4 915
France					
Carbonate	2 382	1 166	462	12	2
Germany					
Oxides	649	625	...	...	...
Carbonate	2 484	2 660	2 991	2 907	2 705
Italy					
Carbonate	162	206	269	347	225
Netherlands					
Oxides	190	187	115	154	331
Carbonate	89	199	224	405	318
Slovenia					
Carbonate	64	89	96	96	110
Spain					
Carbonate	373	3 157	1 123	554	192
Switzerland					
Oxides	78	80	78	69	75
United Kingdom					
Oxides	169	285	125	94	92
Carbonate	193	160	203	271	158

Imports of lithium

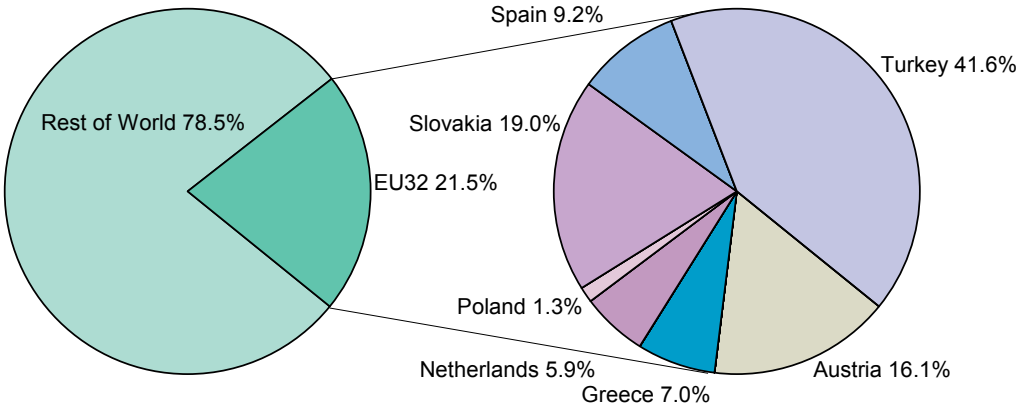
tonnes

Country	2003	2004	2005	2006	2007
Austria					
Carbonate	118	115	182	199	248
Belgium-Luxembourg					
Oxides	1 197	2 250	2 014	1 201	1 784
Carbonate	5 086	6 108	6 205	5 357	5 895
Czech Republic					
Carbonate	45	76	71	118	146
Denmark					
Carbonate	98	93	81	164	155
Finland					
Carbonate	55	53	77	85	73
France					
Oxides	347	407	482	369	314
Carbonate	1 381	1 484	1 392	1 186	1 289
Germany					
Oxides	4 405	3 699	4 209	4 260	5 163
Carbonate	6 018	7 189	8 101	7 948	8 131
Italy					
Oxides	237	148	223	159	160
Carbonate	1 686	1 505	2 263	1 646	1 303
Netherlands					
Oxides	237	270	178	359	428
Carbonate	956	1 081	1 171	1 356	1 459
Poland					
Oxides	74	132	136	266	245
Carbonate	56	117	128	252	184
Slovenia					
Oxides	88	127	116	115	144
Spain					
Oxides	436	329	480	573	600
Carbonate	983	759	1 553	828	1 811
Sweden					
Oxides	113	162	176	186	107
Carbonate	186	208	259	215	236
Switzerland					
Oxides	89	89	81	112	142
Turkey					
Oxides	120	179	183	168	...
Carbonate	278	417	433	440	408
United Kingdom					
Oxides	554	498	446	385	614
Carbonate	687	490	657	650	779

Magnesite

- Magnesite is the commonly used name for magnesium carbonate rock. Magnesite has excellent thermal resistance and is most commonly used as refractory bricks in furnaces. It is also used in fertilisers.
- Economic deposits of magnesite are rare. Only 21 countries are believed to have produced magnesite in 2007, of which China was the largest (approximately 58 per cent of world production). The largest EU32 producer was Turkey with 42 per cent of EU32 production.
- In 2007, Greek raw magnesite (F.O.B.) was about €50–55, increasing to €65–75 in 2008. In 2007, Chinese dead burned 94–95% MgO, F.O.B. China traded at US$172 to US$260 per tonne but this increased significantly in the latter part of 2008 to finish the year in the range US$485 to US$610 per tonne.

EU32 Production of magnesite 2007



Production of magnesite

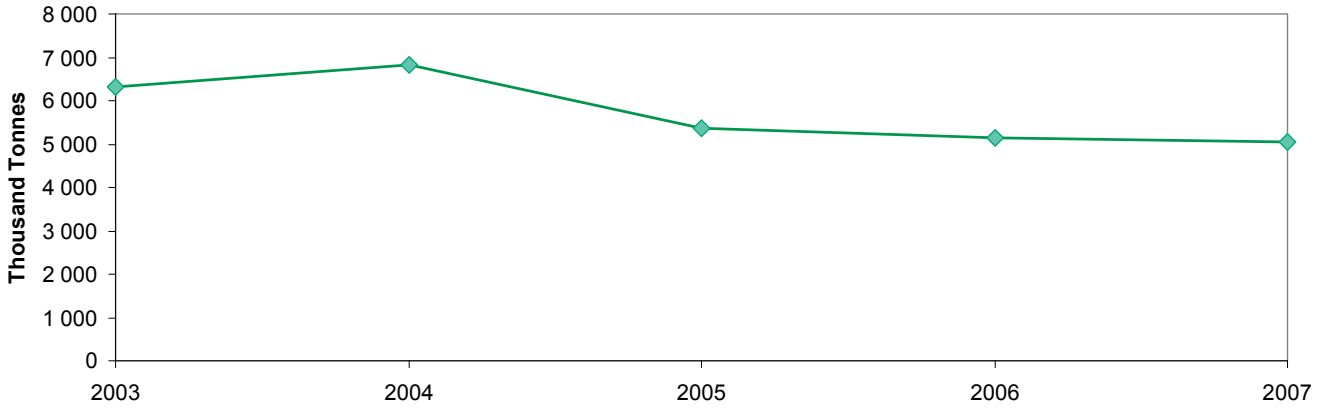
tonnes

Country	2003	2004	2005	2006	2007
Austria	766 525	715 459	693 754	769 188	811 556
Greece	542 800	552 300	471 000	463 277	351 414
Netherlands (a)	261 194	245 495	285 336	293 006	*300 000
Poland	27 200	57 900	55 300	63 000	65 000
Slovakia	994 000	965 900	920 100	941 100	957 000
Spain	517 030	567 504	556 129	520 646	463 850
Turkey	3 224 278	3 732 952	2 372 206	2 088 033	*2 100 000
EU32 Total	6 333 000	6 838 000	5 354 000	5 138 000	5 049 000

Note(s):-
(1) In addition to the countries listed, Bulgaria is believed to produce magnesite

(a) Chloride produced from solution mining

EU32 Production of magnesite 2003 - 07



Exports of magnesite and magnesia

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Magnesite	2 401	642	1 338	1 231	760
Magnesia	50 263	73 037	59 283	45 311	57 964
Belgium-Luxembourg					
Magnesite	7 061	512	575	1 520	1 958
Magnesia	134 268	53 755	52 665	75 011	64 293
Czech Republic	1 924	3 790	6 273	4 099	3 988
Denmark	...	165	232	307	451
France					
Magnesite	507	241	230	241	373
Magnesia	23 037	37 930	45 661	47 832	48 852
Germany					
Magnesite	878	218	61	132	463
Magnesia	45 840	66 422	81 021	93 286	87 264
Greece					
Magnesia	65 673	130 910	140 083	125 783	132 083
Ireland, Republic of					
Magnesite	52	6	...	5 991	5 487
Magnesia	65 549	69 105	82 417	46 656	3 981
Italy					
Magnesite	2 141	2 868	3 489	3 003	3 878
Magnesia	17 414	9 779	12 130	12 174	9 036
Netherlands					
Magnesite	12 352	8 704	1 452	4 750	582
Magnesia	384 711	431 175	492 077	465 555	128 060
Poland	34	796	1 208	654	2 632
Romania					
Magnesia	176	281	231	277	351
Slovakia					
Magnesite	786	2 294	636	...	...
Magnesia	395 689	404 448	385 312	394 826	444 539
Spain					
Magnesite	23 640	25 557	901	19 635	607
Magnesia	158 844	185 811	189 005	179 046	185 364
Sweden					
Magnesia	657	1 431	1 421	2 277	1 593
Turkey					
Magnesite	45 534	39 670	41 353	5 880	12 468
Magnesia	196 613	230 675	198 081	84 322	—
United Kingdom					
Magnesite	34	49	87	26	51
Magnesia	26 248	24 796	20 077	19 036	16 371

Note(s):-
(1) The term 'magnesia', as used here, includes dead-burned, sintered and caustic-burned (caustic calcined) material

Imports of magnesite and magnesia

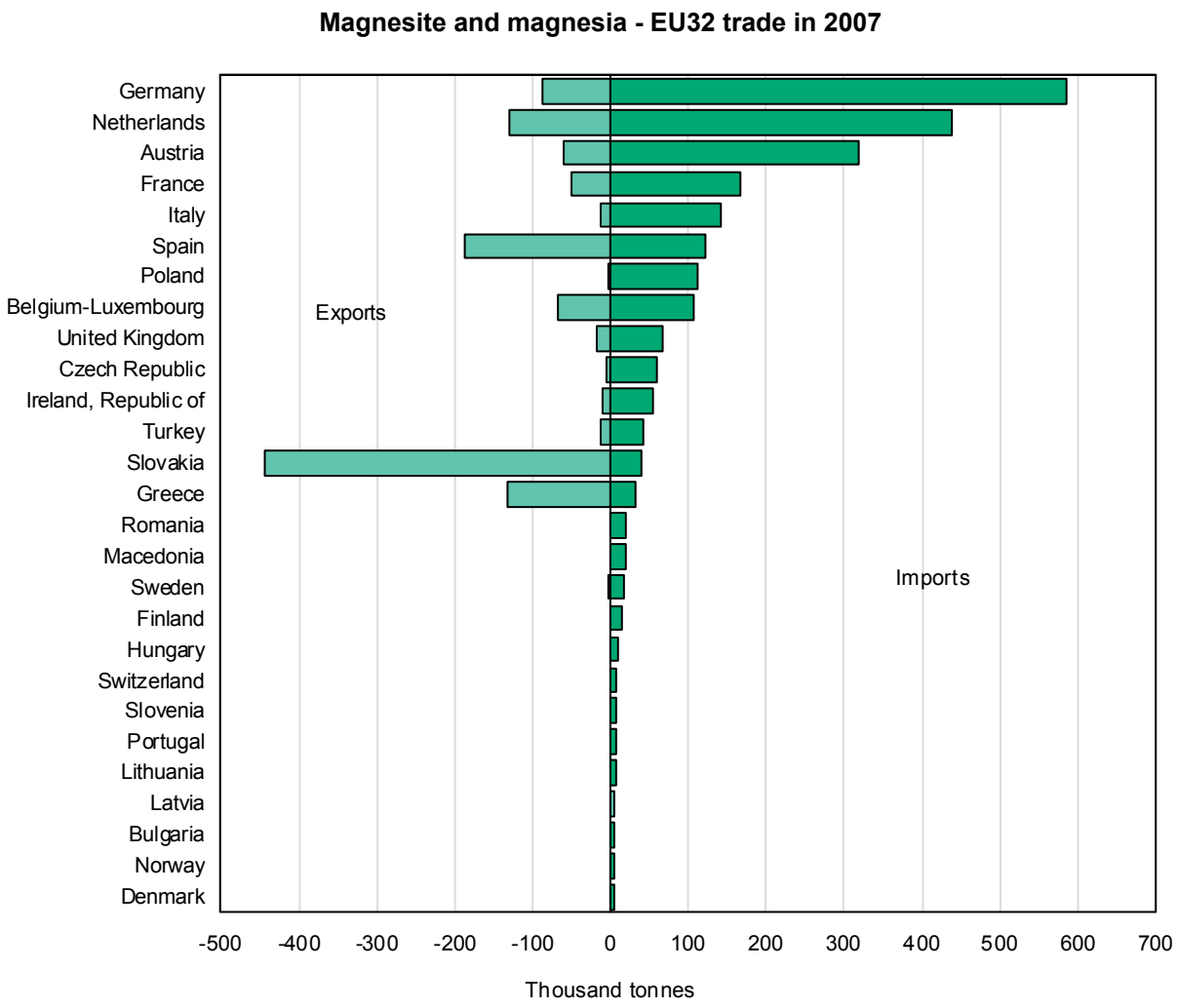
tonnes

Country	2003	2004	2005	2006	2007
Austria					
Magnesite	12 935	4 814	17 019	1 653	933
Magnesia	9 325	181 050	188 449	213 760	317 952
Belgium-Luxembourg					
Magnesite	7 167	505	767	3 872	4 326
Magnesia	151 590	65 125	84 730	152 330	101 911
Bulgaria	5 815	6 354	8 500	6 551	4 670
Croatia	1 006	1 479	1 647	1 564	1 872
Czech Republic					
Magnesite	5 528	5 973	6 860	5 320	6 527
Magnesia	34 377	42 226	43 277	51 674	52 330

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Denmark					
Magnesite	2 499	1 984	2 002	444	512
Magnesia	2 297	2 575	4 560	4 478	3 327
Finland					
Magnesia	17 096	11 567	16 476	9 540	15 989
France					
Magnesite	3 193	1 701	3 427	2 509	2 355
Magnesia	149 468	148 780	161 488	161 029	163 908
Germany					
Magnesite	7 724	4 684	6 353	13 794	17 029
Magnesia	348 042	348 766	515 089	519 576	568 508
Greece					
Magnesite	23 470	20 579	14 250	15 645	12 611
Magnesia	10 427	11 985	17 232	22 763	20 682
Hungary	10 463	7 003	6 251	5 435	9 760
Ireland, Republic of					
Magnesite	15 449	25 886	12 653	1 967	5 971
Magnesia	43 802	49 664	49 466	35 800	48 088
Italy					
Magnesite	17 326	9 429	23 536	10 862	10 240
Magnesia	129 672	163 273	161 432	174 000	131 140
Latvia	3 518	5 297	3 344	4 092	4 681
Lithuania					
Magnesia	5 229	5 448	5 398	5 513	6 501
Macedonia					
Magnesite	...	...	...	42	1 007
Magnesia	1 436	1 288	1 384	5 005	17 856
Netherlands					
Magnesite	13 139	20 619	3 057	3 007	1 390
Magnesia	392 299	644 428	558 764	454 271	437 684
Norway					
Magnesite	3 736	2 587	2 125	4 265	126
Magnesia	190	1 643	500	1 784	4 298
Poland	77 830	82 164	71 774	103 380	111 346
Portugal					
Magnesite	885	969	1 012	1 269	924
Magnesia	5 855	4 808	5 998	6 544	7 119
Romania	23 255	26 209	27 243	27 963	19 853
Slovakia	31 606	27 698	23 379	31 227	40 288
Slovenia	9 732	9 560	9 899	8 478	8 117
Spain					
Magnesite	3 608	2 901	2 348	3 937	4 092
Magnesia	367 117	102 418	103 747	88 898	117 867
Sweden					
Magnesia	28 074	29 455	21 293	24 610	17 556
Switzerland					
Magnesite	225	294	168	394	1 024
Magnesia	5 744	6 538	6 708	7 506	7 144
Turkey					
Magnesia	56 000	38 084	52 432	29 148	43 360
United Kingdom					
Magnesite	20 287	11 187	13 896	10 644	10 194
Magnesia	82 100	83 539	78 843	64 896	57 905

Note(s) :-
(1) The term 'magnesia', as used here, includes dead-burned, sintered and caustic-burned (caustic calcined) material


Magnesite and magnesia - EU32 trade in 2007
Germany
Netherlands
Austria
France
Italy
Spain
Poland
Belgium-Luxembourg
United Kingdom
Czech Republic
Ireland, Republic of
Turkey
Slovakia
Greece
Romania
Macedonia
Sweden
Finland
Hungary
Switzerland
Slovenia
Portugal
Lithuania
Latvia
Bulgaria
Norway
Denmark
Exports
Imports
-500
-400
-300
-200
-100
0
100
200
300
400
500
600
700
Thousand tonnes

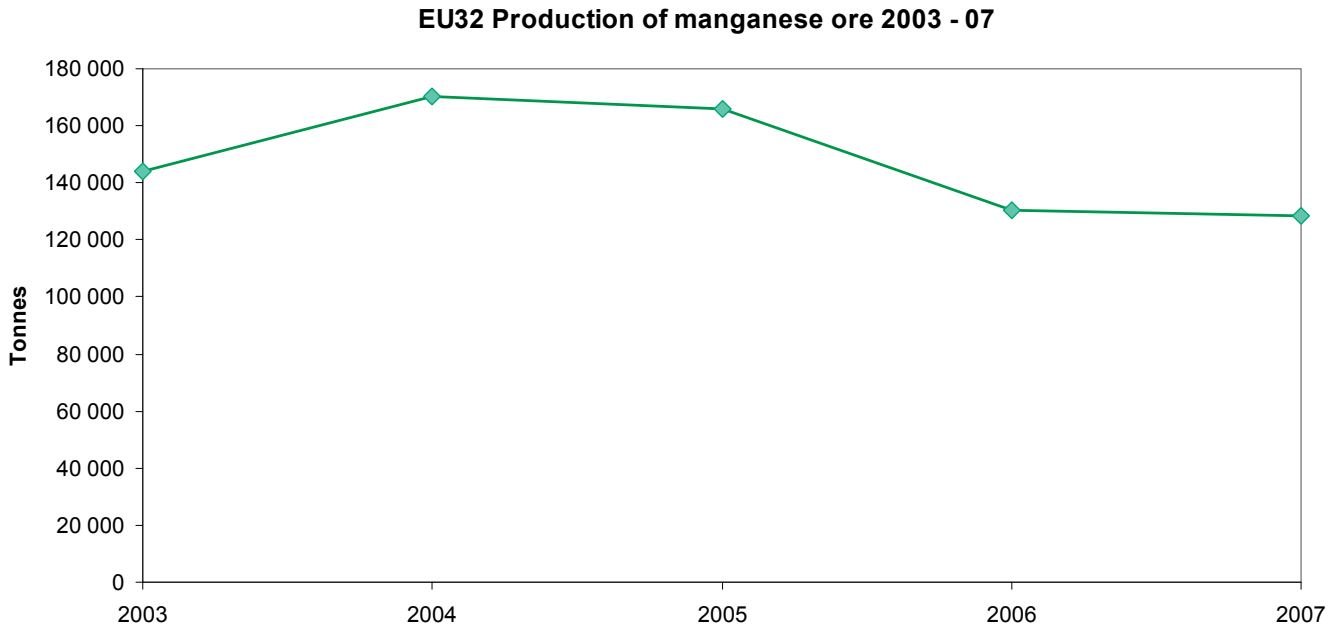
Manganese ore

- Manganese is a hard, brittle metal. The chief ores are pyrolusite and other manganese dioxides. The principal use is in the steel industry as a desulphuriser and an alloying agent, where it imparts hardness and wear resistance. Manganese is also an important constituent of many aluminium alloys. Manganese dioxide is a component of dry-cell batteries; other compounds are used in the chemical industry.
- Economic concentrations of manganese are relatively rare and production is confined to 27 countries. China is the largest producer with an estimated 24 per cent of world production. Production of manganese in the EU32 is limited with Hungary (38 per cent of EU32 production) and Romania (37 per cent) the largest producers. Manganese ore, ferro-manganese, electrolytic manganese dioxide and manganese metal are the chief forms in international trade.
- During 2007 and 2008 prices for standard ferro-manganese (78% Mn, 7.5% C) increased considerably from about €630 per tonne to a high in April 2008 of about €2000 per tonne. However the price fell in the latter part of 2008 to end the year at €1100 to €1500 per tonne.
- Prices for manganese metal (electrolytic manganese flake) increased more sharply at the start of 2007, from just over US$1800 per tonne to more than US$5000 per tonne by June before falling to about US$3000 by the year end. During 2008 the price for manganese metal rose again and for most of the year traded at about US$4000 to US$4500 per tonne. However, in the latter part of the year prices fell considerably, finishing the year at round US$2500 per tonne.

Production of manganese ore

tonnes

Country	2003	2004	2005	2006	2007
Bulgaria	4 200	27 800	38 500	20 500	27 900
Hungary	48 000	49 000	50 000	50 000	51 000
Italy	763	714	632	...	...
Romania	72 931	79 130	72 000	60 107	49 350
Turkey	18 000	13 751	4 751	...	...
EU32 Total	144 000	170 000	166 000	136 000	134 000



Exports of manganese

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	18 923	11 575	5 470	306	116
Belgium-Luxembourg					
Ores & concentrates	13 476	11 300	10 648	5 138	15 819
Metal	3 091	1 377	1 826	7 045	4 060
Bulgaria					
Ores & concentrates	6 402	42 122	53 559	25 595	19 335
Estonia					
Metal	1 320	...	...	142	464
France					
Ores & concentrates (a)	332 067	272 815	139 723	303 881	333 747
Metal	424	745	324	415	327
Germany					
Ores & concentrates	1 776	2 860	3 249	3 046	5 761
Metal	10 703	12 261	17 824	19 757	15 414
Italy					
Metal	37	113	241	298	309
Macedonia					
Ores & concentrates	71 052	...	...	5 117	...
Netherlands					
Ores & concentrates	12 041	15 143	14 903	...	8 223
Metal	7 365	12 548	13 585	16 739	19 767
Norway					
Ores & concentrates	...	105	1 410	7 880	56 939
Romania					
Ores & concentrates	6 029	1 742	...	...	—
Metal	...	...	...	...	3 024
Slovenia					
Metal	185	143	2 584	228	236
Spain					
Ores & concentrates	855	989	776	1 336	1 299
Metal	4 791	6 117	6 651	5 827	5 783
Sweden					
Metal	352	196	143	176	131
Turkey					
Ores & concentrates	...	12 817	955	2 466	4 062
United Kingdom					
Metal (b)	*3 000	*3 100	*3 000	*2 000	*2 100

Note(s):-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) Including manganiferous iron ore
(b) BGS estimates, based on known imports into certain countries

Imports of manganese

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	10 024	6 497	8 707	12 059	17 543
Belgium-Luxembourg					
Ores & concentrates	79 645	73 953	66 840	65 462	79 022
Metal	4 480	2 466	4 150	10 114	6 403
Bulgaria					
Ores & concentrates	234 401	46 768	13 631	17 367	27 602
Croatia					
Ores & concentrates	...	...	2	12	828
Metal	50	93	93	89	586
Czech Republic					
Ores & concentrates	11 966	11 663	13 820	14 335	16 079
Metal	386	593	619	674	757

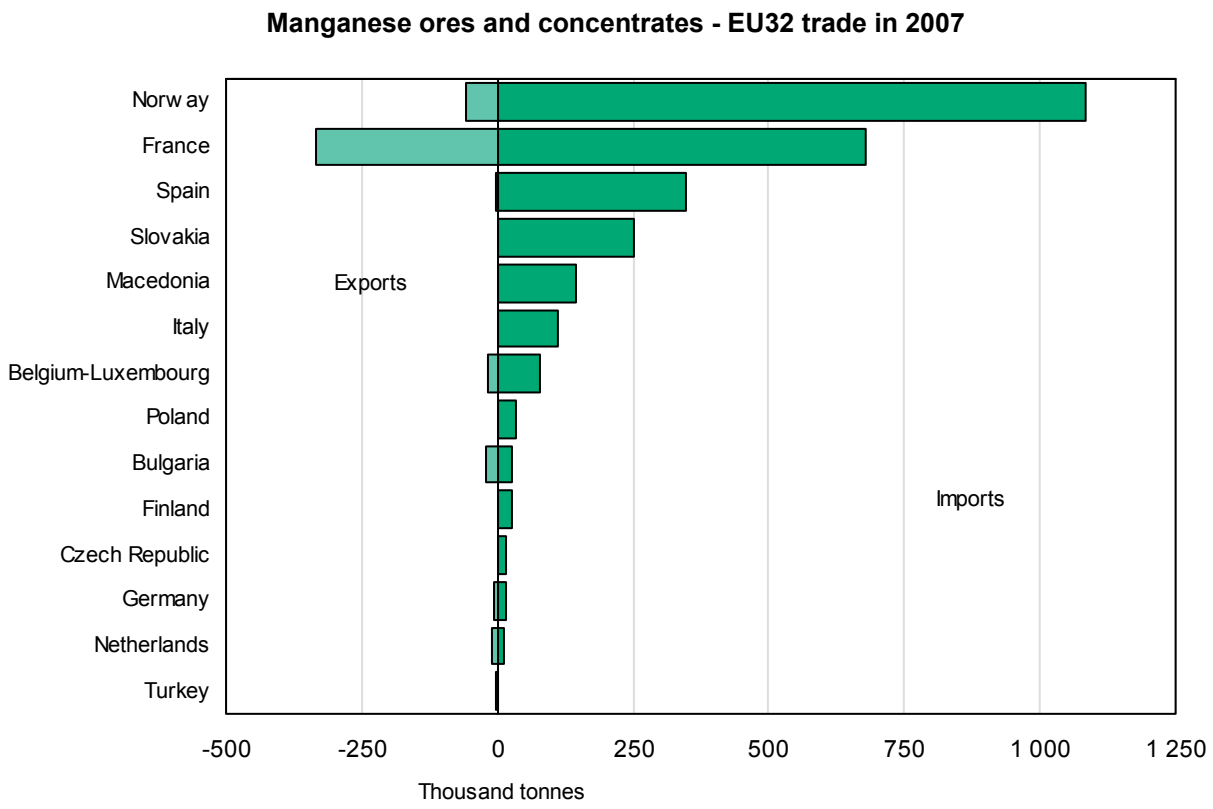
Imports continued

tonnes

Country	2003	2004	2005	2006	2007
Denmark					
Metal	152	164	157	161	317
Estonia					
Metal	1 201	401	552	909	836
Finland					
Ores & concentrates	9 983	20 381	28 335	10 433	27 251
Metal	717	547	753	2 182	2 379
France					
Ores & concentrates (a)	892 176	626 061	615 884	611 043	678 369
Metal	7 613	8 851	11 039	11 131	15 198
Germany					
Ores & concentrates (a)	6 917	8 034	7 645	11 327	15 997
Metal	21 229	22 435	29 449	45 937	42 368
Greece					
Ores & concentrates	24 985	1	22 001	46 164	...
Metal	389	1 510	905	730	291
Hungary					
Metal	568	111	889	1 180	271
Ireland, Republic of					
Ores & concentrates (a)	19 306	268	285	368	286
Metal	9	5	5	15	118
Italy					
Ores & concentrates (a)	100 796	206 249	76 278	72 465	113 300
Metal	3 673	4 970	8 494	35 391	7 100
Macedonia					
Ores & concentrates	...	...	28 977	44 040	143 556
Netherlands					
Ores & concentrates	11 136	14 558	35 936	22 495	11 749
Metal	9 112	14 347	61 240	22 162	31 236
Norway					
Ores & concentrates	803 971	1 132 985	1 172 711	849 729	1 083 361
Metal	3 069	3 610	2 976	3 531	2 953
Poland					
Ores & concentrates	10 037	205 290	38 845	6 017	32 984
Metal	432	652	499	1 155	1 167
Romania					
Ores & concentrates	380 043	534 014	357 327	3 134	79
Metal	297	303	427	1 000	3 030
Slovakia					
Ores & concentrates	176 511	257 331	273 270	308 417	253 048
Metal	147	...	146	193	242
Slovenia					
Metal	152	296	316	435	388
Spain					
Ores & concentrates	437 088	575 518	415 959	393 476	349 131
Metal	10 569	9 786	10 537	9 165	9 563
Sweden					
Ores & concentrates	91	62	119	72	130
Metal	3 618	2 641	2 632	2 380	3 012
Switzerland					
Metal	501	484	486	444	778
Turkey					
Metal	137	495	300	200	...
United Kingdom					
Ores & concentrates (a)	2 102	2 585	698	4 229	1 569
Metal	8 250	9 189	8 223	8 563	7 021

Note(s) :-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

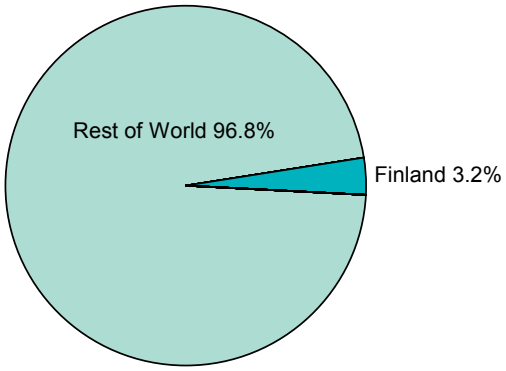
(a) Including manganiferous iron ore


Manganese ores and concentrates - EU32 trade in 2007
Norway
France
Spain
Slovakia
Macedonia
Italy
Belgium-Luxembourg
Poland
Bulgaria
Finland
Czech Republic
Germany
Netherlands
Turkey
Exports
Imports
-500
-250
0
250
500
750
1 000
1 250
Thousand tonnes

Mercury

- Mercury is the only metallic element that is liquid at room temperature. The chief economic sources are deposits of the mineral cinnabar but mercury is also recovered from base metal refining. Mercury's main uses are in electrical switches and other control apparatus, and in dental amalgam. Large amounts remain in use in chlor-alkali plants and in batteries but these applications are being phased out.
- Only nine countries commercially extracted mercury in 2007. China and Kyrgyzstan are the world's two largest producers and are responsible for 86 per cent of total world output. With the closure of the Almaden mine in Spain, Finland is now the only producer in the EU32 countries and its output represents three per cent of the world total.
- Mercury prices (free market, in warehouse) rose during the first part of 2007 to a high of US$550 to US$650 per flask in July and August, before dropping back slightly to stabilise at US$500 to US$600 per flask for several months. Subsequently, the prices rose in the last four months of 2008 to finish the year at US$600 to US$700 per flask.

EU32 Production of mercury 2007



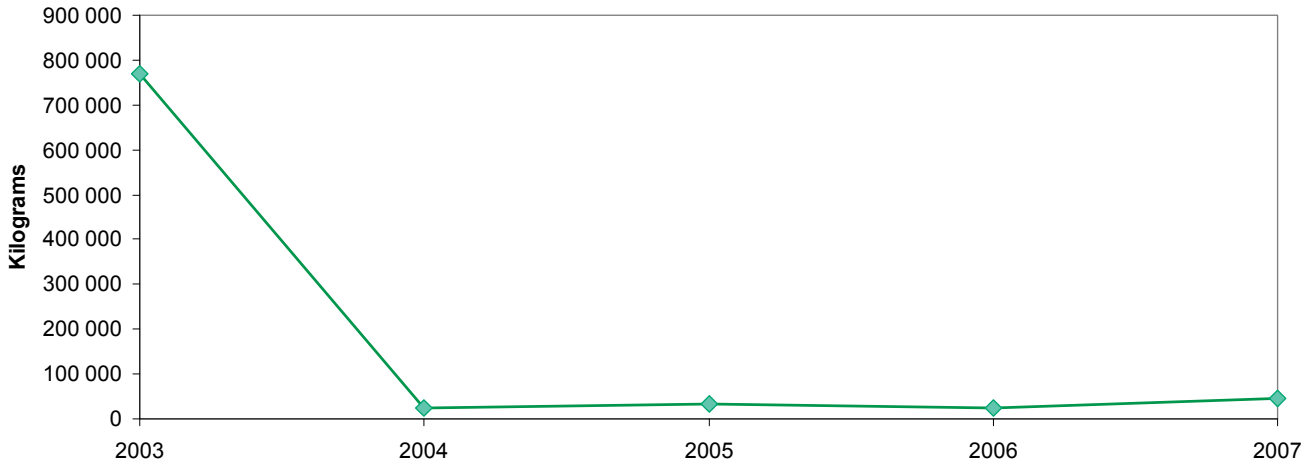
Production of mercury

kilograms

Country	2003	2004	2005	2006	2007
Finland	25 000	23 500	34 200	22 820	45 000
Spain	745 260	—	—	—	—
EU32 Total	770 300	23 500	34 200	22 820	45 000

Note(s):-
(1) Several countries are believed to have unrecorded production of mercury from copper electrowinning processes

EU32 Production of mercury 2003 - 07



Exports of mercury

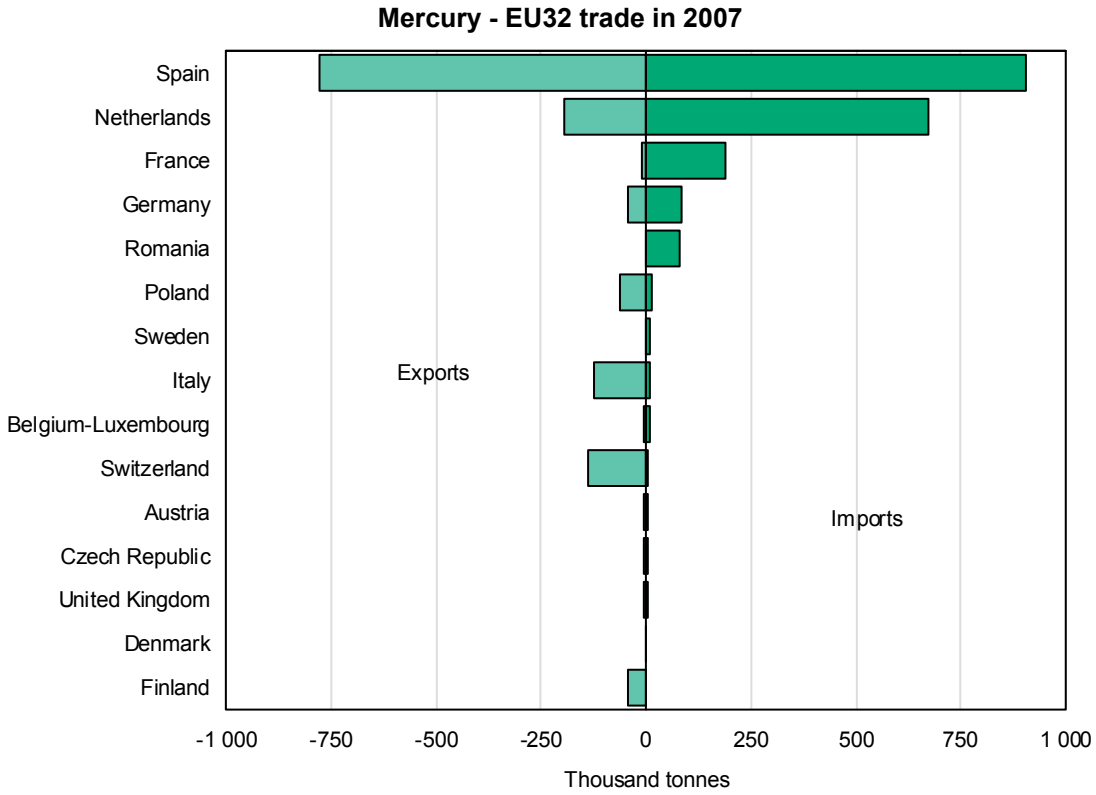
kilograms

Country	2003	2004	2005	2006	2007
Austria	800	1 700	4 100	214	5 000
Belgium-Luxembourg	17 000	1 300	8 800	42 300	3 300
Czech Republic	9 970	22 172	8 200	1 700	3 600
Denmark	10 554	27 458	1 932	824	2 800
Estonia	2 476	...	3 400	—	—
Finland	25 530	23 462	32 090	24 859	45 600
France	6 800	93 800	15 400	27 300	9 100
Germany	48 900	55 500	36 200	40 000	42 300
Italy	20 153	6 952	18 244	14 820	125 946
Netherlands	105 100	183 998	188 220	176 670	196 039
Poland	...	2	3 000	33 900	61 600
Slovakia	2 418	3	6	—	...
Slovenia	15 815	7 309	1 517	28	—
Spain	836 784	596 739	581 653	463 954	779 110
Switzerland	7 793	316 631	171 790	87 136	140 336
United Kingdom	851	2 054	191 193	78 514	4 311

Imports of mercury

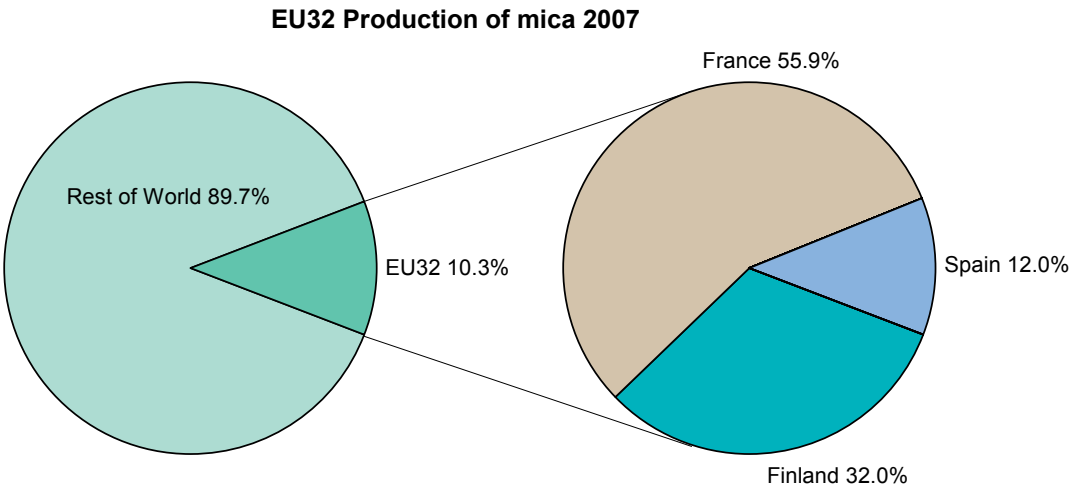
kilograms

Country	2003	2004	2005	2006	2007
Austria	4 000	3 900	1 600	2 000	4 400
Belgium-Luxembourg	29 200	54 700	18 600	44 800	7 900
Czech Republic	2 531	7 300	1 100	4 000	3 200
Denmark	260	403	2 901	129	300
Finland	214	554	28	38	200
France	57 900	299 200	202 600	138 100	190 000
Germany	39 500	80 600	36 200	70 600	84 100
Greece	11 617	187	954	933	100
Hungary	3 875	4 426	4 607	3 529	3 300
Ireland, Republic of	11 604	61	72	11 804	1 019
Italy	27 140	135 119	32 471	49 335	9 491
Netherlands	143 200	616 057	670 022	889 199	674 888
Poland	3 875	4 456	15 700	9 200	15 700
Portugal	523	291	0	0	...
Romania	72	24 287	20 288	49 623	80 000
Slovakia	2 230	2 738	3 457	3 100	3 400
Spain	350 266	301 097	572 872	628 737	906 297
Sweden	3 022	4 000	3 000	6 000	10 600
Switzerland	9 354	9 704	5 846	5 333	6 687
Turkey	8 152	6 044	1 443	2 019	...
United Kingdom	29 673	27 875	32 306	2 128	2 668


Mercury - EU32 trade in 2007
Spain
Netherlands
France
Germany
Romania
Poland
Sweden
Italy
Belgium-Luxembourg
Switzerland
Austria
Czech Republic
United Kingdom
Denmark
Finland
Exports
Imports
-1 000
-750
-500
-250
0
250
500
750
1 000
Thousand tonnes

Mica

- Micas are a group of chemically complex rock-forming minerals recognisable by a perfect cleavage (i.e. they are naturally flaky). Sheet mica is used predominantly in electrical insulation and ground mica has a very wide variety of uses including filler, dusting agent, absorbent, fire insulator, strength enhancer in plastics and decorative material.
- Although a very common mineral, commercial concentrations of mica are relatively rare. Production is limited to about 19 countries. Of these, China was the largest producer in 2007 with 30 per cent of the world total. Mica is produced in three EU32 countries, of which the largest producer is France (56 per cent of EU32 total).
- Because of the wide variety of micas there are many trading categories that are very sensitive to quality. Prices ranged from US$200–US$1300 per tonne in 2007 and 2008.



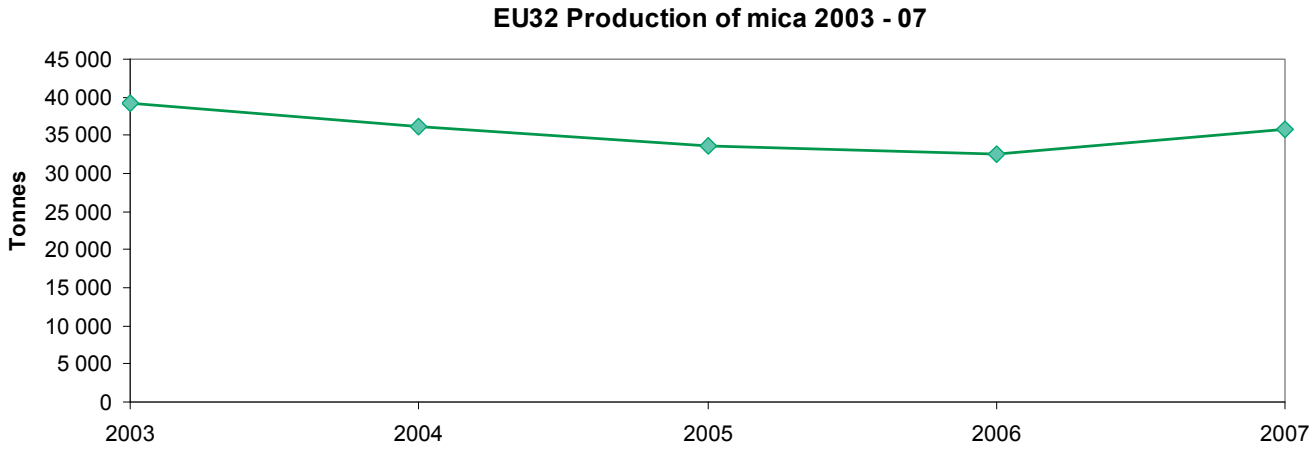
Production of mica

tonnes

Country	2003	2004	2005	2006	2007
Finland	9 337	9 250	9 500	8 097	11 449
France (a)	18 000	19 000	*20 000	*20 000	*20 000
Spain (a)	11 800	7 825	4 043	4 496	4 300
EU32 Total	39 000	36 000	34 000	33 000	36 000

Note(s):-
(1) In addition to the countries listed, Romania is believed to produce mica

(a) Including mica recovered from mica schists and/or kaolin beneficiation



Exports of mica

tonnes

Country	2003	2004	2005	2006	2007
Austria	3 767	3 917	4 915	4 102	4 234
Belgium-Luxembourg	1 907	1 635	3 226	3 225	3 226
Finland	8 099	7 511	5 745	6 603	8 956
France	114 464	14 323	13 469	12 845	13 959
Germany	2 457	3 655	3 656	4 039	4 957
Greece	4 239	2 769	5 653	9 613	3
Italy	371	623	738	1 159	1 429
Netherlands	5 359	6 084	2 912	2 735	6 842
Norway	2 413	2 076	2 003	2 157	2 168
Spain	3 996	3 075	2 591	4 457	3 562
Turkey	546	15 975	565	430	—
United Kingdom	4 774	9 377	4 050	4 593	3 820

Note(s):-
(1) This table shows unmanufactured mica and includes sheet, block, splittings, ground and waste, unless these are separately specified. Mica powder is included under the term 'ground'

Imports of mica

tonnes

Country	2003	2004	2005	2006	2007
Austria	899	645	512	615	722
Belgium-Luxembourg					
Unmanufactured	89	1 588	913	470	1 204
Ground	3 223	4 311	2 996	2 646	3 461
Waste	...	...	...	...	4 364
Czech Republic	764	879	819	1 629	2 262
Denmark	305	369	413	1 596	366
Finland	3 664	2 861	2 998	2 874	4 098
France					
Ground (a)	3 182	1 358	1 534	2 674	2 532
Waste	1 043	546	1 423	—	—
Germany					
Unmanufactured	205	237	89	12	16
Ground	24 993	28 784	30 820	33 101	36 345
Waste	840	1 212	1 101	980	782
Greece	203	94	131	111	123
Ireland, Republic of	364	551	889	650	508
Italy					
Unmanufactured	106	65	118	158	189
Ground	2 759	3 473	3 405	3 657	4 803
Lithuania	138	137	124	122	53
Netherlands					
Unmanufactured	139	54	143	176	400
Ground	8 403	9 951	7 381	7 251	9 933
Norway	1 759	1 559	1 001	1 141	1 267
Poland	486	878	547	918	1 118
Portugal	198	311	193	630	284
Romania					
Mica	590	828	886	912	478
Spain	1 810	1 641	1 917	1 484	1 871
Sweden	566	514	592	515	584
Switzerland	357	426	601	1 151	3 021
Turkey	169	215	248	231	6
United Kingdom					
Unmanufactured	424	1 769	296	251	289
Ground	8 327	6 286	6 684	5 856	6 705
Waste	5 050	4 374	4 485	3 474	3 433

Note(s) :-
(1) This table shows unmanufactured mica and includes sheet, block, splittings, ground and waste, unless these are separately specified. Mica powder is included under the term 'ground'

(a) Including unmanufactured

Molybdenum

- Molybdenum is a hard metal. It is an important component of high tensile steel where it imparts hardness, tolerance of high temperatures and resistance to corrosion. Molybdenum disulphide is used as a dry lubricant.
- Molybdenum is generally produced as a by-product of copper mining. Production in 2007 was confined to only 13 countries, of which the USA, Chile and China together produced 76 per cent. There is no production in the EU32 countries.
- Molybdenum is marketed mainly as concentrate, oxide and ferro-molybdenum. From January 2007 to September 2008 prices for molybdenum oxide (drummed, free market, in warehouse) ranged between US$25 and US$34 per pound with a generally increasing trend. However in the last three months of 2008 there was a dramatic fall in prices to end the year at only US$10 per pound.

Exports of molybdenum

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal (a)	*2 200	*2 100	*4 700	*3 000	*3 500
Oxides	5	125	...	...	...
Belgium-Luxembourg					
Ores & concentrates	11 690	16 219	17 683	24 320	22 340
Metal	314	221	342	194	556
Oxides	820	571	687	905	829
Bulgaria					
Metal	49	546	105	87	99
Czech Republic					
Metal	4	123	23	12	78
Denmark					
Oxides	...	...	...	...	200
Estonia					
Metal	47	1	1	...	...
France					
Ores & concentrates	0	41	365	512	485
Metal	15	436	35	38	79
Oxides	27	31	9	10	12
Germany					
Ores & concentrates	905	2 309	2 770	3 812	2 723
Metal	1 465	2 014	2 241	2 958	346
Oxides	2 894	—	—	—	—
Italy					
Ores & concentrates	20	295	246	29	311
Metal	250	171	132	639	221
Oxides	10	21	47	107	185
Lithuania					
Ores & concentrates	331	...	310	...	173
Netherlands					
Ores & concentrates	17 141	30 424	47 395	27 264	26 613
Metal	161	120	59	190	409
Oxides	1 640	2 010	2 708	2 110	3 059
Poland					
Metal	...	...	61	122	113
Romania					
Metal	...	...	...	...	80
United Kingdom					
Ores & concentrates	84	180	179	166	78
Metal	230	312	807	318	237

Note(s):-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) BGS estimates, based on known imports into certain countries

Imports of molybdenum

tonnes

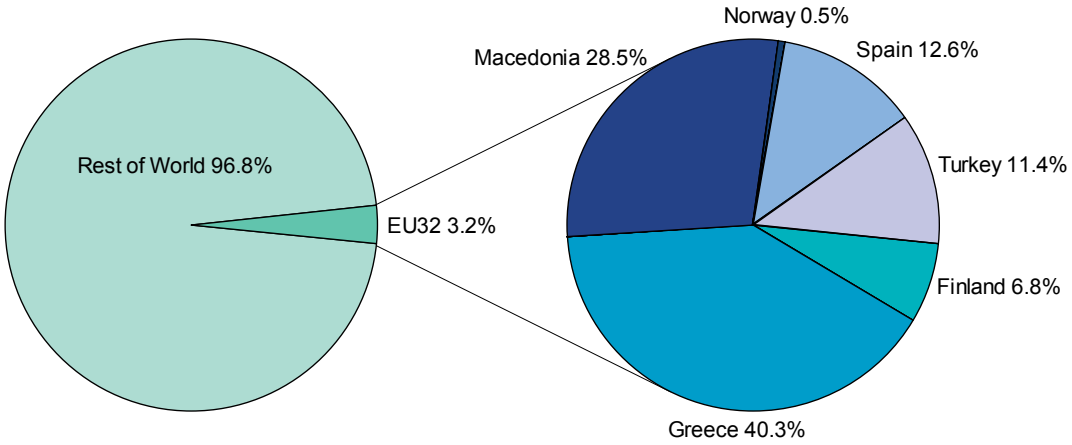
Country	2003	2004	2005	2006	2007
Austria					
Metal	382	865	599	1 342	1 243
Belgium-Luxembourg					
Ores & concentrates	36 903	45 922	54 452	47 122	43 932
Metal	179	277	383	490	752
Oxides	2 702	1 519	2 072	2 618	2 796
Bulgaria					
Metal	58	53	108	73	47
Czech Republic					
Ores & concentrates	...	...	189	139	213
Metal	42	66	89	175	130
Denmark					
Oxides	150	190	247	196	432
Estonia					
Metal	43	4	82	146	...
Finland					
Ores & concentrates	4 868	5 603	4 127	9 270	5 789
France					
Ores & concentrates	1 591	1 492	1 783	1 896	1 511
Metal	727	762	993	1 075	830
Oxides	371	664	678	579	670
Germany					
Ores & concentrates	9 800	12 221	11 537	14 059	10 721
Metal	1 878	3 043	2 569	3 894	4 238
Oxides	545	703	725	2 049	1 776
Greece					
Metal	1	13	2	47	34
Hungary					
Metal	121	129	129	145	112
Italy					
Ores & concentrates	4 119	4 719	5 109	5 552	5 901
Metal	122	105	203	189	215
Oxides	172	247	117	229	183
Netherlands					
Ores & concentrates	29 337	39 710	31 781	34 891	30 403
Metal	459	141	287	801	1 060
Oxides	1 577	2 032	1 509	1 441	1 341
Poland					
Ores & concentrates	1	8	1	5	15
Metal	36	142	102	208	616
Portugal					
Metal	15	24	14	14	8
Slovenia					
Ores & concentrates	42	524	5 674	700	876
Spain					
Ores & concentrates	3 917	3 805	3 317	4 584	4 622
Metal	45	30	31	163	113
Sweden					
Ores & concentrates	5 235	5 826	5 690	6 863	7 003
Metal	252	458	280	139	281
Oxides	784	594	392	1 133	780
Switzerland					
Metal	26	25	31	21	20
Turkey					
Metal	4	10	4	3	2
Oxides	84	130	82	0	...
United Kingdom					
Ores & concentrates	18 884	18 371	18 600	19 032	18 381
Metal	1 169	1 854	2 877	3 445	1 390
Oxides	7	2	630	635	513

Note(s) :-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

Nickel

- Nickel is a hard, strong, corrosion-resistant, malleable and ductile metal that is a good conductor of heat and electricity. Its most important use is in steel alloys where it imparts strength and toughness. It is also widely used in plating, both metals and plastics, and combined with copper in cupro-nickel alloys.
- About one third world nickel mine production in 2007 was supplied by Russia and Canada. Indonesia overtook Australia as the third largest mine nickel producer in the world. Greece is the largest mine producer in the EU32 with 40 per cent of the EU32 total but the output from Macedonia has increased by more than 160 per cent since 2003 and now represents 28 per cent of the EU32 total.
- Russia is also the largest refined nickel producer in the world and Canada is the third largest behind China. Together these three countries produce 44 per cent of the world total. Norway was the largest refined nickel producer in the EU32 in 2007 with 38 per cent of the EU32 total.
- The nickel market enjoyed strong growth in 2006 largely driven by increased use of stainless steel, and this continued into 2007. The LME nickel price reached a high of US$52 160 per tonne in May 2007 before falling back to US$26 000 per tonne by December. A small rise at the start of 2008 was short-lived and most of the year saw prices declining steadily to finish 2008 below US$9700 per tonne, the lowest prices since 2003.

EU32 Mine production of nickel 2007

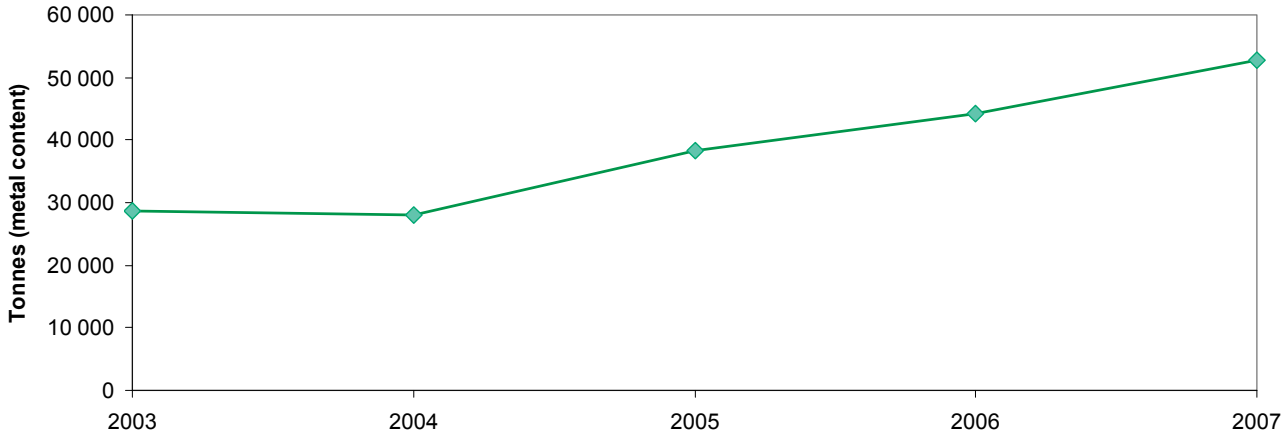


Mine production of nickel

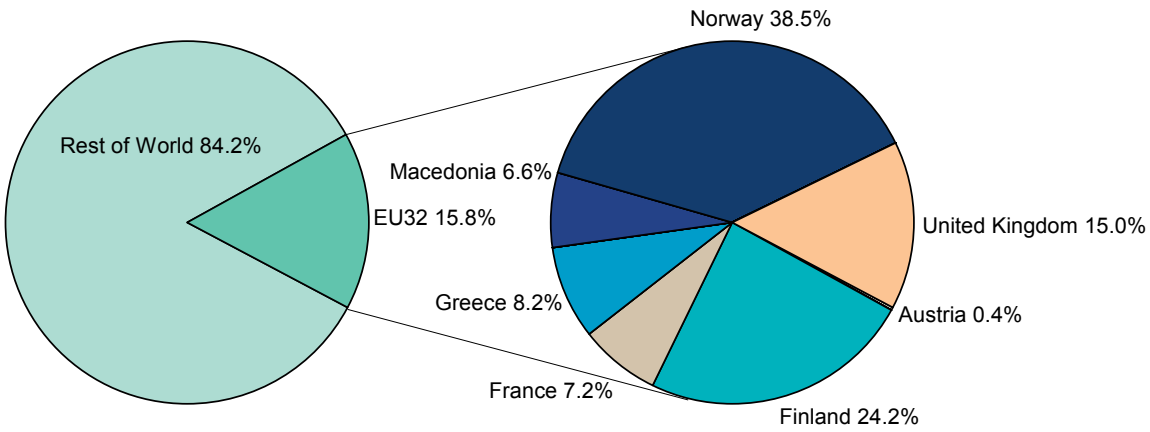
tonnes (metal content)

Country	2003	2004	2005	2006	2007
Finland	3 400	3 400	3 400	3 000	3 600
Greece	19 100	19 000	20 400	21 700	21 200
Macedonia	5 600	5 300	8 100	10 900	15 000
Norway	—	382	342	320	240
Spain	—	—	5 380	6 398	6 630
Turkey	500	—	700	1 900	*6 000
EU32 Total	28 600	28 100	38 300	44 200	52 700

EU32 Mine production of nickel 2003 - 07



EU32 Smelter/refinery production of nickel 2007



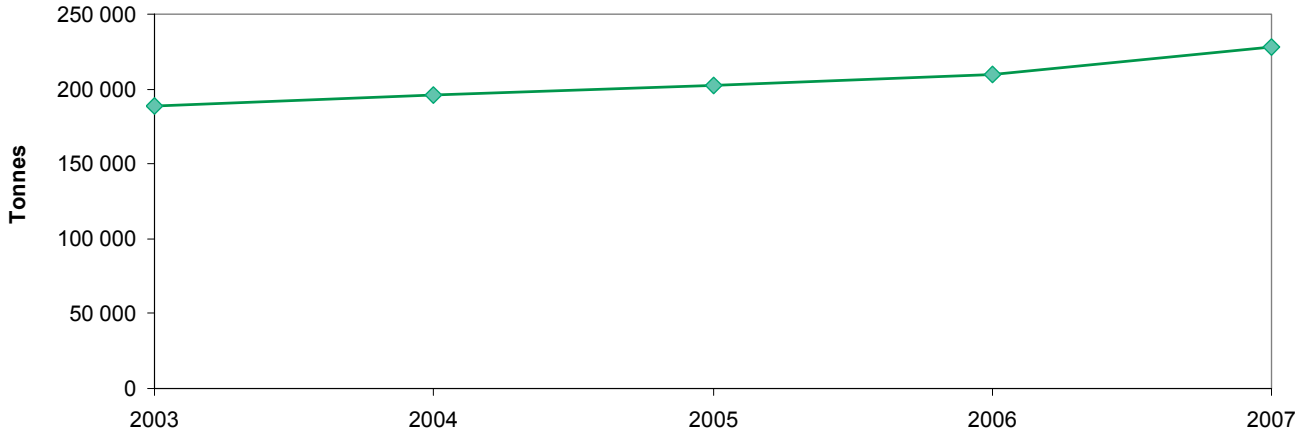
Smelter/refinery production of nickel

tonnes

Country	2003	2004	2005	2006	2007
Austria	*1 000	1 300	1 000	900	900
Finland	50 989	49 580	39 159	47 469	55 000
France	11 370	12 103	12 684	13 700	16 400
Greece	18 000	18 116	19 235	17 700	18 700
Macedonia	5 600	5 300	8 100	10 900	15 000
Norway	77 183	71 410	85 374	82 257	87 600
United Kingdom	24 200	38 600	37 100	36 800	34 050
EU32 Total	188 300	196 400	202 700	209 700	227 700

Note(s):-
(1) Data relate to refined nickel plus the nickel content of ferro-nickel, nickel oxide and nickel salts

EU32 Smelter/refinery production of nickel 2003 - 07



Exports of nickel

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Unwrought (a)	206	297	226	197	333
Scrap	440	1 520	1 927	2 337	2 208
Belgium-Luxembourg					
Ores & concentrates	438	...	853	877	1 423
Mattes, sinters etc.	1 139	768	209	559	68
Unwrought	9 848	16 290	13 376	14 324	15 642
Unwrought alloys	1 947	2 843	2 510	1 994	2 401
Scrap	1 114	1 694	1 008	3 656	4 954
Oxides	268	772	702	685	476
Czech Republic					
Unwrought (a)	186	967	57	690	171
Scrap	417	525	843	1 036	1 245
Oxides	358	296	658	602	617
Denmark					
Scrap	593	777	676	585	482
Estonia					
Unwrought (a)	999	...	42	29	6
Scrap	108	296	34	713	1 260
Finland					
Ores & concentrates	1 459	—	—	—	—
Unwrought	37 416	36 458	30 628	37 747	43 427
Scrap	...	26	28	47	441
Oxides (b)	*600	*500	*300	*600	*600
France					
Unwrought	8 396	9 203	10 148	11 761	12 308
Unwrought alloys	542	1 455	1 762	999	1 475
Scrap	8 306	6 618	6 373	7 826	7 578
Oxides	359	1 140	63	433	26
Germany					
Ores & concentrates	10 884	10 717	7 822	8 901	2 520
Mattes, sinters etc.	...	644	5 604	9 285	18 473
Unwrought	5 225	5 549	8 988	5 287	4 256
Unwrought alloys	6 011	8 732	9 376	9 970	9 664
Scrap	8 091	8 096	9 342	6 224	7 383
Oxides	246	105	102	143	167
Greece					
Ores & concentrates	2 362	190	...	52 169	150
Ireland, Republic of					
Scrap	664	797	641	1 015	556
Italy					
Unwrought (a)	2 923	1 637	1 720	799	1 272
Scrap	351	644	1 923	448	724
Latvia					
Scrap	853	170	538	116	49
Lithuania					
Scrap	996	770	411	674	232
Netherlands					
Mattes, sinters etc. (b)	*8 100	*11 700	*11 800	*11 700	*6 500
Unwrought (a)	33 096	24 467	21 895	77 742	80
Scrap	3 602	2 745	2 009	1 740	4 456
Oxides	0	28 549	6 017	1 757	...
Norway					
Ores & concentrates	6 268	9 575	7 581	7 860	5 379
Unwrought	78 389	71 982	84 012	81 440	88 628
Scrap	264	909	897	641	1 185
Poland					
Unwrought	(a) 41	(a) 110	(a) 480	312	(a) 466
Scrap	...	...	642	290	268
Oxides	339	468	529	577	558
Slovenia					
Unwrought (a)	116	144	117	118	232
Spain					
Ores & concentrates	...	...	85 203	95 377	65 853
Unwrought (a)	126	177	572	795	767
Scrap	420	363	528	910	227

Exports continued — tonnes

Country	2003	2004	2005	2006	2007
Sweden					
Unwrought	384	(a) 133	112	514	(a) 390
Scrap	1 096	1 138	4 369	5 743	5 344
Oxides	181	317	291	349	457
Switzerland					
Unwrought (a)	125	49	73	154	113
Scrap	880	1 106	1 403	1 669	1 750
Turkey					
Ores & concentrates	43 600	3 511	52 062	91 828	175 712
United Kingdom					
Mattes, sinters etc.	200	964	196	517	40
Unwrought	19 200	38 249	38 524	31 610	24 147
Unwrought alloys	4 899	4 710	6 141	6 486	4 375
Scrap	7 861	10 465	14 119	15 555	16 872

Note(s):-
(1) In this table the term 'unwrought' nickel corresponds to item 7502 of the Harmonised System which excludes all electro-plating anodes
(2) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) Including alloys
(b) BGS estimates, based on known imports into certain countries

Imports of nickel

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Mattes, sinters etc.	401	369	460	684	443
Unwrought (a)	5 251	6 772	6 903	7 599	7 874
Scrap	520	632	447	670	605
Oxides	430	293	312	195	78
Belgium-Luxembourg					
Mattes, sinters etc.	61	162	214	203	1 194
Unwrought	41 648	42 387	41 364	51 130	37 554
Unwrought alloys	636	979	822	483	427
Scrap	828	1 644	1 221	271	9 946
Oxides	497	366	324	349	241
Czech Republic					
Unwrought (a)	2 158	2 574	2 520	3 531	4 429
Oxides	465	712	785	844	919
Denmark					
Unwrought (a)	96	112	97	92	53
Scrap	432	447	317	403	529
Estonia					
Mattes, sinters etc.	1 696	46	73	...	1
Unwrought (a)	1 328	163	60	23	30
Scrap	100	331	108	562	803
Finland					
Ores & concentrates	146 122	169 170	104 983	190 233	256 932
Mattes, sinters etc.	51 225	42 944	50 194	45 851	50 856
Unwrought (a)	24 289	24 307	23 801	27 939	15 457
Scrap	200	1 332	860	757	299
France					
Mattes, sinters etc.	15 087	12 329	15 399	19 818	19 864
Unwrought	30 995	26 842	22 656	26 631	25 752
Unwrought alloys	3 192	5 350	6 104	5 500	7 702
Scrap	2 210	2 068	1 554	2 393	1 341
Oxides	200	166	228	297	542
Germany					
Mattes, sinters etc.	4 030	7 264	6 902	6 459	1 911
Unwrought	72 571	72 788	87 939	70 947	74 083
Unwrought alloys	1 933	1 646	2 182	2 908	2 531
Scrap	10 889	11 347	11 672	15 116	19 799
Oxides	563	517	502	445	593

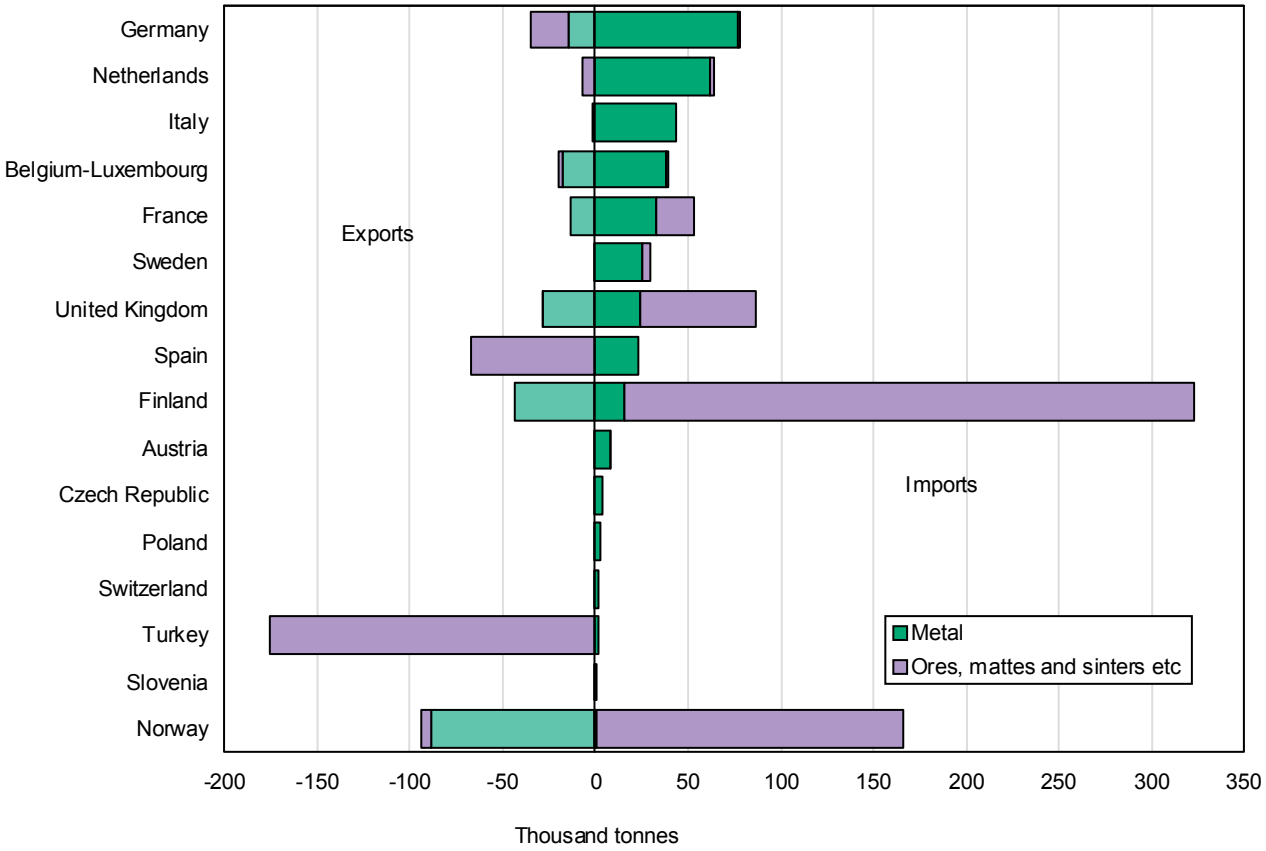
Imports continued tonnes

Country	2003	2004	2005	2006	2007
Greece					
Ores & concentrates	10 480	6	29 153	6 657	36
Unwrought	60	61	56	39	44
Hungary					
Unwrought (a)	149	155	115	141	116
Ireland, Republic of					
Unwrought (a)	1 558	1 493	1 775	1 256	97
Italy					
Mattes, sinters etc.	306	353	32	1 550	1
Unwrought	51 276	41 944	37 708	48 178	41 802
Unwrought alloys	1 211	2 664	1 455	3 918	1 613
Scrap	2 248	3 075	5 119	1 606	1 372
Oxides	127	101	56	40	74
Macedonia					
Ores & concentrates	42 306	65 162	236 025	466 623	863 999
Netherlands					
Mattes, sinters etc.	8 566	9 144	3 832	1 488	...
Unwrought	65 504	61 516	76 469	62 009	...
Unwrought alloys	266	321	343	139	204
Scrap	5 585	6 582	6 738	9 870	14 008
Oxides	7 683	4 632	5 654	3 051	...
Norway					
Mattes, sinters etc.	158 897	136 200	176 657	158 274	165 628
Unwrought (a)	46	222	80	60	215
Poland					
Unwrought (a)	1 589	2 207	1 683	2 573	2 344
Scrap	...	...	3	116	4 897
Portugal					
Unwrought (a)	184	310	602	739	450
Romania					
Unwrought (a)	280	563	745	747	528
Slovakia					
Unwrought	79	199	264	71	70
Slovenia					
Unwrought (a)	992	959	931	874	967
Spain					
Unwrought	26 716	27 854	27 452	28 171	21 202
Unwrought alloys	630	380	1 188	1 174	1 426
Oxides	225	210	176	127	94
Sweden					
Mattes, sinters etc.	4 032	4 051	4 346	4 215	4 252
Unwrought	25 423	27 687	26 931	28 101	25 303
Unwrought alloys	857	1 076	1 324	1 414	356
Scrap	12 543	10 523	8 946	9 158	9 118
Switzerland					
Unwrought (a)	1 392	1 333	1 401	1 706	1 787
Turkey					
Unwrought (a)	2 419	3 353	3 321	1 423	1 695
Oxides	162	144	128	44	...
United Kingdom					
Mattes, sinters etc.	43 968	64 192	57 492	56 336	62 637
Unwrought	34 162	45 264	24 019	17 414	21 044
Unwrought alloys	31 491	2 238	1 629	2 883	2 947
Scrap	20 038	8 957	10 927	7 975	10 376
Oxides	47	103	277	59	49

Note(s) :-
(1) In this table the term 'unwrought' nickel corresponds to item 7502 of the Harmonised System which excludes all electro-plating anodes
(2) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) Including alloys

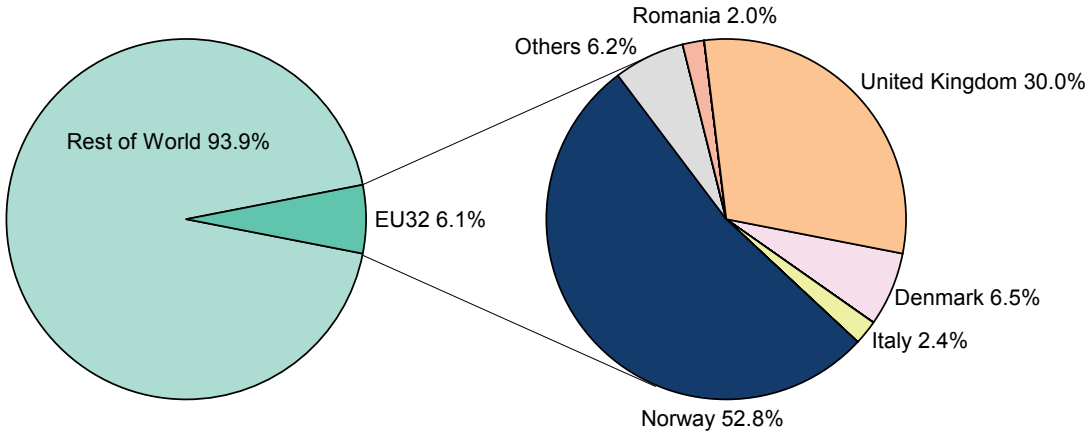
Nickel - EU32 trade in 2007



Crude petroleum

- Petroleum ('oil') is a fundamental energy resource and raw material for lubricants, olefins, polymers (plastics) and other synthetic materials.
- In 2007 a total of 3885 million tonnes of crude petroleum was produced in the world. The largest producing country was Saudi Arabia with 13 per cent of the world total. The EU32 countries produced just 6 per cent of the world total with 53 per cent of this coming from Norway and 30 per cent from the UK.
- Crude oil prices started 2007 at about US$56.00 per barrel and steadily increased throughout the year reaching nearly US$94.00 per barrel by December. This increase continued into 2008 until it reached a peak in July 2008 of nearly US$144.00 per barrel before it declined sharply to end 2008 at about US$34.00 per barrel. The spot price for Brent crude averaged US$72.39 during 2007.

EU32 Production of crude petroleum 2007



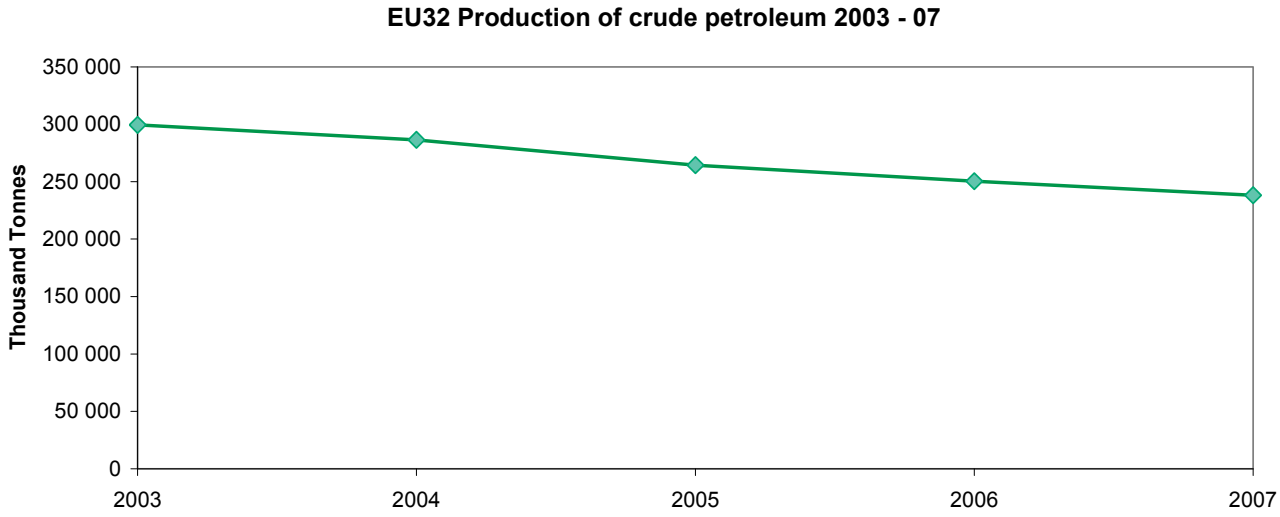
Production of crude petroleum

tonnes

Country	2003	2004	2005	2006	2007
Austria	1 014 716	981 588	933 040	944 637	944 741
Bulgaria	27 900	33 100	30 000	27 500	25 700
Croatia	1 052 121	1 037 787	980 486	950 859	911 207
Czech Republic	310 000	299 000	306 000	259 000	240 000
Denmark	18 341 000	19 446 000	18 822 000	17 068 000	15 551 000
Estonia (a)	1 463 000	1 314 000	1 690 000	1 624 000	1 901 600
France	1 219 000	1 288 000	1 179 000	1 100 000	1 013 000
Germany	3 799 864	3 515 537	3 572 764	3 514 284	3 414 590
Greece	143 000	143 000	135 000	93 000	...
Hungary	1 134 245	1 076 844	947 542	880 000	838 700
Italy	5 570 000	5 445 000	6 100 000	5 800 000	5 800 000
Lithuania	382 400	301 874	216 634	180 894	154 449
Netherlands	3 076 398	2 890 979	2 268 746	2 022 475	2 576 222
Norway	153 508 000	150 974 000	139 802 000	136 695 000	125 763 000
Poland	764 806	886 188	847 844	795 742	720 603
Romania	5 651 000	5 462 000	5 215 000	4 777 000	4 837 000
Slovakia	47 953	42 410	33 150	30 520	23 000
Spain	329 171	262 707	166 014	143 432	143 123
Turkey	2 375 082	2 275 529	2 280 764	2 175 353	1 783 199
United Kingdom	99 161 460	88 834 864	78 821 976	71 432 543	71 484 525
EU32 Total	299 400 000	286 500 000	264 300 000	250 500 000	238 200 000

Note(s):-
(1) The figures shown in this table exclude natural gasoline

(a) From oil shale



Exports of crude petroleum

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg	2 263 897	2 967 608	2 616 977	2 833 897	2 422 211
Czech Republic	155 258	64 315	57 522	41 794	16 573
Denmark	13 015 898	14 324 704	13 567 566	11 456 257	9 493 573
Estonia	(a) *283 000	(a) *321 000	(a) *339 000	...	...
France	91 091	39	20 374	2 675	190
Germany	1 741 465	1 253 391	1 257 658	344 965	196 926
Ireland, Republic of	...	...	(a) *52 000	1	(a) *66 000
Italy	802 524	824 206	986 121	937 813	1 442 498
Latvia	10 162	19 892	6 085	12 099	—
Lithuania	273 187	197 709	148 031	115 075	155 416
Netherlands	54 938	136 202	145 541	309 456	207 858
Norway	135 201 186	129 935 579	119 119 538	105 110 521	99 245 180
Poland	161 074	138 253	216 256	243 699	287 684
Slovakia	16 699	113 305	30 887	27 686	22 172
Spain (a)	*25 000	*3 000	*28 000	*53 000	*201
Turkey (a)	*54 000	*29 000	*75 000	*545 000	*3 584 000
United Kingdom	69 617 507	60 743 679	50 619 044	47 864 601	47 058 702

Note(s):-
(a) BGS estimates, based on known imports into certain countries

Imports of crude petroleum

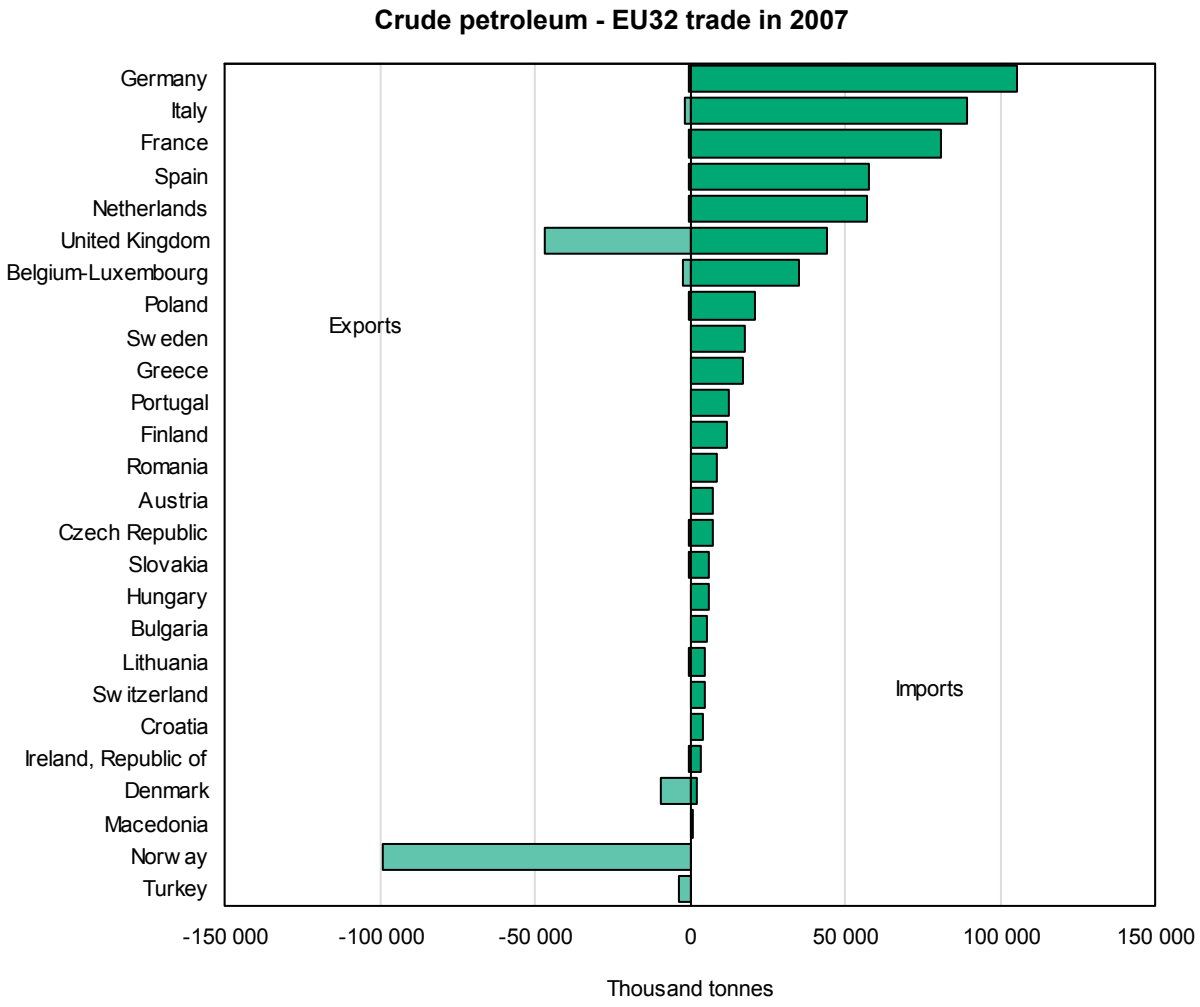
tonnes

Country	2003	2004	2005	2006	2007
Austria	7 819 276	7 539 310	7 836 688	7 698 169	7 645 010
Belgium-Luxembourg	42 731 484	34 210 727	34 417 017	33 843 960	34 847 067
Bulgaria (a)	*489 151	*2 664 126	*3 751 650	*4 866 478	*5 546 761
Croatia	3 776 305	4 197 554	3 855 070	3 778 918	4 285 565
Cyprus	838 280	417 475	...	...	...
Czech Republic	7 380 375	6 530 733	7 674 771	7 752 356	7 179 766
Denmark	3 517 270	3 725 978	2 666 384	2 576 191	2 136 643
Finland	12 019 477	12 249 366	10 603 534	12 176 669	12 221 330
France	84 181 898	86 416 072	84 951 337	83 411 036	81 011 061
Germany	107 268 878	112 096 299	113 067 864	113 960 654	105 162 534
Greece	18 976 807	18 390 500	18 926 138	18 370 720	16 938 841
Hungary	...	5 001 714	6 320 762	...	6 064 641
Ireland, Republic of	1 378 494	2 128 991	3 226 383	3 082 372	3 595 537
Italy	84 724 010	87 208 954	89 007 151	86 807 240	89 130 022
Lithuania	7 075 694	8 375 777	9 746 806	7 994 367	4 869 858

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Macedonia	880 062	781 438	950 742	1 081 738	1 063 614
Netherlands	56 463 347	61 377 494	62 152 486	61 548 064	57 027 374
Norway	562 851	440 346	983 848	440 374	—
Poland	17 448 290	17 316 135	17 639 489	19 479 284	20 778 118
Portugal	12 544 785	13 081 242	12 941 851	13 479 579	12 386 104
Romania	5 216 636	7 314 284	8 688 818	8 678 466	8 533 821
Slovakia	5 603 952	5 858 911	5 421 866	5 878 819	6 141 203
Spain	57 578 507	59 343 873	59 510 408	59 203 359	57 773 847
Sweden	20 436 192	20 873 087	19 770 639	19 170 472	17 719 046
Switzerland	4 551 511	5 086 184	4 744 965	5 413 010	4 595 181
Turkey	24 028 666	23 917 019	23 393 477	8 680 623	...
United Kingdom	44 511 352	56 128 686	54 067 943	55 735 570	44 129 689

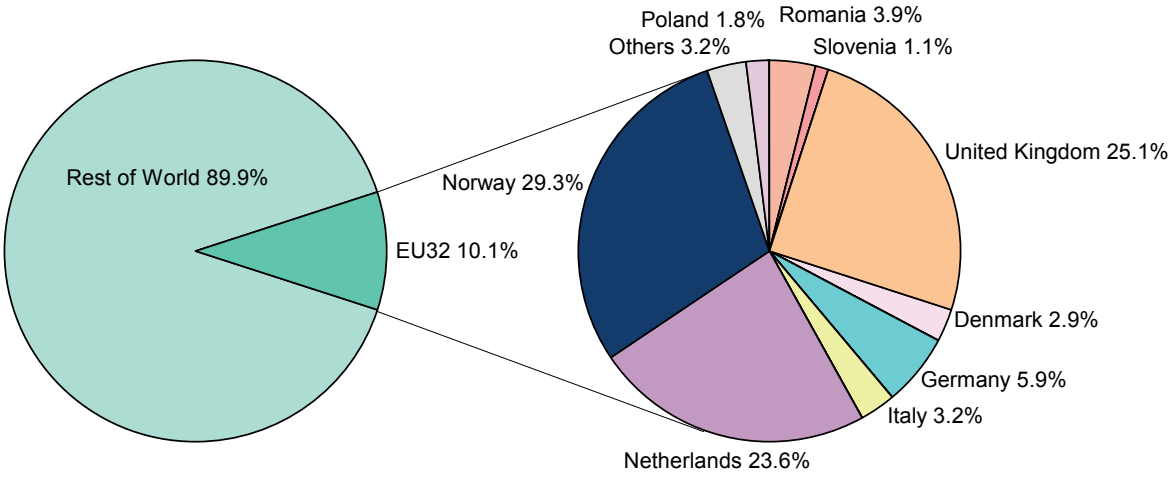
Note(s) :-
(a) BGS estimates, based on known exports from certain countries



Natural gas

- Natural gas is an increasingly important fundamental energy resource. It is used chiefly as a fuel but also a basic feedstock for chemicals such as propane and butane, and in the manufacture of ammonia and fertilisers. It is transported either by pipeline, often over transcontinental distances, or by ships in the form of liquefied natural gas (LNG).
- In 2007 a total of 3 033 000 million cubic metres of gas was produced in the world. Russia (21 per cent) and the USA (18 per cent) are the largest world producers. The EU32 countries contributed 10 per cent to the world total, with 29 per cent of this coming from Norway, 25 per cent from the UK, and 24 per cent from the Netherlands.
- Gas price (European Union CIF) averaged US$8.93 per million Btu in 2007, a 3 per cent rise on 2006.

EU32 Production of natural gas 2007



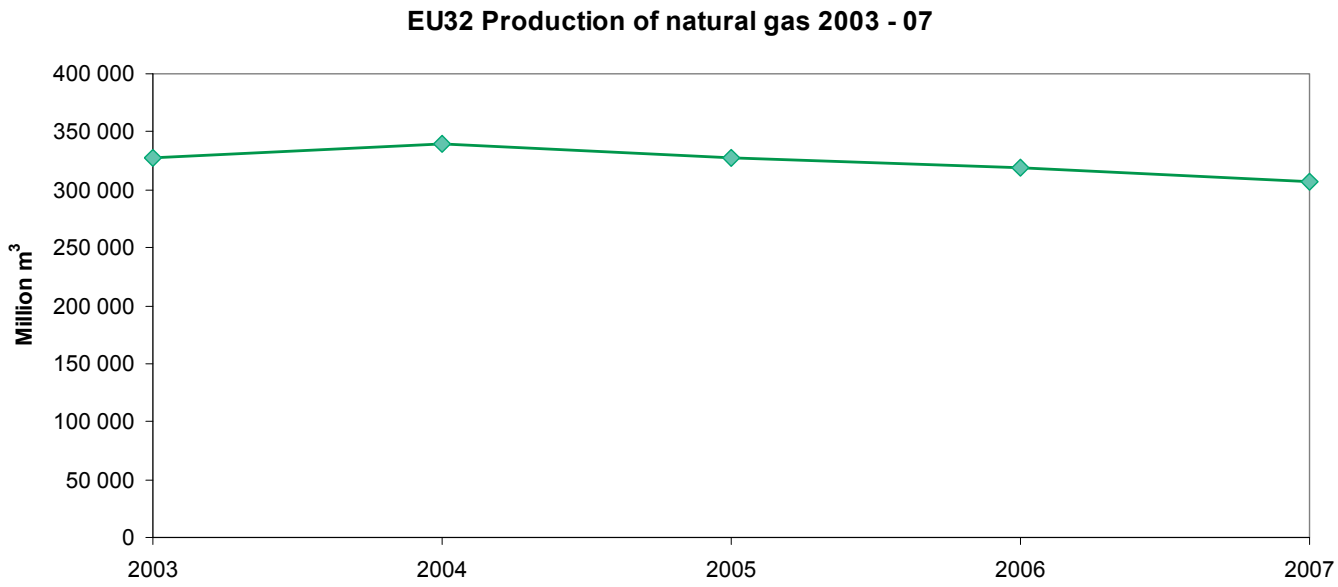
Production of natural gas

million m^3

Country	2003	2004	2005	2006	2007
Austria	2 029	2 011	1 654	1 765	1 835
Bulgaria	11	333	573	519	295
Croatia	2 190	2 198	2 384	2 714	2 892
Czech Republic	131	175	356	148	148
Denmark	7 552	8 946	9 908	9 873	8 752
France	1 523	1 325	1 089	1 167	1 023
Germany	22 202	20 381	19 143	19 798	18 075
Greece	27	23	16	*16	...
Hungary	3 145	3 112	3 041	3 254	2 653
Ireland, Republic of (a)	673	848	570	500	519
Italy	13 885	12 961	11 977	11 000	9 700
Netherlands	69 114	81 499	74 460	73 300	72 431
Norway	72 905	78 351	84 702	87 600	89 700
Poland	5 315	5 630	5 742	5 651	5 653
Romania	13 174	13 246	12 637	12 422	11 981
Slovakia	201	178	151	135	195
Slovenia	4 926	5 500	5 500	4 200	3 400
Spain	268	370	174	118	42
Turkey	276	344	484	307	248
United Kingdom	108 470	101 571	93 505	84 300	76 856
EU32 Total	328 000	339 000	328 000	318 800	306 400

Note(s):-
(1) So far as possible the figures in this table exclude flared or reinjected gas

(a) Sales


EU32 Production of natural gas 2003 - 07
Million m3
400 000
350 000
300 000
250 000
200 000
150 000
100 000
50 000
0
2003
2004
2005
2006
2007

Phosphate rock

- Phosphate rock is the term given to a range of phosphorus-bearing minerals that are commercially exploited. Over 90 per cent of phosphate rock is used to produce fertilisers. The remainder is used in the manufacture of detergents, animal feedstock and many other minor applications.
- China, USA and Morocco together produce 65 per cent of the world's phosphate rock. Finland is the only producer in the EU32, which is otherwise dependent on imports.
- Phosphate rock (70–72 per cent BPL, FAS Casablanca) traded at US$46 per tonne in 2007 and for the first part of 2008. However the price rose significantly in the latter part of the year to finish 2008 at US$100 per tonne.

Production of phosphate rock

tonnes

Country	2003	2004	2005	2006	2007
Finland	799 339	838 000	822 987	857 922	830 989

Exports of phosphate rock

tonnes

Country	2003	2004	2005	2006	2007
Austria	1 280	802	1	942	—
Belgium-Luxembourg	75 856	101 115	108 238	82 232	115 628
Bulgaria	1 100	458	265	...	—
Czech Republic	683	33	545	726	732
Finland	1 626	16 375	996	1 141	6 942
France	1 018	6 362	4 463	10 147	15 919
Germany	66	43	5 048	700	168
Italy	475	4 417	4 883	6 789	7 800
Lithuania	...	...	150	1 406	2 011
Macedonia	3 086	3 104	3 388	1 944	2 050
Netherlands	94 541	94 150	91 592	98 687	106 235
Poland	...	507	1	1	1
Slovakia	26	48	438	2 603	—
Slovenia	...	...	189 207	140 281	109 350
Spain	12	7	42	7 259	7 840
Sweden	51	5	392	969	1 623
United Kingdom	111	34	1 548	335	504

Imports of phosphate rock

tonnes

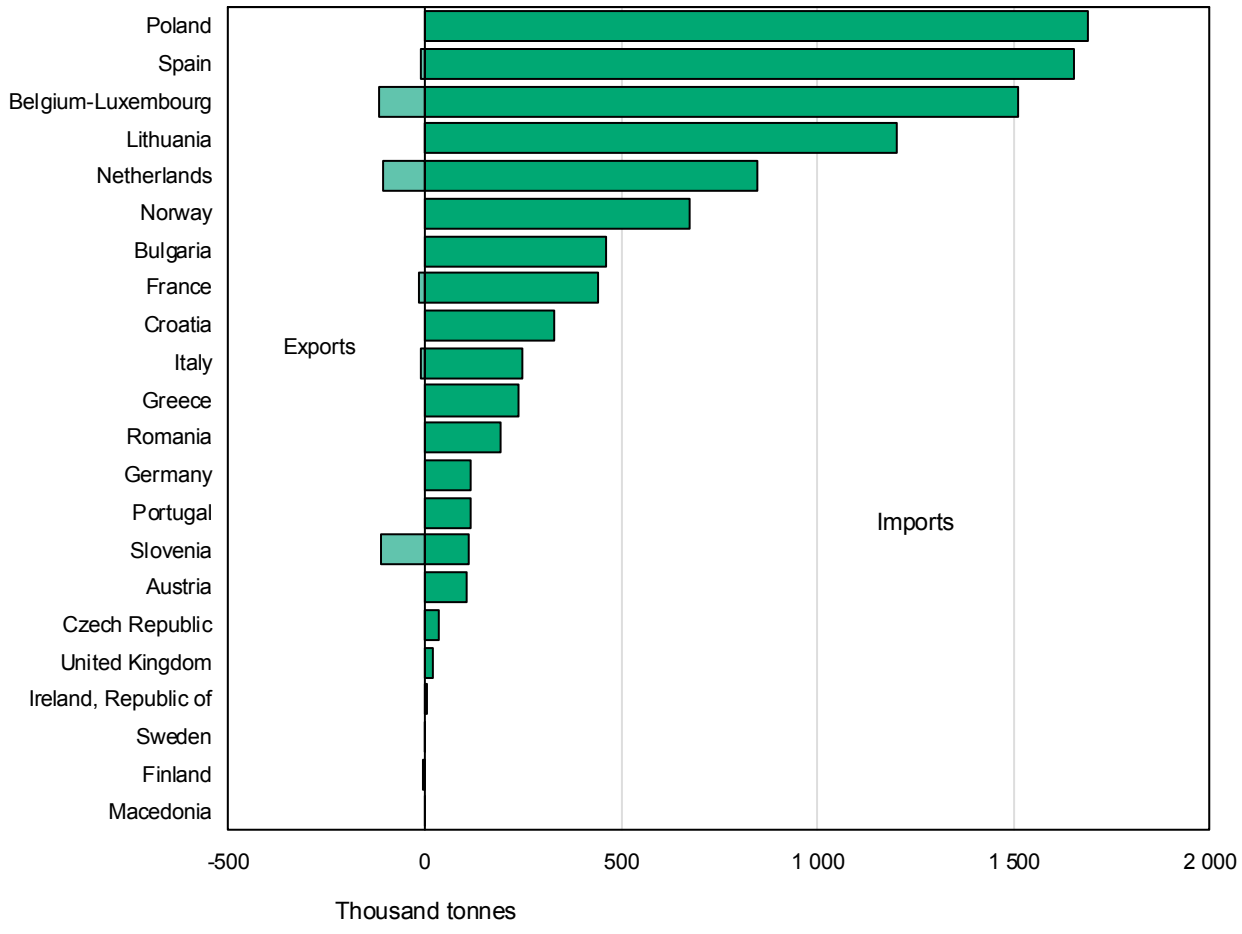
Country	2003	2004	2005	2006	2007
Austria	237 605	210 010	67 853	94 630	106 018
Belgium-Luxembourg	1 664 247	1 545 478	1 688 029	1 299 125	1 512 076
Bulgaria	550 013	515 889	543 637	449 874	462 247
Croatia	181 534	245 224	272 005	317 571	327 936
Czech Republic	24 299	24 282	22 633	28 141	33 954
Denmark	80 114	30 425	1 311	274	1 051
Finland	55 555	57 184	488	343	189
France	773 860	593 253	427 194	387 794	442 826
Germany	120 231	148 082	104 335	117 711	115 109
Greece	336 893	364 398	378 931	197 629	237 577
Hungary	9 140	...	4	...	24
Ireland, Republic of	440	1 159	219	154	6 028
Italy	296 497	359 090	279 693	242 633	249 847
Lithuania	1 079 502	1 082 901	1 178 816	1 193 093	1 202 196

Imports continued

tonnes

Country	2003	2004	2005	2006	2007
Macedonia	37 599	6 567	...	...	...
Netherlands	922 349	724 960	776 661	815 692	847 776
Norway	666 188	646 319	710 528	672 546	673 331
Poland	1 452 726	1 885 350	1 558 007	1 658 266	1 689 120
Portugal	141 740	149 365	137 423	91 912	114 826
Romania	264 547	303 713	283 192	148 110	193 276
Slovakia	441	2 954	5 421	494	267
Slovenia	...	...	189 208	140 455	109 768
Spain	1 790 138	1 800 329	1 768 425	1 556 734	1 653 874
Sweden	18 346	129	156	4 275	280
Turkey	610 286	291 245	373 134	211 810	...
United Kingdom	1 242	11 586	30 177	7 803	23 052

Phosphate rock - EU32 trade in 2007



Platinum group metals

- The platinum group metals (PGMs) are platinum, palladium, rhodium, ruthenium, osmium and iridium. Of these, platinum and palladium are the most commercially significant. Platinum and palladium have important applications in electronics, jewellery and as catalysts (in catalytic converters for vehicles and in many industrial processes). They are also investment commodities.
- Mine production is confined to a handful of countries. The largest producers in 2007 were South Africa (62 per cent - chiefly platinum) and Russia (27 per cent - mainly palladium). There is no EU32 mine production.
- The price of platinum continued its upward trend throughout 2007, reaching US$1500 per troy ounce by December of that year. The price continued upward in the early part of 2008, to a peak of US$2276 per troy ounce in March, before the effects of the global economic difficulties reduced the demand for vehicles and hence for platinum. The price ended 2008 at US$912 per troy ounce.
- Palladium averaged US$356 per troy ounce in 2007 and was fairly constant throughout, ranging between US$327 and US$376 per troy ounce. In 2008 the yearly average was similar at US$357 per troy ounce, but this figure hides a rather more dramatic increase at the start of the year (to US$585 per troy ounce in February) and an equally sharp fall in price towards the end of the year (to US$175 per troy ounce in December).

Exports of platinum group metals

kilograms

Country	2003	2004	2005	2006	2007
Austria					
Platinum & platinum metals	£7 330 000	£8 114 000	£12 253 000	£14 817 000	£30 801 000
Waste & scrap	£309 000	£50 000	£397 000	£281 000	£621 000
Belgium-Luxembourg					
Platinum	2 000	1 000	700	2 600	4 100
Platinum metals	2 100	4 400	2 100	3 000	6 400
Waste & scrap	239 700	245 596	305 700	934 000	592 300
Bulgaria					
Waste & scrap (a)	*30 500	*24 000	*31 400	*73 200	*94 700
Croatia					
Waste & scrap	...	49 784	76 039	27 719	18 314
Czech Republic					
Platinum & platinum metals (a)	*22 000	*4 600	*3 300	*300	*800
Waste & scrap	5 316	4 158	4 500	4 700	1 900
Denmark					
Platinum & platinum metals	203	642	1 435	32	48
Estonia					
Waste & scrap	3 706	3 981	...	...	...
Finland					
Platinum & platinum metals	527	6	5	23	19
Waste & scrap	68	7	75 063	712	200
France					
Platinum	3 800	2 800	1 700	...	...
Platinum metals	3 400	5 200	2 600	...	...
Waste & scrap	35 400	44 182	184 400	383 300	190 100
Germany					
Platinum	26 300	31 900	43 300	40 600	28 100
Palladium	22 000	15 900	20 800	24 400	27 800
Other platinum metals	2 900	4 600	11 100	16 000	22 300
Waste & scrap	803 500	815 821	1 648 800	2 797 600	3 399 700
Hungary					
Waste & scrap	...	...	...	...	89 200
Ireland, Republic of					
Waste & scrap	5 544	13 100	7 900	6 523	7 179
Italy					
Platinum	10 430	6 277	6 555	9 542	11 783
Platinum metals	8 310	4 207	6 458	51 628	20 646
Waste & scrap	96 968	105 220	206	1 065	94 988
Latvia					
Waste & scrap	567	716	1 002	0	—
Lithuania					
Waste & scrap	7 980	6 019	...	0	4 200

Exports continued — kilograms

Country	2003	2004	2005	2006	2007
Netherlands					
Platinum	£19 007 000	£18 570 000	£9 061 000	£8 718 000	£8 190 000
Platinum metals	£1 015 000	£1 377 000	£8 211 000	£3 971 000	£3 766 000
Waste & scrap	9 200	201 129	876	16 569	25 850
Norway					
Platinum & platinum metals	11 150	13 360	11 871	11 885	14 611
Waste & scrap	616	384	342	29 817	66 193
Poland					
Platinum & platinum metals	308	470	903	350	156
Waste & scrap	52 366	33 019	60	4 312	139
Portugal					
Waste & scrap	...	...	...	...	33 500
Slovenia					
Platinum & platinum metals	25	839	47	248	84
Spain					
Platinum & platinum metals	104	1 054	152	363	434
Waste & scrap	7 479	1 893	2 892	290	44
Sweden					
Platinum & platinum metals	£280 000	£1 037 000	£663 000	£1 514 000	£900 000
Waste & scrap	27 000	29 000	25 000	280 000	242 500
Switzerland					
Platinum	67 305	57 268	42 102	62 243	57 569
Palladium	47 110	61 960	75 105	46 578	52 880
Other platinum metals	203	1 703	2 047	292	636
Waste & scrap	85 301	118 241	235 630	200 470	393 326
United Kingdom					
Platinum	37 874	44 598	41 500	42 843	54 256
Palladium	27 669	61 198	51 807	48 688	59 369
Other platinum metals	9 631	12 610	17 852	23 353	31 484
Waste & scrap	1 862 845	2 681 379	2 881 226	3 507 381	3 793 637

Note(s):-
(1) In this table the term 'Platinum' and/or 'Platinum metals' includes unwrought, partly worked and alloys
(2) Kilograms have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
(3) See explanatory notes at the front of the volume regarding currency conversions

(a) BGS estimates, based on known imports into certain countries

Imports of platinum group metals

kilograms

Country	2003	2004	2005	2006	2007
Austria					
Platinum & platinum metals	9 400	9 400	7 200	8 400	1 100
Belgium-Luxembourg					
Platinum	2 481	19 590	...	...	13 300
Platinum metals	11 324	235	1 978	...	2 000
Croatia					
Platinum & platinum metals	...	839	12 320	107	171
Cyprus					
Platinum & platinum metals	35	78	97	73	70
Czech Republic					
Platinum & platinum metals	5 249	...	1 289	4 599	576
Waste & scrap	15	506	55	86	913
Denmark					
Platinum & platinum metals	859	1 443	2 076	2 962	931
Estonia					
Waste & scrap	7 264	...	...	...	...
Finland					
Platinum & platinum metals	773	231	495	309	...

Imports continued kilograms

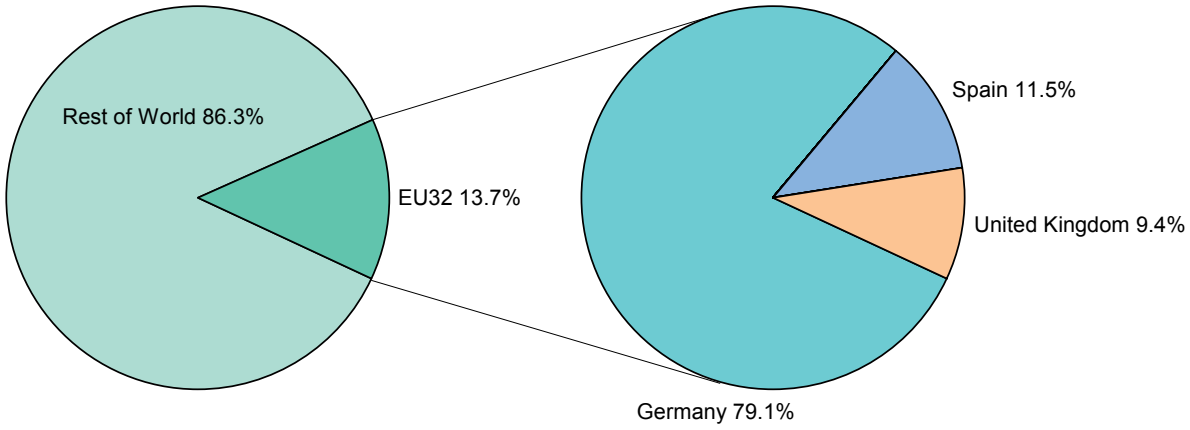
Country	2003	2004	2005	2006	2007
France					
Platinum	5 341	6 416	5 390	4 455	6 263
Platinum metals	4 219	4 268	3 500	3 711	3 631
Waste & scrap	334 300	40 700	55 600	370 600	114 300
Germany					
Platinum	44 800	39 600	58 400	46 900	51 500
Palladium	31 600	20 700	56 000	42 000	54 700
Other platinum metals	6 100	6 400	9 100	8 700	9 700
Waste & scrap	3 837 500	3 713 700	6 574 600	9 332 700	11 442 800
Greece					
Platinum & platinum metals	156	179	181	248	7 400
Hungary					
Platinum & platinum metals	245	184	985	91	126
Ireland, Republic of					
Platinum & platinum metals	1 829	2 620	4 934	3 999	10 382
Italy					
Platinum	10 551	12 087	15 586	17 279	20 491
Platinum metals	20 085	21 430	19 183	19 020	20 721
Waste & scrap	39	278	20 085	431	447
Latvia					
Waste & scrap	...	...	...	...	1 900
Lithuania					
Waste & scrap	...	1 100	5 403	26 700	65 900
Netherlands					
Platinum	£14 657 000	£14 670 000	£12 517 000	£21 774 000	£22 793 000
Platinum metals	£5 635 000	£7 964 000	£3 682 000	£7 066 000	£7 725 000
Norway					
Platinum & platinum metals	747	973	1 076	922	1 057
Waste & scrap	87	59	998	1 102	846
Poland					
Platinum & platinum metals	402	...	3 560	15 500	16 400
Slovakia					
Platinum & platinum metals	61	1 885	125	22 900	62 800
Slovenia					
Platinum & platinum metals	1 033	430	12 262	300	1 500
Spain					
Platinum & platinum metals	1 612	1 402	13 799	1 506	2 075
Waste & scrap	31	298	122	526	4 111
Sweden					
Platinum & platinum metals	£6 531 000	£4 985 000	£6 513 000	£4 509 000	£6 109 000
Waste & scrap	339 000	273 000	577 000	618 000	731 700
Switzerland					
Platinum	69 111	47 742	51 377	76 842	43 113
Palladium	54 805	96 530	46 565	126 416	46 744
Other platinum metals	816	3 725	780	1 078	913
Waste & scrap	129 698	161 433	156 229	172 679	267 258
Turkey					
Platinum & platinum metals	378	231	216	122	3
United Kingdom					
Platinum	13 827	47 735	51 553	23 472	201 163
Palladium	48 106	24 666	30 576	37 226	84 031
Other platinum metals	8 636	8 267	7 134	9 127	398 743
Waste & scrap	367 327	617 417	1 271 315	1 148 802	1 456 413

Note(s) :-
(1) In this table the term 'Platinum' and/or 'Platinum metals' includes unwrought, partly worked and alloys
(2) Kilograms have been used as the unit in this table except where the only obtainable figure is the value. In these cases the national currency figure has been converted to £ sterling
(3) See explanatory notes at the front of the volume regarding currency conversions

Potash

- Potash is the name for a range of potassium-bearing minerals and processed chemical products. Potassium is essential in fertilisers and is widely used in the chemicals industry and in explosives.
- Economic potash deposits are rare. Only 13 countries produced potash in 2007. Canada, Russia and Belarus together generated 68 per cent of world production. The EU32 is a major producer of potash, producing nearly 4.60 million tonnes in 2007 (14 per cent of world production); most of this was from Germany (79 per cent of EU32 total and 11 per cent of world total).
- Prices for standard grade potash, F.O.B. Saskatchewan were stable throughout most of 2007 at US$139 per short ton but jumped towards the end of the year to the range US$200 to US$205 per short ton. In 2008 the price increased to US$400 per short ton in February and again to US$700 to US$800 per short ton from July.

EU32 Production of potash 2007

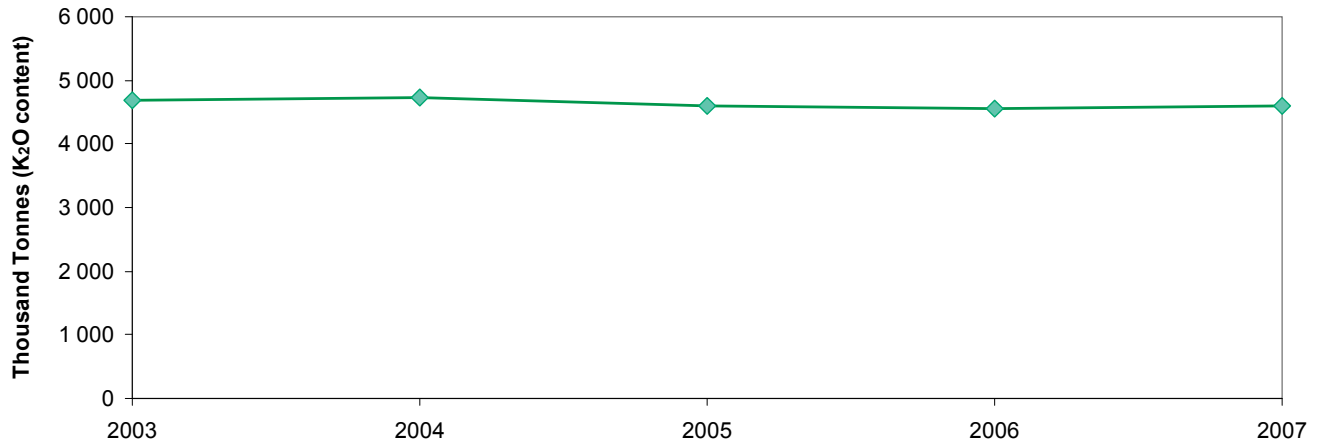


Production of potash

tonnes (K_20 content)

Country	2003	2004	2005	2006	2007
Germany					
Potassic salts	3 563 932	3 626 510	3 663 829	3 624 977	3 636 504
Spain					
Chloride	505 527	553 210	494 594	493 189	530 700
United Kingdom					
Chloride	621 400	539 500	439 200	427 000	430 000
EU32 Total	4 691 000	4 719 000	4 598 000	4 545 000	4 597 000

EU32 Production of potash 2003 - 07



Exports of potash

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Potassic fertilisers	258	158	4 713	8 584	13 595
Belgium-Luxembourg					
Fertiliser salts	1 193	441	127	...	...
Sulphate (b)	*490 000	*685 000	*628 000	*424 000	*364 000
Chloride	142 227	140 950	116 862	41 405	58 339
Other potassic fertilisers	4 756	7 993	9 773	4 769	595
Czech Republic					
Potassic fertilisers	808	2 416	3 463	685	580
Denmark					
Chloride	8 212	3 162	1 052	29 533	127
Finland					
Sulphate	(b) *51 300	(b) *34 900	33 484	(b) *7 900	49 485
Chloride	611	1 008	38 915	65 003	50 342
Other potassic fertilisers	99	86	78	65	95
France					
Sulphate	860	8 248	54 235	32 887	33 446
Chloride	41 600	19 459	6 376	3 185	8 166
Other potassic fertilisers	660	1 271	841	...	...
Germany					
Potassic fertilisers (a) (c)	3 103 009	3 077 154	3 235 651	3 624 977	3 636 504
Greece					
Potassic fertilisers	2 107	4 083	2 894	3 977	1 217
Hungary					
Potassic fertilisers	61	2 512	1 253	...	1 394
Italy					
Potassic fertilisers	2 415	1 169	1 270	2 194	5 572
Lithuania					
Potassic fertilisers	7 128	8 037	10 463	8 939	5 752
Netherlands					
Sulphate	...	578	382	842	7 918
Chloride	219 413	197 731	163 072	152 423	170 921
Other potassic fertilisers	468	391	759	1 557	1 162
Norway					
Chloride	10 964	10 107	7 611	2 243	1 285
Poland					
Potassic fertilisers	1 023	1 638	932	3 130	2 202
Portugal					
Potassic fertilisers	128	30	1 056	42	80
Slovakia					
Potassic fertilisers	281	204	26	...	1 407
Spain					
Sulphate	11 628	3 958	2 832	1 245	1 795
Chloride	502 348	675 140	514 042	201 242	163 891
Sweden					
Sulphate	127 687	70 066	54 841	10 191	84 414
United Kingdom					
Chloride	*630 000	*510 000	*340 000	*430 000	*350 000
Other potassic fertilisers	609	662	705	651	562

Note(s):-
(a) K_2O content
(b) BGS estimates, based on known imports into certain countries
(c) Including sulphate, chloride and other potassic fertilisers

Imports of potash

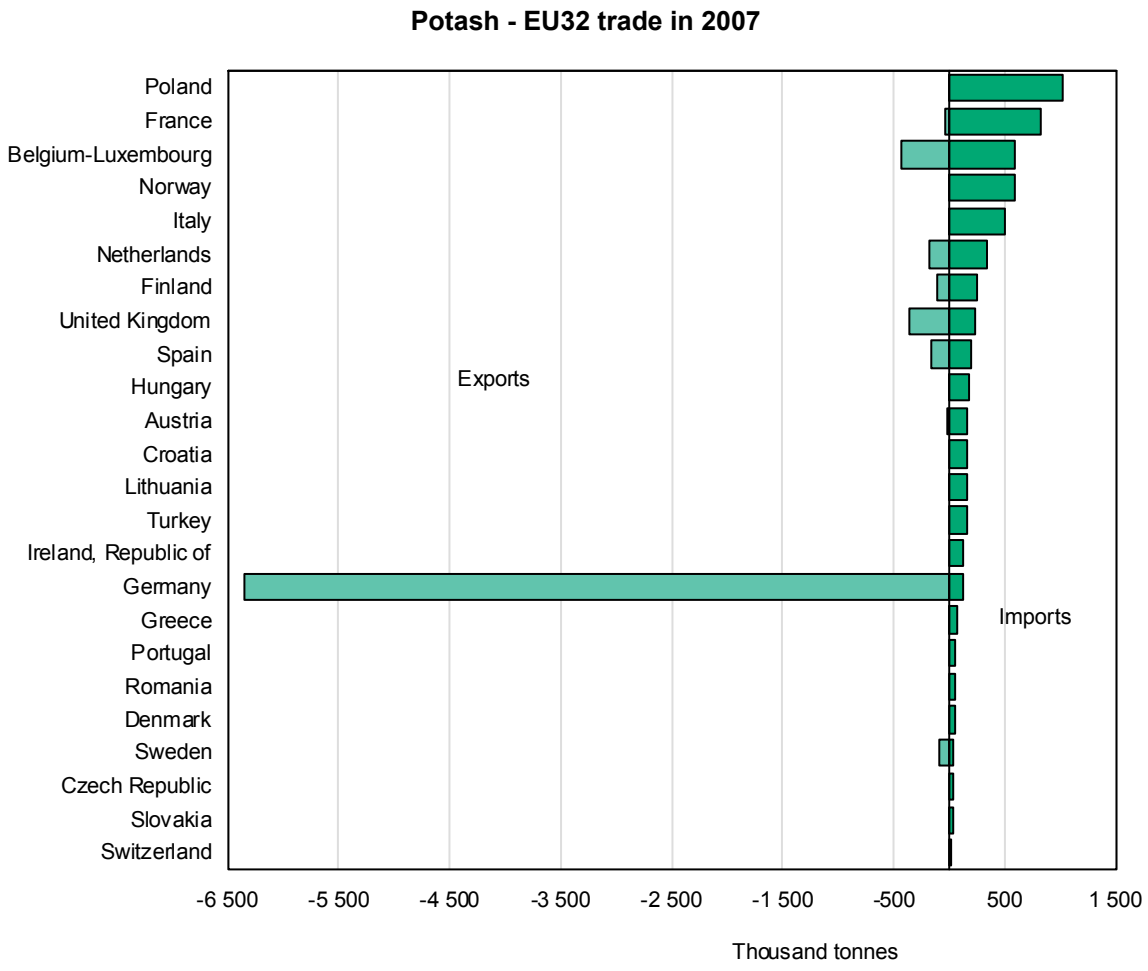
tonnes

Country	2003	2004	2005	2006	2007
Austria					
Fertiliser salts	20 424	23 040	23 685	23 423	...
Sulphate	...	...	13 377	17 797	13 026
Chloride	159 216	145 757	144 234	133 514	123 747
Other potassic fertilisers	(b) 17 997	(b) 22 629	2 336	3 199	26 199
Belgium-Luxembourg					
Fertiliser salts	24 355	26 328	17 331	2 628	...
Sulphate	213 779	212 176	260 839	2 839	5 073
Chloride	1 163 936	1 276 732	1 211 640	576 972	587 275
Other potassic fertilisers	21 700	22 357	17 698	7 693	612
Bulgaria					
Potassic fertilisers	3 453	4 725	7 794	9 102	4 845
Croatia					
Chloride	146 692	168 015	131 567	149 424	159 288
Other potassic fertilisers	4 037	34	2 062	3 594	3 564
Czech Republic					
Chloride	76 396	108 061	97 723	43 238	32 745
Other potassic fertilisers	2 405	3 632	3 783	...	...
Denmark					
Sulphate	14 654	18 006	2 683	4 778	6 077
Chloride	166 236	119 153	38 706	106 772	34 292
Other potassic fertilisers	11 254	13 099	29 605	13 150	13 742
Estonia					
Chloride	33 180	22 619	15 197	11 173	7 048
Finland					
Chloride (a)	177 100	192 600	163 600	161 400	148 400
France					
Fertiliser salts	1 807	1 988	1 401	712	...
Sulphate	90 543	77 441	70 705	33 195	...
Chloride	1 755 346	1 866 149	1 492 129	777 056	...
Other potassic fertilisers	32 600	31 959	29 488	11 432	...
Germany					
Chloride	85 597	97 924	75 483	62 917	101 081
Other potassic fertilisers	5 810	4 996	10 029	6 283	18 452
Greece					
Sulphate	55 208	92 816	28 334	44 049	37 785
Chloride	36 469	29 191	46 667	36 887	22 518
Other potassic fertilisers	5 256	6 411	4 387	9 682	6 189
Hungary					
Chloride	116 586	140 551	137 278	133 764	168 692
Other potassic fertilisers	5 226	2 913	3 735	3 180	5 863
Ireland, Republic of					
Chloride	3 790	30 456	113 476	125 803	122 191
Other potassic fertilisers	6 156	4 924	5 747	4 566	1 785
Italy					
Sulphate	102 855	96 904	96 415	91 061	90 992
Chloride	422 469	392 833	334 324	302 115	396 162
Other potassic fertilisers	16 491	29 902	13 203	17 583	15 929
Latvia					
Potassic fertilisers	22 764	26 368	21 343	15 230	8 454
Lithuania					
Sulphate	7 384	12 553	12 086	10 439	15 637
Chloride	160 334	172 622	123 782	143 499	138 895
Macedonia					
Potassic fertilisers	4 089	5 736	362	995	490
Netherlands					
Sulphate	12 777	23 765	26 208	24 658	21 211
Chloride	467 219	387 637	445 767	265 838	314 011
Other potassic fertilisers	6 018	4 321	2 486	5 283	6 691
Norway					
Sulphate	249 307	267 653	247 379	266 149	241 918
Chloride	310 954	309 061	306 369	307 422	349 459

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Poland					
Fertiliser salts	948	2 264	621	1 066	...
Sulphate	19 967	24 143	21 770	14 517	20 242
Chloride	821 469	1 098 679	1 041 798	770 674	992 979
Other potassic fertilisers	5 223	4 174	4 726	4 110	4 659
Portugal					
Sulphate	4 457	7 526	3 631	3 227	4 223
Chloride	55 775	79 232	65 682	58 237	51 600
Other potassic fertilisers	1 630	1 752	2 780	2 141	1 629
Romania					
Sulphate	41 698	8 070	757	6 361	4 086
Chloride	33 920	53 008	41 974	35 384	50 558
Other potassic fertilisers	...	...	563	491	1 058
Slovakia					
Potassic fertilisers	30 582	36 256	28 913	32 302	31 889
Slovenia					
Potassic fertilisers	1 725	1 751	1 704	2 465	1 973
Spain					
Sulphate	37 444	48 174	47 561	10 412	5 547
Chloride	249 881	269 278	243 017	224 320	199 403
Other potassic fertilisers	10 432	22 019	4 667	86	25
Sweden					
Sulphate	884	2 819	4 911	10 191	1 004
Chloride	33 748	68 457	43 106	44 941	27 470
Other potassic fertilisers	9 862	4 409	1 119	4 109	4 886
Switzerland					
Sulphate	2 621	2 170	3 325	4 215	5 259
Chloride	15 792	19 185	18 971	18 811	19 279
Other potassic fertilisers	3 721	3 039	3 411	2 555	2 504
Turkey					
Sulphate	51 467	59 381	39 198	19 373	57 661
Chloride	107 412	130 748	135 433	78 671	96 038
United Kingdom					
Fertiliser salts	12 751	9 204	9 517	10 696	...
Chloride	246 164	207 056	198 893	170 942	202 623
Other potassic fertilisers	5 439	12 383	13 151	15 584	26 979

Note(s) :-
(a) K_2O content
(b) Including sulphate


Potash - EU32 trade in 2007
Poland
France
Belgium-Luxembourg
Norway
Italy
Netherlands
Finland
United Kingdom
Spain
Hungary
Austria
Croatia
Lithuania
Turkey
Ireland, Republic of
Germany
Greece
Portugal
Romania
Denmark
Sweden
Czech Republic
Slovakia
Switzerland
Exports
Imports
-6 500
-5 500
-4 500
-3 500
-2 500
-1 500
-500
500
1 500
Thousand tonnes

Rare earth minerals

- Rare earth minerals, which occur chiefly in the minerals bastnaesite and monazite, are a group of 15 metallic elements of which cerium, lanthanum and neodymium are the most commonly used. Rare earths are widely used in automotive catalysts, as metallurgical additives and in glass and ceramics.
- Production of rare earths is limited to only four countries of which China is by far the largest producer (95–98 per cent). There is no EU32 production, thus Europe is entirely import dependent.
- Despite the limited production base, prices for most rare earths were remarkably stable. Throughout 2007 and 2008, bastnaesite concentrate (70 per cent leached) traded at US$2.25 per pound rare earth oxides (REO) and yttria (99.99 per cent Y_2O_3) traded at US$5.00 per kilogram. The price for lanthanum oxide (99 per cent) started 2007 at US$1.90 per kilogram, the same as in the previous two years, but jumped in September to US$4.30 per kilogram. In 2008 it climbed steadily, reaching US$9.60 per kilogram by July, but then dropped slightly to finish the year at US$8.50 per kilogram.

Exports of rare earths

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Cerium compounds	1 750	1 564	1 980	1 569	2 596
Other rare earth compounds	6 144	6 415	6 449	5 911	9 039
Metals	417	456	421	333	359
Belgium-Luxembourg					
Rare earth compounds	743	721	413	302	802
Metals	158	237	187	444	253
Estonia					
Rare earth compounds	2 129	1 064	2 319	6 819	3 183
Metals	30	14	3	1	1
Finland					
Rare earth compounds	1	1	2	1	1
Metals	...	...	...	...	104
France					
Rare earth compounds	1 660	8 588	2 007	2 185	2 545
Ferro-cerium & other pyrophoric alloys	109	125	32	...	...
Metals	58	65	7	24	11
Germany					
Rare earth compounds	115	108	123	145	217
Metals	10	4	1	1	8
Ireland, Republic of					
Rare earth compounds	107	85	14	73	8
Ferro-cerium & other pyrophoric alloys	362	...	...	...	...
Italy					
Rare earth compounds	39	20	13	43	38
Metals	15	81	168	56	177
Netherlands					
Rare earth compounds	95	87	171	157	77
Metals	58	124	13	16	64
Norway					
Metals	...	...	11	59	...
Spain					
Cerium compounds	30	12	17	45	63
Other rare earth compounds	3	80	20	18	2
Ferro-cerium & other pyrophoric alloys	1	2	3	1	...
United Kingdom					
Cerium compounds	118	47	121	111	37
Other rare earth compounds	1 105	1 157	1 189	954	1 089
Ferro-cerium & other pyrophoric alloys	768	197	2	76	80
Metals	16	10	26	29	143

Note(s):-
(1) Rare earths are here taken to include yttrium and scandium

Imports of rare earths

tonnes

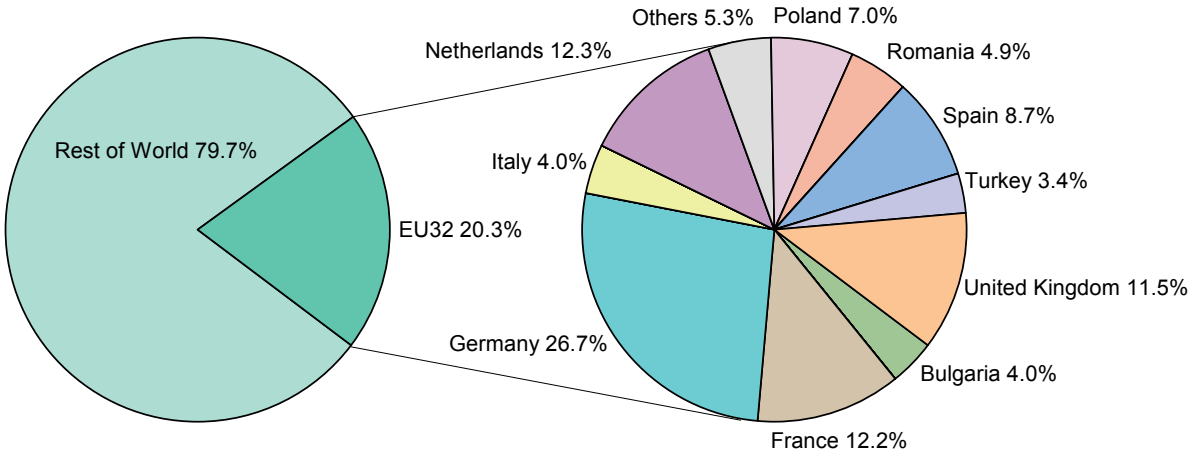
Country	2003	2004	2005	2006	2007
Austria					
Cerium compounds	2 810	2 034	3 055	2 009	3 431
Other rare earth compounds	3 062	3 973	2 685	2 618	3 762
Metals	457	463	374	403	512
Belgium-Luxembourg					
Cerium compounds	843	615	411	280	490
Other rare earth compounds	143	287	139	138	353
Metals	195	226	252	443	297
Czech Republic					
Rare earth compounds	177	92	198	227	228
Estonia					
Rare earth compounds	1 734	3 208	4 317	6 819	4 721
Finland					
Cerium compounds	117	73	83	117	92
France					
Cerium compounds	10 315	11 710	7 105	9 723	8 831
Other rare earth compounds	1 480	1 037	585	1 329	1 232
Metals	279	251	322	479	417
Germany					
Cerium compounds	1 115	1 082	1 082	975	901
Other rare earth compounds	7 810	7 776	6 961	7 024	9 748
Ferro-cerium & other pyrophoric alloys	828	214	6	3	7
Metals	358	285	402	369	410
Hungary					
Rare earth compounds	114	158	...	146	242
Ireland, Republic of					
Rare earth compounds	245	74	32	7	23
Metals	64	4	14	11	...
Italy					
Rare earth compounds	656	932	987	853	1 146
Metals	102	108	38	58	149
Lithuania					
Rare earth compounds	25	80	34	52	3
Netherlands					
Cerium compounds	135	103	141	290	473
Other rare earth compounds	2 222	2 254	1 879	2 781	3 868
Metals	38	10	14	135	100
Norway					
Metals	713	702	544	686	738
Poland					
Rare earth compounds	245	61	118	123	143
Slovenia					
Metals	80	107	139	96	139
Spain					
Rare earth compounds	548	692	824	828	835
Ferro-cerium & other pyrophoric alloys	87	...	8	29	40
Metals	90	84	20	84	95
Sweden					
Rare earth compounds	75	58	26	20	56
Metals	48	56	41	37	74
Switzerland					
Rare earth compounds	30	29	34	38	34
Turkey					
Rare earth compounds	201	171	155	117	183
United Kingdom					
Cerium compounds	2 519	1 914	2 324	1 615	2 167
Other rare earth compounds	471	775	775	600	664
Ferro-cerium & other pyrophoric alloys	1	9	19	60	77
Metals	115	135	166	88	88

Note(s) :-
(1) Rare earths are here taken to include yttrium and scandium

Salt

- Salt (sodium chloride) is a fundamental chemical of life. However, human consumption accounts for a small fraction of salt usage. Industrial use is far higher, particularly in the chemical industry as a source of soda and chlorine. Salt is also used to 'grit ' roads to prevent the formation of ice between 0°C and -6°C.
- Most countries in the world have some salt production from rock salt, brine or seawater. In 2007 the largest producer was China (24 per cent). In the EU32 the largest producer was Germany (27 per cent of total EU32 production).
- Because of the wide availability of salt, markets tend to be very stable. Ground rock salt, in 15–20 tonne lots, delivered to the UK, traded between £20 and £30 per tonne throughout 2007 and 2008.

EU32 Production of salt 2007



Production of salt

tonnes

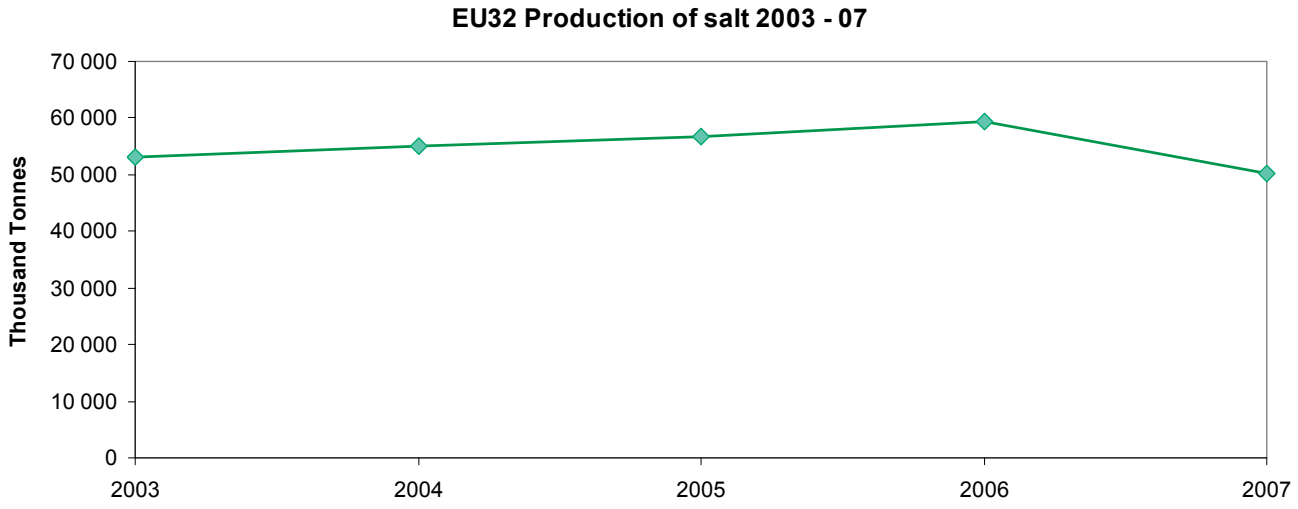
Country	2003	2004	2005	2006	2007
Austria					
Rock salt	1 610	1 228	1 497	1 336	1 172
Salt in brine	723 286	745 670	771 455	764 103	735 724
Bulgaria	1 882 000	1 900 000	1 900 000	2 000 000	2 000 000
Croatia	32 533	32 723	36 970	29 589	32 536
Denmark	*600 000	*600 000	*600 000	*600 000	*600 000
France					
Rock salt	320 000	406 000	494 000	...	...
Brine salt	1 409 000	1 433 000	1 468 000	...	...
Salt in brine	4 351 000	4 408 000	4 750 780	(b) 9 371 000	(b) 6 139 840
Sea salt	1 302 000	1 365 000	1 026 000	...	...
Germany					
Rock salt	6 178 000	7 268 000	8 258 000	9 280 000	4 826 000
Brine salt	1 123 000	974 000	1 006 000	1 001 000	1 010 000
Salt in brine	6 668 000	7 212 000	7 449 000	7 189 000	7 558 000
Greece	192 161	187 522	198 024	*200 000	*200 000
Italy					
Rock salt & brine salt	2 922 251	2 876 469	2 988 051	*3 000 000	*2 000 000
Netherlands	5 980 000	5 896 000	6 155 000	6 056 000	6 177 000
Poland					
Rock salt	847 880	1 099 072	1 123 219	1 129 875	591 240
Brine salt	2 790 996	2 940 169	2 889 941	2 899 076	2 930 726
Portugal					
Rock salt	602 035	661 704	597 945	586 190	590 588
Sea salt	86 603	75 400	92 495	76 858	64 048
Romania	2 416 970	2 399 956	2 442 640	2 621 129	2 475 324
Slovakia	133 100	121 600	105 100	122 500	117 000
Slovenia	3 632	2 852	803	1 624	3 029
Spain					
Rock salt	2 562 832	2 656 904	2 909 526	2 809 046	2 800 000
Sea salt	1 327 108	1 227 625	1 368 960	1 506 343	1 450 000
Other salt	97 730	108 733	121 461	115 826	110 000

Production continued tonnes

Country	2003	2004	2005	2006	2007
Switzerland	461 000	486 000	539 000	525 000	341 000
Turkey					
Rock salt	10 205	6 100	512	...	...
Sea salt	556 652	582 440	529 235	*500 000	*500 000
Other salt	1 675 915	1 569 178	1 196 486	*1 200 000	*1 200 000
United Kingdom					
Rock salt	*1 700 000	*2 000 000	*2 000 000	*2 000 000	2 000 000
Brine salt	*1 000 000	*1 000 000	*1 000 000	*1 000 000	*1 000 000
Salt in brine (a)	*3 200 000	*2 800 000	*2 800 000	*2 800 000	*2 800 000
EU32 Total	53 200 000	55 000 000	56 800 000	59 400 000	50 300 000

Note(s):-
(1) This table does not include production of refined salt
(2) Salt is known to be produced in many countries for which statistics are not available.

(a) Used for purposes other than salt-making
(b) Salt; all forms



Exports of salt

tonnes

Country	2003	2004	2005	2006	2007
Austria	253 791	183 850	199 133	202 465	235 775
Belgium-Luxembourg	117 806	105 680	121 103	94 196	55 208
Bulgaria	2 625	8 586	10 090	16 020	13 943
Croatia	5 530	9 226	5 688	9 759	3 986
Cyprus	508	559	635	521	769
Czech Republic	10 490	12 986	13 833	30 648	18 760
Denmark	376 794	350 587	355 887	115 980	261 895
Finland	581	458	384	531	424
France	497 458	506 431	407 255	254 487	363 438
Germany	3 695 084	3 201 549	3 372 522	3 943 083	2 787 088
Greece	42 976	44 664	50 390	62 896	37 232
Hungary	2 987	576	49 578	45 215	1 459
Ireland, Republic of	110	233	1 521	2 492	3 867
Italy	325 395	289 415	317 124	361 602	212 223
Latvia	411	5 169	10 205	14 485	14 282
Lithuania	3 377	5 457	5 895	7 150	6 761
Macedonia	1 339	1 329	2 677	4 508	5 091
Netherlands	3 679 323	3 212 606	3 749 442	4 126 810	4 055 898
Norway	4 657	4 948	6 679	9 040	4 178
Poland	419 201	493 259	495 481	498 345	345 335

Exports continued

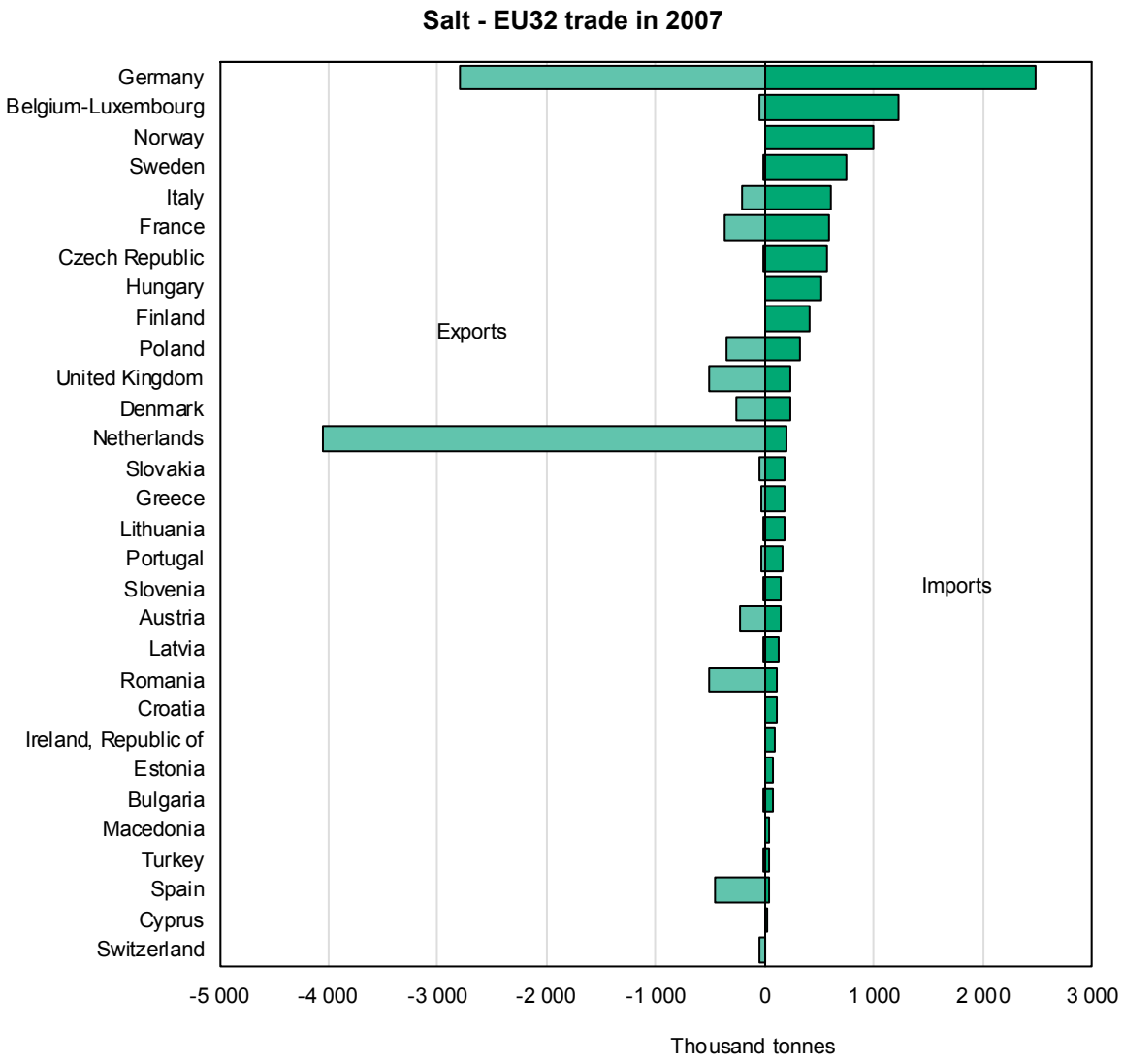
tonnes

Country	2003	2004	2005	2006	2007
Portugal	3 952	4 444	6 130	11 872	25 341
Romania	546 390	497 826	598 154	503 629	506 641
Slovakia	47 199	51 539	53 451	51 566	51 517
Slovenia	4 814	5 253	8 034	20 702	18 280
Spain	695 177	744 750	750 180	743 390	463 791
Sweden	156 140	10 354	8 783	9 357	12 601
Switzerland	52 482	41 044	30 461	62 318	55 916
Turkey	43 317	30 898	22 167	17 095	11 164
United Kingdom	537 497	691 895	538 796	557 311	514 868

Imports of salt

tonnes

Country	2003	2004	2005	2006	2007
Austria	206 355	350 903	210 736	429 515	143 538
Belgium-Luxembourg	1 895 987	1 236 192	1 315 385	2 275 674	1 230 983
Bulgaria	116 840	138 631	165 727	181 801	71 848
Croatia	164 046	165 277	226 931	193 911	104 066
Cyprus	14 053	8 650	13 795	13 647	12 208
Czech Republic	681 134	909 966	891 667	1 151 331	567 960
Denmark	376 122	440 020	436 794	520 735	230 787
Estonia	78 883	78 849	58 269	78 483	72 445
Finland	395 727	408 367	438 346	401 961	409 761
France	753 902	850 703	1 110 898	1 024 789	592 976
Germany	2 366 521	2 467 276	2 558 898	2 591 036	2 476 738
Greece	218 991	173 729	162 669	277 940	177 719
Hungary	557 050	486 695	592 522	662 455	514 119
Ireland, Republic of	77 992	83 789	83 746	96 164	89 236
Italy	745 388	833 790	773 507	863 836	611 435
Latvia	100 459	122 251	139 662	149 696	123 316
Lithuania	187 050	204 839	198 994	197 262	171 915
Macedonia	37 383	34 790	39 178	40 184	35 657
Malta	4 034	3 863	5 453	1 629	3 590
Netherlands	489 369	535 581	630 738	1 150 949	193 457
Norway	702 713	741 959	910 846	1 026 541	988 001
Poland	156 406	294 590	376 829	582 080	313 297
Portugal	139 720	121 621	70 266	110 581	169 480
Romania	99 679	120 787	131 683	113 585	111 681
Slovakia	213 250	266 601	320 413	299 087	182 234
Slovenia	155 881	178 531	207 314	232 017	148 352
Spain	47 011	36 494	111 449	37 632	33 691
Sweden	828 845	929 193	738 931	1 054 982	744 328
Switzerland	13 984	9 299	48 114	19 300	8 913
Turkey	202 349	307 039	320 147	285 694	35 382
United Kingdom	217 009	219 581	287 623	246 879	237 772


Salt - EU32 trade in 2007
Germany
Belgium-Luxembourg
Norway
Sweden
Italy
France
Czech Republic
Hungary
Finland
Poland
United Kingdom
Denmark
Netherlands
Slovakia
Greece
Lithuania
Portugal
Slovenia
Austria
Latvia
Romania
Croatia
Ireland, Republic of
Estonia
Bulgaria
Macedonia
Turkey
Spain
Cyprus
Switzerland
Exports
Imports
-5 000
-4 000
-3 000
-2 000
-1 000
0
1 000
2 000
3 000
Thousand tonnes

Sillimanite minerals

- Sillimanite minerals are a group of three anhydrous aluminium silicate minerals (andalusite, kyanite and sillimanite) that are chiefly used as refractories. Bricks and mortar used to line furnaces and kilns usually contain a proportion of these minerals. Mullite is a form of aluminium silicate that is rarely found in nature but can be artificially produced by heating other aluminium silicate minerals.
- Despite being common minerals in high-grade metamorphic rocks, economic concentrations of these minerals are rare. In 2007, production was restricted to only five countries, of which South Africa was the largest producer. China is also believed to be a significant producer of sillimanite minerals. The only major producer in the EU32 is France.
- In 2007 kyanite prices, ex-works USA (54–60 per cent Al_2O_3,) traded between US$250 and US$365 per short ton, and in 2008 they ranged from US$289 to US$423 per short ton. Andalusite prices, F.O.B. South Africa (57–58 per cent Al_2O_3, 2000 tonne bulk) ranged from €160 to €210 per tonne in 2007 and between €160 to €255 per tonne in 2008.

Production of sillimanite minerals

tonnes

Country	2003	2004	2005	2006	2007
France					
Andalusite	62 000	68 000	*65 000	*65 000	*65 000

Note(s):-
(1) A number of other countries produce sillimanite minerals but details of output are not reported
(2) In addition to the countries listed above as producing sillimanite minerals, synthetic mullite is known to be produced in Denmark, France, Hungary and the United Kingdom

Exports of sillimanite minerals

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg	22 825	49 319	77 463	48 825	47 141
France	49 958	51 653	55 052	59 002	66 776
Germany	12 413	14 382	12 191	13 257	16 143
Hungary					
Mullite	3 869	6 108	6 920	6 870	(a) *7 500
Netherlands	6 400	10 097	11 444	7 679	9 689
United Kingdom	3 238	2 016	2 417	1 925	2 430

Note(s):-
(1) In this table 'Sillimanite minerals' is understood to include any or all of andalusite, kyanite, sillimanite and mullite

(a) BGS estimates, based on known imports into certain countries

Imports of sillimanite minerals

tonnes

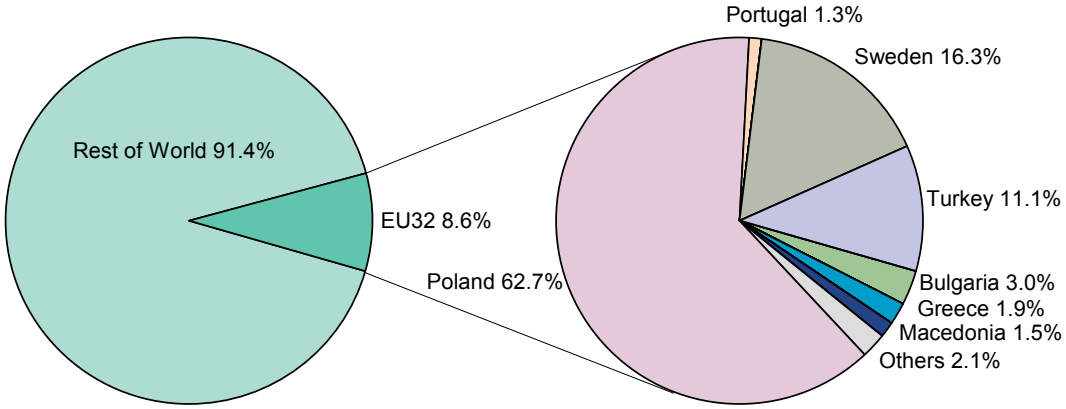
Country	2003	2004	2005	2006	2007
Austria	2 660	1 981	2 194	2 100	3 160
Belgium-Luxembourg	29 333	53 146	81 538	50 726	52 899
Czech Republic	3 480	3 779	3 733	6 765	5 601
Denmark	3 414	2 274	2 909	3 023	3 377
Finland	299	302	445	207	109
France	3 411	3 360	3 080	4 813	6 026
Germany	63 602	60 782	58 047	80 183	109 961
Greece	25	107	25	62	734
Hungary	2 045	2 396	4 519	3 001	3 428
Italy	14 669	15 132	27 476	26 304	24 807
Netherlands	24 106	12 975	20 001	24 195	17 488
Norway	2 004	3 605	2 400	2 288	3 404
Poland					
Sillimanite minerals	17 682	14 928	9 975	21 196	23 321
Mullite	1 974	1 355	2 207	2 012	4 956
Slovakia	2 690	2 459	4 312	2 069	3 299
Spain	15 782	15 262	27 308	22 102	27 792
Sweden	14 155	5 470	5 086	5 568	6 381
Switzerland	253	315	413	463	1 035
Turkey	3 486	5 110	5 504	2 939	6 987
United Kingdom					
Sillimanite minerals	22 649	24 348	39 650	10 268	10 239
Mullite	8 656	12 392	10 430	7 468	12 036

Note(s) :-
(1) In this table 'Sillimanite minerals' is understood to include any or all of andalusite, kyanite, sillimanite and mullite

Silver

- Silver is a ductile and malleable metallic element that has the highest electrical and thermal conductivity of all metals. It is widely used in electronics although the most important uses are in photography (silver nitrate) and making mirrors.
- Silver is more common than the other precious metals, although still much rarer than base and ferrous metals. It is rarely mined in its own right, and is chiefly produced as a by-product of lead, tin or copper mining. In 2007 the world's largest producers were Peru, Mexico and China, together accounting for 44 per cent of world production. The largest EU32 producer was Poland (63 per cent of EU32 production and 6 per cent of world production).
- During 2007 silver prices ranged between US$12.36 and US$14.70 per troy ounce, with an average for the year of US$13.39 per troy ounce. The first three months of 2008 saw the price increase sharply to US$19.51 per troy ounce although this dropped back over the following three months. A second peak of US$18.03 per troy ounce in July was followed by a significant drop to a low of US$9.87 per troy ounce in November. Despite this, the average for 2008 was US$15.02 per troy ounce.

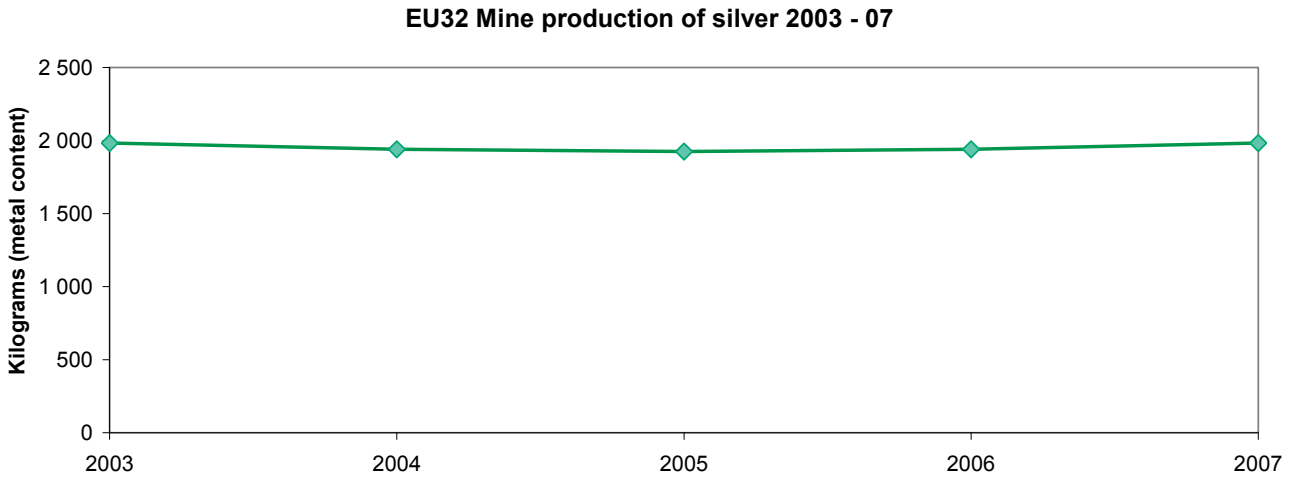
EU32 Mine Production of silver 2007



Mine production of silver

kilograms (metal content)

Country	2003	2004	2005	2006	2007
Bulgaria	*60 000	*60 000	*60 000	*60 000	*60 000
Finland	*12 000	*13 000	*13 000	*13 000	*13 000
France	495	682	—	—	—
Greece	7 000	—	2 300	25 500	38 300
Ireland, Republic of	8 500	5 200	10 500	12 900	10 000
Italy	200	100	100	—	—
Macedonia	22 195	—	—	*10 000	*30 000
Poland	1 332 200	1 372 700	1 262 400	1 265 100	1 244 000
Portugal	21 100	24 400	23 786	20 078	26 514
Romania	*18 000	*18 000	*18 000	*18 000	*18 000
Spain	2 173	3 583	5 227	2 369	—
Sweden	340 701	319 563	309 933	292 255	323 171
Turkey	158 000	122 000	219 000	220 000	*220 000
EU32 Total	1 983 000	1 939 000	1 924 000	1 939 000	1 983 000



Exports of silver

kilograms

Country	2003	2004	2005	2006	2007
Austria					
Metal	87 800	77 400	62 600	120 400	115 100
Belgium-Luxembourg					
Ores & concentrates	56 900	29 800	7 200	8 000	47 600
Metal	47 600	24 100	12 600	45 200	31 200
Croatia					
Metal	...	733	352	324	461
Czech Republic					
Metal	171 398	291 519	29 337	98 354	102 968
Denmark					
Metal	23 831	17 710	14 748	24 299	43 775
Finland					
Ores & concentrates	357 250	507 350	416 650	262 669	700
Metal	6 882	9 804	6 764	6 041	3 400
France					
Ores & concentrates	—	7 100	...	...	26 500
Metal	465 300	404 600	252 300	228 673	208 832
Germany					
Metal	3 032 700	2 814 700	2 631 200	2 995 900	2 884 200
Greece					
Metal	351	3 299	152	3 325	8 300
Hungary					
Metal	1 300	2 519	1 033	395	527
Ireland, Republic of					
Ores & concentrates	—	1 137	19	...	2 560
Italy					
Metal	677 683	616 861	564 308	516 281	547 042
Macedonia					
Metal	24 330	64	500	...	71
Netherlands					
Ores & concentrates	...	42 000	...	26 860	...
Metal	119 012	99 221	93 668	151 077	144 024
Norway					
Metal	62 669	69 207	66 139	52 952	45 461
Poland					
Metal	1 251 194	821 501	318 800	519 800	1 148 300
Portugal					
Ores & concentrates	...	...	...	...	4 000
Slovakia					
Metal	7 985	7 112	1 872	3 430	35 036
Slovenia					
Metal	3 948	2 699	6 382	3 100	5 200
Spain					
Ores & concentrates	...	...	...	...	1 608
Metal	115 059	43 448	11 665	7 915	13 637

Exports continued — kilograms

Country	2003	2004	2005	2006	2007
Sweden					
Ores & concentrates	...	...	...	...	59 400
Metal	433 000	473 000	421 000	368 000	364 500
Switzerland					
Metal	1 544 676	1 085 657	1 044 080	930 397	1 201 402
Turkey					
Metal	947	2 731	27 323	8 932	10 700
United Kingdom					
Metal	3 429 247	1 754 885	2 289 098	1 069 383	2 317 951

Note(s):-
(1) This table excludes silver coin but includes silver shipped for minting
(2) In this table the term 'metal' includes both unwrought and partly worked silver and alloys

Imports of silver

kilograms

Country	2003	2004	2005	2006	2007
Austria					
Metal	109 300	127 600	127 900	168 300	151 600
Belgium-Luxembourg					
Ores & concentrates	84 400	1 100	...	536 600	195 900
Metal	735 100	476 800	175 200	258 700	443 200
Croatia					
Metal	*3 500	3 340	3 837	5 043	3 684
Cyprus					
Metal	8 461	5 135	5 675	2 866	3 746
Czech Republic					
Metal	238 756	422 971	103 373	602 527	697 818
Denmark					
Metal	49 704	18 909	18 173	22 687	2 600
Estonia					
Metal	8 892	10 512	132 992	10 100	3 100
Finland					
Metal	56 470	75 350	70 623	64 504	55 400
France					
Ores & concentrates	...	19 800	...	16 300	39 800
Metal	970 315	675 245	731 182	734 679	643 280
Germany					
Ores & concentrates	...	...	...	1 323 500	859 400
Metal	2 185 300	1 434 200	1 861 800	2 227 600	2 565 300
Greece					
Metal	49 225	95 318	1 059 816	46 241	1 039 000
Hungary					
Metal	17 697	33 036	15 200	900	14 581
Ireland, Republic of					
Metal	2 247	2 709	2 611	5 147	1 070
Italy					
Ores & concentrates	546	1 428	2 378	...	1 002
Metal	1 724 000	1 776 385	1 635 765	1 583 508	1 445 303
Lithuania					
Metal	1 771	5 885	3 943	4 500	5 200
Macedonia					
Metal	2 986	3 725	3 813	3 901	3 612
Malta					
Metal	872	1 031	15 661	1 800	600
Netherlands					
Metal	140 415	139 218	139 625	263 049	229 637
Norway					
Ores & concentrates	...	3 118 000	...	7 923 075	—
Metal	72 647	86 037	90 331	64 511	62 077
Poland					
Metal	36 266	34 563	40 100	28 800	77 000

Imports continued kilograms

Country	2003	2004	2005	2006	2007
Portugal					
Metal	2 520	2 237	200	300	...
Romania					
Metal (a)	*10 900	*10 900	*17 700	*18 600	*7 500
Slovakia					
Metal	13 073	17 735	57 416	6 400	12 200
Slovenia					
Metal	36 253	307 045	45 584	19 700	27 800
Spain					
Ores & concentrates	59 205	54 295	59 653	56 421	58 344
Metal	133 844	158 529	106 596	134 673	126 668
Sweden					
Ores & concentrates	...	...	15 000	...	21 000
Metal	111 000	161 000	151 000	137 000	162 900
Switzerland					
Ores & concentrates (a)	*462 800	*141 000	*309 400	*792 000	*39 800
Metal	746 184	1 082 664	1 484 207	1 306 866	754 108
Turkey					
Metal	199 226	269 009	409 844	108 588	996 239
United Kingdom					
Metal	2 484 101	2 105 057	1 485 290	7 316 639	5 518 256
Waste & scrap	...	2 488 771	2 282 562	2 741 705	3 049 452

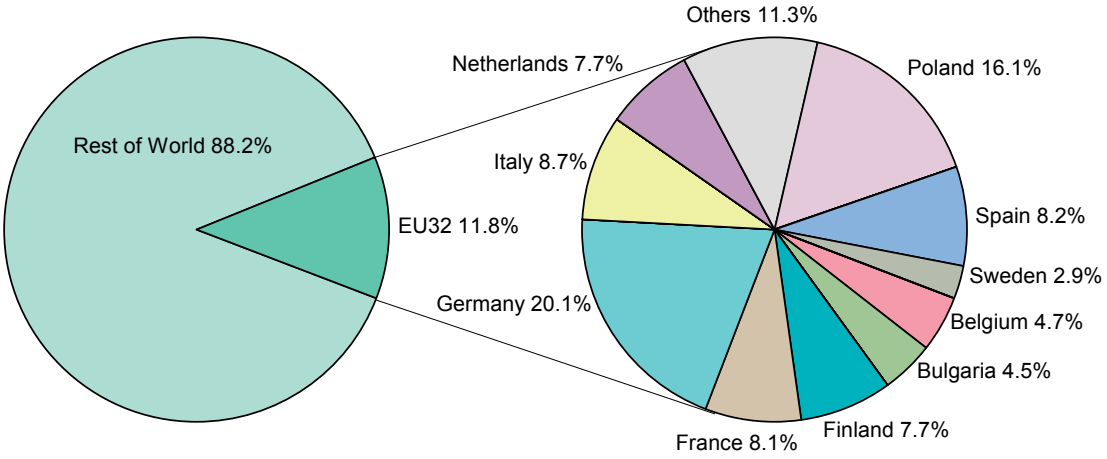
Note(s) :-
(1) This table excludes silver coin but includes silver shipped for minting
(2) In this table the term 'metal' includes both unwrought and partly worked silver and alloys

(a) BGS estimates, based on known exports from certain countries

Sulphur and pyrites

- Sulphur is one of the fundamental feedstocks to the chemical industry, usually as sulphuric acid. The chief sources of sulphur are petroleum refining, natural gas, base metal sulphide processing and pyrites (iron sulphide).
- Most industrialised countries in the world have some sulphur production. The largest producers in 2007 were Canada (13 per cent of world total) and USA (12 per cent of world total). In the EU32 the largest producer was Germany (20 per cent of EU32 production).
- Whilst in 2007 sulphur prices averaged about US$60 per tonne, in 2008 they increased dramatically as a result of reduced production in the USA and problems at other refineries. The price peaked in August 2008 at about US$600 per tonne, but subsequently fell to about US$70 per tonne by November.

EU32 Production of sulphur and pyrites 2007



Production of sulphur and pyrites

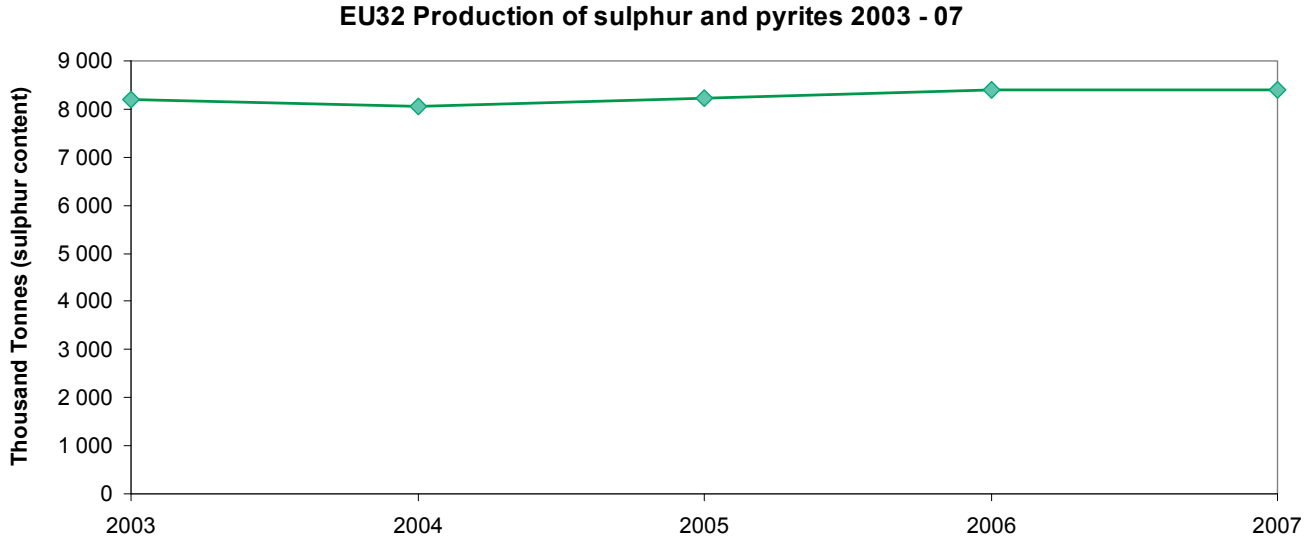
tonnes (sulphur content)

Country	2003	2004	2005	2006	2007
Austria					
Recovered (b)	50 568	55 322	54 377	50 097	50 501
Belgium					
Recovered (a) (b)	383 000	371 000	376 000	391 000	396 000
Bulgaria					
Recovered (a)	260 000	301 000	312 000	340 000	343 000
Recovered (b)	30 000	25 000	30 000	35 000	35 000
Croatia					
Recovered (b)	7 471	9 000	9 000	7 000	9 000
Czech Republic					
Recovered (b)	45 000	60 000	65 000	65 000	65 000
Denmark					
Recovered (b)	4 751	4 660	4 223	4 142	3 896
Finland					
Pyrites	276 200	283 700	184 400	199 700	194 300
Recovered (a)	328 779	325 523	304 751	325 793	*326 000
Recovered (b)	61 000	65 000	70 000	70 000	125 000
France					
Recovered (b)	710 400	698 400	622 345	616 234	605 820
Recovered (c)	196 000	150 000	127 000	75 000	75 000
Germany					
Recovered (b)	1 619 900	1 526 700	1 627 900	1 706 200	1 650 100
Recovered (c)	43 900	40 000	42 900	42 500	35 900
Greece					
Recovered (b)	162 000	160 000	162 000	162 000	165 000
Hungary					
Recovered (b)	51 000	35 000	65 000	50 000	65 000
Italy					
Recovered (a)	127 000	113 000	92 000	87 000	84 000
Recovered (b)	565 000	575 000	650 000	680 000	650 000
Lithuania					
Recovered (b)	48 515	67 094	74 276	61 135	42 618

Production continued — tonnes (sulphur content)

Country	2003	2004	2005	2006	2007
Macedonia					
Recovered (a)	7 000	—	—	—	—
Netherlands					
Recovered (a)	131 000	137 000	141 000	141 000	141 000
Recovered (b)	408 000	410 000	440 000	495 000	505 000
Norway					
Recovered (a)	105 000	*105 000	*110 000	*110 000	*95 000
Recovered (b)	20 000	18 000	19 000	20 000	18 000
Poland					
Frasch	762 689	821 489	801 799	800 200	833 600
Recovered (a)	293 700	289 100	289 000	308 000	*310 000
Recovered (b)	181 900	182 000	186 600	203 100	*205 300
Portugal					
Recovered	27 000	25 000	30 000	38 000	27 000
Romania					
Recovered	49 000	53 000	79 000	60 000	64 000
Slovakia					
Recovered (a)	5 000	5 000	5 000	5 000	5 000
Recovered (b)	60 000	65 000	65 000	65 000	78 000
Spain					
Recovered (a)	560 000	488 000	541 000	547 000	543 000
Recovered (b)	145 000	145 000	*150 000	*150 000	*150 000
Sweden					
Recovered (a)	180 200	185 800	180 000	180 000	177 000
Recovered (b)	62 454	62 238	59 839	68 391	66 569
Turkey					
Pyrites	28 000	20 000	55 000	59 000	61 000
Recovered (b) (c)	94 000	68 000	76 000	73 000	73 000
United Kingdom					
Recovered (a)	4 800	—	—	—	—
Recovered (b)	115 000	120 000	124 000	115 000	130 000
EU32 Total					
Pyrites	763 000	821 000	802 000	800 000	834 000
Frasch	304 000	304 000	239 000	259 000	194 000
Recovered	7 143 000	6 940 000	7 184 000	7 347 000	7 315 000

Note(s):-
(a) From metal sulphide processing
(b) From petroleum refining and/or natural gas
(c) Other



Exports of sulphur and pyrites

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Pyrites	...	2 418	2 641	2 881	2 645
Sulphur	54	46	141	225	3 006
Sulphur, sublimed & precipitated	9 265	8 435	9 245	4 881	492
Belgium-Luxembourg					
Sulphur	40 984	36 824	47 927	38 494	18 393
Sulphur, sublimed & precipitated	350	338	290	465	531
Bulgaria					
Sulphur	21 478	20 103	25 019	31 737	33 039
Croatia					
Sulphur	7 505	8 505	8 028	6 606	8 614
Czech Republic					
Sulphur	10 087	9 787	9 294	11 718	5 579
Sulphur, sublimed & precipitated	134	1 581	503	113	114
Denmark					
Sulphur	1 598	2 608	332	176	153
Finland					
Pyrites (c)	*266 000	*279 000	*100 000	*73 000	*90 000
Sulphur	...	...	3 135	3 674	3 513
France					
Sulphur, crude	382 273	481 226	347 690	(b) 294 003	(b) 59 934
Sulphur, refined	16 851	16 076	13 904	...	...
Sulphur, sublimed & precipitated	652	562	642	619	680
Germany					
Pyrites	389	339	240	486	741
Sulphur, crude	856 707	854 548	862 753	(b) 796 341	(b) 828 544
Sulphur, refined	41 163	40 135	36 067	...	...
Sulphur, sublimed & precipitated	4 021	276	163	102	114
Greece					
Pyrites	23	6 920	4 306	16 495	73 606
Sulphur	338	3 385	138	43 773	52 668
Hungary					
Sulphur	...	22 607	36 471	34 850	43 178
Italy					
Pyrites	8 185	7 384	4 763	8 646	8 024
Sulphur, crude	14 358	8 785	41 534	...	...
Sulphur, refined	136 717	156 833	183 869	(a) 253 472	(a) 263 362
Sulphur, sublimed & precipitated	5 693	930	2 159	36 881	39 061
Lithuania					
Sulphur	16 724	13 960	3 851	1	7
Netherlands					
Pyrites	...	76 812	82 502	531	24
Sulphur, crude	223 880	133 553	55 758	...	...
Sulphur, refined	98 196	170 473	192 922	(a) 436 669	(a) 460 352
Norway					
Sulphur	...	...	1	20	3 325
Sulphur, sublimed & precipitated	12 194	2 671	—	—	—
Poland					
Sulphur	530 180	560 340	575 796	478 736	555 603
Sulphur, sublimed & precipitated	...	13 706	17 364	18 426	26 376
Portugal					
Pyrites	...	...	...	...	1 750
Sulphur	9 847	10 838	28 122	9 747	15 410
Sulphur, sublimed & precipitated	408	121	80	500	1
Romania					
Sulphur	12 974	20 682	54 917	43 255	45 579
Slovakia					
Sulphur, sublimed & precipitated	48 534	65 648	60 776	63 019	75 817
Spain					
Sulphur, crude	29 959	45 034	32 557	(b) 76 771	(b) 77 220
Sulphur, refined	12 746	8 704	13 133	...	...
Sulphur, sublimed & precipitated	575	79	124	338	244
Sweden					
Sulphur	9 572	4 542	16 883	12 071	5 168
Sulphur, sublimed & precipitated	0	139	239	5 719	10 959

Exports continued — tonnes

Country	2003	2004	2005	2006	2007
Turkey					
Sulphur	1 251	534	638	152	7 091
Sulphur, sublimed & precipitated	141	75	127	170	15 376
United Kingdom					
Sulphur	476	700	431	756	23 476
Sulphur, sublimed & precipitated	836	1 387	1 458	1 312	624

Note(s):-
(a) Including crude
(b) Incuding refined
(c) BGS estimates, based on known imports into certain countries

Imports of sulphur and pyrites

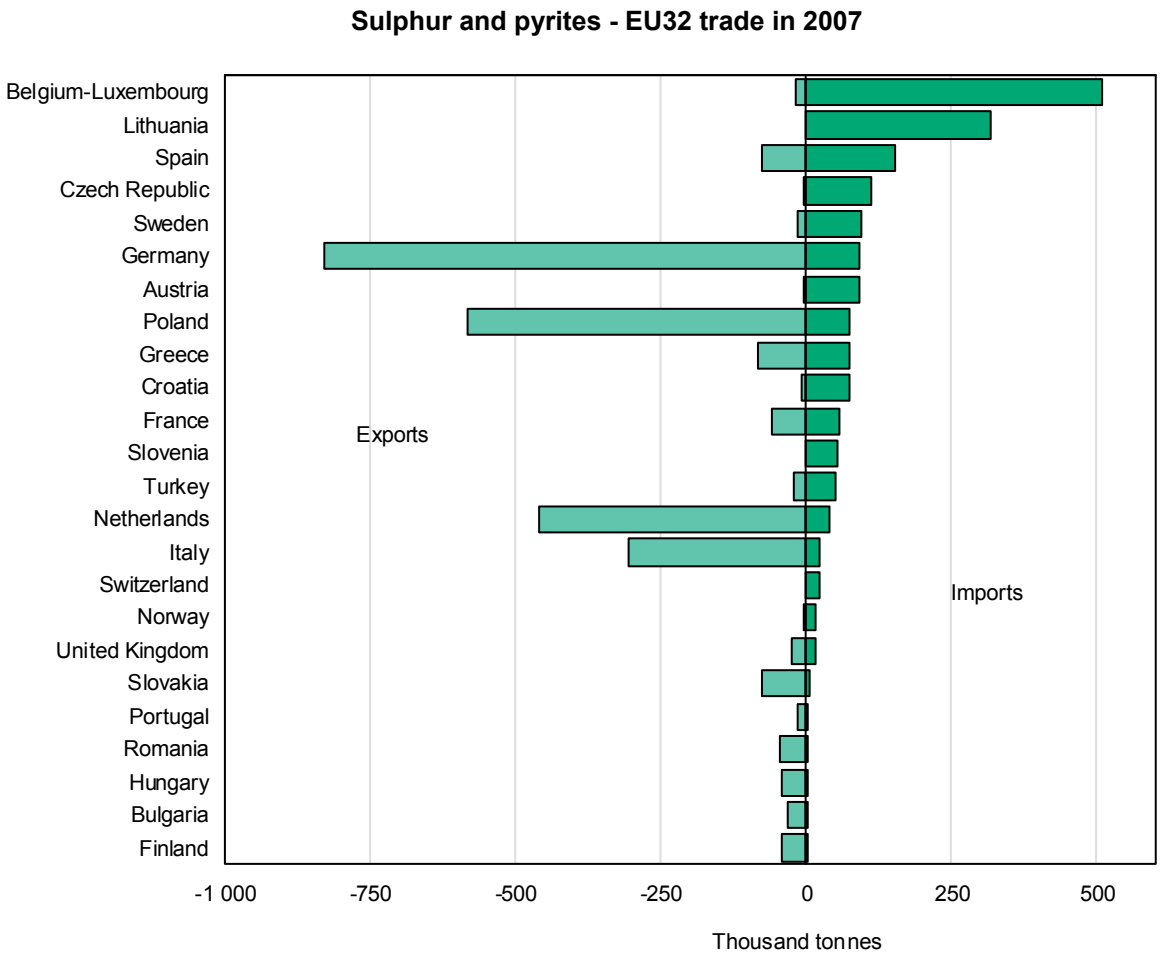
tonnes

Country	2003	2004	2005	2006	2007
Austria					
Pyrites	2 107	3 126	3 251	3 537	3 809
Sulphur	64 198	58 218	60 054	70 350	84 659
Sulphur, sublimed & precipitated	388	6 339	9 589	10 850	5 556
Belgium-Luxembourg					
Sulphur, crude	152 598	152 830	167 624	...	...
Sulphur, refined	241 917	305 518	322 649	(c) 574 515	(c) 506 662
Sulphur, sublimed & precipitated	103	28	127	156	311
Bulgaria					
Sulphur	407	903	1 076	767	1 039
Croatia					
Sulphur	46 017	63 606	70 897	86 431	71 965
Sulphur, sublimed & precipitated	3 611	4 817	1 923	3 492	2 425
Cyprus					
Sulphur	1 370	1 226	1 356	893	994
Czech Republic					
Sulphur	52 784	34 787	16 983	40 147	55 196
Sulphur, sublimed & precipitated	49 164	70 159	89 595	70 555	57 410
Denmark					
Sulphur	8 210	7 883	7 066	2 335	204
Finland					
Sulphur	19 575	8 238	310	11 925	415
France					
Pyrites	3 359	5 643	4 521	2 533	160
Sulphur, crude	50 147	43 846	39 973	...	...
Sulphur, refined	56 388	27 041	42 353	(c) 72 785	(c) 56 072
Sulphur, sublimed & precipitated	2 488	12 555	5 809	2 439	797
Germany					
Pyrites	42 170	53 264	62 686	76 343	92 569
Sulphur	45 962	56 272	46 127	31 267	51 785
Sulphur, sublimed & precipitated	1 448	12 782	4 389	1 363	2 007
Greece					
Pyrites	...	...	...	31 906	94 621
Sulphur	106 922	83 733	68 765	3 933	35 625
Hungary					
Sulphur (a)	*2 178	*1 697	*1 228	*3 442	*1 228
Sulphur, sublimed & precipitated	67	296	362	326	174
Ireland, Republic of					
Sulphur, sublimed & precipitated	898	1 371	2 327	2 486	887
Italy					
Pyrites	12 067	8 929	15 548	17 741	14 879
Sulphur, crude	11 975	8 646	3 150	...	...
Sulphur, refined	8 478	10 279	10 497	(c) 11 691	(c) 16 271
Sulphur, sublimed & precipitated	483	281	328	375	414
Lithuania					
Sulphur	316 359	255 917	306 635	320 658	317 678
Sulphur, sublimed & precipitated	...	...	560	607	...

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Netherlands					
Sulphur	29 631	40 439	37 083	23 928	38 189
Sulphur, sublimed & precipitated	210 984	104 982	37 484	5 563	...
Norway					
Pyrites	225 492	225 513	26 940	...	...
Sulphur	628	4 559	16 413	11 983	5 224
Sulphur, sublimed & precipitated	...	...	240	5 571	10 790
Poland					
Pyrites	1 933	1 061	1 013	5 065	1 582
Sulphur	88 544	78 292	78 274	83 432	74 805
Portugal					
Sulphur	6 333	3 532	5 878	4 485	3 233
Sulphur, sublimed & precipitated	5	431	28	3	3
Romania					
Sulphur	5 660	2 075	964	1 413	1 959
Sulphur, sublimed & precipitated	30	9	113	112	2
Slovakia					
Sulphur	7 439	3 582	3 669	3 454	4 339
Sulphur, sublimed & precipitated	167	94	689	287	755
Slovenia					
Pyrites	399	375	400	463	612
Sulphur	46 289	49 649	58 669	58 159	53 434
Spain					
Pyrites	667	1 012	1 542	1 478	2 585
Sulphur, crude	210 794	220 662	182 318	(b) 133 552	(b) 152 566
Sulphur, refined	5 936	13 582	5 778	...	...
Sulphur, sublimed & precipitated	753	533	243	296	265
Sweden					
Pyrites	291	699	319	557	750
Sulphur	89 505	61 305	71 337	82 246	94 449
Sulphur, sublimed & precipitated	5 632	2 693	16	23	4
Switzerland					
Pyrites	207	117	76	69	51
Sulphur	25 968	24 940	24 977	19 369	20 982
Sulphur, sublimed & precipitated	193	120	61	50	5
Turkey					
Sulphur	124 243	90 502	91 763	49 620	...
Sulphur, sublimed & precipitated	4 899	138	110	43	...
United Kingdom					
Sulphur, crude	23 469	44 963	24 222	11 608	5 101
Sulphur, refined	5 560	3 984	7 263	7 334	8 577
Sulphur, sublimed & precipitated	544	675	577	1 297	1 073

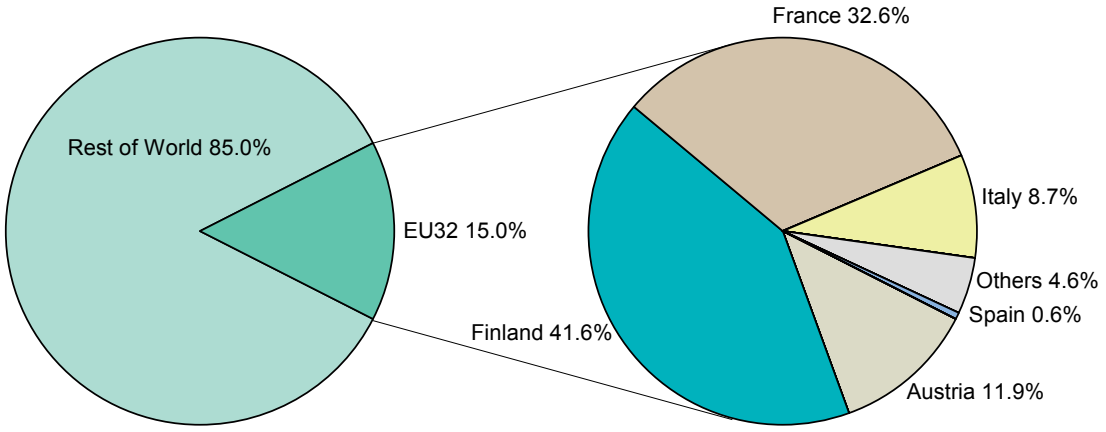
Note(s) :-
(a) BGS estimates, based on known exports from certain countries
(b) Including refined
(c) Including crude


Sulphur and pyrites - EU32 trade in 2007
Belgium-Luxembourg
Lithuania
Spain
Czech Republic
Sweden
Germany
Austria
Poland
Greece
Croatia
France
Slovenia
Turkey
Netherlands
Italy
Switzerland
Norway
United Kingdom
Slovakia
Portugal
Romania
Hungary
Bulgaria
Finland
Exports
Imports
-1 000
-750
-500
-250
0
250
500
Thousand tonnes

Talc

- Talc is a soft hydrous magnesium silicate mineral. It is frequently coloured by the presence of iron-bearing minerals and trace elements but usually turns white when finely ground. The familiar use of talc as a cosmetic powder is minor compared to industrial usage. Talc is chiefly used as a filler in paint, plastics, pharmaceuticals, adhesives and rubber. It is also extensively used in ceramics manufacture and as a filler and coater in the paper industry.
- During 2006 the largest world producer was China with an estimated 29 per cent of world production. Within the EU32 the largest producer is Finland, which accounted for 39 per cent of EU32 production.
- Talc is traded in a variety of forms and, as a result of widespread production, markets are very stable. During 2007 and 2008 Norwegian, ex-store UK talc traded at between £142 and £294 per tonne depending on grade.

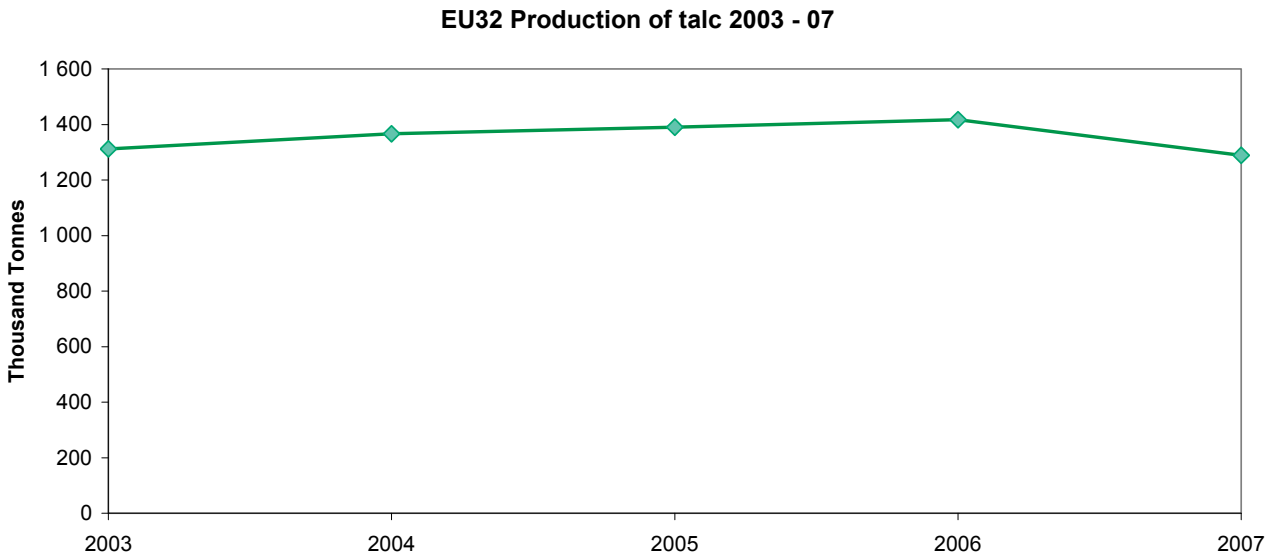
EU32 Production of talc 2007



Production of talc

tonnes

Country	2003	2004	2005	2006	2007
Austria	137 596	136 305	166 569	159 447	153 409
Finland	501 658	528 943	508 169	547 146	535 882
France	394 000	402 000	416 000	*420 000	*420 000
Germany	3 859	...	...	...	...
Greece	500	200	250	*250	*250
Italy	81 568	111 887	140 581	146 942	112 080
Macedonia	3 271	4 350	1 955	1 025	1 775
Norway	48 000	32 000	34 000	*34 000	*34 000
Portugal	5 460	6 231	5 362	5 517	12 367
Romania	10 082	9 725	6 760	2 967	1 513
Slovakia	4 200	7 100	200	—	—
Spain					
Talc	101 739	107 829	90 589	83 502	85 000
Pyrophyllite	900	700	700	—	—
Sweden	7 000	8 000	7 000	6 000	7 000
United Kingdom	6 494	3 881	6 000	4 325	2 850
EU32 Total	1 306 000	1 359 000	1 384 000	1 411 000	1 366 000



Exports of talc

tonnes

Country	2003	2004	2005	2006	2007
Austria	174 590	151 022	158 799	165 923	153 457
Belgium-Luxembourg	92 350	128 120	168 900	144 081	165 105
Finland (a)	*227 000	*275 000	*278 000	*246 000	*284 000
France	226 550	262 147	279 659	273 706	276 014
Germany	5 285	3 862	3 906	4 790	5 394
Greece	990	2 566	3 479	4 065	5 016
Hungary	314	1 533	—	—	162
Italy	116 739	118 131	120 920	122 148	131 071
Macedonia	720	664	789	735	1 124
Netherlands	177 554	225 528	183 270	190 668	199 896
Norway	32 520	30 279	28 448	31 834	33 032
Portugal	204	1 117	1 614	6 013	4 243
Slovakia	1 205	1 239	1 051	1 011	1 494
Spain	67 748	60 832	56 493	47 142	39 689
Sweden	8 061	9 388	10 080	7 556	9 415
Switzerland	1 777	72	105	73	133
Turkey	463	1 963	2 806	1 195	1 742
United Kingdom	3 325	3 317	5 244	4 626	2 389

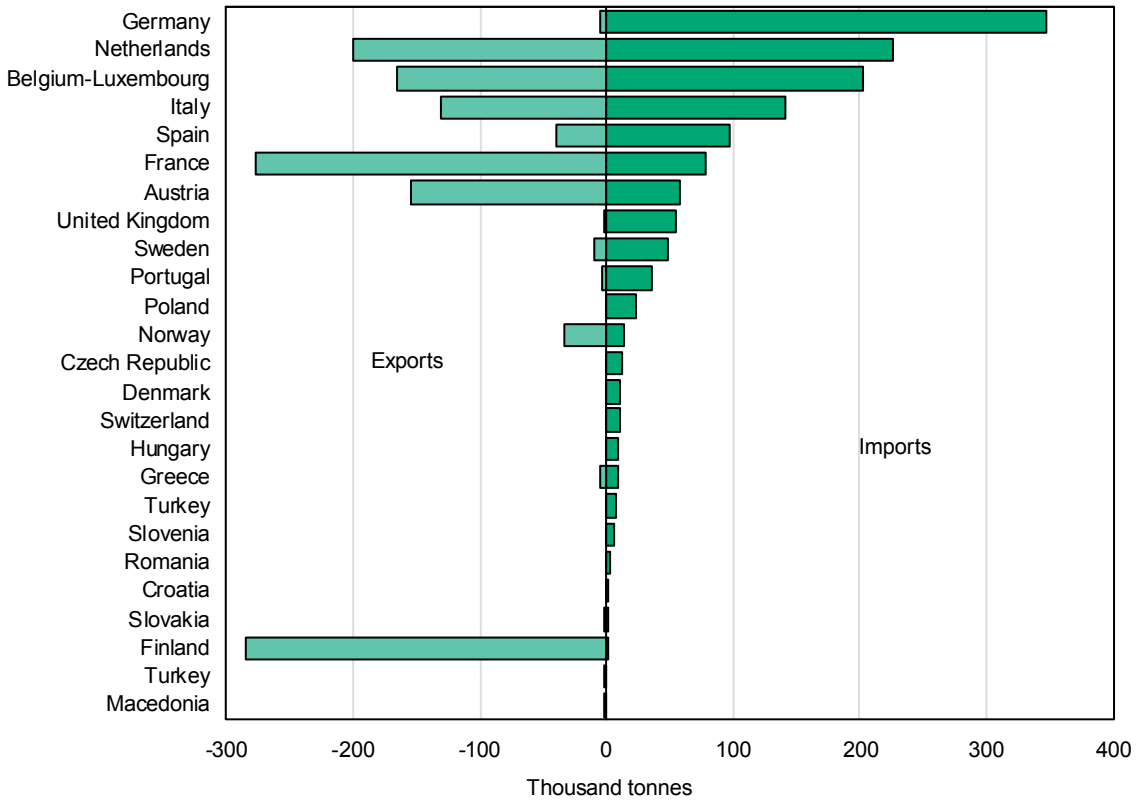
Note(s):-
(a) BGS estimates, based on known imports into certain countries

Imports of talc

tonnes

Country	2003	2004	2005	2006	2007
Austria	30 831	49 930	50 768	49 900	58 500
Belgium-Luxembourg	124 455	135 046	224 624	186 227	202 593
Bulgaria	465	487	599	626	688
Croatia	1 531	1 726	1 378	1 753	1 985
Cyprus	255	242	386	307	343
Czech Republic	10 278	9 426	9 986	10 855	12 993
Denmark	14 407	14 085	14 103	13 299	10 830
Estonia	246	316	300	295	418
Finland	3 971	1 827	866	757	663
France	40 650	77 240	76 021	59 853	77 772
Germany	307 374	352 177	376 618	345 863	347 230
Greece	5 316	10 061	9 937	10 000	8 550
Hungary	10 070	9 178	...	8 175	9 224
Ireland, Republic of	2 008	2 508	2 632	1 278	375
Italy	127 855	126 745	125 913	129 218	140 461
Latvia	157	154	105	217	396
Lithuania	64	87	402	463	511
Malta	170	315	302	271	179
Netherlands	220 448	226 602	206 485	243 071	225 720
Norway	14 737	14 522	16 488	10 991	13 374
Poland	18 342	16 155	20 536	22 348	23 122
Portugal	17 721	20 203	23 583	30 955	36 089
Romania	1 187	1 609	1 962	2 101	2 006
Slovakia	369	192	211	4 174	1 344
Slovenia	5 251	5 628	5 383	5 297	5 301
Spain	68 760	80 626	80 726	87 578	96 298
Sweden	45 509	43 288	45 376	44 669	48 746
Switzerland	11 490	9 579	10 254	10 786	10 360
Turkey	11 227	16 810	15 312	10 900	7 595
United Kingdom	59 172	66 722	65 496	55 200	54 812

Talc - EU32 trade in 2007



Tantalum and niobium

- Tantalum and niobium are produced from their ores, sometimes combined in one mineral. Tantalum is also produced from tin refinery slags. Tantalum is a heavy, very hard, ductile metallic element that has a very high melting point (2996°C) and is strongly resistant to chemical attack. It is used chiefly in electronic applications, especially in miniature capacitors. Niobium is a soft and ductile metallic element that is used mainly in special steels and superalloys.
- World production of tantalum in 2007 was dominated by Australia (approximately 52 per cent) and the largest producer of niobium ores was Brazil (> 90 per cent). There was no production in the EU32, which is entirely import dependent.
- Tantalum is normally traded in oxide form (tantalite). During 2007 and 2008 the average price for tantalite (Europe 25%/40% basis) was US$35 per pound Ta_2O_5.

Exports of tantalum and niobium

tonnes

Country	2003	2004	2005	2006	2007
Czech Republic					
Tantalum	55	84	68	53	66
Estonia					
Tantalum	25	39	65	51	43
France					
Tantalum	3	20	101	9	21
Germany					
Niobium & tantalum ores	174	93	...	...	...
Tantalum	323	337	190	294	199
Lithuania					
Tantalum	14	13	5	5	48
Netherlands					
Tantalum	23	24	3	76	2
Portugal					
Tantalum	18	42	15	4	63
Switzerland					
Tantalum	8	14	27	17	14
United Kingdom					
Tantalum	278	77	131	83	77

Note(s):-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

Imports of tantalum and niobium

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Tantalum	54	64	0	0	70
Belgium-Luxembourg					
Tantalum	41	20	1	0	3
Czech Republic					
Tantalum	168	261	141	164	206
France					
Tantalum	41	67	23	55	83
Germany					
Tantalum	239	281	164	148	125
Ireland, Republic of					
Tantalum	2	2	8	2	3
Lithuania					
Tantalum	7	12	10	11	47
Netherlands					
Tantalum	4	35	12	6	8
Portugal					
Tantalum	69	68	115	103	69

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Spain					
Tantalum	30	4	62	10	112
United Kingdom					
Tantalum	842	243	97	119	96

Note(s) :-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

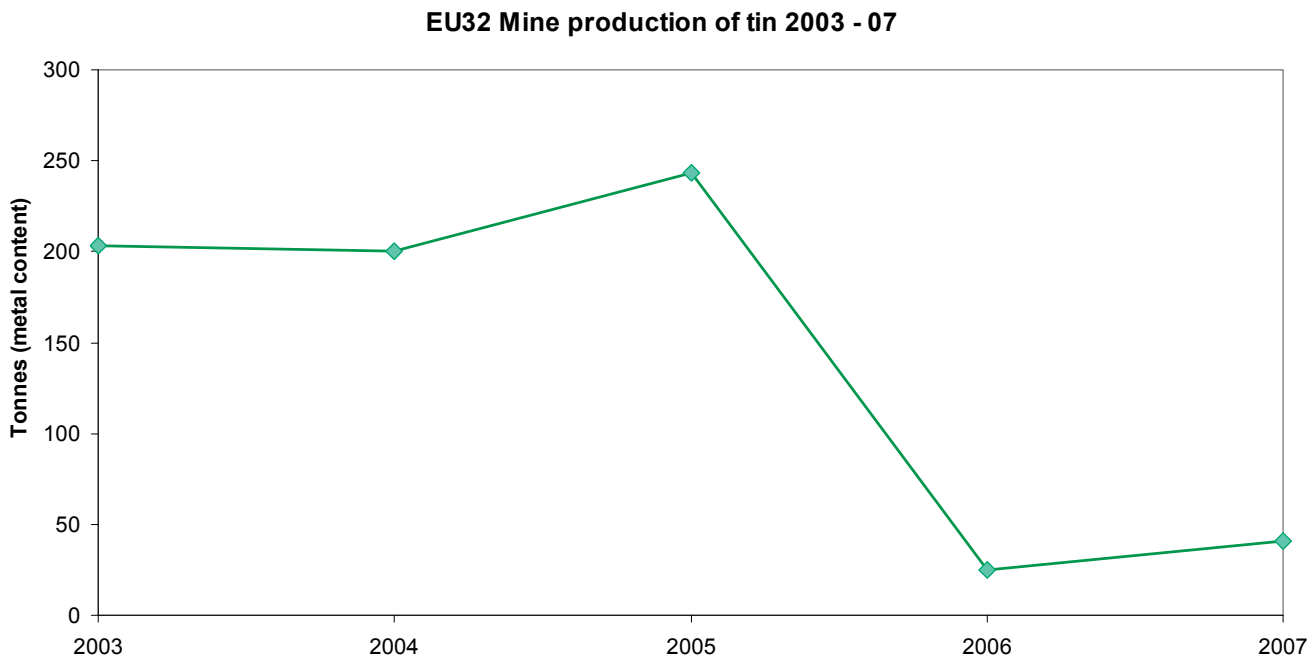
Tin

- Tin is a malleable and ductile metal that is resistant to corrosion. The chief use of tin is to coat metals that are more susceptible to corrosion, especially steel. It is also widely used as an alloying agent (i.e. with lead to make pewter) and its use in solders is rapidly growing as it replaces lead. Tin chemicals are used as fungicides and other biocides.
- World mine production is restricted to 18 countries, of which China was the largest producer during 2007 (45 per cent of world total). Production from the EU32 countries is limited to a small amount from Portugal.
- The LME tin price rose steadily throughout 2007 from US$11 352 per tonne in January to US$16 252 per tonne in December. This increased more sharply during the early part of 2008, reaching US$24 052 per tonne in May before falling back to US$11 228 per tonne by the end of the year.

Mine production of tin

tonnes (metal content)

Country	2003	2004	2005	2006	2007
Portugal	203	200	243	25	41



Smelter production of tin

tonnes

Country	2003	2004	2005	2006	2007
Belgium	7 700	8 900	7 700	8 000	8 400

Exports of tin

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Unwrought (a)	151	153	116	110	167
Scrap	153	278	62	125	103
Belgium-Luxembourg					
Concentrates	...	186	286	118	68
Unwrought	7 538	8 803	6 814	1 633	2 734
Unwrought alloys	171	184	388	7 421	7 072
Scrap	601	607	362	216	148
Czech Republic					
Unwrought (a)	66	191	381	74	253
Scrap	25	130	65	249	958
Denmark					
Scrap	110	178	68	124	90
Estonia					
Scrap	8	7	125	17	71
Finland					
Unwrought alloys	9	46	60	90	40
Scrap	126	86	58	89	201
France					
Unwrought	577	430	324	368	552
Unwrought alloys	612	527	1 020	1 010	884
Scrap	279	457	478	893	590
Germany					
Concentrates	...	...	163	331	—
Unwrought	909	978	1 343	1 015	1 246
Unwrought alloys	481	408	329	392	1 371
Scrap	849	994	701	965	1 222
Ireland, Republic of					
Concentrates	172	190	151	110	75
Unwrought (a)	29	103	67	71	1 094
Scrap	21	140	...	54	77
Italy					
Unwrought (a)	458	406	503	437	567
Scrap	201	180	17	269	204
Latvia					
Scrap	...	...	20	307	...
Malta					
Scrap	5	6	9	373	340
Netherlands					
Unwrought	4 278	3 921	5 330	6 971	8 061
Unwrought alloys	240	1 430	1 790	1 051	293
Scrap	344	685	297	761	545
Norway					
Scrap	14	211	323	236	189
Poland					
Unwrought	14	64	115	174	1 483
Portugal					
Concentrates	266	147	—	0	80
Unwrought alloys	...	...	...	146	172
Spain					
Unwrought (a)	179	205	139	120	98
Scrap	198	221	435	408	460
Sweden					
Unwrought (a)	238	261	217	250	201
Scrap	88	161	45	43	161
Switzerland					
Unwrought (a)	112	72	29	160	112
Scrap	73	107	157	130	123

Exports continued — tonnes

Country	2003	2004	2005	2006	2007
United Kingdom					
Concentrates	29	0	2	4	373
Unwrought	283	524	1 608	8 395	4 085
Unwrought alloys	2 152	885	442	698	696
Scrap	4 499	7 353	20 603	35 252	27 329

Note(s):-
(1) In this table the term 'unwrought' tin corresponds to item 8001 of the Harmonised System and comprises ingots, pigs, unwrought bars, sticks, etc.

(a) Including alloys

Imports of tin

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Unwrought (a)	702	765	1 926	2 177	2 486
Scrap	174	170	79	23	10
Belgium-Luxembourg					
Concentrates	74	329	377	154	17
Unwrought	490	1 686	1 210	1 312	1 657
Unwrought alloys	2 737	3 421	1 284	1 368	2 719
Scrap	4 816	5 726	1 382	4 866	3 907
Bulgaria					
Unwrought	65	39	49	278	45
Croatia					
Unwrought (a)	95	67	62	73	81
Czech Republic					
Unwrought (a)	635	550	634	665	616
Finland					
Unwrought (a)	151	126	178	173	166
France					
Unwrought	9 693	9 167	7 307	8 159	7 689
Unwrought alloys	701	638	1 080	931	409
Scrap	148	24	217	182	432
Germany					
Unwrought	20 904	21 258	20 438	21 584	23 917
Unwrought alloys	381	453	554	936	409
Scrap	505	408	506	917	1 689
Greece					
Unwrought (a)	598	671	615	244	323
Hungary					
Unwrought (a)	91	155	192	384	328
Ireland, Republic of					
Unwrought (a)	171	462	307	211	249
Italy					
Concentrates	—	241	24	572	65
Unwrought	6 201	5 610	5 899	5 526	4 113
Unwrought alloys	105	95	135	392	504
Netherlands					
Unwrought	7 368	6 801	8 730	13 696	7 858
Unwrought alloys	1 330	1 832	1 983	1 283	1 972
Scrap	202	155	201	466	607
Norway					
Unwrought	382	47	21	23	28
Unwrought alloys	71	79	57	103	46
Poland					
Unwrought (a)	1 077	1 367	1 437	1 583	1 838
Scrap	...	697	705	1 653	1 931
Portugal					
Unwrought	781	434	971	763	577
Unwrought alloys	63	71	100	274	419

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Romania					
Unwrought (a)	291	188	216	421	137
Slovakia					
Unwrought (a)	1 091	2 034	2 610	2 246	2 260
Spain					
Concentrates	101	160	137	29	27
Unwrought	8 072	7 860	7 109	7 716	7 093
Unwrought alloys	90	292	170	220	167
Scrap	2 400	2 111	1 919	1 576	185
Sweden					
Unwrought	421	468	551	697	623
Unwrought alloys	379	256	210	141	97
Scrap	71	39	60	37	14
Switzerland					
Unwrought (a)	803	726	909	1 042	1 241
Turkey					
Unwrought	(a) 1 966	(a) 2 314	(a) 2 731	(a) 2 380	2 788
United Kingdom					
Unwrought	7 488	5 861	4 812	3 558	13 630
Unwrought alloys	2 378	1 145	2 067	891	525
Scrap	168	215	468	1 728	452

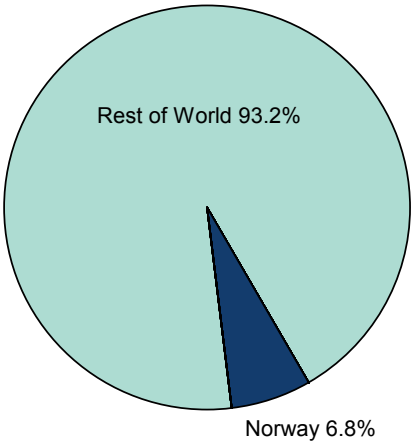
Note(s) :-
(1) In this table the term 'unwrought' tin corresponds to item 8001 of the Harmonised System and comprises ingots, pigs, unwrought bars, sticks, etc.

(a) Including alloys

Titanium minerals

- The titanium minerals ilmenite and rutile are the main sources of titanium, a low density, strong and corrosion resistant metal that is important in the aerospace industry. However, the chief use (94 per cent) of titanium minerals is in the form of titanium dioxide, a white pigment used in paint, plastics, rubber and paper.
- In 2007 Australia was the world's largest producer of titanium minerals, followed by Canada and South Africa. Together these three countries produced 59 per cent of the world total. EU32 production is restricted to Norway, which produced about seven per cent of the world total.
- At the close of 2007, ilmenite (Australian, min 54% TiO_2, F.O.B., bulk concentrates) traded between US$75 and US$85 per tonne. By the end of 2008 this had increased to between US$84 to US$136.50 per tonne. Rutile, which has a higher TiO_2 content (Australian concentrate, min. 95% TiO_2 F.O.B., bulk pigment grade), traded between US$475 and US$500 per tonne at the close of 2007. This increased to between US$500 and US$550 per tonne by the end of 2008.

EU32 Production of titanium minerals 2007



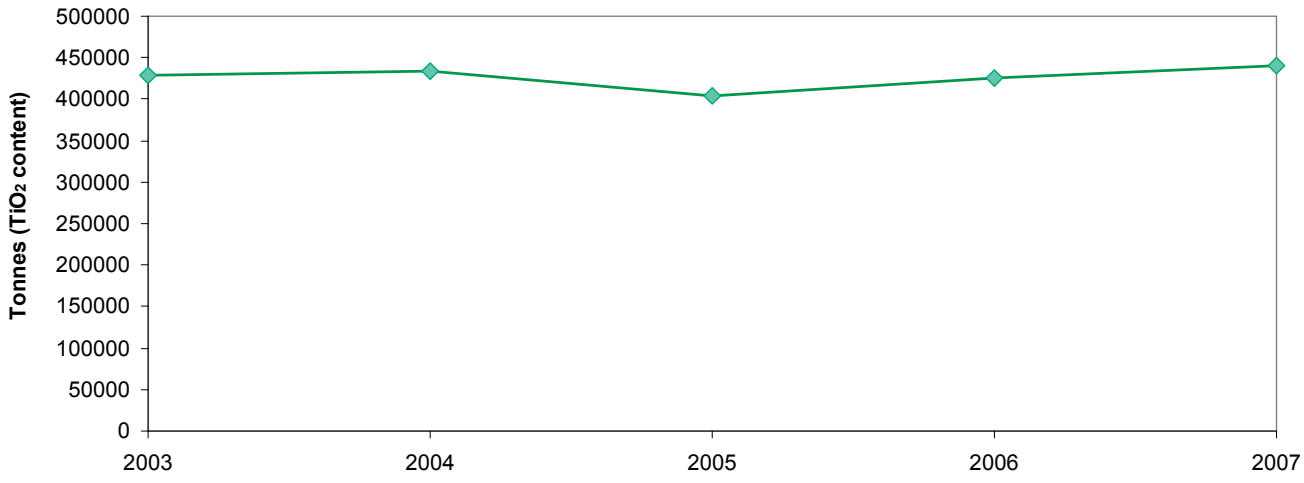
Production of titanium minerals

tonnes

Country	2003	2004	2005	2006	2007
Norway					
Ilmenite	859 000	866 700	806 800	850 000	882 000
EU32 Total (TiO_2 content)	430 000	433 000	403 000	425 000	441 000

Note(s):-
(1) The figures in this table refer to gross tonnage of titanium concentrates

EU32 Production of titanium minerals 2003 - 07



Exports of titanium

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	340	397	317	513	576
Oxides	2 404	2 640	3 457	3 976	4 885
Belgium-Luxembourg					
Titanium minerals	123 823	139 393	131 597	100 498	129 722
Titanium slag	...	...	4 219	20 830	3 209
Metal	1 214	1 031	1 093	1 490	2 074
Oxides	348 005	397 481	366 632	401 614	422 885
Croatia					
Oxides	...	60	155	419	489
Czech Republic					
Titanium minerals	177	873	340	492	745
Metal	239	191	358	424	126
Oxides	33 354	37 673	40 707	43 010	43 166
Denmark					
Metal	185	166	184	146	162
Oxides	578	1 304	1 136	1 134	1 121
Estonia					
Metal	336	188	31	49	11
Oxides	493	68	144	163	1 491
Finland					
Metal	30	22	44	35	30
Oxides (a)	*81 000	*94 000	*104 000	*103 000	*103 000
France					
Metal	3 722	4 086	5 891	5 722	5 112
Oxides	180 080	172 796	157 543	167 807	171 337
Germany					
Titanium minerals	778	319	607	490	776
Metal	6 705	8 048	8 911	8 893	8 713
Oxides	331 806	356 007	359 946	400 832	409 495
Greece					
Oxides	1 624	1 835	2 373	1 861	2 233
Hungary					
Oxides	163	278	126	324	991
Italy					
Titanium slag	...	...	1 499	...	...
Metal	3 159	4 439	4 130	4 101	4 884
Oxides	28 323	28 476	25 433	22 473	26 242
Netherlands					
Titanium minerals	3 611	4 050	1 390	1 660	449
Metal	2 015	1 846	2 181	1 902	2 182
Oxides	(a) *65 100	92 050	84 310	95 512	64 544
Norway					
Titanium minerals	500 000	(a) *416 000	(a) *382 000	(a) *477 000	(a) *435 000
Metal	214	182	159	176	117
Oxides (a)	*229 000	*193 000	*177 000	*221 000	*199 000
Poland					
Metal	1	25	740	917	52
Oxides	23 977	20 818	24 394	25 598	21 776
Portugal					
Oxides	383	431	512	840	1 064
Romania					
Metal	94	277	255	579	650
Slovenia					
Oxides	35 655	38 497	44 123	50 755	55 867
Spain					
Titanium minerals	494	604	170	185	232
Metal	697	483	903	2 005	1 431
Oxides	70 052	85 867	83 905	85 307	91 583
Sweden					
Metal	1 004	1 737	1 955	1 461	2 667
Oxides	11 713	13 912	14 306	20 409	17 047
Switzerland					
Metal	398	562	560	692	868
Oxides	499	740	1 020	1 024	1 133

Exports continued — tonnes

Country	2003	2004	2005	2006	2007
Turkey					
Metal	7	20	30	17	—
United Kingdom					
Metal	10 084	11 913	17 212	14 028	12 934
Oxides	242 541	234 591	215 741	182 246	212 068

Note(s):-
(1) Significant quantities of titanium slag are traded, but it is not always possible to identify this material in national trade accounts
(2) So far as possible, the term 'oxides', as used in this table, includes oxides and oxide based pigments classified under Harmonised System items 2823 and 3206.10
(3) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) BGS estimates, based on known imports into certain countries

Imports of titanium

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Titanium minerals	675	494	349	575	451
Metal	441	943	1 691	1 873	3 851
Oxides	18 528	18 612	25 640	27 485	26 856
Belgium-Luxembourg					
Ilmenite	11 632	...	—	720	—
Other titanium minerals	164 624	165 288	165 711	156 771	221 173
Metal	1 712	1 868	2 289	1 857	4 139
Oxides	272 441	339 444	291 670	314 131	145 929
Bulgaria					
Titanium minerals	2 979	407	1 287	300	712
Oxides	3 156	3 332	3 959	4 750	5 398
Croatia					
Oxides	2 327	2 401	2 561	2 827	3 245
Cyprus					
Oxides	1 172	1 172	1 286	1 227	1 243
Czech Republic					
Titanium minerals	74 709	53 570	80 407	149 925	179 323
Metal	620	800	1 143	1 155	1 086
Oxides	5 462	6 773	8 008	8 734	10 529
Denmark					
Metal	745	778	770	788	623
Oxides	21 022	22 269	23 156	24 678	19 514
Estonia					
Metal	234	113	216	12	393
Oxides	1 082	235	1 344	1 726	2 548
Finland					
Titanium minerals	...	...	5 080	34 403	20 578
Oxides	11 390	13 163	14 380	14 788	15 838
France					
Ilmenite	127 083	48 930	60 205	83 499	60 739
Other titanium minerals	34 984	81 141	86 552	78 849	71 292
Titanium slag	...	61 456	111 137	107 092	91 602
Metal	5 689	8 259	9 403	9 431	10 521
Oxides	151 809	140 068	119 699	135 309	126 786
Germany					
Ilmenite	349 819	315 214	333 603	414 037	425 175
Other titanium minerals	175 660	225 849	224 675	253 392	200 512
Titanium slag	41 319	—	—	17 403	112 474
Metal	10 044	14 756	15 978	18 426	19 385
Oxides	211 539	237 464	240 554	269 812	299 599
Greece					
Titanium minerals	313	563	528	440	826
Oxides	22 801	27 241	25 592	25 372	27 284

Imports continued — tonnes

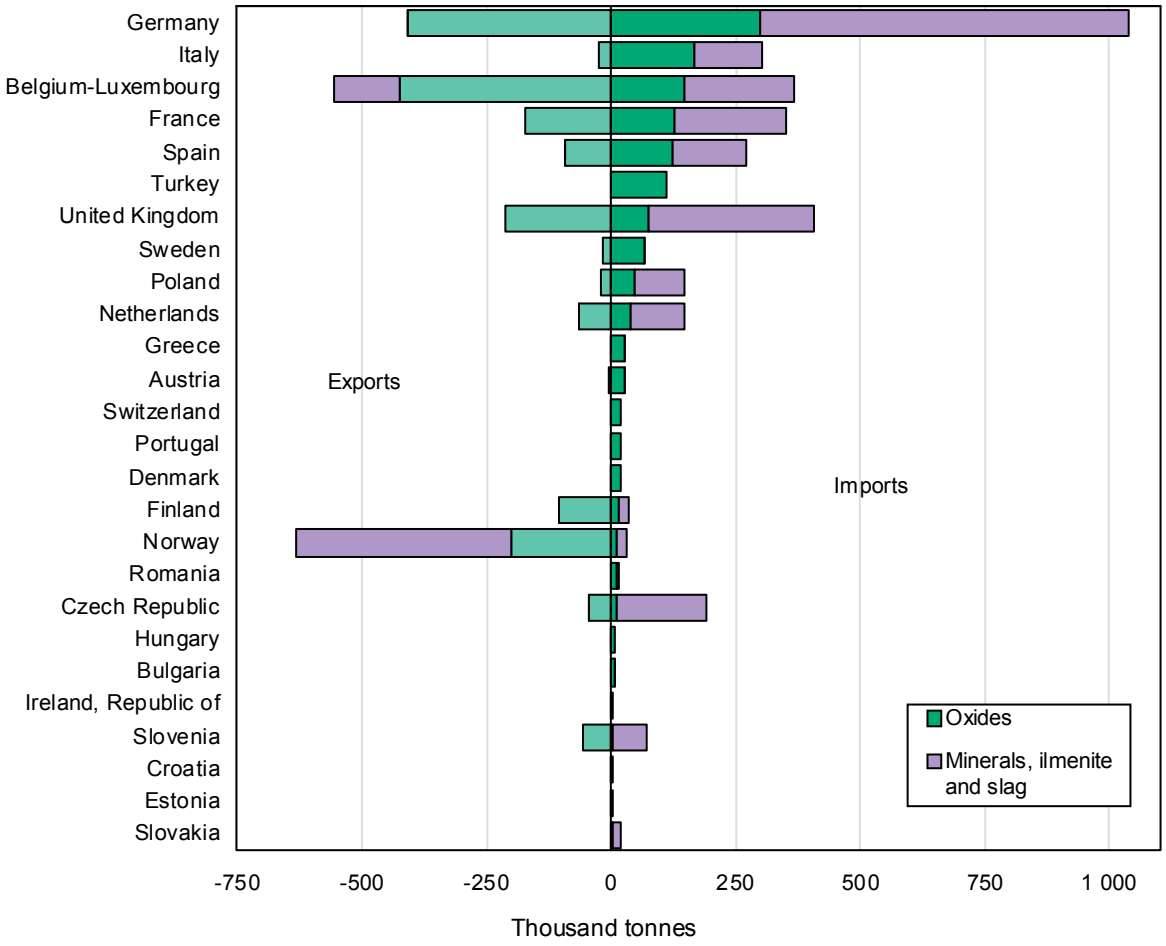
Country	2003	2004	2005	2006	2007
Hungary					
Metal	367	387	107	238	138
Oxides	8 247	8 677	7 523	7 845	8 291
Ireland, Republic of					
Metal	107	151	290	350	362
Oxides	5 095	5 685	5 059	4 703	4 822
Italy					
Titanium minerals	123 862	88 361	85 607	185 121	136 274
Metal	4 738	6 580	5 186	6 248	8 609
Oxides	149 238	158 592	154 950	161 253	166 223
Latvia					
Oxides	2 032	1 232	726	833	781
Lithuania					
Oxides	648	713	926	975	1 328
Macedonia					
Oxides	408	430	466	471	383
Netherlands					
Titanium minerals	123 129	154 460	127 941	79 377	103 580
Metal	2 676	2 835	1 857	2 234	4 295
Oxides	33 290	47 957	92 334	8 387	41 221
Norway					
Titanium minerals	...	...	33 000	73 690	17 600
Metal	557	505	636	661	637
Oxides	8 729	10 026	11 924	16 013	12 121
Poland					
Titanium minerals	101 284	98 214	100 539	95 057	100 002
Metal	151	271	328	2 550	2 122
Oxides	30 546	29 710	33 417	36 943	45 984
Portugal					
Oxides	18 922	20 120	17 458	18 565	19 545
Romania					
Titanium minerals	2 192	2 334	2 111	1 809	2 093
Metal	83	195	328	486	610
Oxides	5 454	6 378	7 600	9 794	11 132
Slovakia					
Titanium minerals	...	6 407	17 627	12 648	17 242
Metal	111	101	980	179	250
Oxides	2 701	2 173	2 804	2 742	2 193
Slovenia					
Titanium minerals	24 652	11 610	21 054	22 825	14 903
Titanium slag	...	...	...	64 246	53 245
Metal	118	300	614	392	348
Oxides	3 219	3 033	3 157	3 153	3 500
Spain					
Ilmenite	128 692	172 431	121 204	159 090	121 898
Other titanium minerals	2 296	2 316	1 746	1 807	22 037
Titanium slag	...	...	57	8	2 164
Metal	2 974	3 722	3 862	5 782	3 450
Oxides	100 814	116 397	117 203	112 778	123 132
Sweden					
Titanium minerals	320	389	300	911	1 032
Metal	1 707	1 856	1 382	2 294	2 623
Oxides	44 721	44 812	50 099	62 841	65 872
Switzerland					
Metal	535	735	1 273	1 357	1 352
Oxides	18 689	19 349	19 055	18 805	20 455
Turkey					
Titanium minerals	5 591	10 435	6 755	2 941	...
Oxides	68 613	85 832	92 136	104 103	108 932

Imports continued tonnes

Country	2003	2004	2005	2006	2007
United Kingdom					
Ilmenite	113 852	110 596	80 435	175 882	181 794
Other titanium minerals	111 754	113 852	109 238	48 147	42
Titanium slag	44 890	151	64 849	91 603	151 494
Metal	25 126	27 401	27 938	30 267	30 905
Oxides	74 138	74 787	67 102	71 528	74 708

Note(s) :-
(1) Significant quantities of titanium slag are traded, but it is not always possible to identify this material in national trade accounts
(2) So far as possible, the term 'oxides', as used in this table, includes oxides and oxide based pigments classified under Harmonised System items 2823 and 3206.10
(3) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

Titanium - EU32 trade in 2007



Tungsten

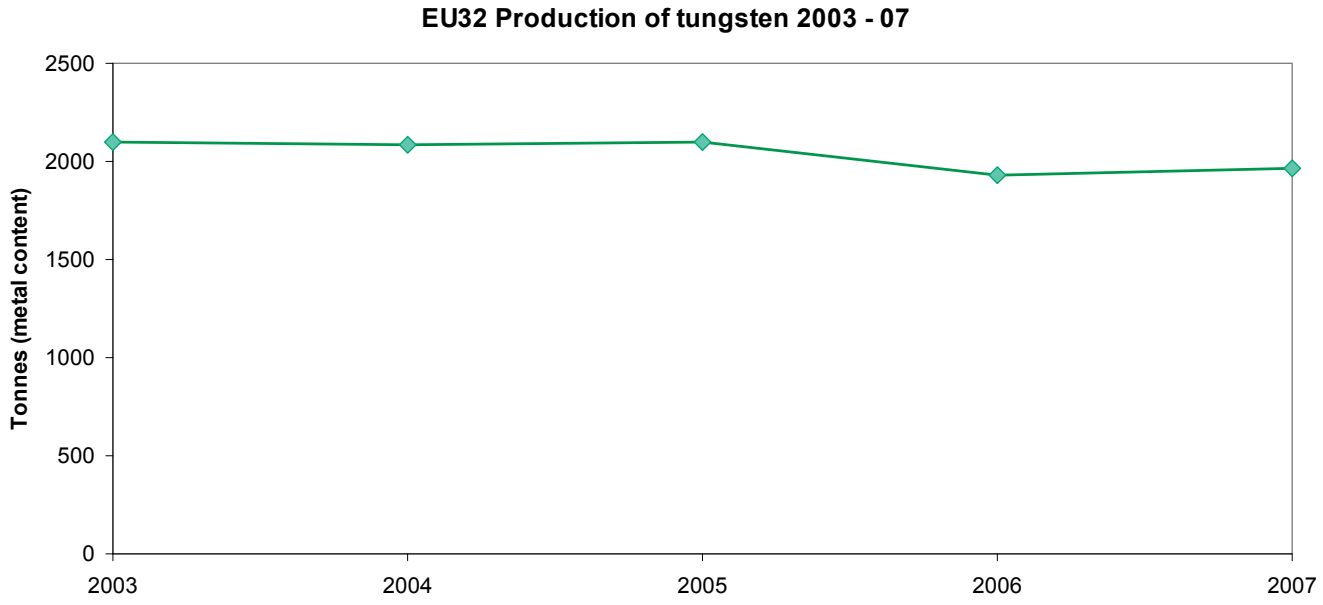
- Tungsten is a corrosion-resistant metallic element with an extremely high melting point. Its largest use is as cemented carbides in cutting tools; it is also used as an alloying agent with steel to make high-speed tool steel, and in superalloys. Its most familiar use is in light bulb filaments.
- China's tungsten production in 2007 was 72 per cent of the world total. There was minor production from Austria and Portugal but overall the EU32 is import dependent.
- Tungsten is traded in several forms but the bulk of exports were from China, and thus the largest component of international trade, was of ammonium paratungstate (APT). Prices for APT (European free market) varied between US$232 per tonne and US$265 per tonne throughout 2007 and 2008.

Mine production of tungsten

tonnes (metal content)

Country	2003	2004	2005	2006	2007
Austria	1 381	1 335	1 280	1 153	1 117
Portugal (a)	715	746	816	780	846
EU32 Total	2 100	2 100	2 100	1 900	2 000

Note(s):-
(a) Wolframite and scheelite



Exports of tungsten

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal (a)	*1 100	*1 300	*2 100	*2 000	*1 600
Belgium-Luxembourg					
Metal	374	404	452	484	387
Carbide	35	39	25	62	54
Czech Republic					
Metal	108	133	185	142	102
Carbide	...	...	...	579	605
Denmark					
Metal	13	26	5	86	112
Estonia					
Ores & concentrates	127	...	...	...	...
Metal	196	1	3	1	...
Finland					
Metal	67	91	77	80	113
France					
Metal	538	571	574	617	1 148
Carbide	241	251	265	343	431
Germany					
Metal	2 209	2 816	4 020	4 320	3 020
Hungary					
Metal	56	64	24	49	52
Ireland, Republic of					
Metal	41	72	963	183	180
Italy					
Metal	191	357	233	197	455
Latvia					
Metal	84	32	4	3	1
Netherlands					
Ores & concentrates	1	16	—	276	...
Metal	237	777	502	434	391
Poland					
Metal	34	89	84	89	76
Portugal					
Ores & concentrates	...	900	1 425	1 305	1 466
Metal	143	217	12	14	16
Slovakia					
Metal	11	...	16	66	2
Spain					
Metal	158	141	77	59	177
Sweden					
Ores & concentrates	75	...	62	...	3 192
Metal	334	102	414	296	234
Carbide	68	114	37	491	446
Switzerland					
Metal	244	268	316	270	392
United Kingdom					
Metal	2 053	1 267	1 732	2 100	2 444
Carbide	70	92	83	251	303

Note(s):-
(1) Significant amounts of tungsten are traded in the forms of ammonium paratungstate (APT) and carbide. Though statistics are included where available, most countries do not separately distinguish these forms in their trade accounts
(2) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) BGS estimates, based on known imports into certain countries

Imports of tungsten

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Metal	271	400	825	670	548
Carbide	148	136	42	22	...
Belgium-Luxembourg					
Metal	404	372	340	454	513
Carbide	51	42	42	64	1 182
Czech Republic					
Metal	73	116	173	197	837
Denmark					
Metal	5	103	307	523	113
Estonia					
Ores & concentrates	121	...	...	...	...
Finland					
Metal	169	119	121	21	130
France					
Metal	448	568	784	925	823
Carbide	695	692	592	898	866
Germany					
Ores & concentrates	195	389	493	512	604
Metal	4 874	4 976	5 515	4 450	4 791
Carbide	1 419	1 520	1 802	1 366	2 678
Ireland, Republic of					
Metal	331	177	292	173	277
Carbide	33	...	...	53	184
Italy					
Metal	258	321	257	236	280
Carbide	318	299	337	365	361
Netherlands					
Ores & concentrates	342	222	110	1 532	575
Metal	217	210	204	330	284
Carbide	18	56	99	49	36
Poland					
Metal	42	46	108	111	108
Portugal					
Metal	103	153	179	106	122
Carbide	96	109	105	97	119
Spain					
Metal	179	259	134	556	914
Carbide	48	59	38	35	41
Sweden					
Metal	470	559	502	563	546
Carbide	665	747	925	738	876
Switzerland					
Metal	139	170	235	146	257
United Kingdom					
Metal	1 932	1 903	3 204	4 607	2 925
Carbide	1 232	838	974	913	1 409

Note(s) :-
(1) Significant amounts of tungsten are traded in the forms of ammonium paratungstate (APT) and carbide. Though statistics are included where available, most countries do not separately distinguish these forms in their trade accounts
(2) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

Vanadium

- Vanadium is a soft, ductile, metallic element that is very corrosion resistant. The chief use is as an additive in alloy steels where it imparts strength and corrosion resistance. Other uses are in titanium alloys and as a catalyst.
- Mine production is confined to four countries, of which Russia (estimated 36 per cent of world total) and South Africa (35 per cent of world total) are the largest producers. There is no EU32 mine production. In the USA vanadium is a significant by-product from the refining of heavy crude oils.
- Vanadium is traded chiefly as vanadiferous slags and other residues, vanadium pentoxide and ferro-vanadium. During 2007 prices for vanadium pentoxide remained in the range US$5.90 to US$8.30 per pound but these increased sharply at the start of 2008 and remained in the range US$13.00 to US$18.20 per pound until October. In the latter part of 2008 prices fell back to about US$6.50 per pound. Prices for ferro-vanadium followed a similar trend, remaining between US$30 and US$42 per kilogram through 2007 before increasing sharply at the start of 2008. They remained between US$61 and US$88 per kilogram until October but then fell back to finish the year at about US$30 per kilogram.

Exports of vanadium

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg					
Vanadiferous residues	3 129	...	...	...	...
Ores & concentrates	748	1 456	2 600	791	297
Pentoxide	22	9	2	13	10
France					
Pentoxide	183	138	13	10	15
Metal	0	26	25	63	...
Germany					
Ores & concentrates	127	1 060	4 680	2 372	...
Pentoxide	102	296	1 216	1 444	1 250
Metal	483	522	1 469	573	...
Italy					
Ores & concentrates	1 691	1 267	1 092	1 291	527
Pentoxide	88	13	6	...	2
Lithuania					
Ores & concentrates	...	...	...	...	346
Netherlands					
Pentoxide	219	1 167	381	411	157
Metal	379	5	11	6	...
Turkey					
Pentoxide	32	900	940	—	24
United Kingdom					
Pentoxide	...	...	...	...	697
Metal	1 137	1 075	433	70	...

Note(s):-
(1) In this table the term 'pentoxide' also includes vanadium oxides and hydroxides, if any
(2) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

Imports of vanadium

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Vanadiferous residues	*25 000	*27 000	*29 000	*29 000	*37 000
Ores & concentrates	459	467	1 565	792	543
Pentoxide	(a) *400	(a) *1 000	(a) *300	(a) *50	...
Metal	2	9	—	—	...
Belgium-Luxembourg					
Ores & concentrates	1 379	1 116	894	197	162
Pentoxide	57	3	267	12	64
Metal	238	32	60	67	...
Czech Republic					
Pentoxide	4 898	5 429	3 831	4 858	3 210
France					
Ores & concentrates	1	...	21	—	...
Pentoxide	496	441	556	533	656
Metal	34	72	88	71	...
Germany					
Pentoxide	802	648	741	1 222	1 071
Metal	106	159	193	173	...
Italy					
Pentoxide	129	134	156	209	150
Netherlands					
Pentoxide	865	1 718	714	362	316
Norway					
Metal	55	32	10	63	...
Poland					
Metal	...	32	32	35	...
Slovenia					
Metal	22	21	16	25	...
Spain					
Pentoxide	36	118	62	71	45
Sweden					
Metal	49	46	20	40	...
United Kingdom					
Pentoxide	363	306	339	472	425
Metal	256	338	812	407	...

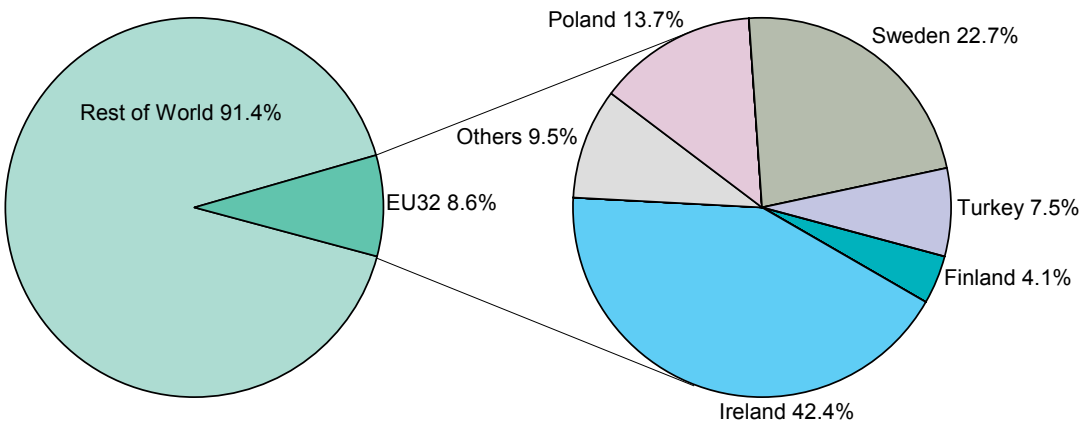
Note(s) :-
(1) In this table the term 'pentoxide' also includes vanadium oxides and hydroxides, if any
(2) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) BGS estimates, based on known exports from certain countries

Zinc

- Zinc is a metal that is brittle at ordinary temperatures but malleable at temperatures above 100ºC. It is corrosion resistant and this property is exploited in its chief use as a steel coating (galvanising). Its other main uses are as zinc die-castings and alloyed with copper to make brass, which is widely used in the electrical, engineering and construction industries.
- Zinc is produced by many countries from mines, or in refineries that process imported zinc concentrates. China was the world's largest mine producer during 2007 with 27 per cent of the total. Australia and Peru are also major producers. The Republic of Ireland was the largest mine producer in the EU32 with 42 per cent of the EU32 total. A number of EU32 countries have major zinc refineries.
- Prices for zinc were volatile in 2007, but generally show a decline from the record high of US$4620 per tonne seen in November 2006. However, in 2008 they dropped significantly from US$2500 per tonne in January to about US$1100 by the end of the year.

EU32 Mine production of zinc 2007

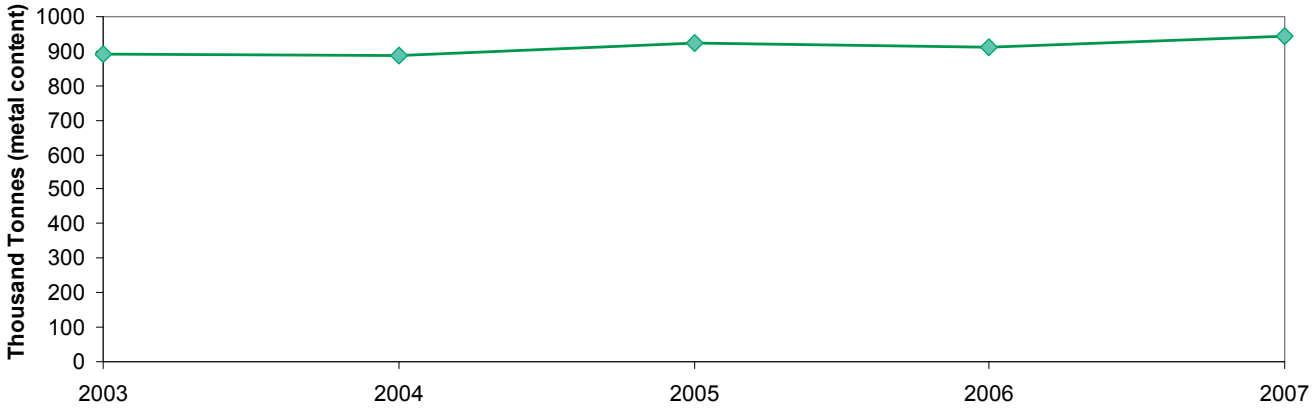


Mine production of zinc

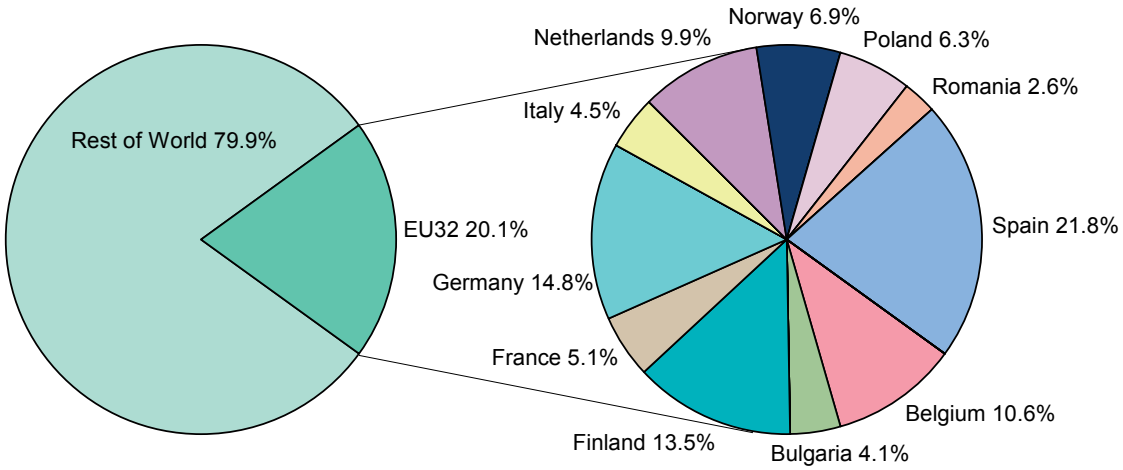
tonnes (metal content)

Country	2003	2004	2005	2006	2007
Bulgaria	13 000	*12 700	*12 000	*10 400	*11 500
Finland	38 800	37 200	40 500	35 700	38 900
Greece	3 000	—	4 000	18 000	21 300
Ireland, Republic of	419 000	438 300	445 400	425 800	400 900
Macedonia	—	—	—	9 349	32 195
Poland	154 277	140 381	135 600	126 600	129 600
Portugal	—	—	—	7 505	24 163
Romania	22 081	23 599	13 784	8 052	849
Spain	15 140	—	—	—	—
Sweden	185 884	197 034	215 691	210 029	214 576
Turkey	40 000	39 000	56 000	59 000	71 000
EU32 Total	891 000	888 000	923 000	910 000	945 000

EU32 Mine production of zinc 2003 - 07



EU32 Production of slab zinc 2007

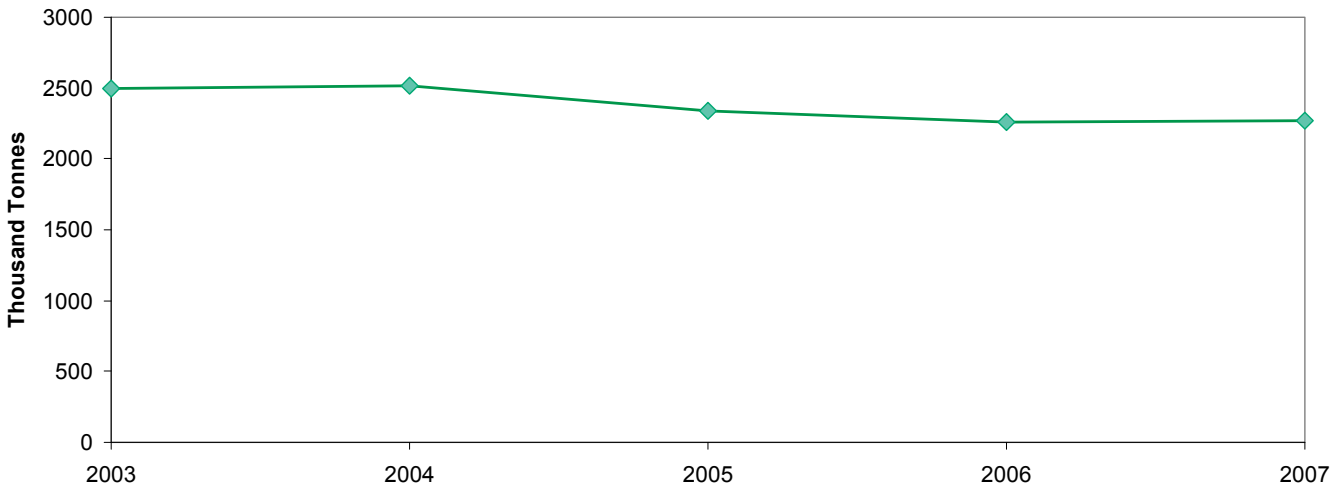


Production of slab zinc

tonnes

Country	2003	2004	2005	2006	2007
Belgium	244 400	272 500	222 000	251 000	240 000
Bulgaria	86 800	101 500	92 500	85 900	93 200
Finland	265 853	284 525	281 904	282 238	305 543
France	257 000	260 000	209 000	120 000	116 000
Germany	388 131	382 020	334 900	342 566	334 891
Italy	123 100	118 400	121 200	109 200	102 100
Macedonia	23 746	—	—	—	—
Netherlands	224 000	224 000	227 500	227 500	225 000
Norway	143 627	140 901	151 285	160 670	157 027
Poland	154 200	155 500	137 300	133 900	141 900
Romania	51 000	52 746	56 795	43 705	58 342
Spain	519 000	525 000	501 400	507 300	494 100
United Kingdom	16 600	—	—	—	—
EU32 Total	2 497 000	2 517 000	2 336 000	2 264 000	2 268 000

EU32 Production of slab zinc 2003 - 07



Exports of zinc

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Unwrought (a)	36 012	37 304	13 469	19 981	14 682
Scrap	2 984	2 000	3 559	4 329	2 132
Belgium-Luxembourg					
Ores & concentrates	232 845	384 652	511 730	540 810	479 825
Unwrought	130 356	136 768	10 058	13 275	22 114
Scrap	19 485	26 546	37 754	57 851	42 673
Bulgaria					
Unwrought (a)	74 801	89 287	82 902	227 543	90 573
Scrap	653	1 194	1 576	1 854	1 511
Croatia					
Scrap	566	325	417	511	683
Czech Republic					
Unwrought (a)	1 670	5 659	7 865	10 669	18 786
Scrap	2 247	2 976	2 498	3 086	2 981
Denmark					
Scrap	5 543	2 336	3 538	3 628	2 388
Estonia					
Scrap	1 612	1 146	539	1 121	725
Finland					
Unwrought	212 125	235 735	235 320	233 041	260 342
Unwrought alloys	97	436	83	190	92
Scrap	5 195	2 281	2 116	1 650	1 274
France					
Ores & concentrates	37 167	38 779	39 463	47 516	51 781
Unwrought	109 839	115 352	80 472	31 960	29 305
Unwrought alloys	31 625	35 879	33 940	12 205	7 238
Scrap	38 294	56 440	63 571	71 224	56 200
Germany					
Ores & concentrates	4 741	695	7 257	2 336	612
Unwrought	104 982	91 123	81 664	65 824	77 443
Unwrought alloys	38 710	37 762	30 115	29 999	30 439
Scrap	47 414	52 545	55 913	54 939	59 297
Greece					
Ores & concentrates	0	0	3 276	12 615	14 890
Unwrought (a)	1 076	709	334	1 802	29 861
Scrap	683	709	517	421	644
Hungary					
Unwrought	921	3 798	415	1 189	—
Scrap	2 794	3 571	3 938	4 557	3 716
Ireland, Republic of					
Ores & concentrates	439 247	564 018	522 312	483 949	412 703
Scrap	298	450	684	569	3 044
Italy					
Ores & concentrates	61 273	93 317	96 439	114 339	105 437
Unwrought	2 761	2 331	9 230	37 659	21 048
Unwrought alloys	6 914	3 523	2 854	7 792	6 689
Scrap	17 313	15 157	13 652	12 934	13 574
Latvia					
Scrap	348	504	629	750	757
Lithuania					
Scrap	878	691	685	976	517
Macedonia					
Ores & concentrates	217	...	3 306	23 106	58 973
Unwrought (a)	27 083	745	124	30	5
Scrap	15	222	720	719	874
Netherlands					
Ores & concentrates	...	31 254	5 836	3 730	13 939
Unwrought	277 262	265 840	273 832	615 269	243 354
Unwrought alloys	7 571	19 867	9 364	38 116	31 276
Scrap	24 856	32 684	41 593	39 073	67 010
Norway					
Unwrought	125 896	127 410	134 690	138 491	130 570
Unwrought alloys	6 245	6 710	5 600	12 275	13 899

Exports continued tonnes

Country	2003	2004	2005	2006	2007
Poland					
Ores & concentrates	64 486	44 257	63 913	61 094	61 595
Unwrought	65 661	72 820	74 938	62 332	73 096
Unwrought alloys	1 330	850	857	2 513	1 829
Scrap	136	269	797	233	422
Portugal					
Ores & concentrates	...	...	...	13 035	40 950
Scrap	1 198	1 855	2 050	2 023	3 345
Romania					
Ores & concentrates	49 989	31 665	26 611	16 796	4 043
Unwrought (a)	49 234	42 991	42 012	32 008	48 339
Slovakia					
Unwrought	587	...	3 522	5 232	16 356
Unwrought alloys	311	5 977	3 618	14 053	7 147
Slovenia					
Scrap	950	788	803	846	873
Spain					
Ores & concentrates	33 913	37 986	67 420	31 416	98 359
Unwrought	245 702	294 548	333 966	270 233	220 002
Unwrought alloys	75 497	54 670	32 673	87 073	66 155
Scrap	3 561	5 125	11 981	7 946	5 295
Sweden					
Ores & concentrates	305 058	379 155	372 925	402 219	405 682
Unwrought (a)	496	280	165	1 143	103
Scrap	42 715	21 598	16 134	29 015	2 777
Switzerland					
Scrap	2 415	2 582	2 480	2 856	2 408
Turkey					
Ores & concentrates	97 605	110 692	138 288	144 662	123 956
Unwrought	(a) 315	(a) 302	(a) 227	(a) 120	—
Scrap	4 293	2 318	53	176	...
United Kingdom					
Unwrought	3 106	1 581	1 661	5 325	5 932
Unwrought alloys	21 770	26 260	38 267	37 120	33 799
Scrap	15 436	9 710	9 881	4 571	7 543

Note(s):-
(1) In this table the term 'unwrought' zinc corresponds to item 7901 of the Harmonised System and comprises blocks, pigs, slabs, etc.

(a) Including alloys

Imports of zinc

tonnes

Country	2003	2004	2005	2006	2007
Austria					
Unwrought	58 968	47 866	58 838	61 856	65 391
Unwrought alloys	24 621	31 444	28 955	41 002	33 939
Scrap	1 643	2 035	609	737	149
Belgium-Luxembourg					
Ores & concentrates	1 189 103	1 410 560	1 182 083	1 109 923	1 100 875
Unwrought	244 081	261 216	46 505	73 894	218 660
Unwrought alloys	2 649	13 872	35 653	24 414	13 475
Scrap	42 424	42 534	44 890	44 221	60 039
Bulgaria					
Ores & concentrates	149 957	167 098	149 735	198 504	208 313
Unwrought (a)	4 146	4 285	1 450	9 994	3 330
Croatia					
Unwrought (a)	5 324	3 516	3 329	11 506	4 674
Czech Republic					
Unwrought	(a) 28 748	(a) 34 205	28 263	33 732	35 666
Unwrought alloys	...	...	8 039	11 113	11 992
Scrap	25	220	565	334	4 008

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Denmark					
Unwrought	10 761	10 813	9 855	11 494	9 931
Unwrought alloys	1 647	1 548	1 457	1 320	1 345
Estonia					
Unwrought (a)	10 578	17 468	9 105	7 253	4 362
Scrap	4 473	191	18	86	32
Finland					
Ores & concentrates	436 345	479 603	499 024	520 081	555 569
Unwrought alloys	566	908	1 218	1 372	1 358
Scrap	2 511	395	711	138	...
France					
Ores & concentrates	482 493	458 760	423 664	250 791	259 750
Unwrought	115 491	103 037	143 476	170 263	166 110
Unwrought alloys	34 874	56 492	45 566	47 309	44 124
Scrap	8 203	6 046	6 996	7 833	7 247
Germany					
Ores & concentrates	340 244	480 355	401 829	314 268	357 692
Unwrought	253 892	248 654	245 794	313 034	316 603
Unwrought alloys	100 172	83 556	76 981	83 795	87 785
Scrap	26 647	23 997	22 480	30 028	19 586
Greece					
Unwrought (a)	24 982	29 255	20 110	19 320	58 708
Hungary					
Unwrought (a)	16 900	15 779	14 529	19 093	16 843
Ireland, Republic of					
Unwrought (a)	4 241	2 956	3 629	7 010	7 687
Italy					
Ores & concentrates	191 369	249 978	219 491	175 253	195 798
Unwrought	226 245	273 146	261 192	229 040	314 714
Unwrought alloys	28 659	35 835	34 929	42 768	51 514
Scrap	14 095	15 991	14 172	18 541	21 599
Latvia					
Unwrought (a)	895	1 172	654	901	664
Lithuania					
Unwrought	685	393	547	235	86
Unwrought alloys	80	95	129	873	541
Macedonia					
Unwrought (a)	568	5 025	3 750	15 658	6 721
Netherlands					
Ores & concentrates	430 349	408 032	484 472	532 861	359 520
Unwrought	160 793	143 218	144 592	200 473	182 072
Unwrought alloys	853	2 318	2 387	40 482	38 602
Scrap	14 213	20 288	15 257	14 619	13 633
Norway					
Ores & concentrates	221 754	231 563	255 158	248 486	284 791
Unwrought (a)	109	296	247	2 828	2 167
Poland					
Ores & concentrates	113 990	114 800	78 746	129 551	127 720
Unwrought	11 609	19 580	13 333	28 714	31 838
Unwrought alloys	10 573	12 022	13 337	11 421	13 660
Scrap	656	4 636	3 899	2 681	4 445
Portugal					
Unwrought	18 113	13 450	11 862	19 015	16 367
Unwrought alloys	10 616	14 675	11 573	5 778	5 054
Romania					
Ores & concentrates	113 683	109 019	150 282	137 878	173 536
Unwrought (a)	16 030	19 555	14 640	23 732	13 135
Slovakia					
Unwrought (a)	33 557	42 324	43 500	45 143	44 959
Slovenia					
Unwrought (a)	19 925	21 146	21 740	29 435	28 407
Spain					
Ores & concentrates	1 096 292	917 968	1 090 022	1 188 067	1 257 304
Unwrought	7 448	3 862	8 203	7 577	21 634
Unwrought alloys	12 477	16 601	17 858	18 933	17 411
Scrap	4 103	4 062	3 927	4 996	6 601

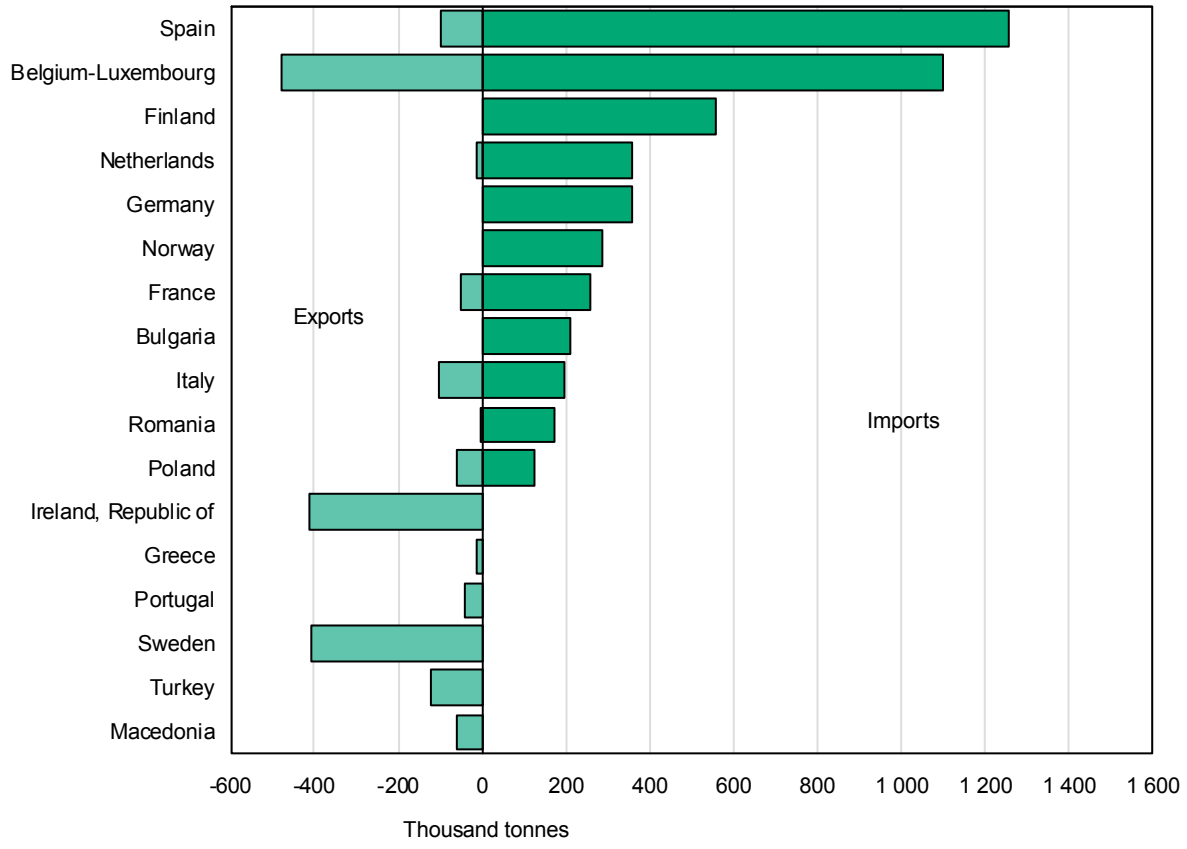
Imports continued tonnes

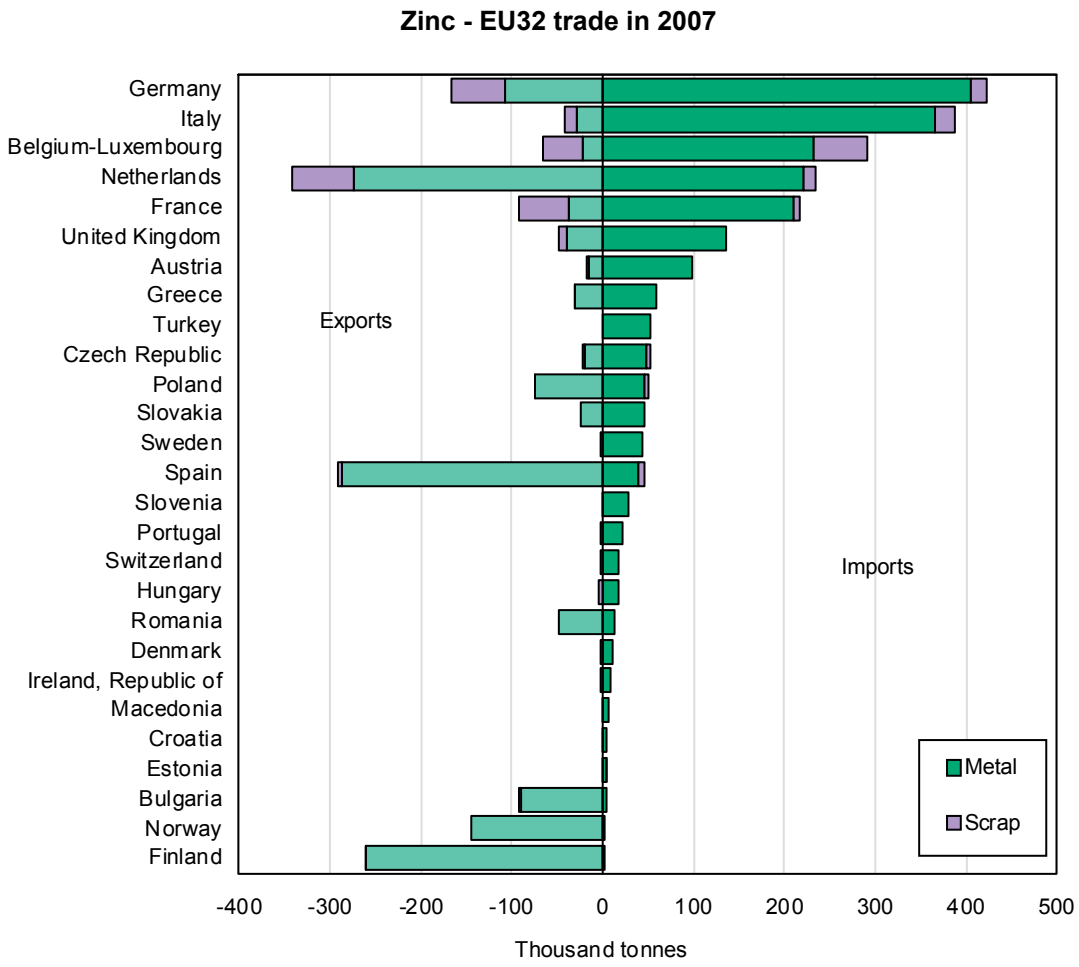
Country	2003	2004	2005	2006	2007
Sweden					
Unwrought	22 320	29 682	29 847	25 763	21 570
Unwrought alloys	13 496	18 009	16 812	20 325	22 600
Switzerland					
Unwrought	11 730	14 577	13 045	12 189	14 473
Unwrought alloys	3 798	3 194	2 601	2 214	2 700
Turkey					
Unwrought	(a) 126 315	(a) 148 897	139 156	72 927	49 650
Unwrought alloys	...	...	6 121	5 481	3 775
United Kingdom					
Ores & concentrates	16 611	260	903	603	164
Unwrought	171 219	139 477	135 840	119 676	122 458
Unwrought alloys	13 796	15 960	16 128	15 666	13 201
Scrap	172	228	188	334	30

Note(s) :-
(1) In this table the term 'unwrought' zinc corresponds to item 7901 of the Harmonised System and comprises blocks, pigs, slabs, etc.

(a) Including alloys

Zinc ore - EU32 trade in 2007




Zinc - EU32 trade in 2007
Germany
Italy
Belgium-Luxembourg
Netherlands
France
United Kingdom
Austria
Greece
Turkey
Czech Republic
Poland
Slovakia
Sweden
Spain
Slovenia
Portugal
Switzerland
Hungary
Romania
Denmark
Ireland, Republic of
Macedonia
Croatia
Estonia
Bulgaria
Norway
Finland
Exports
Imports
Metal
Scrap
-400
-300
-200
-100
0
100
200
300
400
500
Thousand tonnes

Zirconium minerals

- The mineral zircon (zirconium silicate) is the principal zirconium commodity. Due to its very high melting temperature and chemical stability, it is used as a refractory in furnace and ladle linings, foundry sands and ceramic manufacture. Zirconium metal manufacture is a very small part of total output.
- Zircon is recovered from heavy mineral sands, typically as a co-product with titanium minerals, and the relative rarity of large deposits restricts production to only a few countries. The largest producers in 2007 were Australia (39 per cent) and South Africa (26 per cent).
- The price for zircon sand, Australian or USA bulk F.O.B., ranged from US$725 to US$860 per tonne, throughout 2007 and 2008.

Exports of zirconium

tonnes

Country	2003	2004	2005	2006	2007
Belgium-Luxembourg					
Concentrates	10 047	11 105	22 965	27 054	23 645
Metal	163	170	222	144	251
France					
Concentrates	653	1 129	1 058	2 316	1 832
Germany					
Concentrates	2 111	2 567	5 211	1 643	2 057
Metal	300	275	286	434	514
Italy					
Concentrates	22 050	25 633	21 760	23 472	25 596
Metal	424	441	455	260	630
Netherlands					
Concentrates	7 011	8 548	8 178	7 391	14 539
Slovenia					
Concentrates	...	...	1 009	1 186	509
Spain					
Concentrates	13 669	10 844	9 805	9 811	11 803
Metal	602	989	820	110	200
United Kingdom					
Concentrates	418	505	699	902	1 096
Metal	244	183	127	90	54

Note(s):-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

Imports of zirconium

tonnes

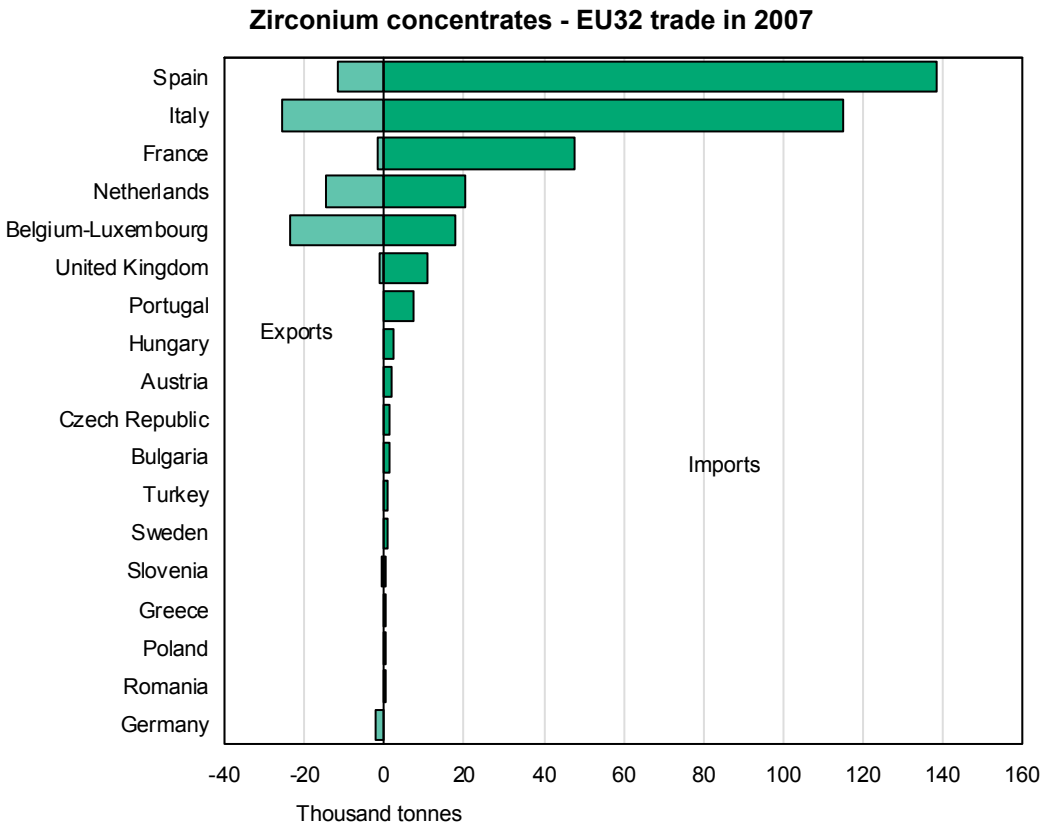
Country	2003	2004	2005	2006	2007
Austria					
Concentrates	1 206	1 486	1 200	1 285	2 054
Belgium-Luxembourg					
Concentrates	5 178	3 991	14 504	18 763	17 593
Metal	533	534	605	556	469
Bulgaria					
Concentrates	1 375	1 149	1 589	1 421	1 357
Czech Republic					
Concentrates	2 105	1 605	655	1 498	1 482
Metal	348	32	60	86	78
France					
Concentrates	58 457	48 004	53 701	48 973	47 719
Metal	288	276	207	378	570
Germany					
Concentrates	(a) 85 178	(a) 80 328	(a) 79 729	—	—
Metal	632	516	503	571	880
Greece					
Concentrates	651	611	629	466	547
Hungary					
Concentrates	...	...	3 266	...	2 427

Imports continued tonnes

Country	2003	2004	2005	2006	2007
Italy					
Concentrates	130 207	149 787	147 435	143 672	114 838
Metal	823	122	120	128	315
Netherlands					
Concentrates	11 607	13 613	10 975	15 948	20 462
Metal	52	105	88	123	199
Poland					
Concentrates	1 056	1 085	870	863	542
Metal	2	23	6	43	15
Portugal					
Concentrates	2 802	2 045	5 918	6 426	7 205
Romania					
Concentrates	827	809	552	766	303
Metal	22	30	22	32	16
Slovenia					
Concentrates	529	416	625	443	550
Spain					
Concentrates	142 949	143 860	153 619	149 710	138 442
Metal	60	94	56	55	65
Sweden					
Concentrates	480	564	588	750	825
Metal	172	82	91	134	219
Switzerland					
Metal	85	86	117	29	29
Turkey					
Concentrates	3 996	3 881	4 581	1 118	980
Metal	5	9	14	3	...
United Kingdom					
Concentrates	39 285	32 917	19 519	13 729	11 007
Metal	346	444	338	467	446

Note(s) :-
(1) Metal traded in ferro-alloy form is included under iron, steel and ferro-alloys

(a) Including niobium and tantalum concentrates



Borates

- Borates is a general term for a range of boron-containing minerals of which borax (tincal), ulexite, colemanite and datolite are the most commercially significant. These minerals are processed via boron trioxide to boric acid. The chief use of borate minerals is in glass manufacture (in particular fibreglass) and ceramics.
- Economic concentrations of borates form in unusual geological environments and so production is restricted to a few countries. Of these, Turkey (43 per cent of world production) was the largest world and only EU32 producer in 2007.
- Borates are traded in a variety of forms. The price of Turkish lump colemanite (F.O.B. 40–42% B_2O_3) was between US$270 and US$290 per tonne throughout 2007 and 2008.

Production of borates

tonnes

Country	2003	2004	2005	2006	2007
Turkey	1 324 000	1 727 000	2 087 000	2 373 345	*2 400 000

Nepheline syenite

- Nepheline syenite is an igneous rock composed chiefly of feldspar and nepheline (one of a family of minerals called feldspathoids). The chief uses are similar to those for feldspar, i.e. in the manufacture of glass, in ceramics and as a filler.
- Economic concentrations form in rare geological environments and only three countries produce nepheline syenite. Russia was the largest producer in 2007 (48 per cent of world total), followed by Canada (37 per cent) and Norway (15 per cent).
- Norwegian nepheline syenite (bulk F.O.L., UK port, glass grade, 0.5mm) traded at £97 per tonne throughout 2007 and 2008.

Production of nepheline syenite

tonnes

Country	2003	2004	2005	2006	2007
Norway	332 000	329 000	320 000	312 000	312 000

Perlite

- Perlite is a silicate mineral that results from the alteration of natural glass with the chemical composition of granite. Upon heating the mineral swells and dewaters — resulting in a sudden increase in volume accompanied by a decrease in density. It has remarkable thermal insulation properties, porosity, chemical stability, nonflammability, high heat resistance and high sound absorption. It is chiefly used in building materials.
- More than 20 countries produce perlite. China is believed to be the largest perlite producer in the world, representing approximately 37 per cent of world production in 2007, closely followed by Greece (29 per cent of the world total).
- Perlite can have a wide range of properties and shipments are individually assessed according to specification. Thus, the price range is large. During 2007 and 2008 perlite (aggregate, expanded, ex-works UK) traded between £320–£650 per tonne.

Production of perlite

tonnes

Country	2003	2004	2005	2006	2007
Bulgaria	16 800	8 500	15 300	4 500	13 900
Greece	1 079 036	1 053 388	1 075 129	*1 100 000	*1 100 000
Hungary	95 100	65 000	69 900	71 019	67 542
Italy	*60 000	*60 000	*60 000	*60 000	*60 000
Slovakia	15 000	23 840	8 630	10 560	20 000
Turkey	136 683	133 829	156 935	*160 000	*160 000

Selenium metal

- Selenium is a light, weakly toxic, metalloid. Selenium has a wide range of uses; the largest is in glass-making where it acts as a decolourizer, and it is also used in ceramics, pigments, electronics, animal feed supplement and in base-metal alloys. Its former major use in photocopiers has declined as it has been replaced by other materials.
- Selenium is most commonly produced as a by-product of copper refining. Thus, production tends to occur in the countries that produce significant amounts of refined copper. The largest producer in 2007 was Japan (47 per cent of world total). The EU32 countries contribute 28 per cent to the world total with Belgium and Sweden the largest producers.
- The average price for selenium metal was US$32.92 per pound in 2007, a 41 per cent increase on 2006. This reflects the sharp increase in the first part of 2007 from US$23 per pound in January to US$43 per pound in June, although the price declined later in the year. A smaller increase in the price occurred at the start of 2008 from US$32 per pound in January to US$38 per pound in March, before it fell heavily to finish 2008 at US$20 per pound.

Production of selenium metal

tonnes

Country	2003	2004	2005	2006	2007
Belgium	*200	*200	*200	*200	*200
Finland	52	65	66	70	52
Germany	*14	*14	*12	12	12
Poland	78	83	82	87	*90
Sweden	107	131	122	135	130

Strontium minerals

- Strontium is a soft metallic element. The most common strontium mineral is celestite (strontium sulphate). This is frequently converted into strontium carbonate before marketing.
- The dominant use of strontium is (in oxide form) in the faceplate glass of cathode ray tubes where it blocks X-ray emissions. Strontium compounds are also used in pigments, pyrotechnics and fluorescent tubes. Strontium metal has only very minor uses.
- Only a small number of countries produce strontium minerals. China is believed to be the world's largest producer with approximately 72 per cent of world production. In the EU32, Spain and Turkey are the only known producers, contributing nearly 16 per cent to the world total. In 2007 and 2008 celestite traded at between US$54–US$100 per tonne depending on source and grade.

Production of strontium minerals

tonnes

Country	2003	2004	2005	2006	2007
Spain	152 383	206 001	336 630	280 195	142 512
Turkey	*70 000	*60 000	*60 000	*12 000	*9 000

Note(s):-
(1) In addition to the countries listed, Germany and Poland are believed to produce strontium minerals

Uranium

- Uranium is a dense metallic element. It is chiefly used as the fuel source for nuclear power stations.
- Uranium ore is milled and processed into 'yellowcake' (a uranium oxide), which is the chief form in international trade. Yellowcake is converted to uranium hexafluoride, which is then enriched to enable it to be used as a fuel.
- Canada was the world's largest mine producer during 2007, accounting for 23 per cent of the world total. Australia is the second largest producer contributing 21 per cent to world production, followed by Kazakhstan with 16 per cent. In the EU32, a small amount of uranium was mined in the Czech Republic. In addition there was minor production from Romania and Germany.
- Over 80 per cent of uranium is sold under long-term contracts, however, a spot market has been in existence for several years and this is frequently referred to when negotiating prices for long-term contracts. The spot market price continued its sharp rise during the early part of 2007, reaching a peak of US$138 per pound in June, before falling sharply to end the year at about US$90 per pound. In 2008 the spot market price continued to fall further, ending the year at about US$55 per pound.

Mine production of uranium

tonnes (metal content)

Country	2003	2004	2005	2006	2007
Czech Republic	458	435	420	383	322
Germany	104	77	80	65	41
Romania	90	90	*90	*90	*77
EU32 Total	652	602	590	538	440
EU32 Total (U_3O_8 equivalent)	770	710	696	635	519

Note(s):-
(1) Excluding uranium production from decommissioning operations in France and Spain

Wollastonite

- Wollastonite (calcium metasilicate) is a commercially important mineral because of its bladed (acicular) crystals. It is used as filler in plastics, ceramics, paint and friction products and as an asbestos substitute.
- Production is restricted to a handful of countries, of which China is the largest (51 per cent of world production). Spain and Finland were the only EU32 producers, contributing four per cent and two per cent respectively to world production.
- Wollastonite is traded on the basis of the aspect ratio of its crystals and by mesh size. Prices were stable throughout 2007 and 2008 at between US$205 and US$373 per short ton for US ex-works, depending on grade.

Production of wollastonite

tonnes

Country	2003	2004	2005	2006	2007
Finland	17 300	16 763	15 950	16 200	16 364
Spain	...	...	30 000	30 000	30 000

Note(s):-
(1) In addition to the countries listed, Turkey is believed to produce wollastonite