

# World Mineral Production



2011–2015



**British  
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL



BRITISH GEOLOGICAL SURVEY

# WORLD MINERAL PRODUCTION 2011–15

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## PREFACE

Welcome to the latest edition of World Mineral Production, which includes global mineral production data for 2015 and is a continuation of the dataset that began in 1913.

This publication is compiled from a comprehensive database, maintained by the British Geological Survey, through which we aim to provide a reliable, comprehensive and continuous set of data covering most of the minerals that enter international trade. In this volume we have set out the production figures by country for more than 70 mineral commodities, over the five-year period from 2011 to 2015. The objective of this series remains to present the latest production information obtained from official bodies in individual countries, although other sources are also used to ensure completeness and accuracy. The cooperation afforded to the British Geological Survey by numerous national and international organisations is gratefully acknowledged.

The production statistics in this latest volume reveal that for most minerals production in 2015 was broadly similar to 2014, with the world totals for the majority of mineral commodities increasing or decreasing by less than 10 per cent. There are exceptions, of course. For example the mine production of platinum group metals increased by nearly 22 per cent in 2015 compared to 2014, more than reversing the fall in 2014 compared to 2013. This is almost entirely due to production levels in South Africa returning to more typical levels following the challenges experienced there in 2014. However, global output is still seven per cent lower in 2015 than it was in 2011 and the World Platinum Council reported that the market remained in deficit.

Other notable production increases in 2015 compared to 2014 are mined bismuth (up 16 per cent), bauxite (up 13 per cent), bentonite (up 11 per cent) and mined cobalt (up 10 per cent). The increase in mined bismuth is largely due to a new mine opening in Vietnam. The increase in bauxite is predominantly due to a significant increase in output from Malaysia which has more than offset the continued decline in production from Indonesia following the ban on exports from the latter. However, we are expecting a notable change in this position for 2016 because Malaysia has instigated its own restrictions on bauxite mining as a result of environmental issues associated with this higher production.

Mineral commodities with notable reductions in global production in 2015 compared to 2014 include mined antimony (down 18 per cent), barytes (down 10 per cent), asbestos (down 20 per cent) and bromine (down 11 per cent). For each of these, a large part of the decrease is due to reductions in a single country: for example, in China mine production of antimony fell by 21 per cent in 2015 compared to 2014 and barytes by 27 per cent. Asbestos production in Russia and bromine production in Israel both declined by 33 per cent. It can often be difficult to determine the exact cause of declining production levels such as these.

Concern surrounding the worldwide security of supply of minerals, which has been evident for a few years now, continues. Particular interest focusses on the so called 'critical' minerals, i.e. those elements that are essential for new and/or green technologies. New policies and programmes of supporting research have continued to be developed across the entire worldwide supply chain, with the common aims of diversifying the supply base, improving resource efficiency (which includes, but is not limited to, recycling), and developing alternatives for the most constrained elements both in terms of substituting materials and other technologies.

During the past year, the BGS has been part of the consortium that is preparing the next update of the European commission's list of critical raw materials and the final results are expected to be published later in 2017. In addition, BGS continues to be involved with several materials-related research projects including: the European rare earth element project (EURARE; [www.eurare.eu](http://www.eurare.eu)); Blue Mining ([www.bluemining.com](http://www.bluemining.com)), which is focussed on sustainable deep sea mining; and Mineral Intelligence Capacity Analysis (MICA; <http://mica.eurogeosurveys.org/>). New projects in this research area, which have just commenced, include: Solution for Critical Raw Materials – a European Expert Network (SCRREEN; <http://screen.eu/>) and Global Material Flows and Demand-Supply Forecasting for Mineral Strategies (MinFuture).

As always, I would welcome any comments and suggestions that you have relating to this volume which might help us to meet your ongoing needs.

John N Ludden  
Executive Director

British Geological Survey  
Keyworth  
Nottingham

February 2017

## CONTENTS

### *Commodity Index*

Alumina 3	Manganese 47
Aluminium 4	Mercury 48
Antimony 5	Mica 49
Arsenic 5	Molybdenum 50
Asbestos 6	Natural gas 56
Barytes 7	Natural sodium carbonate 67
Bauxite 2	Nepheline syenite 50
Bentonite 8	Nickel 51
Beryl 10	Niobium 72
Bismuth 11	Perlite 53
Borates 11	Petroleum 54
Bromine 12	Phosphates 58
Cadmium 12	Platinum 59
Chromium 13	Potash 60
Coal 14	Pyrites 67
Cobalt 17	Rare earths 61
Copper 19	Rhenium 61
Diamond 22	Salt 62
Diatomite 23	Selenium 64
Feldspar 24	Silicon 37
Ferro alloys 37	Sillimanite 65
Fluorspar 25	Silver 65
Fuller's earth 8	Strontium 67
Gallium 26	Sulphur 67
Germanium 26	Talc 71
Gold 27	Tantalum 72
Graphite 29	Tellurium 73
Gypsum 30	Tin 74
Indium 32	Titanium 75
Iodine 32	Tungsten 77
Iron ore 32	Uranium 78
Iron and steel 34	Vanadium 78
Kaolin 40	Vermiculite 79
Lead 42	Wollastonite 79
Lithium 44	Zinc 80
Magnesite 45	Zirconium 82
Magnesium 46	

## APPENDIX

### *Tables relating to Europe only*

Aggregates 84
Cement 86

## EXPLANATORY NOTES

### *Coverage*

*World Mineral Production* covers the majority of economically important mineral commodities. For each commodity constant efforts are made to ensure that as many producing countries as possible are reported. For some commodities, where statistics on production 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 British Geological Survey files and is available for consultation. Historical data (from 1913 for many commodities) can be obtained from the predecessors to this series entitled *World Mineral Statistics* and the *Statistical Summary of the Mineral Industry*. Copies of these publications are available in the World Archive section of the website: [www.mineralsUK.com](http://www.mineralsUK.com).

### *Arrangement of countries*

Countries are ordered alphabetically in geographical groupings as follows:

- Europe
- Africa
- North and Central America, including the Caribbean
- South America
- Asia
- Australasia, including the Pacific Islands

### *Metals*

Mine production of many metals is expressed in terms of metal content. This is clearly indicated at the head of the table, adjacent to the unit used. For aluminium, cobalt, copper, iron, lead, nickel, tin and zinc, mine production and metal production are shown in separate tables. Unless otherwise specified, metal production statistics relate to metal recovered from both domestic and imported materials, whether primary or secondary, but exclude remelted material wherever possible.

### *World totals*

For certain minerals and metals no world total is shown due to the non-availability of certain individual country totals.

### *Exclusion of Warranty*

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### *Acknowledgements*

Compilation of this volume of mineral statistics has been possible only by obtaining information from a very large number of organisations throughout the world, chiefly home and overseas government departments and specialist national or international authorities concerned with particular sectors of the minerals or metals industries. To all these bodies the British Geological Survey expresses its grateful acknowledgement for the information made available, whether

in published form or provided by direct correspondence. 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, the Barytes Association 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 Minière, *Annuaire Statistique Mondial des Minerais et Métaux*; 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 UN agencies.

In addition, information has been obtained from the websites of the following organisations, companies, statistical offices and government departments: United Nations; BP Plc; Eurofer; Eurostat; Instituto Latinoamericano del Fierro y el Acero; International Iron and Steel Institute; Kaolin & Plastic Clays Europe; Kimberley Process; World Nuclear Association; African Development Bank; UEPG; Agnico Eagle Mines; Altyntau; Anglo American; AngloGold Ashanti; ARMZ; Aura Minerals Inc; Avocet Mining Plc; Belvedere Resources; BHP Biliton; Boliden Metal Producers; Breakwater Resources; Centamin; Centerra Gold; Consolidated Murchison; CZP; Dominion Salt; Dragon Mining; Dundee Precious Metals; Eagle Graphite; ElektroZinc; Endeavour Mining; Endomines; Eurasian Natural Resources Corporation; Evraz; First Quantum; Galaxy Resources; Gemfields Plc; Glencore Xstrata; GoldBridges; Gravita; Hudson Resources Ltd; Iamgold Corporation; Inmet Mining; IRC Group; KAZ Minerals; Kazakhmys; Kazzinc; Kenmare Resources Plc; Lapland Goldminers; Lundin Mining; Lynas Corporation; Mandalay Resources; Minerals and Metals Group; Nevsun Resources; Nickel Asia; Nordgold; Norsk Hydro; Nyrstar; Orvara Minerals; Outokumpu; Paladin Energy Ltd; PanAust Mining; Phosagro; Phosphate Resources Ltd; Polymetal International; Qatalum; Qatar Steel Company; RandGold Resources; Resolute Mining; Rich Metal Group; Rio Tinto; Ronphos Corporation; UC Rusal; Semafo; Sherritt International; SMR; SMZ company; South 32; Sun-gold; Talvivaara; Teranga Gold Corp; TiZir; UMMC; Uralkali; Vitmetco; Weatherly International Plc; Wolf Minerals; Aluar Aluminio Argentino, Argentina; Alumbra, Argentina; Institute of Argentinean Petroleum and Gas, Argentina; Acero Argentinos; Department of Natural Resources and Mines Queensland, Australia; Northern Territory Government, Australia; Department of Primary Industries Victoria, Australia; Mineral Resources Tasmania, Australia; Tasmania Mines Ltd; Australia; NWS Department of Primary Industries, Australia; Bureau of Resources and Energy Economics, Australia; Department of Mines and Petroleum, Western Australia; Grafitbergbau-Kaisersberg, Austria; Vereinigung der Osterreichischen Zementindustrie, Austria; Department of Statistics of the Bahamas; Petrobangla, Bangladesh; Central Bank of Barbados; Federation de l'Industrie Cimentiere Belge, Belgium; Belgian Steel Federation; Statistics Belgium; Aluminium Bahrain; National Statistical Committee, Belarus;

Ministry of Mining and Metallurgy, Bolivia; Agency for Statistics; Bosnia & Herzegovina; Departamento Nacional De Producao Mineral, Brazil; Agencia Nacional do Petroleo, Brazil; Associação Brasileira do Alumínio, Brazil; Ministerio de Minas y Energia, Brazil; Ministry of Energy, Bulgaria; Chamber of Mines, Burkina Faso; INSD, of the Ministère de l'Économie et des Finances, Burkina Faso; Institut de Statistiques et d'Études Économiques du Burundi, Burundi; Natural Resources Canada; Statistics Canada; Canadian Association of Petroleum Producers; Canadian Clay Products; Chilean Copper Commission; National Service for Geology and Mining, Chile; National Bureau of Statistics, China; Ministerio De Minas Y Energia, Columbia; Statistics Office, Croatia; Oficina Nacional de Estadísticas, Cuba; Czech Republic Statistical Office; Statistics Denmark; Danish Energy Agency, Denmark; Ministerio de Recursos Naturales No Renovables, Ecuador; Fiji Bureau of Statistics; Geological Survey of Finland; Unicef, France; Infociments, France; Statistisches Bundesamt Deutschland, Germany; RW Silicium, Germany; BEB Erdgas und Erdol, Germany; Verband der Kali, Germany; Larco, Greece; Central Bank, Guyana; Ministerio de Energia y Minas, Guatemala; Indian Bureau of Mines, India; Federacciai, Italy; Metal Economics Research Institute, Japan; Statistics Agency of Kazakhstan; Korea Institute of Geoscience and Mineral Resources, Republic of Korea; State Agency of Geology and Mineral Resources, Kyrgyz Republic, Kyrgyzstan; Stateg, Luxembourg; Bank Negara, Malaysia; Minerals & Geoscience department Malaysia; Cámara Nacional de la Industria del Hierro y del Acero, Mexico; Instituto Nacional de Estadística y Geografía, Mexico; Mineral Autlan, Mexico; Mineral Resources & Petroleum Authority of Mongolia; Statistics Office of Montenegro; Ministry of Mines and Energy, Namibia; Bank of Namibia; RONphos Corporation, Nauru; Centraal Bureau voor de Statistiek, Netherlands; Staatstoezicht op de Mijnen, Netherlands; Netherlands Oil and Gas Portal; Ministry of Economic Development, New Zealand; Central Bank, Nicaragua; National Bureau of Statistics, Nigeria; Statistisk Sentralbyrå, Norway; Geological Survey of Norway; Norwegian Petroleum Directorate; Central Bank of Oman; Ministry of National Economy, Oman; Direccion de Estadística y Censo, Panama; Chamber of Mines and Petroleum, Papua New Guinea; PeruPetro; Ministerio de Energia y Minas, Peru; Sociedad Nacional de Minería Petroleo y Energia, Peru; Mines and Geosciences Bureau, Philippines; Polish Geological Institute, Poland; Central Statistical Office of Poland; Polish Academy of Science; Centre National de la Statistique et des Etudes Économiques, Republic of Congo; Johnson Matthey, Russia; National Bank of Rwanda; Agence Nationale de la Statistique et de la Démographie, Senegal; Statistical Office of the Republic of Serbia; Central Bank of Sierra Leone; Geological Survey, Slovenia; Statistical Office of the Republic of Slovenia; Central Bank of Solomon Islands; Instituto Geológico y Minero, Spain; Unesid, Spain; Sveriges Geologiska Undersokning, Sweden; Jernkontoret, Sweden; Statistiska Centralbyran, Sweden; Swiss Geotechnical Commission, Switzerland; Bureau of Mines, Taiwan; National Statistics, Taiwan; Bank of Thailand; Central Bank of Trinidad and Tobago; Department for Business, Energy and Industrial Strategy, United Kingdom; Office for National Statistics, United Kingdom; Energy Information Administration, United States of America; General Statistics Office, Vietnam.

### *Units*

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

tonnes  $\times$  0.9842 = long tons

tonnes  $\times$  1.1023 = short tons

kilograms  $\times$  2.2046 = pounds

kilograms  $\times$  32.1507 = troy ounces

cubic metres  $\times$  35.3147 = cubic feet

1 tonne of crude petroleum equals on average 7 barrels of crude petroleum.

1 flask mercury = 34.5 kilograms

### *Symbols*

...	figures not available
0	quantity less than half unit shown
—	nil
*	estimated
BGS	British Geological Survey



## **STATISTICAL INFORMATION**

## Production of bauxite

tonnes (metric)

Country	2011	2012	2013	2014	2015
Bosnia & Herzegovina	707 712	800 316	657 115	605 215	787 409
Croatia	4 800	5 690	8 220	9 100	—
France (a)	80 800	69 500	100 000	71 000	* 70 000
Greece	2 324 000	1 816 000	1 844 000	1 876 000	1 821 000
Hungary	277 800	255 000	93 700	14 400	8 300
Montenegro	158 614	—	61 154	155 153	50 369
Russia	5 380 000	5 166 000	5 322 000	5 589 000	5 398 000
Turkey	1 024 915	1 521 150	795 562	1 091 442	* 1 100 000
Ghana	400 069	752 771	826 994	798 114	1 104 605
Guinea (b)	17 593 100	17 823 000	18 763 000	19 182 000	18 114 000
Mozambique	10 352	8 633	6 190	3 386	4 985
Sierra Leone	1 321 000	776 000	616 000	1 161 705	1 334 046
Tanzania	29 520	28 434	39 977	25 641	205
Dominican Republic	—	10 522	769 530	1 446 311	1 724 162
Jamaica	10 188 916	9 339 291	9 435 214	9 676 697	9 628 824
Mexico	14 400	96 000	—	—	—
USA (c)	63 121	128 152	* 100 000	* 100 000	* 100 000
Brazil (d)	33 624 600	34 987 800	33 903 800	36 313 200	37 063 900
Guyana	1 818 399	2 213 972	1 713 242	1 563 563	1 526 713
Suriname	3 236 116	2 874 312	2 670 680	2 707 719	1 865 148
Venezuela	2 454 769	2 285 949	2 346 160	2 315 787	991 810
China	37 173 800	44 052 300	50 339 383	59 212 401	* 65 000 000
India (e)	13 599 566	16 611 610	22 319 148	22 493 671	28 133 516
Indonesia	40 643 852	31 443 325	57 023 774	2 556 429	471 667
Iran (f)	818 224	898 437	903 559	748 297	* 700 000
Kazakhstan	5 495 000	5 170 000	5 192 800	4 515 600	4 682 600
Malaysia	188 141	121 873	208 770	(h)* 3 500 000	(h)* 27 700 000
Pakistan (g)	9 033	30 223	25 288	31 156	24 689
Saudi Arabia	206 299	760 114	1 044 360	2 076 000	2 174 000
Vietnam	* 100 000	* 100 000	482 000	1 090 000	* 1 112 000
Australia	70 231 216	76 281 245	81 119 334	78 632 393	80 909 704
Fiji	—	349 556	564 777	489 476	172 300
Solomon Islands	—	—	—	—	* 300 000
World total	249 000 000	257 000 000	299 000 000	260 000 000	294 000 000

### Note(s)

(1) This table includes production of refractory bauxite

(a) For non-metallurgical uses

(b) No adjustment has been made for moisture content

(c) Data for Alabama only

(d) Including beneficiated and direct shipping ore

(e) Years ended 31 March following that stated

(f) Years ended 20 March following that stated

(g) Years ended 30 June of that stated

(h) Conservative BGS estimate based on reported exports

## Production of alumina

tonnes (Al<sub>2</sub>O<sub>3</sub> content)

Country	2011	2012	2013	2014	2015
Azerbaijan	6 188	101 780	—	—	—
Bosnia & Herzegovina	261 874	202 416	175 961	170 646	250 845
France	470 000	430 000	430 000	400 000	432 000
Germany	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000
Greece	683 030	653 011	664 510	674 000	672 100
Hungary	* 132 000	* 111 000	* 81 100	* 1 000	—
Ireland, Republic of	1 249 300	1 250 600	1 264 689	1 270 784	1 283 111
Romania	484 000	414 000	391 000	362 627	404 825
Russia	2 825 000	2 719 000	2 659 000	2 572 000	2 593 000
Spain	* 1 300 000	* 1 100 000	* 1 400 000	* 1 400 000	* 1 400 000
Turkey	* 210 000	* 220 000	* 186 000	* 190 000	* 190 000
Ukraine	1 601 000	1 429 000	1 493 000	1 455 000	1 481 000
Guinea	574 000	150 000	—	—	—
Canada	1 473 271	1 498 605	1 554 604	1 562 559	1 560 932
Jamaica	1 959 926	1 757 693	1 854 910	1 850 960	1 864 645
USA	3 792 000	4 372 000	4 324 000	4 461 000	4 541 000
Brazil	10 306 800	10 320 600	9 942 100	10 404 000	10 451 500
Suriname	1 421 464	1 202 806	1 149 392	1 149 388	779 660
Venezuela	1 265 530	808 043	579 874	660 195	459 488
China	34 077 600	37 696 300	47 749 600	52 399 100	58 978 000
India (a)	3 930 950	3 609 815	3 779 301	* 4 000 000	* 5 000 000
Iran (b)	233 000	228 000	248 000	383 000	421 700
Japan	* 500 000	* 350 000	* 250 000	* 120 000	* 20 000
Kazakhstan	1 670 000	1 510 000	1 590 000	1 419 000	1 448 000
Saudi Arabia	—	—	—	23 000	846 000
Vietnam	—	—	214 000	485 000	* 494 000
Australia	18 726 564	20 914 745	21 528 263	20 474 200	20 097 181
World total	90 200 000	94 000 000	104 500 000	108 900 000	116 700 000

### Note(s)

- (1) Where possible figures in this table show the alumina equivalent (Al<sub>2</sub>O<sub>3</sub>) of total hydrate produced, whether or not calcined  
(2) The figures in this table represent alumina produced from bauxite. Alumina-rich materials can also be derived from salt slags formed during the production of secondary aluminium

- (a) Years ended 31 March following that stated  
(b) Years ended 20 March following that stated

## Production of primary aluminium

tonnes (metric)

Country	2011	2012	2013	2014	2015
Azerbaijan	6 817	54 890	53 290	50 357	49 038
Bosnia & Herzegovina	163 924	159 660	157 191	131 238	118 253
Croatia	600	—	—	—	—
France	334 000	349 000	343 000	415 000	415 000
Germany	432 472	410 413	492 368	530 700	541 000
Greece	167 490	165 050	169 480	173 260	179 990
Iceland	780 853	802 827	736 429	748 949	735 263
Italy	141 900	99 600	—	—	—
Montenegro	92 838	74 813	47 951	42 767	42 499
Netherlands	* 200 000	86 300	81 000	800	28 200
Norway	1 201 000	1 110 900	1 172 900	1 182 000	1 224 000
Romania	261 000	248 600	250 200	263 098	271 356
Russia	3 992 000	4 024 000	3 724 000	3 488 000	3 529 000
Slovakia	162 840	160 662	163 000	167 767	171 328
Slovenia	75 300	83 300	84 035	84 400	83 800
Spain	408 400	386 395	* 250 000	* 230 000	360 000
Sweden	111 000	129 000	131 000	113 000	116 000
Turkey	56 400	43 700	32 200	30 400	45 900
Ukraine	7 000	—	—	—	—
United Kingdom	213 000	60 000	45 000	41 000	48 000
Cameroon	69 000	52 000	75 000	93 000	* 65 000
Egypt (a)	353 904	393 696	318 459	333 178	292 200
Ghana	35 000	38 000	36 600	38 100	33 800
Mozambique	562 000	562 000	562 000	566 900	558 400
Nigeria	15 000	22 000	2 000	—	—
South Africa	810 000	665 000	822 000	745 000	695 000
Canada	2 987 964	2 780 556	2 967 364	2 858 238	2 880 035
USA	1 986 000	2 070 300	1 946 000	1 710 400	1 586 500
Argentina	420 299	412 692	434 758	442 719	430 388
Brazil	1 440 400	1 436 400	1 304 100	962 000	772 200
Venezuela	330 000	203 000	171 717	138 334	125 537
Bahrain	881 310	890 217	912 700	931 427	960 643
China	20 072 000	23 534 000	26 534 000	28 316 671	31 413 000
India (b)	1 654 156	1 720 427	1 667 300	2 026 803	2 354 949
Indonesia	246 300	253 000	255 300	264 400	257 100
Iran (c)	329 000	335 000	349 000	286 500	258 700
Japan	4 700	4 500	3 000	500	—
Kazakhstan	249 000	249 000	250 159	207 849	219 192
Malaysia	188 100	121 900	* 290 000	440 000	* 440 000
Oman	373 000	360 000	354 000	364 000	377 186
Qatar	468 789	627 971	634 351	640 153	637 900
Saudi Arabia	—	—	187 000	662 000	839 000
Tajikistan	278 364	272 506	216 369	121 261	139 123
United Arab Emirates	1 750 000	1 814 000	1 845 000	2 296 000	2 397 000
Australia	1 944 858	1 864 184	1 777 408	1 704 286	1 645 963
New Zealand	357 000	325 000	324 000	327 000	333 000
World total	46 600 000	49 500 000	52 200 000	54 200 000	57 700 000

### Note(s)

(1) The figures in this table are for primary aluminium only. Aluminium can also be produced from secondary sources and may be recovered from salt slags

(a) Years ended 30 June of that stated

(b) Years ended 31 March following that stated

(c) Years ended 20 March following that stated

## Mine production of antimony

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Russia	6 348	* 6 400	* 6 520	* 6 400	7 420
Turkey	2 340	7 119	4 512	3 013	1 917
Morocco	1 570	710	—	—	—
South Africa	2 391	3 044	2 332	816	* 100
Canada	100	100	177	5	1
Guatemala	—	62	159	—	—
Mexico	105	169	294	266	90
Bolivia	3 947	5 081	5 053	4 186	3 843
Burma	* 5 600	* 5 900	* 7 400	* 3 300	* 3 000
China	123 900	135 600	152 104	140 389	111 400
Iran	600	—	400	432	* 400
Kazakhstan	800	600	900	800	700
Kyrgyzstan	892	924	* 900	* 2 450	* 2 000
Laos	728	521	804	620	1 100
Pakistan (a)	—	12	89	127	114
Tajikistan	6 642	6 645	7 307	* 6 500	* 5 400
Thailand	442	672	488	706	* 700
Vietnam	286	480	990	1 098	996
Australia (a)	1 548	1 753	2 883	3 484	3 737
World total	158 000	176 000	193 000	175 000	143 000

### Note(s)

(1) This table includes antimony content of antimonial lead alloys

(2) In addition to the countries listed, antimony may be produced in Honduras but available information is insufficient to make a reliable estimate.

(a) Years ended 30 June of that stated

## Production of white arsenic

tonnes (metric)

Country	2011	2012	2013	2014	2015
Belgium	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Portugal	* 15	* 15	* —	* —	* —
Russia	* 1 500	* 1 500	* 1 500	* 1 500	* 1 500
Morocco	8 154	8 820	8 968	6 863	7 567
Namibia	1 750	1 590	1 520	1 980	1 960
Bolivia	99	104	120	52	38
China	* 25 000	* 26 000	* 25 000	* 25 000	* 25 000
Japan	* 45	* 45	* 45	* 45	* 45

### Note(s)

(1) This table includes calculated trioxide equivalent of arsenic metal produced except where this would involve double counting

## Production of asbestos

tonnes (metric)

Country	2011	2012	2013	2014	2015
Russia	* 1 000 000	* 1 000 000	* 1 000 000	* 1 050 000	* 700 000
Zimbabwe					
Chrysotile	—	30	377	—	—
Canada					
Chrysotile	* 50 000	* —	* —	* —	* —
Argentina	105	102	* 101	* 100	* —
Brazil	306 320	304 568	290 825	311 227	* 300 000
China	* 385 000	* 420 000	* 420 000	* 410 000	* 400 000
India					
Amphibole (a)	276	389	227	—	—
Kazakhstan	223 200	241 000	243 300	213 100	179 800
World total	2 000 000	2 000 000	2 000 000	2 000 000	1 600 000

### Note(s)

(1) In addition to the countries listed, asbestos may also be produced in Afghanistan, North Korea, Romania and Slovakia.

(a) Years ended 31 March following that stated

## Production of barytes

tonnes (metric)

Country	2011	2012	2013	2014	2015
Bosnia & Herzegovina	13	28	—	—	—
Bulgaria	200	—	1 000	20 000	60 000
Georgia	—	—	—	500	500
Germany	55 342	52 030	45 446	87 585	45 311
Italy	* 3 500	* 3 500	* 3 500	* 3 500	* 3 500
Russia	* 64 000	* 64 000	* 64 000	* 45 000	* 60 000
Slovakia	13 000	21 000	24 000	21 000	20 000
Turkey	250 786	* 250 000	* 250 000	* 340 000	* 310 000
United Kingdom	31 000	30 000	* 30 000	* 44 000	* 50 000
Algeria	36 500	36 000	30 250	31 234	* 30 000
Egypt	4 000	4 000	3 821	3 379	4 000
Morocco	769 504	1 021 400	1 094 500	1 006 600	1 212 130
Nigeria	4 988	* 6 000	* 6 000	* 6 000	* 6 000
Tunisia	5 700	11 000	5 300	9 800	* 10 000
Zimbabwe	500	100	300	300	500
Canada	* 25 000	* 25 000	* 25 000	* 25 000	* 25 000
Guatemala	334	91	343	43	544
Mexico	134 727	139 997	119 402	130 914	200 294
USA (a)	710 000	666 000	723 000	663 000	* 700 000
Argentina	5 053	* 4 200	* 4 200	* 4 200	* 4 200
Bolivia	21 297	20 400	30 476	26 240	46 732
Brazil (b)	7 039	3 025	* —	* —	* —
Colombia	* 2 000	* 2 000	2 039	* 2 000	* 2 000
Peru	86 790	79 451	52 491	106 071	* 53 000
Afghanistan	500	300	400	500	* 500
Burma (c)	32 183	21 539	31 295	23 060	* 2 900
China	4 300 000	4 400 000	3 500 000	4 100 000	3 000 000
India (c)	1 776 980	1 789 431	1 170 522	910 963	* 900 000
Iran (d)	271 454	314 769	435 798	440 741	290 000
Kazakhstan	466 000	590 000	530 200	200 000	210 000
Laos	12 400	23 000	27 000	46 000	92 000
Malaysia	—	—	500	—	—
Pakistan (e)	31 836	48 510	118 471	133 658	204 940
Saudi Arabia	30 000	32 000	30 000	32 000	43 000
Thailand	67 703	64 499	107 437	134 961	170 621
Vietnam	90 000	90 000	90 000	140 000	140 000
Australia	10 569	10 273	13 176	14 676	6 016
World total	9 300 000	9 800 000	8 600 000	8 800 000	7 900 000

### Note(s)

(1) This table may include small quantities of witherite

- (a) Sold or used by producers
- (b) Including beneficiated and directly shipped material
- (c) Years ended 31 March following that stated
- (d) Years ended 20 March following that stated
- (e) Years ended 30 June of that stated

## Production of bentonite and fuller's earth

tonnes (metric)

Country	2011	2012	2013	2014	2015
Armenia					
Bentonite	835	4 987	15 387	798	1 592
Azerbaijan					
Bentonite	20 679	36 700	91 958	76 512	53 958
Bosnia & Herzegovina					
Bentonite (a)	—	—	18 808	80 952	67 261
Bulgaria					
Bentonite	53 900	77 900	—	41 100	61 600
Cyprus					
Bentonite	160 625	160 180	158 386	140 174	127 036
Czech Republic					
Bentonite	160 000	221 000	226 000	301 000	369 000
Denmark					
Bentonite	38 300	30 330	56 355	66 388	54 272
France					
Bentonite	20 000	28 000	25 000	20 000	* 20 000
Germany					
Bentonite	375 332	366 220	358 844	394 657	* 395 000
Greece					
Bentonite	1 188 442	1 235 105	1 000 000	1 011 485	1 150 000
Attapulgitite	36 720	19 870	32 400	45 000	108 000
Hungary					
Bentonite	22 931	1 392	7 397	10 463	11 420
Italy					
Bentonite	112 811	95 757	20 129	20 658	* 20 000
Macedonia					
Bentonite	8 918	2 355	18 520	11 691	9 004
Poland					
Bentonite	910	780	1 050	1 650	450
Romania					
Bentonite	19 864	19 241	24 127	18 583	19 355
Russia					
Bentonite	* 460 000	* 460 000	* 460 000	* 460 000	* 460 000
Slovakia					
Bentonite	213 000	177 000	184 000	205 000	205 000
Slovenia					
Bentonite	168	98	143	199	232
Spain					
Bentonite	110 371	96 605	102 726	105 627	102 000
Attapulgitite	26 021	23 537	26 764	26 798	26 188
Sepiolite	566 270	622 372	599 352	555 581	560 000
Turkey					
Bentonite	471 528	1 033 568	622 872	1 088 444	3 134 911
Sepiolite	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Ukraine					
Bentonite	211 000	219 000	* 219 000	* 219 000	* 219 000
Algeria					
Bentonite	29 000	26 000	27 670	30 800	* 30 000
Angola					
Fuller's earth	—	35 492	98 084	...	...
Egypt					
Bentonite (b)	17 709	4 594	2 523	3 615	* 3 500
Kenya					
Bentonite	70	75	80	* 80	* 80
Malawi					
Bentonite	2 450	—	—	—	—
Morocco					
Bentonite	97 071	91 200	105 240	98 757	92 290
Fuller's earth (c)	103 682	81 800	59 000	* 60 000	* 60 000
Mozambique					
Bentonite	493	1 459	968	* 1 000	* 1 000
Senegal					
Attapulgitite	179 900	180 500	234 600	191 400	188 400
South Africa					
Bentonite	120 417	120 566	177 187	169 591	163 696
Attapulgitite	14 448	15 850	21 233	18 376	18 280



## Production of bentonite and fuller's earth

tonnes (metric)

Country	2011	2012	2013	2014	2015
Canada					
Bentonite (d)	2 266	2 015	3 451	2 083	583
Cuba					
Bentonite	1 244	668	335	700	500
Guatemala					
Bentonite	12 270	16 183	18 377	38 368	31 582
Mexico					
Bentonite	563 795	956 224	826 887	474 025	* 470 000
Fuller's earth	107 436	227 496	306 507	245 147	* 240 000
USA					
Bentonite (e)	4 950 000	4 980 000	4 350 000	4 800 000	* 4 320 000
Fuller's earth (e)	1 950 000	1 980 000	1 990 000	1 990 000	* 1 970 000
Argentina					
Bentonite	236 125	193 795	* 200 000	* 200 000	* 200 000
Bolivia					
Bentonite	591	745	182	886	1 023
Brazil					
Bentonite	566 267	512 975	403 351	405 169	* 400 000
Chile					
Bentonite	1 255	893	358	1 083	1 434
Colombia					
Bentonite	* 8 500	* 8 500	9 056	* 9 000	* 9 000
Peru					
Bentonite	27 534	22 977	47 743	37 375	21 341
Uruguay					
Bentonite	1 210	5 530	8 974	7 800	4 250
China					
Bentonite	* 3 500 000	* 3 500 000	* 3 600 000	* 3 500 000	* 3 500 000
India					
Bentonite (f)	* 1 157 000	* 1 188 000	* 1 305 000	* 1 327 000	* 1 466 000
Fuller's earth (f)	* 5 600	* 5 600	* 5 600	* 5 600	* 5 600
Indonesia					
Bentonite	* 6 500	* 7 000	* 6 000	* 6 000	* 6 000
Iran					
Bentonite (g)	377 398	430 231	502 155	403 008	430 000
Iraq					
Bentonite	6 452	6 530	6 288	* 6 300	* 6 300
Japan					
Bentonite	* 425 000	* 420 000	* 420 000	* 420 000	* 420 000
Korea (Rep. of)					
Bentonite	94 987	88 543	80 188	71 850	78 439
Fuller's earth	46 623	57 787	51 309	54 001	87 094
Pakistan					
Bentonite (b)	30 840	16 520	26 077	40 374	23 283
Fuller's earth (b)	4 180	6 906	4 259	6 397	8 005
Philippines					
Bentonite	2 087	2 699	3 329	3 369	* 3 370
Thailand					
Bentonite	55 220	81 000	150 000	* 150 000	* 150 000
Uzbekistan					
Bentonite	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Vietnam					
Bentonite	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Australia					
Bentonite (b)	* 72 000	* 82 100	* 105 900	* 66 300	* 70 600
Fuller's earth	* 8 000	* 10 000	10 543	10 176	16 216
New Zealand					
Bentonite	—	2 263	762	* 750	* 750
World total bentonite	16 100 000	17 100 000	16 100 000	16 600 000	18 400 000
World total fuller's earth (a)	3 100 000	3 300 000	3 400 000	3 200 000	3 300 000

See notes on following page

## Production of bentonite and fuller's earth

### 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 to attapulgite, a mineralogically distinct clay mineral but exhibiting similar properties
  - (4) In addition to the countries listed, Algeria, France, Iran and Japan may produce fuller's earth
- (a) Including attapulgite and sepiolite
  - (b) Years ended 30 June of that stated
  - (c) Smectite
  - (d) Sales
  - (e) Sold or used by producers
  - (f) Years ended 31 March following that stated
  - (g) Years ended 20 March following that stated

## Production of beryl

tonnes (metric)

Country	2011	2012	2013	2014	2015
Madagascar (a)	12	16	* 85	* 135	* 135
Mozambique	58	532	103	—	—
Zambia	* 5	5	5	4	7
USA (b)	5 920	5 570	5 910	6 900	5 100
China	* 550	* 500	* 500	* 500	* 500

### Note(s)

- (a) Includes ornamental and industrial products
- (b) Includes bertrandite ore, calculated as equivalent to beryl containing 11% beryllium oxide

## Mine production of bismuth

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Armenia	3	4	4	* 4	* 4
Bulgaria	—	1	3	—	—
Russia	* 45	* 45	* 45	* 45	* 45
Canada	92	121	35	3	2
Mexico	935	800	824	948	606
Bolivia	41	10	—	11	20
China	1 544	2 494	1 393	1 490	* 1 500
Japan (a)	476	446	485	582	568
Vietnam	—	—	—	646	1 510
World total	3 100	3 900	2 800	3 700	4 300

### 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

(a) Metal production

## Production of borates

tonnes (metric)

Country	2011	2012	2013	2014	2015
Russia	* 400 000	* 400 000	* 250 000	* 250 000	* 250 000
Turkey	2 729 849	1 814 725	1 748 231	3 143 175	2 180 976
USA (a)	* 1 250 000	* 1 300 000	* 1 300 000	* 1 300 000	* 1 300 000
Argentina	648 806	* 660 000	* 670 000	* 740 000	* 770 000
Bolivia	138 767	142 532	157 338	151 799	166 451
Chile	488 523	444 487	580 528	496 533	517 584
Peru	—	104 072	224 454	239 725	662 709
China (b)	* 150 000	* 160 000	* 160 000	* 160 000	* 160 000
Iran (c)	1 044	2 500	2 330	1 383	* 1 300
Kazakhstan	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000

### Note(s)

- (a) Sold or used by producers
- (b) B<sub>2</sub>O<sub>3</sub> equivalent
- (c) Years ended 20 March following that stated

## Production of bromine

kilograms

Country	2011	2012	2013	2014	2015
Germany	* 1 600 000	* 1 600 000	* 1 500 000	* 1 500 000	* 1 500 000
Ukraine	* 4 100 000	* 4 100 000	* 4 100 000	* 3 500 000	* 3 500 000
USA (a)	* 225 000 000	* 225 000 000	* 225 000 000	* 225 000 000	* 225 000 000
China	* 100 000 000	* 105 000 000	* 110 000 000	* 110 000 000	* 100 000 000
India (b)	1 572 160	1 773 010	2 131 260	2 196 270	2 439 390
Israel	202 313 000	173 940 000	172 341 000	173 796 000	115 583 000
Japan	* 20 000 000	* 20 000 000	* 20 000 000	* 20 000 000	* 20 000 000
Jordan	* 50 000 000	* 60 000 000	* 80 000 000	* 100 000 000	* 100 000 000
Turkmenistan	* 460 000	* 480 000	* 500 000	* 500 000	* 500 000
World total	605 000 000	592 000 000	616 000 000	636 000 000	569 000 000

Note(s)

(a) Elemental bromine sold as such or used in the preparation of bromine compounds by primary producers

(b) Years ended 31 March following that stated

## Production of cadmium

tonnes (metric)

Country	2011	2012	2013	2014	2015
Armenia	—	43	41	43	* 40
Bulgaria	428	360	411	382	* 380
Germany	* 400	* 400	* 400	* 400	* 400
Netherlands	* 570	* 560	* 610	* 620	* 620
Norway	309	* 310	* 310	* 310	* 310
Poland	526	370	460	628	383
Russia	1 100	1 000	900	* 1 000	* 1 000
Turkey	—	—	12	—	—
Canada (a)	1 240	1 286	1 313	1 187	1 159
Mexico	1 485	1 482	1 451	1 409	1 301
USA (a)	600	* 600	* 600	* 550	* 500
Argentina	31	37	28	30	39
Brazil	* 200	* 200	* 200	* 200	* 200
Peru (b)	572	684	695	769	757
China	6 672	7 265	7 496	8 201	* 8 200
India (c)	449	391	228	69	—
Japan	1 755	1 856	1 821	1 851	1 959
Kazakhstan	1 278	1 166	1 335	1 633	1 475
Korea (Rep. of)	3 005	3 904	3 904	5 645	* 5 600
Korea, Dem. P.R. of	* 200	* 200	* 200	* 200	* 200
Australia	* 390	* 380	* 380	* 380	* 380
World total	21 200	22 500	22 800	25 500	24 900

Note(s)

(1) Data in this table excludes secondary metal unless otherwise stated

(a) Including cadmium sponge and/or secondary metal

(b) Refined

(c) Years ended 31 March following that stated

## Production of chromium ores and concentrates

tonnes (metric)

Country	2011	2012	2013	2014	2015
Albania	330 938	365 749	529 592	683 874	639 909
Finland (a)	692 527	425 217	981 752	1 034 750	946 188
Kosovo	—	2 860	8 950	12 700	—
Russia	662 000	552 000	360 000	380 000	* 380 000
Turkey	2 281 981	3 295 398	4 140 655	6 611 394	* 6 600 000
Madagascar (b)	66 700	111 500	110 000	95 800	197 800
South Africa	10 721 360	11 310 223	13 644 699	14 037 722	15 684 481
Sudan	64 130	18 300	30 870	61 334	* 40 000
Zimbabwe	599 079	408 476	355 142	408 422	* 443 500
Brazil	542 512	472 501	485 951	716 674	* 700 000
Afghanistan	* 4 500	4 678	5 040	* 4 500	* 4 500
China	* 200 000	* 200 000	* 200 000	* 200 000	* 200 000
India (c)	2 923 435	2 833 895	2 878 320	2 164 163	2 893 997
Iran (d)(e)	440 000	411 566	344 169	359 332	* 350 000
Kazakhstan	5 059 000	5 233 000	5 255 000	5 410 700	5 382 800
Oman	616 700	554 800	787 700	751 200	442 600
Pakistan	* 450 000	* 500 000	* 490 000	* 350 000	* 330 000
Philippines (d)	25 483	36 628	26 164	47 056	15 502
Vietnam	* 24 900	* 1 800	* 24 800	* —	* —
Australia	323 800	452 300	355 200	—	—
World total	26 000 000	27 200 000	31 000 000	33 300 000	35 300 000

### Note(s)

(a) Concentrates

(b) Exports

(c) Years ended 31 March following that stated

(d) Including foundry sand and/or lumpy ore

(e) Years ended 20 March following that stated

## Production of coal

tonnes (metric)

Country	2011	2012	2013	2014	2015
Albania					
Lignite	100	—	—	—	—
Bosnia & Herzegovina					
Brown coal & lignite	12 738 225	12 311 623	11 764 827	11 673 320	12 111 830
Bulgaria					
Anthracite & Bituminous	—	—	—	16 500	—
Lignite	34 496 200	31 040 700	26 459 300	29 127 500	33 773 000
Brown coal	2 743 500	2 556 700	2 301 500	2 228 800	2 165 100
Czech Republic					
Bituminous	10 967 000	10 796 000	8 610 000	8 341 000	7 640 000
Brown coal	46 848 000	43 710 000	40 585 000	38 348 000	38 251 000
Georgia	352 872	424 998	404 187	299 314	305 870
Germany					
Anthracite & Bituminous	12 960 000	11 558 000	8 260 000	8 340 000	6 650 000
Brown coal	176 502 048	185 432 000	182 995 337	178 154 848	178 065 353
Greece					
Lignite	58 400 000	62 368 800	55 500 000	50 411 000	45 576 000
Hungary					
Lignite	8 800 783	8 438 000	8 834 000	8 918 000	9 095 000
Brown coal	699 129	875 944	718 700	635 700	162 490
Kosovo					
Lignite	8 212 103	8 028 397	8 219 393	7 204 211	8 240 694
Macedonia					
Lignite	7 902 084	7 309 546	6 633 560	6 469 819	5 927 749
Montenegro					
Lignite	1 972 671	1 706 302	1 692 535	1 655 045	1 752 758
Norway					
Bituminous (a)	1 640 000	1 325 000	2 135 000	1 701 000	1 203 000
Poland					
Bituminous	76 447 604	79 854 904	68 399 000	65 696 000	65 070 000
Lignite	62 841 269	64 297 772	66 139 000	64 002 000	63 135 000
Romania					
Anthracite & Bituminous	2 121 574	1 876 062	1 839 667	1 619 347	1 418 596
Lignite	33 779 130	31 529 377	22 902 291	23 144 539	25 245 677
Brown coal	46 071	17 700	—	—	—
Russia	334 000 000	354 000 000	347 000 000	356 000 000	372 000 000
Serbia					
Bituminous	134 000	141 000	160 000	121 000	123 000
Lignite (b)	40 467 132	37 707 017	39 752 741	29 340 000	37 308 043
Brown coal	349 861	316 507	340 892	354 000	351 116
Slovakia					
Lignite	124 000	136 000	179 000	166 000	97 000
Brown coal	1 989 000	1 964 000	2 009 000	1 885 000	1 636 000
Slovenia					
Lignite	4 066 278	3 967 064	3 721 188	3 108 203	3 168 001
Brown coal	435 800	314 262	50 744	—	—
Spain					
Anthracite	4 032 683	2 514 649	759 930	1 263 585	1 126 758
Bituminous	1 774 992	1 823 343	1 814 328	1 343 617	631 318
Sub-bituminous	2 358 372	1 826 680	1 870 569	1 347 849	1 318 628
Turkey					
Anthracite	2 619 247	3 235 299	2 789 338	1 916 833	2 074 049
Lignite	82 375 247	78 014 194	66 310 998	71 082 623	58 330 354
Ukraine					
Bituminous	62 661 000	65 705 000	64 427 000	45 932 000	29 917 000
Lignite	* 175 000	* 175 000	* 175 000	* 175 000	* 175 000
United Kingdom					
Bituminous (c)	17 892 000	16 287 000	12 673 000	11 648 000	8 598 000
Botswana	787 729	1 454 724	1 495 653	1 711 555	2 065 778
Congo, Democratic Republic					
Bituminous	143 335	132 449	146 057	132 450	* 132 500
Egypt (d)	233 283	* 250 000	293 214	* 641 855	* 650 000
Ethiopia					
Lignite	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Malawi	83 146	70 552	54 431	70 760	* 71 000

# Production of coal

tonnes (metric)

Country	2011	2012	2013	2014	2015
Mozambique					
Bituminous	648 220	4 900 000	* 5 500 000	* 8 500 000	* 8 600 000
Niger	246 016	235 072	241 792	255 936	221 024
Nigeria					
Sub-bituminous	35 570	36 300	44 450	44 450	* 45 000
South Africa					
Anthracite	2 553 635	3 005 136	3 621 283	3 516 573	3 395 505
Bituminous	250 203 209	255 570 657	252 660 850	257 881 954	248 680 484
Swaziland					
Anthracite	121 050	152 284	257 090	177 931	141 732
Tanzania					
Bituminous	82 856	78 672	84 772	246 128	281 565
Zimbabwe					
Bituminous	2 562 054	1 593 600	3 114 200	5 782 600	* 6 382 000
Canada					
Bituminous	34 621 000	35 374 000	38 283 000	34 500 000	29 000 000
Sub-bituminous	22 762 000	21 625 000	21 657 000	24 968 000	22 500 000
Lignite	9 731 000	9 496 000	8 969 000	8 800 000	10 259 000
Mexico					
Bituminous	20 967 630	16 276 556	15 717 587	15 874 413	9 024 197
USA					
Anthracite (e)	2 082 940	2 148 000	1 944 097	1 766 289	1 944 000
Bituminous (e)	454 054 000	440 321 000	427 450 027	435 440 500	366 241 366
Sub-bituminous	441 167 731	436 395 960	393 978 539	397 912 999	380 577 606
Lignite	73 440 875	71 602 574	70 060 970	72 109 393	64 929 000
Argentina					
Bituminous	178 000	* 245 000	* 250 000	* 250 000	* 250 000
Brazil					
Bituminous & lignite (f)	5 985 489	6 440 998	8 009 895	7 696 154	6 353 656
Chile					
Bituminous	131 430	141 120	144 313	194 747	157 017
Lignite	522 672	570 594	2 758 131	3 973 438	3 004 709
Colombia					
Bituminous	85 803 229	89 024 321	85 496 062	88 577 980	85 547 514
Peru					
Anthracite & Bituminous	164 392	226 908	211 885	229 213	251 788
Venezuela					
Bituminous	2 611 463	1 910 801	1 229 309	800 640	801 697
Afghanistan					
Bituminous	12 600	14 500	16 000	18 000	* 18 000
Bangladesh (d)	666 635	861 072	854 804	942 796	* 943 000
Bhutan	148 244	98 731	77 743	121 891	85 164
Burma (g)	355 693	471 022	380 272	386 732	419 862
China	3 764 000 000	3 945 128 000	3 974 322 000	3 874 000 000	3 684 847 000
India					
Bituminous (g)	539 950 000	556 402 000	565 765 000	609 200 000	639 021 000
Lignite (g)	42 332 000	46 453 000	44 271 000	48 300 000	44 008 000
Indonesia					
Anthracite & Bituminous	353 270 937	385 899 100	474 600 921	458 096 707	461 566 080
Iran					
Bituminous (h)	2 499 495	2 819 792	2 575 378	2 598 078	* 2 800 000
Kazakhstan					
Bituminous	108 081 000	112 780 000	113 349 000	107 669 100	101 792 500
Lignite	8 368 000	7 748 000	6 511 000	6 893 500	5 525 700
Korea (Rep. of)					
Anthracite	2 084 474	2 094 000	1 814 000	1 748 000	1 764 000
Korea, Dem. P.R. of	* 41 000 000	41 492 000	* 42 000 000	* 41 000 000	* 41 000 000
Kyrgyzstan	830 700	1 163 900	1 407 900	1 777 400	1 869 900
Laos	511 700	510 100	508 185	131 884	* 132 000
Malaysia	2 915 788	2 951 124	2 907 963	2 667 764	2 559 444
Mongolia	32 994 400	31 139 000	33 341 000	24 449 000	23 979 000
Nepal					
Sub-bituminous (i)	13 165	10 904	14 084	8 151	7 399
Pakistan (j)(d)	3 291 617	3 178 986	2 813 079	3 340 192	3 407 659

## Production of coal

tonnes (metric)

Country	2011	2012	2013	2014	2015
Philippines					
Bituminous	6 881 474	7 348 647	7 100 033	7 601 260	7 377 639
Tajikistan	236 400	412 000	515 600	878 100	1 041 900
Thailand					
Lignite	21 324 406	18 652 557	18 110 763	17 991 362	15 150 549
Uzbekistan					
Bituminous	59 874	232 239	56 245	47 173	* 47 000
Lignite	3 783 867	3 803 825	3 972 561	4 352 672	* 4 350 000
Vietnam					
Anthracite	46 611 000	42 083 000	41 064 000	41 086 000	41 518 200
Australia					
Bituminous (k)	349 624 000	380 734 000	411 313 000	441 519 000	439 586 000
Brown coal (d)	66 733 000	69 124 000	59 854 000	58 001 000	* 58 000 000
New Zealand					
Bituminous	2 330 400	2 276 300	2 279 300	1 948 000	1 399 800
Sub-bituminous	2 294 200	2 324 000	2 055 700	1 727 700	1 665 700
Lignite	320 100	325 900	290 400	316 700	324 100
World total	7 931 000 000	8 201 000 000	8 226 000 000	8 165 000 000	7 860 000 000

### 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.
  - (2) Where no sub-commodity is shown the figures relate to all ranks of coal.
- (a) Spitzbergen: not including production from mines controlled by Russia
  - (b) Excluding production in Kosovo
  - (c) Including anthracite
  - (d) Years ended 30 June of that stated
  - (e) Includes a small amount of refuse recovery
  - (f) Including beneficiated and directly shipped material
  - (g) Years ended 31 March following that stated
  - (h) Years ended 20 March following that stated
  - (i) Years ended 15 July of that shown
  - (j) Including lignite
  - (k) Including sub-bituminous



## Mine production of cobalt

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Finland	480	* 1 381	2 061	2 104	2 119
Russia (a)	2 337	2 186	2 368	2 302	2 040
Botswana	149	195	248	196	316
Congo, Democratic Republic	99 475	86 433	76 593	74 712	83 529
Madagascar	—	718	2 340	3 221	3 920
Morocco (a)	1 518	1 314	1 353	1 391	1 722
South Africa (a)	862	1 102	1 294	1 332	1 362
Uganda (a)	673	556	181	—	—
Zambia (a)	5 956	5 665	5 658	4 317	2 997
Zimbabwe	174	195	319	358	* 380
Canada	6 836	6 676	7 168	6 907	7 489
Cuba	3 853	3 792	3 319	3 210	3 734
USA	—	—	—	120	760
Brazil	3 623	2 900	3 500	3 838	* 3 800
China	6 843	7 498	8 580	9 619	* 9 600
Indonesia	* 3 200	* 3 600	* 4 700	* 329	* 350
Philippines	* 1 500	2 269	2 126	4 094	4 140
Vietnam	—	—	—	223	277
Australia (b)	3 725	4 888	6 385	5 832	6 031
New Caledonia	2 404	2 631	7 414	8 239	11 210
Papua New Guinea	—	473	1 224	1 798	2 505
World total	144 000	134 000	137 000	134 000	148 000

### Note(s)

- (1) There is frequently a considerable disparity between the cobalt content of ore raised and cobalt actually recovered.  
(2) Figures in this table relate where possible to cobalt recovered. The principal exceptions to this are Brazil and New Caledonia, the figures for which relate to cobalt in ore raised.

(a) Metal and/or refined

(b) Years ended 30 June of that stated

## Production of refined cobalt

tonnes (metric)

Country	2011	2012	2013	2014	2015
Belgium (a)	3 187	4 200	5 415	5 850	6 306
Finland	10 627	10 562	10 798	12 551	9 615
France	354	326	308	219	133
Norway	3 067	2 969	3 348	3 582	3 117
Russia	2 337	2 186	2 368	2 302	2 040
Congo, Democratic Republic (b)	3 083	2 999	3 000	3 300	3 300
Madagascar	—	493	2 083	2 915	3 464
Morocco	1 518	1 314	1 353	1 391	1 722
South Africa (c)	862	1 102	1 294	1 332	1 362
Uganda	673	556	291	—	—
Zambia	5 956	5 665	5 658	4 317	2 997
Canada (d)	6 038	5 994	5 602	4 671	5 504
Brazil	1 614	1 750	1 871	1 350	1 300
China (a)	34 969	59 568	36 062	39 292	48 719
India	1 299	800	295	100	150
Japan	2 007	2 542	2 747	3 654	4 259
Australia	4 722	4 769	4 981	5 419	5 150
World total	82 300	107 800	87 500	92 200	99 100

### Note(s)

(1) In addition to the production listed above, several countries, including the United Kingdom, are known to produce substantial amounts of cobalt compounds which are not shown here to avoid double counting.

(a) Some refined cobalt production in China is recorded in Belgium

(b) Excludes white alloy and matte which are believed to be further processed in Belgium and elsewhere

(c) Includes metal and metal contained in sulphate

(d) Including oxides

# Mine production of copper

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Albania	4 379	5 691	5 087	3 503	1 610
Armenia	33 597	40 908	48 891	50 952	83 634
Azerbaijan	611	502	327	784	969
Bulgaria (a)	114 603	118 255	115 149	108 323	111 746
Cyprus	3 660	4 328	3 631	3 088	2 121
Finland	14 000	25 446	38 763	42 790	41 085
Georgia	10 000	6 800	10 000	6 800	13 000
Macedonia	7 555	9 506	9 802	8 187	8 965
Poland	426 665	427 064	428 879	421 285	426 196
Portugal	79 686	74 043	77 236	75 433	83 081
Romania	6 355	5 902	7 600	8 100	4 400
Russia	713 100	* 720 000	725 000	* 740 000	* 740 000
Serbia	26 100	32 200	36 200	33 739	29 827
Slovakia	28	31	40	46	58
Spain	68 511	97 452	104 600	103 900	111 700
Sweden	82 967	82 422	82 904	79 345	75 125
Turkey	92 500	104 300	120 500	122 000	108 000
Botswana	31 929	35 768	48 500	47 700	22 300
Congo, Democratic Republic	499 198	619 942	922 016	1 030 129	1 039 007
Eritrea	—	—	21 800	88 900	61 600
Mauritania	35 281	37 670	37 970	33 079	45 001
Morocco	12 076	14 750	11 575	16 579	18 348
Namibia	3 366	5 304	4 896	5 249	13 913
South Africa	96 600	88 800	80 821	78 697	77 360
Tanzania	6 748	5 840	5 740	6 363	6 795
Zambia	663 400	695 200	759 800	707 100	719 200
Zimbabwe	6 555	6 665	8 285	8 261	8 220
Canada	566 779	580 082	652 595	672 729	697 104
Dominican Republic	11 777	11 737	10 379	9 262	7 324
Mexico	443 621	500 275	480 124	515 025	540 468
USA	1 112 900	1 166 800	1 250 000	1 360 000	1 380 000
Argentina	116 700	135 700	109 600	102 600	61 800
Bolivia	4 176	8 700	7 549	10 746	9 480
Brazil	213 760	223 141	270 979	301 197	346 100
Chile	5 262 800	5 433 900	5 776 000	5 749 600	5 764 000
Colombia	808	781	659	3 991	5 500
Ecuador	1 400	1 800	2 600	3 200	3 200
Peru	1 235 345	1 298 761	1 375 641	1 378 000	1 700 814
Burma	* 12 000	* 14 000	* 18 000	* 29 000	* 20 000
China	1 294 700	1 576 800	1 715 150	1 776 794	1 706 400
India (b)	31 375	29 281	32 194	24 867	32 966
Indonesia	538 300	398 100	509 300	377 100	577 400
Iran	258 900	245 500	222 900	216 800	245 400
Kazakhstan	405 300	426 800	454 400	471 700	473 600
Korea, Dem. P.R. of	* 7 000	* 6 700	* 6 200	* 14 400	* 15 000
Kyrgyzstan	—	—	—	700	3 100
Laos	138 756	149 580	154 915	159 696	167 702
Mongolia	124 000	123 900	189 000	252 000	314 000
Oman	21 166	19 684	10 906	13 699	7 828
Pakistan	* 20 000	* 23 900	* 20 700	* 18 000	* 16 000
Philippines	63 835	65 444	90 861	91 824	83 835
Saudi Arabia	1 954	2 150	* 8 500	* 9 000	* 9 000
Uzbekistan	* 80 000	* 80 000	* 80 000	* 80 000	* 80 000
Vietnam	11 888	12 716	12 958	20 296	22 592
Australia	959 474	920 898	1 000 999	965 986	963 602
Papua New Guinea	130 456	125 348	121 571	75 901	45 185
World total	16 100 000	16 800 000	18 300 000	18 500 000	19 200 000

Note(s)

(a) Metal content of ore

(b) Years ended 31 March following that stated

## Smelter production of copper

tonnes (metric)

Country	2011	2012	2013	2014	2015
Armenia	8 876	10 075	10 771	9 814	11 601
Bulgaria	283 800	269 100	294 000	305 000	301 600
Finland	124 360	129 256	135 840	146 542	141 474
Germany	335 000	352 400	289 900	349 700	338 300
Norway	36 292	37 891	37 461	35 813	35 477
Poland	481 875	466 715	458 789	503 111	514 774
Russia	652 200	646 000	650 000	664 000	661 000
Serbia	26 000	32 200	33 300	30 700	54 000
Spain	260 730	270 200	212 000	285 400	286 300
Sweden	161 500	151 100	140 400	150 000	150 000
Turkey	* 30 600	* 35 500	* 35 800	* 35 100	* 35 000
Namibia	34 365	27 767	24 354	35 042	44 504
South Africa	79 400	55 300	69 900	58 500	60 900
Zambia (a)	520 000	519 200	520 300	525 800	648 800
Zimbabwe	4 400	* 5 000	* 5 000	* 5 000	* 5 000
Canada	304 724	287 051	254 509	288 699	281 416
Mexico	231 700	260 900	220 800	258 000	256 300
USA	538 400	485 300	516 500	522 000	527 000
Brazil	223 500	170 400	202 800	213 085	157 800
Chile	1 522 300	1 342 400	1 358 300	1 356 200	1 496 200
Peru	299 004	290 088	412 966	314 615	327 909
China	3 036 700	3 601 400	4 228 919	5 167 900	5 500 000
India	671 200	695 400	617 000	766 000	792 600
Indonesia	276 200	198 400	217 700	236 900	199 700
Iran	185 200	173 100	154 600	156 500	153 500
Japan	1 173 275	1 274 690	1 261 348	1 323 500	1 243 813
Kazakhstan	350 100	341 700	325 600	283 900	384 500
Korea (Rep. of)	449 200	477 300	478 800	500 000	511 200
Korea, Dem. P.R. of	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Oman	7 515	721	4 200	2 300	1 300
Pakistan (b)	15 672	20 201	15 285	* 16 000	* 15 000
Philippines	205 000	97 000	160 000	153 200	190 000
Uzbekistan	* 90 000	* 90 000	* 90 000	* 100 000	* 100 000
Vietnam	* 8 000	* 8 000	* 9 700	* 9 700	* 11 000
Australia	442 190	422 398	445 520	468 468	432 843
World total	13 100 000	13 300 000	13 900 000	15 300 000	15 900 000

### 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

(a) Including leach cathodes

(b) Years ended 30 June of that stated

## Production of refined copper

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria	112 500	113 600	82 842	83 200	102 900
Belgium	394 200	397 100	389 400	387 300	378 600
Bulgaria	226 100	226 000	230 100	234 000	230 000
Cyprus	3 660	4 328	3 631	3 088	2 121
Finland	124 360	129 256	135 840	146 542	141 474
Germany	708 800	682 132	677 600	674 000	678 100
Italy	7 600	7 700	4 900	7 900	7 300
Macedonia	—	1 100	1 900	1 700	2 400
Norway	36 292	37 891	37 461	35 813	35 477
Poland	571 041	565 834	565 155	576 876	574 310
Russia	927 100	889 400	875 500	890 800	876 200
Serbia	28 400	34 700	35 800	33 175	44 000
Spain	353 790	406 600	351 000	418 500	419 900
Sweden	219 316	214 050	206 193	217 337	206 059
Turkey	74 354	59 673	75 000	72 300	84 000
Ukraine	23 400	24 000	16 500	15 200	18 500
Congo, Democratic Republic	354 800	453 400	642 600	779 800	792 800
Egypt	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
Namibia	—	—	—	—	10 659
South Africa	86 166	66 416	75 400	57 700	59 800
Zambia	516 400	530 200	567 800	499 400	496 900
Zimbabwe	4 400	5 000	* 5 000	* 5 000	* 5 000
Canada	273 761	275 990	321 511	325 352	330 902
Mexico	403 100	376 900	355 100	390 400	434 100
USA	1 040 000	1 001 000	1 040 000	1 090 000	1 140 000
Argentina	* 16 000	* 16 000	* 16 000	* 14 000	* 14 000
Bolivia	1 000	904	1 271	1 789	1 830
Brazil	245 300	210 700	261 950	236 685	310 000
Chile	3 092 400	2 902 000	2 754 900	2 729 400	2 688 400
Peru	367 554	311 197	361 450	347 396	353 000
Burma	* 8 000	* 8 000	* 10 000	* 20 000	* 15 000
China	5 163 100	5 879 100	6 667 096	7 649 050	7 964 000
India (a)	504 677	493 519	644 193	762 176	790 373
Indonesia	274 900	197 200	214 300	231 800	198 400
Iran (b)	235 000	213 000	188 000	189 000	193 000
Japan	1 328 288	1 516 354	1 468 123	1 554 224	1 483 131
Kazakhstan	338 524	367 161	350 837	294 808	394 641
Korea (Rep. of)	595 447	591 000	604 000	604 000	644 603
Korea, Dem. P.R. of	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Laos	78 859	86 295	90 030	88 541	89 253
Mongolia	2 389	2 282	2 598	6 300	12 400
Oman	7 515	721	4 200	2 300	1 300
Philippines	164 100	98 400	153 000	* 130 000	* 150 000
Thailand	459	486	203	229	* 230
Uzbekistan	90 000	* 90 000	* 90 000	* 100 000	* 100 000
Vietnam	* 8 000	* 8 000	* 9 700	* 9 700	* 11 000
Australia	476 775	460 390	480 775	511 252	439 586
World total	19 500 000	20 000 000	21 100 000	22 400 000	22 900 000

### 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.
- (2) In addition to the countries listed, Albania and Colombia produce refined copper.

- (a) Years ended 31 March following that stated  
(b) Years ended 20 March following that stated

## Production of diamond

Carats

Country	2011	2012	2013	2014	2015
Russia	35 139 800	34 927 650	37 884 140	38 303 500	41 912 390
Angola	8 328 519	8 330 096	8 598 695	8 791 340	9 016 343
Botswana	22 903 000	20 478 000	22 597 000	24 658 000	20 824 000
Cameroon (a)	* 6 000	* 5 000	* 5 000	* 6 000	* 5 000
Central African Republic	323 576	365 917	(b) ...	(b) ...	(b) ...
Congo	76 548	51 588	56 495	53 163	40 057
Congo, Democratic Republic	19 249 057	19 154 000	16 653 000	14 689 000	14 284 000
Ghana	283 369	215 118	159 074	241 235	174 364
Guinea	235 400	266 800	202 365	164 059	162 110
Ivory Coast	—	—	—	1 074	14 925
Lesotho	224 180	478 926	414 013	346 017	304 232
Liberia	39 866	34 271	47 819	74 882	65 996
Namibia	1 344 932	1 667 000	1 776 290	1 897 872	1 988 126
Sierra Leone	355 890	532 560	604 740	594 422	500 050
South Africa	7 046 644	7 245 403	8 168 113	8 060 373	8 232 627
Tanzania	40 691	127 174	179 633	252 875	216 482
Togo	71	456	24	23	46
Zimbabwe	8 502 648	12 060 163	10 411 818	4 771 637	3 490 881
Canada	10 795 000	10 529 215	10 561 600	12 082 000	11 600 000
Brazil	45 536	46 292	49 166	56 923	31 826
Guyana	52 273	40 763	63 961	99 950	118 451
China	* 201	* 1 855	* 1 050	* —	* —
India (c)	18 490	31 988	37 515	36 107	36 070
Australia	7 561 487	8 625 996	11 481 749	9 288 118	13 560 795
World total	122 600 000	125 200 000	130 000 000	124 500 000	126 600 000

### Note(s)

- (1) This table does not show production of synthetic diamond.
- (2) So far as possible the amounts shown include estimates for illegal production.
- (3) Production of diamond from Ivory Coast was under United Nations sanctions from 2004 to 2013. It is believed illegal production continued during this period but it is not possible to estimate the quantity involved.

- (a) Including artisanal production
- (b) Currently under temporary suspension by the Kimberley Process and not trading in rough diamonds; however it is unclear whether production has actually stopped
- (c) Years ended 31 March following that stated

## Production of diatomite

tonnes (metric)

Country	2011	2012	2013	2014	2015
Armenia	29 232	29 148	19 376	20 439	* 20 000
Czech Republic	46 000	43 000	49 000	34 000	15 000
Denmark					
Moler (a)	126 000	111 000	128 125	118 750	127 500
France	* 75 000	* 85 000	* 85 000	* 90 000	* 90 000
Germany	52 698	50 036	51 435	54 277	52 784
Hungary	1 309	1 229	456	550	1 092
Poland	580	600	600	590	600
Russia	33 000	* 70 000	* 70 000	72 000	* 70 000
Spain (b)	83 624	60 777	53 713	59 619	62 000
Turkey	45 187	86 403	84 751	61 884	86 656
Algeria	2 000	2 000	2 124	2 415	* 2 500
Ethiopia (c)	* 4 000	* 5 000	* 5 000	* 5 000	* 5 000
Kenya	713	1 731	1 054	1 195	1 090
Mozambique	—	541	675	* 680	* 690
Costa Rica	8 700	—	8 813	5 024	* 5 000
Mexico	84 231	84 537	87 463	87 849	88 095
USA (d)	813 000	735 000	782 000	901 000	832 000
Argentina	60 651	278 126	209 000	* 200 000	* 200 000
Brazil	4 415	3 427	1 947	5 080	* 5 000
Chile	22 938	23 021	27 092	31 000	26 186
Peru	54 163	93 786	124 917	151 398	120 672
China	* 440 000	* 420 000	* 420 000	* 420 000	* 420 000
Iran (e)	...	1 956	4 167	—	* —
Japan	* 100 000	* 100 000	* 90 000	* 90 000	* 100 000
Korea (Rep. of)	5 150	6 000	34 000	65 893	15 310
Saudi Arabia	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Thailand	38 130	8 500	—	—	—
Vietnam	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Australia (f)	* 12 000	* 12 000	* 21 000	* 13 000	* 16 000
New Zealand	—	—	4	43 624	...
World total	2 154 000	2 324 000	2 373 000	2 546 000	2 374 000

### Note(s)

(1) In addition to the countries listed, Georgia may produce diatomite

(a) Moler is an impure diatomite containing a large proportion of clay

(b) Including Tripoli

(c) Years ended 7 July of that stated

(d) Sold or used by producers

(e) Years ended 20 March following that stated

(f) Years ended 30 June of that stated

## Production of feldspar

tonnes (metric)

Country	2011	2012	2013	2014	2015
Czech Republic	407 000	445 000	411 000	422 000	433 000
Finland	26 292	43 124	47 636	46 233	38 026
France	* 600 000	* 600 000	* 550 000	* 550 000	* 550 000
Germany	350 000	350 000	* 350 000	320 000	317 352
Greece	10 560	13 000	—	—	—
Italy	* 4 700 000	* 4 700 000	* 4 700 000	* 4 700 000	* 4 700 000
Macedonia	25 032	17 168	15 168	18 076	20 289
Norway	25 271	—	—	154	76
Poland	538 800	487 200	483 000	519 896	539 875
Portugal (a)	187 159	167 287	138 715	136 440	178 622
Romania	3 814	4 112	7 060	7 570	13 244
Russia	* 160 000	* 160 000	* 160 000	* 160 000	* 160 000
Serbia	23 586	19 927	* 20 000	* 20 000	* 20 000
Slovakia	—	—	5 000	6 000	4 000
Spain	662 418	530 238	592 908	533 328	* 550 000
Sweden	30 000	27 000	30 000	27 000	29 000
Turkey	7 076 068	9 479 699	7 090 677	7 609 692	7 960 844
Ukraine	178 614	146 286	133 933	(b) 94 506	(b) 44 460
Algeria	132 000	162 000	258 700	230 372	* 230 000
Egypt	210 000	* 400 000	* 400 000	* 200 000	* 300 000
Ethiopia (c)	441	* 500	* 530	* 510	* 510
Morocco	43 889	* 45 000	* 45 000	* 45 000	* 45 000
Nigeria	* 1 700	* 1 700	* 1 700	* 1 700	* 1 700
South Africa	101 559	94 458	191 443	102 541	126 542
Sudan	9 519	26 283	31 700	50 680	* 55 000
Cuba	3 100	3 800	3 200	3 600	3 300
Guatemala	7 516	19 356	19 611	10 410	10 340
Mexico	382 497	380 441	164 484	150 726	154 174
USA	580 000	560 000	550 000	530 000	* 510 000
Argentina	216 721	273 896	* 230 000	* 200 000	* 200 000
Brazil	333 352	247 152	294 357	717 771	* 700 000
Chile	7 563	6 399	3 874	4 233	6 577
Colombia	* 85 000	* 60 000	46 195	* 30 000	12 234
Ecuador	130 498	152 590	210 142	183 259	247 253
Peru	11 645	26 359	22 695	18 019	16 979
Uruguay	—	—	4	300	200
Venezuela	76 726	85 115	91 054	93 934	75 527
China	* 2 100 000	* 2 100 000	* 2 500 000	* 2 500 000	* 2 500 000
India (d)	835 526	1 459 008	1 512 982	1 343 366	* 1 300 000
Indonesia	* 18 000	* 19 000	* 18 000	* 18 000	* 18 000
Iran (e)	576 643	1 154 998	1 044 791	1 055 368	* 1 000 000
Japan (f)	104 109	* 100 000	* 100 000	* 100 000	* 100 000
Korea (Rep. of)	384 221	360 413	343 241	528 958	601 030
Malaysia	379 629	482 906	314 399	376 646	442 980
Pakistan (g)	23 254	53 235	38 218	92 672	38 568
Philippines	22 050	24 969	30 388	34 232	* 34 200
Saudi Arabia	44 000	227 000	160 000	168 000	176 000
Sri Lanka	53 337	87 318	96 043	* 96 000	* 96 000
Taiwan	50	40	15	5	1
Thailand	1 041 152	1 100 619	1 072 656	1 413 428	1 329 816
Uzbekistan	* 4 300	* 4 300	* 4 300	* 4 300	* 4 300
Vietnam	* 200 000	* 200 000	* 200 000	* 200 000	* 200 000
Australia (g)	* 94 000	* 108 000	* 73 000	* 55 000	* 55 000
World total	23 219 000	27 217 000	24 808 000	25 730 000	26 150 000

See notes on the following page



## Production of feldspar

### Note(s)

- (a) Includes feldspathic sand
- (b) Figures do not include production from Crimea or Sevastopol
- (c) Years ended 6 July of that stated
- (d) Years ended 31 March following that stated
- (e) Years ended 20 March following that stated
- (f) Including weathered granite feldspar
- (g) Years ended 30 June of that stated

## Production of fluorspar

tonnes (metric)

Country	2011	2012	2013	2014	2015
Bulgaria	31 800	69 700	82 500	130 800	146 500
Germany	65 619	54 202	48 744	58 100	49 801
Russia	120 000	130 000	56 200	8 200	* 8 200
Spain	117 063	113 570	128 512	135 293	135 000
Turkey	4 524	5 197	3 874	4 271	6 238
United Kingdom	—	—	16 000	25 000	17 000
Egypt (a)	—	* 7 665	850	—	—
Kenya	95 100	91 000	71 987	97 156	70 096
Morocco	79 207	79 300	81 200	79 840	80 890
Namibia	94 032	90 834	* 63 470	28 954	—
South Africa	* 240 000	* 225 000	* 175 000	* 285 000	* 200 000
Mexico	1 206 907	1 237 091	1 210 477	1 109 721	1 095 928
Argentina	25 099	35 874	* 23 000	* 23 000	* 23 000
Brazil (b)	25 040	24 148	27 712	23 849	* 25 000
China	6 550 000	4 200 000	* 4 000 000	* 3 800 000	* 3 800 000
India (c)	5 010	3 092	2 487	2 946	2 333
Iran (d)	55 976	60 000	56 298	54 370	* 60 000
Kazakhstan	* 66 000	* 66 000	* 110 000	* 100 000	* 100 000
Kyrgyzstan	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
Mongolia	404 000	428 900	337 800	* 338 000	* 338 000
Pakistan (a)	3 156	6 866	13 344	7 500	* 7 500
Thailand	5 093	9 602	2 432	4 590	15 095
Vietnam	* 4 000	* 4 000	* 4 000	90 940	193 164
World total	9 200 000	6 900 000	6 500 000	6 400 000	6 400 000

### Note(s)

- (2) In addition, the USA produced the following amounts of fluorspar equivalent in fluorosilicic acid derived from processing phosphate rock ('000 t): 2011: 124; 2012: 130; 2013: 134; 2014: 131; 2015: 114.

- (a) Years ended 30 June of that stated
- (b) Including beneficiated and directly shipped material
- (c) Years ended 31 March following that stated
- (d) Years ended 20 March following that stated

## Production of primary gallium

Accurate data for gallium is difficult to obtain because it is produced only as a by-product of bauxite or zinc processing using proprietary techniques and the majority of producers do not report production figures. The leading producing countries are believed to be China, Russia, Germany and Ukraine, with smaller quantities produced in the Republic of Korea, Hungary and Japan.

The following table provides the currently available information but this is incomplete. The United States Geological Survey estimates total world primary production as: 2011, 292 tonnes; 2012, 273 tonnes; 2013, 390 tonnes; 2014, 440 tonnes and 2015, 435 tonnes.

Lower grade production is often subsequently refined to higher grade material which complicates the collection of production data as double counting is a significant risk. High-purity gallium is believed to be produced in China, Japan, United Kingdom, U.S.A. and possibly Slovakia. There is also believed to be significant production of refined gallium from scrap recycling, particularly in Canada, Germany, Japan, United Kingdom and USA.

tonnes (metric)					
Country	2011	2012	2013	2014	2015
Germany	...	...	38	16	11
Russia	* 13	* 13	* 13	* 13	* 13
China	* 200	* 270	* 300	* 400	* 400
Japan	5	8	8	8	5
Kazakhstan	19	16	* —	* —	* —

## Production of germanium metal

tonnes (metric)					
Country	2011	2012	2013	2014	2015
Finland	12	16	17	17	13
Russia	* 5	* 5	* 5	* 5	* 5
USA (a)	3	* 3	* 3	* 3	* 3
China	* 100	* 100	* 110	* 110	* 120
Japan	* 2	* 2	* 2	* 2	* 2

### Note(s)

(1) Germanium is also believed to be recovered from imported or domestic material in Belgium, Canada, Russia and Ukraine.

(a) Including production of secondary metal

## Mine production of gold

In addition to 'industrial scale' gold mines around the world, a significant quantity of gold is mined by small scale or artisanal producers, both on a legal and illegal basis. In some countries the quantities involved with artisanal mining can be relatively large. The compilation of reliable data for the quantity produced by artisanal mining in each country is difficult, particularly where the actions are illegal. Artisanal mining can be seasonal, temporary and highly variable, on both geographical and temporal scales.

Where possible, the table attempts to include estimates for artisanal mining of gold in order that the calculated World totals are as complete as possible. However, the difficulties noted above mean that these totals cannot be completely accurate and they are consequently rounded to a greater degree than the individual country figures may suggest is appropriate. This is an attempt to convey the level of uncertainty associated with these total figures.

For clarity, additional comments on specific countries are shown below (there may be other countries where artisanal mining also occurs; these comments are not intended to be exhaustive):-

Burkina Faso – official Chamber of Mines figures include 302 kg for artisanal mining in 2015; 208 kg in 2014; and 476 kg in 2013. It is believed the actual artisanal production may be higher.

Cameroon – all gold mining is currently small scale or artisanal. A nominal estimate is shown in the table but it could be much higher.

Democratic Republic of Congo – artisanal mining is quite extensive, the figures shown include estimates for artisanal mining ranging from 10 000 to 17 000 kg per year.

Ghana – gold produced by artisanal mining is purchased by a state-owned marketing organisation and consequently official reported figures include this artisanal mining. It is believed that the artisanal component of these figures could be as high as 20 000 to 30 000 kg per year.

Guinea – the figures currently shown in the table are for industrial mines only. Artisanal mining does occur and is likely to be in the range of 100 to 1000 kg per year.

Ivory Coast – the figures currently shown in the table are for industrial mines only. Artisanal mining does occur but the scale is unknown.

Madagascar – estimates of artisanal mining are in the order of 3000 to 4000 kg per year.

Mali – the figures include an estimate of 5000 kg per year for artisanal mining, but it is likely the real figure varies from year to year.

Togo – the reported figures are exports of gold which is transiting through the country. It is believed the majority of this originates in Burkina Faso from artisanal mining but it is not recorded within the production figures for that country. Consequently it is recorded here for completeness. Some artisanal mining is also believed to occur in Togo.

Burma – these figures include an estimate of between 200 and 300 kg per year for artisanal mining.

kilograms

Country	2011	2012	2013	2014	2015
Armenia	2 125	1 941	2 324	2 814	3 640
Azerbaijan	1 775	1 562	1 621	1 875	2 240
Bulgaria	5 302	7 058	7 385	7 899	7 914
Finland	6 674	9 100	8 660	8 085	8 342
Georgia	* 3 100	* 3 100	* 4 300	* 2 300	* 3 100
Greece	—	26	823	552	510
Greenland	103	307	25	—	—
Poland	400	469	431	226	431
Romania	* 500	* 500	* 500	* 500	* 500
Russia	188 748	200 345	229 982	249 065	255 783
Serbia (a)	1 534	1 400	1 154	1 310	* 1 200
Slovakia	398	546	533	582	603
Spain	529	1 529	1 994	1 958	2 128
Sweden	5 994	6 015	6 530	6 849	6 028
Turkey	24 000	29 390	33 980	31 260	27 800
United Kingdom	202	102	42	—	—
Algeria	340	264	140	85	* 80
Botswana	1 562	1 522	1 206	958	757
Burkina Faso	32 189	29 877	32 994	36 320	36 540
Burundi	1 052	2 147	2 823	650	549
Cameroon	* 600	* 600	* 600	* 600	* 600
Congo, Democratic Republic	* 10 000	* 17 000	* 20 000	* 36 000	* 43 000
Egypt	6 305	8 175	11 102	11 734	13 657
Eritrea	11 788	9 735	2 862	840	753
Ethiopia (b)	10 322	12 581	13 050	10 340	9 370
Gabon	* 300	684	1 201	2 024	1 301
Ghana	90 959	89 768	189 813	139 081	112 711
Guinea	15 779	16 153	18 139	15 660	21 457
Ivory Coast	11 009	11 054	12 713	17 318	20 245
Kenya	1 636	3 600	2 100	36	71
Liberia	449	641	587	620	482
Madagascar (c)	* 3 001	* 3 157	* 3 000	* 3 000	* 3 500
Mali	* 41 100	* 46 800	* 46 000	* 45 400	* 46 500
Mauritania	8 198	7 647	9 518	9 625	8 804
Morocco (a)	520	532	463	377	448

## Mine production of gold

kilograms

Country	2011	2012	2013	2014	2015
Mozambique	111	178	180	197	242
Namibia	2 112	2 402	2 036	2 377	6 105
Niger	1 957	1 677	1 041	732	1 209
Nigeria	* 3 700	* 4 000	4 200	* 4 000	* 4 000
Rwanda	—	—	—	319	336
Senegal	4 089	6 666	6 445	6 588	5 670
Sierra Leone	164	141	96	43	87
South Africa	180 184	154 180	159 724	151 622	144 515
Sudan	46 100	44 500	70 000	73 300	82 400
Tanzania	37 085	39 012	43 390	40 598	45 777
Togo (d)	16 469	18 551	21 086	20 583	15 568
Zambia (e)	3 493	4 232	5 207	4 803	4 238
Zimbabwe	12 949	14 743	14 001	15 386	* 14 100
Canada	102 624	107 486	133 636	152 460	159 040
Costa Rica	* 500	—	* 2 000	* 1 500	* 950
Dominican Republic	495	4 106	26 084	35 081	30 838
Guatemala	11 898	6 473	6 386	6 142	5 610
Honduras	1 893	1 859	1 985	2 762	2 598
Mexico	88 649	102 802	119 774	117 771	124 581
Nicaragua	6 395	6 981	8 612	8 648	8 522
Panama	2 057	2 208	1 120	—	—
USA	233 925	234 623	228 234	210 076	212 304
Argentina	59 140	54 651	52 486	71 770	71 235
Bolivia	6 513	27 488	18 127	24 803	12 810
Brazil	65 200	66 773	79 563	81 038	* 80 000
Chile	45 137	49 936	51 309	46 031	42 501
Colombia	55 908	66 178	55 745	57 015	59 202
Ecuador	4 924	5 139	8 676	7 322	7 161
French Guiana	* 1 300	* 1 000	* 2 000	* 2 000	1 265
Guyana	11 293	13 643	14 963	12 053	14 024
Peru	166 168	161 545	151 486	140 090	145 035
Suriname	12 605	12 507	11 001	10 641	9 396
Uruguay (f)	1 702	1 881	2 092	1 715	1 480
Venezuela	4 608	1 982	1 679	1 056	558
Burma	* 100	787	893	* 900	* 1 200
China (a)	360 960	403 050	428 163	451 799	450 053
India (g)	2 194	1 588	1 564	1 441	1 323
Indonesia	77 722	69 291	59 804	69 023	92 171
Iran (h)	915	1 179	1 656	1 760	* 2 000
Japan	8 692	7 232	7 411	7 114	7 699
Kazakhstan	36 670	40 006	42 552	50 339	63 614
Korea (Rep. of)	209	336	413	284	258
Kyrgyzstan	18 900	10 600	19 400	18 000	17 600
Laos	3 984	6 415	6 838	5 265	6 893
Malaysia	4 219	4 625	3 823	4 308	4 732
Mongolia	5 703	5 995	8 904	19 959	20 828
Philippines	31 120	15 762	17 248	18 423	20 643
Saudi Arabia	4 611	4 285	4 158	4 789	5 089
Tajikistan	2 240	2 400	2 670	3 436	* 4 400
Thailand	5 568	4 895	4 419	4 576	3 305
Uzbekistan	* 91 000	* 90 000	* 90 000	* 102 000	* 102 000
Vietnam	1 333	1 508	1 681	164	* 160
Australia	259 052	251 654	268 262	274 047	277 942
Fiji	1 572	1 439	1 218	1 196	1 290
New Zealand	11 738	10 049	12 468	11 989	12 687
Papua New Guinea	62 271	55 839	56 035	57 939	60 046
Solomon Islands	1 588	2 109	1 826	603	—
World total	2 670 000	2 740 000	3 010 000	3 070 000	3 110 000

See notes on the following page

## Mine production of gold

### 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) In addition to the countries listed, Benin, Central African Republic, Congo, Uganda and Taiwan produce less than 100 kg gold per year.
- (3) In addition to the countries listed, Cambodia, El Salvador, Haiti, Macedonia, Malawi, Pakistan, Paraguay, Portugal, and South Sudan may produce gold.

- (a) Metal production
- (b) Years ended 7 July of that stated
- (c) Includes an estimate for artisanal mining
- (d) Exports
- (e) Contained in blister copper, refinery muds and electrolytic copper
- (f) Year ended 30 November of the year stated
- (g) Years ended 31 March following that stated
- (h) Years ended 20 March following that stated

## Production of graphite

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria (a)(b)	27 450	18 840	17 190	23 240	21 840
Germany	—	109	269	517	398
Norway	7 789	6 992	6 207	8 266	9 185
Russia	* 14 000	* 14 000	* 14 000	* 14 000	* 14 000
Sweden	—	—	—	—	113
Turkey	5 250	31 500	28 740	* 28 500	* 32 000
Ukraine	600	4 600	6 900	13 800	14 500
Madagascar (c)	3 951	3 500	6 100	5 700	8 000
Zimbabwe	7 252	7 022	6 934	6 853	* 7 000
Canada	* 20 000	* 20 000	* 20 000	* 30 000	* 30 000
Mexico	7 348	7 520	7 024	9 160	8 071
Brazil (d)	105 188	88 110	91 908	87 026	75 100
China (e)	* 1 800 000	* 1 800 000	* 1 800 000	* 1 800 000	* 1 800 000
India (a)(f)	153 339	134 735	146 390	116 712	134 568
Korea, Dem. P.R. of	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Pakistan (g)	1 268	912	6 188	14 279	2 864
Sri Lanka	3 357	4 173	3 143	* 3 100	* 3 100
World total	2 200 000	2 200 000	2 200 000	2 200 000	2 200 000

### Note(s)

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

- (a) Crude
- (b) Sold for Graphite
- (c) Exports
- (d) Including beneficiated and directly shipped material
- (e) Including flake graphite
- (f) Years ended 31 March following that stated
- (g) Years ended 30 June of that stated

# Production of Gypsum

tonnes (metric)

Country	2011	2012	2013	2014	2015
Albania	93 248	91 021	126 349	108 733	86 163
Armenia	34 000	30 400	28 700	22 300	19 400
Austria (a)	815 438	791 961	635 299	729 892	715 195
Azerbaijan	107 328	149 983	169 028	145 457	130 284
Bosnia & Herzegovina (a)	71 870	73 365	73 300	67 700	58 800
Bulgaria	114 800	113 700	119 100	87 800	108 600
Croatia	231 008	182 557	114 450	120 055	138 088
Cyprus	335 000	327 800	315 000	347 600	471 885
Czech Republic	11 000	14 000	11 000	11 000	11 000
France (a)	2 452 204	2 314 788	2 078 984	1 907 768	1 807 978
Germany (a)	2 021 000	1 949 000	1 778 000	4 090 000	4 200 000
Greece (a)	590 000	621 000	760 000	664 000	661 000
Hungary (a)	3 000	—	—	—	—
Ireland, Republic of	* 300 000	* 200 000	* 200 000	* 300 000	* 250 000
Italy (a)	3 642 897	3 200 920	3 192 186	5 886 653	420 806
Latvia (a)	215 950	252 714	272 340	270 120	* 270 000
Macedonia (a)	162 984	157 844	162 661	156 492	172 525
Moldova (b)	* 400 000	375 900	* 400 000	* 400 000	* 400 000
Norway (a)(c)	88 953	85 296	77 009	79 740	77 403
Poland (a)	1 418 300	1 395 400	1 270 100	1 231 858	1 099 081
Portugal	337 272	321 988	299 038	328 730	309 966
Romania	834 009	765 251	736 099	815 586	888 746
Russia	* 3 000 000	* 3 100 000	* 5 100 000	* 5 300 000	* 4 500 000
Slovakia (a)	88 000	88 000	60 000	65 000	67 000
Spain	7 825 747	6 359 923	7 388 699	6 925 120	7 100 000
Switzerland	300 000	297 000	284 000	257 000	* 165 000
Turkey	5 723 439	8 248 446	9 790 097	9 051 158	8 638 715
Ukraine (a)	2 293 800	2 185 800	2 175 400	1 525 300	1 254 900
United Kingdom	* 1 200 000	* 1 200 000	* 1 200 000	* 1 200 000	* 1 200 000
Algeria	1 800 000	2 000 000	2 077 700	2 130 459	* 2 000 000
Angola	200 000	121 981	189 242	* 190 000	* 190 000
Egypt (a)	966 250	457 602	940 615	872 141	* 850 000
Eritrea	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Ethiopia (a)(d)	46 000	46 000	42 452	* 43 000	* 43 000
Kenya (a)	6 520	6 653	5 500	12 400	5 800
Libya	* 125 000	* 150 000	* 200 000	* 200 000	* 20 000
Madagascar	* 130	* 130	* 130	* 130	* 130
Mauritania	72 153	* 75 000	* 75 000	* 75 000	* 75 000
Morocco	* 600 000	* 600 000	* 600 000	* 600 000	* 600 000
Niger	6 058	600	1 755	—	253
Nigeria	* 320 000	* 350 000	* 350 000	* 350 000	* 350 000
South Africa	476 118	558 242	559 443	376 223	232 878
Sudan	31 000	117 073	132 000	111 271	* 110 000
Tanzania	38 659	91 610	171 567	200 179	235 920
Tunisia	534 000	776 000	632 000	* 630 000	* 630 000
Canada (a)	2 555 000	2 550 000	2 654 000	1 811 000	1 633 000
Cuba	131 400	131 000	87 100	97 800	90 900
Dominican Republic	61 161	185 890	144 178	243 098	243 992
Guatemala	77 009	99 628	117 619	81 885	111 351
Honduras	* 5 500	* 5 500	* 5 500	* 10 000	* 10 000
Jamaica	79 521	64 753	48 322	45 201	42 883
Mexico	6 463 861	9 456 478	7 903 159	7 043 563	* 7 100 000
Nicaragua	29 710	34 890	36 500	46 570	37 100
USA	9 770 000	14 800 000	12 900 000	11 000 000	* 11 500 000
Argentina	1 469 447	1 432 517	* 1 450 000	* 1 500 000	* 1 500 000
Bolivia	600	645	1 223	* 1 000	650
Brazil	3 228 931	3 749 860	3 332 991	3 447 012	* 3 500 000
Chile	917 759	799 064	1 015 158	843 490	860 075
Colombia	* 200 000	* 200 000	* 200 000	395 651	445 855
Paraguay	* 4 500	* 4 500	* 4 500	* 4 500	* 4 500
Peru	479 950	390 705	297 527	543 856	438 025
Afghanistan	1 000	2 000	2 500	3 000	* 3 000
Bhutan	352 234	313 173	351 420	414 148	389 365
Burma (e)	77 413	38 579	60 510	104 994	99 860

## Production of Gypsum

tonnes (metric)

Country	2011	2012	2013	2014	2015
China	* 127 000 000	* 128 000 000	* 129 000 000	* 130 000 000	* 132 000 000
India (e)(f)	3 991 853	3 564 300	3 115 894	2 478 056	* 2 500 000
Indonesia	* 7 500	* 8 000	* 7 000	* 7 000	* 7 000
Iran (g)	14 657 191	14 178 577	17 354 489	14 869 796	* 22 000 000
Iraq	11 350 170	9 424 214	10 461 708	* 10 462 000	* 10 460 000
Israel	20 437	45 407	27 200	82 000	159 299
Japan	4 770 000	5 002 000	4 771 000	4 674 000	* 5 000 000
Jordan	254 860	275 000	* 275 000	* 275 000	* 275 000
Kazakhstan	* 700 000	* 700 000	* 700 000	* 700 000	* 700 000
Laos	686 100	619 300	772 138	584 338	* 584 000
Mongolia	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Oman	1 254 100	1 915 300	2 785 000	3 387 300	6 180 800
Pakistan (h)	885 368	1 260 021	1 249 967	1 326 437	1 417 007
Saudi Arabia	2 239 000	1 700 000	1 700 000	1 780 000	1 860 000
Sri Lanka	542	* 600	* 600	* 600	* 600
Syria	* 405 000	* 200 000	* 100 000	* 50 000	* 25 000
Tajikistan	11 300	13 700	12 200	12 900	8 500
Thailand					
Gypsum	10 994 074	11 447 199	12 382 648	12 445 100	11 267 144
Anhydrite	614 148	857 172	1 264 077	976 818	876 024
Uzbekistan	* 80 000	* 80 000	* 80 000	* 80 000	* 80 000
Vietnam	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Yemen, Republic of	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Australia (h)	3 401 300	3 834 900	3 588 885	3 624 174	* 4 065 000
World total	249 300 000	257 800 000	265 200 000	263 500 000	268 200 000

### Note(s)

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

- (a) Including anhydrite
- (b) Excluding output from the region east of the River Nistru and the Municipality of Bender
- (c) Sales
- (d) Years ended 7 July of that stated
- (e) Years ended 31 March following that stated
- (f) Including selenite
- (g) Years ended 20 March following that stated
- (h) Years ended 30 June of that stated

## Refinery production of indium

tonnes (metric)

Country	2011	2012	2013	2014	2015
Belgium	* 30	* 30	* 30	* 30	* 30
France	—	13	33	43	41
Germany	* 10	* 10	* 10	* 10	* 10
Italy	* 5	* 5	* 5	* 5	* 5
Netherlands	* 5	* 5	* 5	* 5	* 5
Russia	6	7	7	* 7	* 7
Canada	* 77	* 65	* 70	* 67	* 65
Brazil	* 5	* 5	* 5	* 5	* 5
Peru	* 2	* 11	11	14	* 15
China	* 380	* 405	* 415	* 460	* 370
Japan	70	70	70	70	70
Korea (Rep. of)	* 100	* 100	* 100	* 100	* 100

### Note(s)

(1) In addition to the countries listed, Kazakhstan is believed to produce small quantities of indium.

## Production of iodine

kilograms

Country	2011	2012	2013	2014	2015
Azerbaijan	200 000	240 400	249 100	221 100	210 376
Russia	* 105 000	* 105 000	* 105 000	* 105 000	* 105 000
USA	* 1 270 000	* 1 270 000	* 1 270 000	* 1 270 000	* 1 350 000
Chile	16 000 000	17 494 000	20 656 000	18 989 000	21 179 000
China	* 590 000	* 600 000	* 600 000	* 600 000	* 600 000
Indonesia	* 61 000	* 44 000	* 43 000	* 56 000	* 45 000
Iran (a)	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Japan	9 277 000	9 315 000	* 9 500 000	9 814 000	10 610 000
Turkmenistan	* 470 000	* 480 000	* 500 000	* 500 000	* 510 000
Uzbekistan	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
World total	28 300 000	29 900 000	33 200 000	31 900 000	34 900 000

### Note(s)

(a) Years ended 20 March following that stated

## Production of iron ore

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria (a)	2 206 910	2 142 255	2 323 323	2 436 675	2 783 327
Azerbaijan	214 300	207 300	141 400	91 400	127 600
Bosnia & Herzegovina	1 891 000	2 075 732	2 121 908	2 127 564	2 122 802
Germany (b)(c)	489 091	447 515	413 404	461 082	496 079
Norway	6 723 426	7 744 487	9 549 232	10 542 149	* 11 000 000
Russia	104 000 000	104 000 000	102 100 000	102 100 000	101 000 000
Sweden	30 840 000	32 198 000	37 411 000	35 759 000	29 861 000



## Production of iron ore

tonnes (metric)

Country	2011	2012	2013	2014	2015
Turkey	6 450 480	4 969 901	8 589 362	11 887 154	7 760 957
Ukraine	80 900 000	67 149 000	70 389 000	68 337 000	66 902 000
Algeria	1 700 000	1 700 000	1 066 700	911 135	576 000
Egypt (d)	3 320 878	3 930 002	1 421 772	1 699 133	* 1 700 000
Liberia	386 968	2 369 850	4 948 095	5 189 723	5 748 520
Mali	* 100 000	* 160 000	* 100 000	* 100 000	* —
Mauritania	11 176 000	11 169 800	12 532 200	13 305 800	11 607 000
Morocco	78 926	260 700	301 100	22 910	17 860
Nigeria	* 70 000	* 70 000	* 50 000	* 50 000	* 50 000
Sierra Leone	339 330	5 203 490	11 894 580	17 497 553	* 7 000 000
South Africa (e)	58 056 897	67 100 474	71 543 088	80 759 334	73 220 891
Sudan	48 163	96 400	339 390	* 40 000	* 40 000
Swaziland	79 553	1 032 230	1 258 560	603 251	—
Tunisia	171 200	223 100	243 100	307 600	300 000
Uganda	2 134	4 431	2 282	* 4 200	9 000
Canada (f)	33 573 000	39 427 100	42 769 700	44 196 000	45 954 000
Guatemala	1 160	1 000	778	—	—
Mexico	19 403 000	22 600 000	28 545 000	25 193 818	21 428 359
USA (f)(g)	54 700 000	54 000 000	53 000 000	55 900 000	* 42 500 000
Bolivia	—	—	—	—	24 453
Brazil	460 400 000	400 600 000	316 800 000	345 800 000	389 146 000
Chile	12 624 600	17 330 000	17 108 000	18 865 800	15 449 000
Colombia	174 459	391 503	710 047	676 180	901 736
Ecuador (h)	27 060	7 631	2 616	408	—
Peru	8 623 000	8 221 983	7 014 000	7 193 000	7 320 807
Venezuela	16 347 621	15 403 095	11 198 077	11 258 577	11 715 475
Bhutan	—	3 742	20 506	18 997	43 202
China	1 326 942 000	1 309 637 000	1 451 011 000	1 514 240 000	1 381 288 000
India (i)	168 582 000	136 618 000	152 183 000	129 321 000	155 910 000
Indonesia	11 814 544	11 545 752	22 353 337	5 951 400	* 6 000 000
Iran (j)	38 260 000	32 138 000	57 225 896	69 279 071	* 58 000 000
Iraq	26 639	—	—	* —	* —
Kazakhstan	51 742 000	52 614 000	51 758 500	51 540 800	37 269 700
Korea (Rep. of)	541 539	592 743	663 045	693 262	445 318
Korea, Dem. P.R. of	* 5 300 000	* 5 100 000	* 3 444 000	* 3 212 000	* 1 800 000
Malaysia (j)	8 077 879	12 143 985	12 134 258	9 615 323	1 534 553
Mongolia	5 678 300	7 561 400	6 011 200	10 260 500	6 173 400
Pakistan (d)	329 100	384 893	412 108	197 074	328 702
Philippines	292 608	216 176	826 745	153 775	107 119
Thailand	489 359	303 233	389 620	347 918	16 483
Vietnam	2 371 300	1 506 200	2 495 300	2 719 000	2 237 800
Australia	477 330 291	519 858 812	615 523 352	750 519 855	816 781 763
New Zealand	2 357 440	2 394 848	3 156 619	3 245 369	3 193 722
World total	3 015 000 000	2 965 000 000	3 195 000 000	3 415 000 000	3 328 000 000

### Note(s)

- (a) Including micaceous iron oxide
- (b) Including manganiferous iron ore
- (c) Used as aggregate in the construction industry
- (d) Years ended 30 June of that stated
- (e) Including by-product magnetite
- (f) Including by-product iron ore
- (g) Including beneficiated and direct shipping ore
- (h) Including iron sand
- (i) Years ended 31 March following that stated
- (j) Years ended 20 March following that stated

## Production of pig iron

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria	5 815 000	5 751 000	6 200 000	6 015 000	5 805 000
Belgium	4 700 000	4 073 000	4 343 000	4 335 000	4 248 000
Bosnia & Herzegovina	684 734	749 539	759 100	860 430	845 462
Czech Republic	4 137 000	3 935 207	4 040 000	4 152 000	4 031 129
Finland	2 600 000	2 461 000	2 100 000	2 500 000	2 600 000
France	9 697 535	9 531 844	10 276 499	10 865 646	10 097 177
Germany	27 943 000	27 046 000	26 678 000	27 943 000	27 844 000
Hungary	1 315 000	1 229 000	600 000	801 000	1 247 000
Italy	9 824 000	9 424 000	6 933 000	6 371 000	5 051 000
Netherlands	5 943 000	5 909 000	5 700 000	5 868 000	6 050 000
Norway	101 000	100 000	106 000	102 000	* 100 000
Poland	3 974 930	3 943 968	4 013 877	4 639 571	4 826 492
Romania	1 593 000	1 467 000	1 604 000	1 631 000	1 800 000
Russia	48 200 000	50 500 000	50 000 000	51 400 000	53 700 000
Serbia	1 197 693	318 651	366 277	550 000	904 000
Slovakia	3 346 000	3 519 755	3 617 000	3 838 000	3 738 486
Spain	3 540 000	3 081 000	3 949 000	3 958 000	4 450 000
Sweden	3 240 000	2 805 000	2 896 000	3 078 000	3 000 000
Turkey	14 877 155	18 289 109	19 548 094	* 20 000 000	* 20 000 000
Ukraine	28 878 000	28 487 000	29 088 700	24 800 900	21 863 000
United Kingdom	6 625 000	7 183 100	9 470 600	9 704 600	8 773 500
Algeria	360 000	350 000	300 000	300 000	* 300 000
Egypt	3 532 000	3 618 000	3 400 000	2 882 000	2 451 000
Libya	165 000	508 000	1 000 000	1 302 000	449 000
South Africa	6 018 000	6 092 000	6 404 000	6 040 000	6 939 000
Canada	8 025 000	8 496 000	7 300 000	8 210 000	7 353 000
Mexico	10 462 912	10 197 841	11 011 092	11 092 595	10 555 000
Trinidad & Tobago	1 705 600	1 684 300	1 749 700	1 633 000	901 100
USA	30 233 000	32 062 000	30 381 000	29 345 000	* 26 000 000
Argentina	4 470 900	3 683 000	4 115 390	4 428 300	3 937 500
Brazil	33 416 000	32 448 000	31 552 000	* 32 000 000	* 33 000 000
Chile	1 130 000	1 068 000	869 000	584 000	643 000
Colombia	295 000	345 000	264 000	234 000	264 000
Paraguay	42 000	67 000	69 000	71 000	71 000
Peru	94 000	98 000	91 000	88 000	72 000
Venezuela	4 470 000	4 594 000	2 600 000	1 415 000	1 393 000
China	640 508 800	663 544 000	711 498 800	713 747 800	691 415 000
India	65 594 000	68 037 000	68 252 000	75 532 000	74 621 000
Indonesia	1 228 000	524 000	757 000	155 000	* 200 000
Iran	12 670 000	13 725 000	16 465 000	17 333 000	17 005 000
Japan	81 028 352	81 405 470	83 849 049	83 872 490	81 010 826
Kazakhstan	3 141 000	2 707 000	2 622 745	3 184 780	3 233 671
Korea (Rep. of)	42 212 717	41 718 000	41 045 000	46 909 000	47 639 000
Korea, Dem. P.R. of	* 250 000	* 250 000	* 250 000	* 250 000	* 250 000
Malaysia	2 877 000	2 329 000	1 399 000	1 007 000	* 1 000 000
Pakistan	* 358 000	* 198 000	* 165 000	* 142 000	* 142 000
Qatar	2 212 999	2 424 000	2 385 493	2 547 000	2 631 000
Saudi Arabia	5 153 000	4 976 000	5 300 000	5 508 000	5 391 000
Taiwan	12 940 000	11 784 000	13 300 000	14 505 000	14 370 000
Vietnam	* 600 000	* 650 000	* 650 000	* 1 393 000	* 1 393 000
Australia	5 296 000	3 480 000	3 342 000	3 282 000	3 594 000
New Zealand	659 000	670 000	700 000	680 000	678 000
World total	1 169 000 000	1 194 000 000	1 245 000 000	1 263 000 000	1 230 000 000

### Note(s)

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

## Production of crude steel

tonnes (metric)

Country	2011	2012	2013	2014	2015
Albania	464 000	390 000	312 000	560 000	550 000
Austria	7 474 000	7 421 000	7 953 000	7 876 000	7 687 000
Azerbaijan	234 002	267 660	222 800	324 119	302 015
Belarus	2 778 792	2 869 373	2 394 489	2 597 807	2 578 471
Belgium	8 026 000	7 301 000	7 127 000	7 331 000	7 257 000
Bosnia & Herzegovina	649 085	700 341	722 155	792 019	795 942
Bulgaria	835 000	633 000	523 000	612 000	543 000
Croatia	162 709	1 016	135 000	159 000	122 000
Czech Republic	5 583 000	5 072 082	5 171 255	5 360 000	5 261 591
Estonia	1	185	157	202	724
Finland	3 989 000	3 759 000	3 517 000	3 808 000	3 988 000
France	15 780 639	15 607 227	15 685 350	16 143 625	14 984 045
Germany	44 284 000	42 661 000	42 645 000	42 943 000	42 674 000
Greece	1 934 000	1 247 000	1 030 000	1 022 000	910 000
Hungary	1 729 000	1 543 000	883 000	1 152 000	1 675 000
Italy	28 735 000	27 252 000	24 093 000	23 714 000	22 018 000
Kosovo	...	* 120 000	* 120 000	* 150 000	* —
Latvia	568 000	805 000	198 000	* 190 000	* 190 000
Luxembourg	2 521 000	2 214 000	2 090 000	2 193 000	2 127 000
Macedonia	348 576	225 224	145 633	196 454	165 235
Moldova (a)	321 000	335 000	190 000	344 000	* 340 000
Montenegro	61 164	28 161	19 723	* 15 000	36 602
Netherlands	6 937 000	6 879 000	6 713 000	6 964 000	6 995 000
Norway	610 000	700 000	605 000	600 000	590 000
Poland	8 776 458	8 542 514	8 199 353	8 799 731	9 337 105
Portugal	1 942 000	1 960 000	2 050 000	2 070 000	2 035 000
Romania	3 828 000	3 292 000	2 985 000	3 158 000	3 352 000
Russia	68 400 000	70 400 000	68 800 000	70 300 000	69 400 000
Serbia	1 304 954	346 000	396 000	583 000	955 000
Slovakia	4 236 000	4 403 447	4 511 000	4 705 000	4 561 609
Slovenia	648 000	632 000	618 000	615 000	604 000
Spain	15 504 000	13 639 000	14 252 000	14 163 000	14 845 000
Sweden	4 867 200	4 326 300	4 404 100	4 539 200	4 374 400
Switzerland	* 1 400 000	* 1 450 000	* 1 530 000	1 611 607	1 586 020
Turkey	30 562 184	35 885 000	34 654 000	34 035 000	31 517 000
Ukraine	35 512 156	33 509 180	33 198 653	27 372 913	23 166 031
United Kingdom	9 478 000	9 579 100	11 857 500	12 033 500	10 906 700
Algeria	551 000	557 000	417 000	415 000	650 000
Congo, Democratic Republic	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Egypt	6 485 000	6 627 000	6 754 000	6 485 000	5 506 000
Ethiopia	* 130 000	* 130 000	* 130 000	* 130 000	* 130 000
Ghana	* 25 000	* 25 000	* 25 000	* 25 000	* 25 000
Kenya	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Libya	100 000	315 000	712 000	968 000	352 000
Mauritania	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Morocco	654 000	539 000	558 000	501 000	516 000
Nigeria	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
South Africa	7 546 000	6 938 000	7 253 000	7 210 000	7 614 000
Tunisia	* 150 000	* 150 000	* 150 000	* 150 000	* 50 000
Uganda	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Canada	12 891 000	13 507 000	12 349 000	12 595 000	12 473 000
Cuba	283 982	280 899	268 814	259 130	223 441
Dominican Republic	* 76 000	* 56 000	* 56 000	* 60 000	* 60 000
El Salvador	97 000	72 000	118 000	121 000	112 000
Guatemala	294 000	334 000	385 000	358 000	403 000
Mexico	18 110 111	18 073 052	18 242 195	18 995 283	18 228 000
Trinidad & Tobago	603 400	623 800	615 800	483 300	266 500
USA	86 000 000	88 695 000	86 878 000	88 347 000	* 81 000 000
Argentina	5 610 500	4 996 000	5 185 710	5 488 100	5 027 900
Brazil	35 220 000	34 524 000	34 163 000	33 912 000	33 200 000
Chile	1 615 000	1 671 000	1 398 000	1 079 000	1 103 000
Colombia	1 244 000	1 302 000	1 236 000	1 208 000	1 179 000
Ecuador	463 000	425 000	570 000	667 000	674 000

## Production of crude steel

tonnes (metric)

Country	2011	2012	2013	2014	2015
Paraguay	28 000	44 000	45 000	47 000	48 000
Peru	882 000	981 000	1 057 000	1 078 000	1 082 000
Uruguay	81 000	78 000	91 000	94 000	* 84 000
Venezuela	2 980 000	2 359 000	2 494 000	1 466 000	1 346 000
Burma	* 25 000	* 25 000	* 30 000	* 35 000	* 35 000
China	685 283 100	723 882 200	813 138 900	822 306 300	803 823 000
India (b)	74 291 000	78 416 000	81 690 000	88 980 000	89 790 000
Indonesia	3 621 000	2 254 000	2 644 000	4 428 000	* 4 200 000
Iran	14 037 000	14 395 000	15 631 000	14 308 000	* 14 340 000
Israel	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Japan	107 601 194	107 232 297	110 594 771	110 666 068	105 134 378
Jordan	* 150 000	* 150 000	* 150 000	* 150 000	* 150 000
Kazakhstan	4 699 000	3 676 000	3 275 000	4 014 860	3 902 617
Korea (Rep. of)	68 519 191	69 073 000	66 061 000	71 542 000	69 670 000
Korea, Dem. P.R. of	* 1 300 000	* 1 280 000	* 1 250 000	* 1 250 000	* 1 250 000
Kuwait	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000
Malaysia	5 941 000	5 612 000	4 693 000	4 316 000	* 4 100 000
Mongolia	63 600	72 400	* 58 600	* 58 600	* 58 600
Pakistan	* 1 592 000	* 1 631 000	* 1 845 000	* 2 423 000	* 2 892 000
Philippines	1 200 000	1 260 000	1 308 000	1 196 000	968 000
Qatar	2 005 000	2 148 000	2 236 000	2 867 000	2 593 000
Saudi Arabia	5 275 000	5 203 000	5 471 000	6 291 000	5 662 000
Singapore	752 000	688 000	434 000	540 000	* 515 000
Syria	* 70 000	* 70 000	* 10 000	* 5 000	* 5 000
Taiwan	21 640 000	19 927 000	21 466 000	22 511 000	21 000 000
Thailand	4 238 000	3 328 000	3 579 000	4 095 000	3 718 000
United Arab Emirates	* 2 000 000	2 408 000	2 878 000	2 390 000	3 006 000
Uzbekistan	733 000	736 000	746 000	723 000	643 000
Vietnam	4 900 000	5 298 000	5 474 000	5 847 000	6 050 000
Australia	6 538 000	4 903 000	4 646 000	4 607 000	4 925 000
New Zealand	844 000	912 000	900 000	881 000	793 000
World total	1 521 000 000	1 555 000 000	1 642 000 000	1 669 000 000	1 620 000 000

### Note(s)

- (1) Unless otherwise indicated, these figures include production from scrap.  
(2) Small amounts of steel are believed to be produced in Sri Lanka.

- (a) Production from the region east of the River Nistru  
(b) Years ended 31 March following that stated

## Production of ferro-alloys

tonnes (metric)

Country	2011	2012	2013	2014	2015
Albania					
Ferro-chrome	28 433	24 018	24 692	34 897	43 350
Armenia					
Ferro-molybdenum	5 525	5 836	6 619	6 528	5 576
Austria					
Ferro-molybdenum	4 000	4 000	4 000	4 000	4 000
Ferro-nickel	2 500	2 500	2 500	2 500	2 500
Ferro-vanadium	8 000	8 000	8 000	8 000	8 000
Bosnia & Herzegovina	17 527	15 874	16 707	18 383	18 716
Czech Republic					
Ferro-vanadium	* 4 600	* 5 800	* 6 400	* 6 400	* 6 200
Finland					
Ferro-chrome	231 000	229 000	434 000	441 000	457 000
France					
Ferro-manganese	130 500	101 000	104 000	115 700	* 116 000
Ferro-silico-manganese	63 400	68 500	64 900	64 800	* 64 800
Ferro-silicon	71 500	63 300	49 600	40 000	* 40 000
Silicon metal	* 104 000	* 110 000	* 110 000	* 100 000	* 100 000
Other ferro-alloys	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Georgia					
Ferro-manganese	* 4 500	* 4 500	* 4 500	* 4 500	* 4 500
Ferro-silico-manganese	242 746	257 421	253 361	243 951	210 680
Germany					
Ferro-chrome	* 18 500	* 17 800	* 17 500	* 17 000	* 17 000
Silicon metal	30 134	28 574	30 283	28 500	29 953
Other ferro-alloys	9 985	8 248	* 8 200	* 8 200	* 8 200
Greece					
Ferro-nickel	93 910	96 435	86 850	94 952	89 129
Iceland					
Ferro-silicon	120 076	131 818	125 204	109 739	121 556
Italy					
Ferro-manganese	* 25 000	* 27 000	* 27 000	* 27 000	* 27 000
Ferro-silico-manganese	145 000	110 000	153 000	67 000	82 000
Kosovo					
Ferro-nickel	* 68 948	* 30 200	* 33 300	* 39 100	* 40 000
Macedonia					
Ferro-silico-manganese	50 756	14 179	—	—	—
Ferro-nickel	17 292	19 247	20 001	18 054	17 699
Ferro-silicon	56 167	42 402	72 279	73 014	45 698
Norway					
Ferro-manganese	337 900	325 900	320 000	* 325 000	* 350 000
Ferro-silico-manganese	266 000	271 400	* 250 000	* 250 000	* 250 000
Ferro-silicon	170 102	203 886	337 281	192 389	243 813
Silicon metal	* 170 000	* 150 000	* 150 000	* 150 000	* 150 000
Poland					
Ferro-manganese	800	800	820	549	460
Ferro-silico-manganese	400	200	100	32	—
Ferro-silicon	72 668	78 115	73 589	62 878	77 138
Other ferro-alloys	300	300	11 250	24 909	—
Romania					
Ferro-silico-manganese	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Russia					
Spiegeleisen	* 7 000	* 7 000	* 7 000	* 7 000	* 7 000
Ferro-chrome	501 700	477 600	* 480 000	* 480 000	* 480 000
Ferro-silico-chrome	* 4 200	* 4 200	* 4 200	* 4 200	* 4 200
Ferro-manganese	* 170 000	* 170 000	* 170 000	* 170 000	* 170 000
Ferro-silico-manganese	* 148 000	* 148 000	* 148 000	* 148 000	* 148 000
Ferro-molybdenum	6 917	7 018	5 297	4 503	* 4 500
Ferro-nickel	34 581	20 049	* 20 000	* 20 000	* 20 000
Ferro-silicon	1 030 000	1 042 000	* 1 050 000	* 1 050 000	* 1 050 000
Ferro-vanadium	16 683	14 381	14 059	14 076	* 14 000
Silicon metal	* 48 700	* 48 000	* 48 000	* 48 000	* 48 000
Other ferro-alloys	* 34 000	* 34 000	* 34 000	* 34 000	* 34 000
Slovakia					
Ferro-silico-manganese	25 036	50 089	* 50 000	29 643	27 100
Ferro-silicon	32 304	32 726	41 664	39 300	38 200
Other ferro-alloys	18 575	20 059	* 20 000	22 300	30 200

## Production of ferro-alloys

tonnes (metric)

Country	2011	2012	2013	2014	2015
<b>Spain</b>					
Ferro-manganese	92 100	* 80 200	80 500	* 80 500	* 80 500
Ferro-silico-manganese	142 300	148 100	148 500	* 149 000	* 150 000
Ferro-silicon	* 69 700	* 68 600	* 80 500	* 80 000	* 80 000
Silicon metal	* 34 800	* 27 200	* 24 200	* 22 000	* 22 000
<b>Sweden</b>					
Ferro-chrome	80 140	35 800	55 078	65 703	82 616
<b>Turkey</b>					
Ferro-chrome	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Ferro-silico-chrome	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
<b>Ukraine</b>					
Ferro-manganese	187 897	163 921	88 626	104 291	100 209
Ferro-silico-manganese	930 337	823 131	724 892	960 657	750 181
Ferro-nickel	89 903	119 652	121 586	114 222	95 209
Ferro-silicon	186 306	150 265	191 207	167 977	114 826
Other ferro-alloys	25 126	22 115	15 908	15 326	19 360
<b>Egypt</b>					
Ferro-silicon (a)	52 421	54 930	49 060	56 794	57 000
Other ferro-alloys (a)	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
<b>South Africa</b>					
Ferro-chrome	3 421 911	3 063 257	3 219 000	* 3 000 000	* 3 000 000
Ferro-manganese	* 696 000	* 654 000	* 650 000	* 650 000	* 650 000
Ferro-silico-manganese	314 000	149 000	* 150 000	* 150 000	* 150 000
Ferro-silicon	124 000	91 000	* 90 000	* 90 000	* 90 000
Ferro-vanadium	* 18 000	* 16 000	* 16 000	* 16 000	* 16 000
Silicon metal	59 000	* 47 000	* 50 000	* 50 000	* 50 000
<b>Zimbabwe</b>					
Ferro-chrome	161 839	137 534	150 060	214 110	* 220 000
<b>Canada</b>					
Ferro-niobium	7 018	7 132	7 974	8 485	* 8 500
Ferro-silicon	31 039	31 979	38 817	35 500	* 35 000
Ferro-vanadium	900	800	800	800	* 800
Silicon metal	* 30 000	* 30 000	* 12 000	* 30 000	* 30 000
<b>Dominican Republic</b>					
Ferro-nickel	34 576	38 433	23 419	—	—
<b>Mexico</b>					
Ferro-manganese	73 684	61 845	60 674	67 506	67 919
Ferro-silico-manganese	139 047	161 221	157 855	164 852	139 363
<b>USA</b>					
Ferro-silicon & silicon metal	437 000	499 000	468 000	502 000	* 525 000
<b>Argentina</b>					
Ferro-silico-manganese	* 11 000	* 11 000	* 11 000	* 11 000	* 11 000
Ferro-silicon	* 11 000	* 11 000	* 11 000	* 11 000	* 11 000
<b>Brazil</b>					
Ferro-chrome	145 000	181 425	174 200	188 700	173 500
Ferro-silico-chrome	11 600	18 890	13 184	* 13 000	* 13 000
Ferro-silico-magnesium	20 900	21 200	* 20 000	* 20 000	* 20 000
Ferro-manganese	77 000	88 714	83 348	* 80 000	* 40 000
Ferro-silico-manganese	218 600	241 705	227 652	* 230 000	* 230 000
Ferro-nickel	45 600	94 400	34 500	37 200	71 500
Ferro-niobium	81 900	50 400	46 600	51 700	150 000
Ferro-silicon	210 900	203 881	158 000	230 000	* 200 000
Silicon metal	210 400	230 000	230 000	230 000	* 230 000
Other ferro-alloys	32 700	38 784	* 40 000	* 40 000	* 40 000
<b>Chile</b>					
Ferro-molybdenum	17 177	15 451	13 072	14 584	* 14 500
<b>Colombia</b>					
Ferro-nickel	103 371	138 966	137 995	* 113 000	* 100 500
<b>Venezuela</b>					
Ferro-manganese	12 000	* 12 000	* 12 000	* 12 000	* 12 000
Ferro-silico-manganese	24 000	14 200	* 14 200	* 14 000	* 14 000
Ferro-nickel	51 800	* 50 000	* 50 000	* 50 000	* 50 000
Ferro-silicon	84 700	72 300	* 74 300	* 80 000	* 80 000

## Production of ferro-alloys

tonnes (metric)

Country	2011	2012	2013	2014	2015
Bahrain					
Ferro-manganese	35 300	35 000	35 000	* 35 000	* 35 000
Ferro-silicon	3 000	3 000	3 000	* 3 000	* 3 000
Bhutan					
Ferro-silicon	* 79 600	* 82 000	* 83 000	* 79 500	* 106 500
China					
Ferro-alloys	* 27 100 000	* 30 300 000	37 762 000	37 860 000	36 664 000
Silicon metal	1 355 300	1 136 800	1 452 100	1 705 000	* 1 700 000
India					
Ferro-aluminium (b)	5 850	4 935	5 497	3 737	3 212
Ferro-chrome (b)	943 000	944 000	944 000	944 000	944 000
Ferro-silico-magnesium (b)	19 491	19 205	21 964	26 123	20 541
Ferro-manganese (b)	517 000	518 000	518 000	518 000	518 000
Ferro-silico-manganese (b)	201 066	236 541	225 395	249 691	269 920
Ferro-molybdenum (b)	1 058	1 076	1 231	1 295	1 459
Ferro-silicon (b)	89 000	90 000	90 000	90 000	90 000
Ferro-titanium (b)	595	630	821	545	198
Ferro-vanadium (b)	695	796	906	1 035	937
Other ferro-alloys (b)	730	* 730	* 730	* 730	* 730
Indonesia					
Ferro-manganese	* 12 000	* 13 000	* 12 000	* 12 000	* 12 000
Ferro-silico-manganese	* 8 000	* 9 000	* 8 000	* 8 000	* 8 000
Ferro-nickel	98 450	91 860	91 245	84 255	86 055
Iran					
Ferro-chrome (c)	* 8 000	* 8 000	* 8 000	* 8 000	* 8 000
Ferro-silicon (c)	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Japan					
Ferro-chrome	17 217	19 392	21 671	(d) ...	(d) ...
Ferro-manganese	456 798	436 171	460 936	463 345	465 952
Ferro-silico-manganese	49 798	52 287	24 741	* 25 000	* 25 000
Ferro-molybdenum	5 167	4 616	4 550	(d) ...	(d) ...
Ferro-nickel	279 944	371 913	402 768	379 291	396 969
Ferro-vanadium	3 980	4 403	4 433	(d) ...	(d) ...
Other ferro-alloys	20 913	19 364	19 394	* 50 000	* 55 000
Kazakhstan					
Ferro-chrome	1 289 917	1 305 343	1 337 275	1 351 803	1 414 476
Ferro-silico-chrome	143 296	164 853	165 195	158 825	74 609
Ferro-silico-manganese	232 039	251 530	203 926	200 379	164 189
Ferro-silicon	1 683	464	470	* 470	* 470
Other ferro-alloys	1 754	1 845	646	4 130	88 646
Korea (Rep. of)					
Ferro-manganese	355 047	* 355 000	* 355 000	* 355 000	* 355 000
Ferro-silico-manganese	195 650	* 196 000	* 196 000	* 196 000	* 196 000
Other ferro-alloys	4 162	* 4 200	* 4 200	* 4 200	* 4 200
Korea, Dem. P.R. of	* 13 000	* 16 000	* 21 000	* 22 000	* 22 000
Australia					
Ferro-manganese & ferro-silico-manganese (a)	267 000	198 000	234 000	269 000	278 000
Silicon metal	* 34 000	* 43 000	* 52 000	* 54 000	* 51 000
New Caledonia					
Ferro-nickel	169 513	184 476	174 078	224 884	228 484

### Note(s)

- (1) In addition to the countries listed, Bahrain and Chile also produce ferro-chrome.  
(2) In addition to the countries listed, Saudi Arabia also produces ferro-manganese and ferro-silico-manganese.

- (a) Years ended 30 June of that stated  
(b) Years ended 31 March following that stated  
(c) Years ended 20 March following that stated  
(d) Included with 'other ferro-alloys'

# Production of kaolin

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria	18 897	13 497	11 558	14 343	12 668
Belgium	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Bosnia & Herzegovina	232 147	149 495	44 940	21 610	252 268
Bulgaria	7 700	33 900	22 600	6 900	* 6 500
Czech Republic (a)	660 000	624 000	609 000	617 000	648 000
France	310 000	308 000	300 000	311 000	* 310 000
Germany (b)	* 1 100 000	* 1 100 000	* 1 100 000	1 100 000	1 100 000
Greece	7 250	6 268	—	—	—
Italy	* 180 000	* 180 000	* 180 000	* 180 000	* 180 000
Poland (c)	163 600	137 800	166 000	197 322	170 904
Portugal	322 041	321 689	248 008	269 073	247 482
Romania	—	—	32 722	30 638	* 30 000
Russia	* 45 000	* 45 000	* 45 000	* 45 000	* 45 000
Serbia	90 472	69 487	* 70 000	* 70 000	* 70 000
Slovakia	4 000	3 000	6 000	6 000	6 000
Spain (c)	384 179	402 251	410 717	344 414	350 000
Turkey	1 229 352	988 081	1 027 189	734 072	2 032 103
Ukraine	1 353 555	1 217 909	1 179 380	1 426 447	1 814 786
United Kingdom	* 1 290 000	* 1 150 000	* 1 110 000	* 1 090 000	* 1 014 000
Algeria	108 000	100 000	42 500	* 45 000	* 40 000
Egypt	300 000	* 300 000	* 300 000	* 300 000	* 300 000
Eritrea	* 240	* 250	* 250	* 250	* 250
Ethiopia (d)	4 498	4 000	3 534	* 3 500	* 3 500
Kenya	* 980	* 1 100	* 1 200	* 1 200	* 1 200
Madagascar	* 260	* 260	* 260	* 260	* 260
Nigeria	* 155 000	* 140 000	* 140 000	* 140 000	* 140 000
South Africa	15 220	40 999	22 295	27 258	20 339
Sudan	15 096	11 579	26 000	33 770	* 35 000
Tanzania	1 177	1 422	907	3 809	1 953
Uganda	20 883	42 886	43 875	46 286	34 697
Cuba	3 000	4 000	3 600	1 700	1 500
Guatemala	1 620	1 866	1 339	1 285	1 101
Mexico	372 506	514 730	669 860	546 437	* 500 000
USA (e)	5 950 000	5 900 000	6 140 000	6 310 000	* 6 160 000
Argentina	54 166	66 574	* 70 000	* 65 000	* 60 000
Brazil (a)	1 927 000	2 388 000	2 139 000	2 055 000	1 700 000
Chile	59 912	60 429	60 000	60 000	60 000
Ecuador	95 062	42 564	100 195	40 236	2 583
Paraguay	* 6 000	* 6 000	* 6 000	* 6 000	* 6 000
Peru	18 169	34 585	32 249	19 964	43 251
Venezuela	1 482	2 447	2 793	* 3 000	* 3 000
China	3 200 000	* 3 300 000	* 3 300 000	* 3 300 000	* 3 300 000
India (f)(g)	76 134	101 354	71 901	74 207	* 74 000
Indonesia	* 175 000	* 180 000	* 175 000	* 175 000	* 175 000
Iran (h)	* 1 500 000	1 503 377	* 1 000 000	1 879 943	* 1 500 000
Japan	* 13 000	* 13 000	* 12 000	* 12 000	* 12 000
Jordan	89 903	76 000	* 65 000	* 65 000	* 65 000
Korea (Rep. of)	1 051 772	796 603	847 172	682 749	587 787
Malaysia	442 550	438 923	293 480	219 652	294 693
Oman	142 600	139 500	114 700	66 600	169 500
Pakistan (i)	16 055	21 555	22 917	16 191	18 956
Philippines	3 529	4 631	6 568	7 050	* 7 000
Saudi Arabia	65 000	137 000	101 000	106 000	111 000
Sri Lanka	11 157	11 805	12 990	* 13 000	* 13 000
Taiwan	16 936	26 376	15 963	1 808	732
Thailand (a)	175 881	175 464	* 175 000	* 175 000	* 175 000
Uzbekistan (f)	* 150 000	* 150 000	* 150 000	* 150 000	* 150 000
Vietnam	* 650 000	* 650 000	* 650 000	* 650 000	* 650 000



## Production of kaolin

tonnes (metric)

Country	2011	2012	2013	2014	2015
Australia (i)	46 388	89 229	204 521	171 933	* 261 000
New Zealand	21 545	11 578	13 066	61 382	13 659
World total	24 700 000	24 500 000	23 900 000	24 300 000	25 300 000

### Note(s)

(1) In addition to the countries listed, Denmark is believed to produce kaolin.

- (a) Beneficiated
- (b) Washed and dried
- (c) Washed
- (d) Years ended 7 July of that stated
- (e) Sold or used by producers
- (f) Beneficiated; excludes directly used natural kaolin
- (g) Years ended 31 March following that stated
- (h) Years ended 20 March following that stated
- (i) Years ended 30 June of that stated

## Mine production of lead

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Bosnia & Herzegovina	3 656	3 700	4 500	4 000	4 500
Bulgaria (a)	14 369	15 949	16 914	15 618	16 755
Greece	13 400	18 060	18 010	16 700	17 000
Ireland, Republic of	50 700	47 400	42 950	40 500	31 300
Kosovo	4 530	5 295	6 378	7 676	5 541
Macedonia	37 295	39 184	42 826	43 810	37 922
Montenegro	1 200	1 958	2 453	2 755	3 476
Poland	53 100	89 000	79 000	83 329	* 60 200
Portugal	—	87	1 496	3 192	3 077
Romania	* —	* 5 300	* 400	* —	* —
Russia	119 000	151 000	165 000	196 000	196 000
Serbia	2 100	2 500	3 100	3 700	3 300
Slovakia	114	166	235	162	200
Spain	5 705	3 800	2 200	1 300	* 10 000
Sweden	62 028	63 551	59 556	70 848	79 354
Turkey	38 682	57 017	76 638	62 190	75 902
United Kingdom	(c) 280	(c) 61	(d)* 100	(e)* 100	(e)* 100
Burkina Faso	—	—	2 168	1 902	* 2 000
Congo, Democratic Republic	—	800	600	800	700
Morocco	30 850	27 526	30 765	27 505	32 138
Namibia	8 330	9 270	11 224	11 788	10 746
Nigeria	9 100	11 300	11 500	11 400	* 8 000
South Africa	54 460	52 489	41 848	29 348	34 573
Canada	67 505	64 116	20 678	3 617	4 200
Guatemala	—	2 300	863	10 359	10 153
Honduras	13 100	12 400	11 600	15 500	9 800
Mexico	223 717	238 091	253 361	250 462	253 890
USA	342 000	345 000	340 000	379 000	* 385 000
Argentina	26 100	* 25 000	* 23 000	* 29 000	* 26 000
Bolivia	100 051	81 095	82 131	75 572	75 272
Brazil	8 545	8 922	8 020	10 978	* 9 400
Chile	841	410	1 829	2 678	2 979
Peru	230 199	249 236	266 472	277 000	316 000
Burma	* 9 700	* 9 800	* 11 700	* 18 000	* 13 600
China	2 405 700	2 613 200	2 696 538	2 608 619	* 2 300 000
India (b)	89 699	104 345	109 812	111 643	147 897
Iran	40 000	45 000	42 000	36 000	41 000
Kazakhstan	38 800	38 000	40 800	37 800	40 700
Korea (Rep. of)	1 289	1 940	2 500	2 764	2 921
Korea, Dem. P.R. of	* 28 500	* 38 000	* 59 000	* 53 000	* 47 000
Laos	1 361	164	1 600	100	400
Pakistan	* 2 000	* 600	* 300	* 200	* 100
Saudi Arabia	396	* —	—	—	—
Tajikistan	8 900	16 000	17 000	28 000	31 000
Vietnam	* 3 700	* 200	* —	* 1 400	* 700
Australia	621 487	620 598	711 211	727 953	653 488
World total	4 800 000	5 100 000	5 300 000	5 300 000	5 000 000

### Note(s)

- (a) Metal content of ore
- (b) Years ended 31 March following that stated
- (c) By-product of gold mining in Northern Ireland.
- (d) By-product of Pennine fluorspar operations and of gold mining in Northern Ireland.
- (e) By-product of Pennine fluorspar operations

## Production of refined lead

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria	26 200	24 504	25 000	25 100	24 400
Belgium	119 000	119 000	129 429	133 252	130 000
Bosnia & Herzegovina	3 370	3 327	2 382	1 227	142
Bulgaria	90 000	85 000	90 000	92 000	90 000
Czech Republic	38 000	41 000	42 000	44 000	45 000
Estonia	7 800	8 046	7 581	8 588	8 329
France	80 000	83 000	71 000	72 000	72 000
Germany	429 100	423 000	400 000	380 000	378 000
Greece	* 7 000	* 6 000	* 6 000	* 12 000	* 14 000
Ireland, Republic of	18 000	16 000	17 000	17 200	17 200
Italy	149 500	138 400	179 700	209 600	207 500
Netherlands	27 000	27 000	27 000	31 000	32 000
Poland	121 500	141 000	145 400	149 000	155 000
Portugal	6 000	5 000	4 000	5 000	* 5 000
Romania	6 747	13 200	14 000	12 000	* 12 000
Russia	124 000	110 000	106 000	96 500	114 000
Slovenia	15 000	12 000	12 000	11 000	12 000
Spain	177 000	160 000	157 000	166 000	172 000
Sweden	52 438	61 528	68 713	68 708	71 293
Turkey	* 48 000	* 50 000	* 50 000	* 55 000	* 56 000
Ukraine	55 300	43 200	48 800	42 900	31 800
United Kingdom	275 000	311 930	296 000	267 000	351 200
Algeria	10 000	6 000	* 9 000	* 9 000	* 9 000
Ghana (a)	2 403	2 961	3 076	2 817	3 048
Kenya	* 1 000	* 1 000	* 1 200	* 1 000	* 1 000
Morocco	36 469	15 600	* 14 000	* 15 000	16 325
Mozambique (a)	900	1 500	1 900	2 310	2 494
Nigeria	9 000	15 000	* 14 000	* 14 000	* 15 000
Senegal (a)	2 383	3 366	2 607	2 187	1 857
South Africa	56 000	54 000	52 000	52 000	52 000
Zambia	* 3 000	* 4 000	* 5 000	* 5 000	4 000
Canada	282 589	279 150	281 781	281 456	268 863
Costa Rica	4 000	4 000	7 000	7 000	7 000
Dominican Republic	2 000	5 000	6 000	6 000	6 000
Guatemala	* 18 000	* 17 000	* 17 000	* 15 000	* 15 500
Honduras	956	—	—	—	—
Mexico	281 700	279 100	271 200	363 500	356 000
USA (b)	1 248 000	1 221 000	1 264 000	1 020 000	1 050 000
Argentina	84 600	* 90 300	91 000	95 100	81 200
Bolivia	500	500	—	1 924	459
Brazil	184 000	188 000	182 000	190 000	190 000
Chile	8 000	9 000	14 000	12 000	12 000
Colombia	* 42 000	* 42 000	* 42 000	* 42 000	* 42 000
Peru	* —	5 000	62 900	54 550	1 494
Venezuela	* 26 000	* 25 000	* 22 000	* 20 000	* 20 000
Burma	* 200	* 200	* 200	* 200	* 200
China	4 603 600	4 590 900	4 935 100	4 704 319	4 405 000
India	419 000	460 100	463 000	477 000	500 600
Indonesia	* 47 000	* 45 000	* 42 000	* 46 000	* 46 000
Iran	82 000	81 000	76 000	72 000	76 000
Israel	26 000	25 000	25 000	25 000	25 000
Japan	252 562	258 527	251 854	* 240 000	* 231 000
Kazakhstan	111 518	88 099	91 072	127 064	120 108
Korea (Rep. of)	416 900	460 000	427 700	639 000	641 000
Korea, Dem. P.R. of	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
Lebanon	* 7 200	* 7 200	* 7 200	* 7 200	* 10 000
Malaysia	44 000	32 100	32 000	26 200	25 300
Pakistan (c)	1 569	1 414	2 527	2 549	* 2 500
Philippines	* 34 000	* 32 000	* 32 000	* 30 000	* 30 000
Saudi Arabia	* 35 000	* 37 000	* 37 000	* 36 000	* 37 000
Sri Lanka (a)	2 138	3 762	4 803	4 528	2 548
Taiwan	36 000	35 000	34 000	34 000	30 000
Thailand	42 223	86 507	87 385	79 250	86 000
United Arab Emirates	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000

## Production of refined lead

tonnes (metric)

Country	2011	2012	2013	2014	2015
Australia	232 000	207 000	232 000	226 000	232 000
New Zealand	* 13 000	* 3 000	—	—	—
World total	10 600 000	10 600 000	11 000 000	10 900 000	10 700 000

### Note(s)

(1) Figures relate to both primary and secondary refined lead and include the lead content of antimonial lead.

- (a) Years ended 31 March following that stated
- (b) Excluding lead content of primary antimonial lead
- (c) Years ended 30 June of that

## Production of lithium minerals

tonnes (metric)

Country	2011	2012	2013	2014	2015
Portugal					
Lepidolite	37 534	20 698	19 940	17 459	17 120
Zimbabwe	44 000	47 000	44 000	44 000	44 000
Canada	* —	* —	* —	108	—
USA (a)	* 1 000	* 1 000	870	* 900	* 900
Argentina (b)(c)	14 017	13 942	* 13 200	* 16 000	* 19 000
Brazil					
Spodumene	7 820	7 084	7 982	8 519	* 8 500
Chile (d)	69 597	71 594	60 646	62 253	56 375
China (a)	* 2 100	* 1 900	* 2 100	* 1 900	* 2 200
Australia					
Spodumene	421 228	452 921	* 363 000	* 444 000	* 428 000
World total (Li content)	27 900	28 500	24 600	26 800	26 200

### Note(s)

- (1) In addition to the countries listed, Russia has also produced lithium minerals in the past.
- (2) In addition to the countries listed, Bolivia is believed to produce lithium minerals.

- (a) Li content
- (b) Carbonate
- (c) Chloride
- (d) Carbonate, hydroxide and chloride

## Production of magnesite

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria	867 912	778 810	714 422	754 096	702 504
Greece	393 880	349 998	314 770	391 140	383 312
Netherlands (a)	274 877	290 873	249 568	285 907	257 510
Poland	75 350	83 860	97 000	92 000	96 000
Russia	* 2 600 000	* 2 600 000	* 2 600 000	* 2 600 000	* 2 600 000
Slovakia	751 700	618 400	584 000	557 100	501 200
Spain	577 725	649 977	836 269	836 869	* 800 000
Turkey	2 588 276	2 475 828	2 597 465	2 377 157	3 335 258
South Africa	31 900	* 30 000	* 40 000	* 50 000	* 50 000
Zimbabwe	169	—	* —	* —	* —
Canada (b)	* 150 000	* 150 000	* 150 000	* 150 000	* 150 000
Guatemala	311	27 132	17 196	24 268	* 20 000
Mexico	—	100 724	101 000	101 000	* 101 000
Brazil (c)	1 103 800	1 707 730	1 084 194	1 152 233	* 1 150 000
Colombia	* —	—	1 774	* 1 750	* 1 750
China	33 010 000	* 28 000 000	* 30 000 000	* 36 000 000	* 33 000 000
India (d)	224 104	224 315	196 940	285 009	265 022
Iran (e)	172 697	143 000	109 496	202 151	* 140 000
Israel (f)	126 988	105 610	91 040	135 966	* 136 000
Korea, Dem. P.R. of	* 254 000	* 250 000	* 250 000	* 250 000	* 250 000
Nepal (g)	—	—	—	225	60
Pakistan (h)	4 908	5 444	6 705	3 770	4 581
Philippines	4 784	4 822	5 998	* 6 000	* 6 000
Saudi Arabia	159 000	254 000	235 000	286 000	294 000
Australia (h)	671 073	614 139	522 187	611 547	680 967
World total	44 000 000	39 500 000	40 800 000	47 200 000	44 900 000

### Note(s)

(1) In addition to the countries listed, Bulgaria is believed to produce magnesite.

- (a) Chloride produced from solution mining
- (b) Officially described as magnesitic dolomite and brucite
- (c) Including beneficiated and directly shipped material
- (d) Years ended 31 March following that stated
- (e) Years ended 20 March following that stated
- (f) Magnesium chloride
- (g) Years ended 15 July of that stated
- (h) Years ended 30 June of that stated

## Production of primary magnesium metal

tonnes (metric)

Country	2011	2012	2013	2014	2015
Russia	13 517	13 798	13 970	13 744	12 460
Ukraine	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
USA	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Brazil	* 5 000	* 5 000	* 5 000	4 933	* 5 000
China	674 900	698 200	770 407	873 649	852 064
India	* 200	* 200	* 200	* 200	* 200
Israel	26 284	27 292	27 399	26 000	26 000
Kazakhstan (a)	21 400	22 000	13 000	9 500	8 100
Korea (Rep. of)	—	* 2 500	* 7 500	* 10 000	* 10 000
Malaysia	600	650	650	2 950	* 1 600

Note(s)

(a) Not marketed as metal but used in titanium production.

## Production of manganese ore

tonnes (metric)

Country	2011	2012	2013	2014	2015
Bulgaria	85 600	39 100	103 600	93 700	46 500
Georgia (a)	* 370 000	* 370 000	* 370 000	* 370 000	* 370 000
Hungary	58 000	51 000	35 000	51 000	57 000
Romania	3 180	8 993	21 300	12 662	40 262
Russia	2 600	8 200	—	—	* —
Turkey	172 480	192 756	321 785	245 830	142 809
Ukraine	1 391 228	1 234 007	1 524 696	1 526 218	* 1 525 000
Burkina Faso	49 715	—	—	—	* 1 600
Egypt (b)	62 388	* 40 000	31 325	22 299	* 10 000
Gabon	3 831 215	3 363 170	4 091 399	* 4 000 000	* 4 000 000
Ghana	1 827 692	1 490 634	1 997 911	1 531 394	1 562 769
Ivory Coast	43 600	100 400	245 499	* 350 000	* 250 000
Morocco	58 000	90 200	111 000	91 271	71 700
Namibia	41 876	* 42 000	133 473	104 527	31 591
South Africa					
Metallurgical	8 635 863	8 931 472	* 10 930 000	* 13 830 000	* 15 947 000
Chemical	15 979	11 943	* 22 000	* 27 000	* 32 000
Sudan	—	—	3 250	* 3 500	* 3 500
Mexico	437 264	510 942	580 309	652 465	592 728
Brazil	2 738 000	2 796 000	2 833 000	2 723 000	2 700 000
Burma	* 586 000	* 286 000	* 394 000	* 242 000	* 70 000
China	* 14 000 000	* 14 500 000	* 15 000 000	* 15 000 000	* 15 000 000
India (c)	2 411 871	2 342 169	2 626 291	2 369 481	2 147 629
Iran (d)	194 428	172 560	171 846	140 196	* 165 000
Kazakhstan	2 963 000	2 975 000	2 852 100	2 608 800	1 625 700
Malaysia	597 917	1 099 585	1 125 127	835 429	501 827
Oman	41 300	37 500	49 000	37 500	7 400
Thailand	398	8 151	14 320	14 330	9 000
Vietnam	* 64 600	* 15 800	* 9 700	* 800	* —
Australia	6 960 769	7 178 975	7 425 985	7 587 207	6 281 497
World total	47 600 000	47 900 000	53 000 000	54 500 000	53 200 000

### Note(s)

(1) In addition to the countries listed, Colombia and Cuba may produce manganese ore.

(a) Marketable

(b) Fiscal years ending 30 June of that stated

(c) Years ended 31 March following that stated

(d) Years ended 20 March following that stated

## Production of mercury

kilograms

Country	2011	2012	2013	2014	2015
Finland	5 000	—	—	—	—
Russia	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Morocco	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Mexico (a)	* 120 300	* 235 300	* 266 200	* 300 900	* 306 500
USA	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Argentina	31 000	37 000	28 000	* 25 000	* 25 000
Chile (a)(b)	* 89 200	* 48 600	* 19 300	* 18 000	* 14 000
China	1 493 000	1 347 000	1 822 000	2 259 000	1 861 000
Kyrgyzstan	112 000	74 000	31 000	46 000	20 000
Tajikistan	100 000	103 000	130 000	85 000	* 100 000
World total	2 000 000	1 900 000	2 400 000	2 800 000	2 400 000

### Note(s)

(1) Several countries are believed to have unrecorded production of mercury from copper electrowinning processes and by recovery from effluents.

(a) BGS estimates based on net exports

(b) From copper solvent extraction and electrowinning processes



## Production of mica

tonnes (metric)

Country	2011	2012	2013	2014	2015
Finland	12 896	12 112	11 244	11 973	11 836
France (a)	* 19 000	* 18 000	* 19 700	* 20 200	* 20 700
Russia	* 9 000	* 9 000	* 9 000	* 9 000	* 9 000
Spain (a)	3 609	3 518	3 462	4 049	4 000
Turkey	17 542	6 077	1 076	17 440	44 637
Madagascar	3 411	12 532	10 779	9 400	9 400
South Africa	633	400	309	383	29
Sudan	378	324	500	—	—
Canada	* 21 000	* 22 000	* 22 000	* 22 000	* 22 000
Mexico	—	160	160	160	* 160
USA (a)(b)	52 000	47 500	48 100	46 000	* 41 500
Argentina	10 226	5 785	* 7 500	* 7 500	* 7 500
Brazil	6 193	5 220	9 728	427 341	* 450 000
China (c)	* 132 000	* 149 000	* 161 000	* 159 000	* 151 000
India (d)	1 899	1 256	1 660	636	* 600
Iran (e)	7 130	* 7 000	5 635	* 5 600	* 5 600
Korea (Rep. of) (f)	31 260	25 594	25 143	24 205	17 405
Malaysia (g)	4 245	3 967	4 363	5 659	4 788
Sri Lanka	2 927	1 260	1 493	* 1 500	* 1 500
Taiwan	1 455	6 844	8 931	5 016	8 287
World total	337 000	338 000	352 000	777 000	810 000

### 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

(b) Sold or used by producers

(c) Conservative BGS estimates, based on exports

(d) Years ended 31 March following that stated

(e) Years ended 20 March following that stated

(f) Mainly sericite

(g) Sericite

## Mine production of molybdenum

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Armenia	4 822	5 446	5 934	6 022	5 324
Norway	...	4	8	2	1
Russia	4 842	4 838	3 605	3 114	* 3 100
Turkey	3	—	1	—	3
Canada	8 674	8 954	8 952	8 681	4 189
Mexico	10 787	11 366	12 562	14 370	12 279
USA	63 700	61 500	61 000	68 200	* 56 300
Argentina	1 708	4 850	3 829	1 907	1 730
Brazil	263	185	* 200	* 200	* 200
Chile	40 698	35 090	38 715	48 770	52 398
Peru	19 141	16 790	18 140	17 000	20 000
China	103 320	120 870	122 265	128 538	* 130 000
Iran (a)	3 365	3 512	3 470	4 000	* 4 000
Mongolia	1 957	1 904	1 819	1 999	2 557
World total	263 000	275 000	281 000	303 000	292 000

### Note(s)

(1) In addition to the countries listed, Australia, Georgia, India, Democratic P.R. of Korea, Romania and Tajikistan are believed to produce molybdenum

(a) Years ended 20 March following that stated

## Production of nepheline syenite

tonnes (metric)

Country	2011	2012	2013	2014	2015
Norway	330 000	320 000	320 000	331 000	324 000
Russia					
Nepheline syenite	4 608 000	4 947 000	4 662 000	4 396 000	4 111 000
Nepheline concentrates	997 000	1 056 700	990 600	940 300	951 900
Canada	610 000	592 000	674 000	670 000	621 000

## Mine production of nickel

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Albania	3 637	750	2 151	5 091	6 280
Finland	18 244	19 073	18 560	19 700	18 700
Greece	21 700	21 600	19 100	21 400	19 800
Kosovo	7 728	4 436	7 607	6 724	7 418
Macedonia	* 3 600	* 1 700	—	—	—
Norway	339	351	296	290	300
Poland	850	840	570	780	840
Russia	270 000	268 700	264 000	264 000	261 000
Spain	—	2 398	7 574	8 631	7 213
Turkey	848	3 805	1 076	3 034	8 637
Botswana	15 675	17 948	22 848	14 958	16 789
Madagascar	—	5 695	25 148	37 053	47 271
Morocco	217	288	160	—	—
South Africa (a)	43 321	45 945	51 208	54 956	56 689
Zambia	2 869	—	—	—	—
Zimbabwe	7 992	7 899	12 962	16 633	* 16 800
Canada	219 025	211 701	227 743	228 867	234 936
Cuba	68 600	64 600	55 600	51 600	56 400
Dominican Republic	13 528	15 186	9 355	—	—
Guatemala	—	* 2 400	* 10 200	* 46 800	* 56 400
USA	—	—	—	4 093	27 167
Brazil	74 600	89 600	77 400	85 600	89 300
Colombia	37 800	51 595	49 369	44 300	40 400
Venezuela	13 400	8 100	—	2 500	2 581
Burma	—	—	* 6 100	* 21 000	* 26 400
China	89 800	93 300	93 151	101 067	* 100 000
Indonesia	552 400	750 000	839 300	215 700	129 600
Philippines	319 354	317 621	315 633	393 262	416 019
Vietnam	—	—	1 166	6 854	8 607
Australia	215 014	243 597	280 584	299 021	225 227
New Caledonia	128 732	131 693	164 406	178 080	186 065
Papua New Guinea	—	4 758	12 918	17 685	25 582
World total	2 129 000	2 386 000	2 576 000	2 150 000	2 092 000

### Note(s)

(a) Includes metal and metal content of sulphate and concentrates

## Smelter/refinery production of nickel

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria	500	500	500	600	700
Finland	49 823	46 275	44 498	42 750	43 594
France	13 700	13 200	12 100	8 400	6 500
Greece	18 530	18 630	17 500	18 481	17 113
Kosovo	7 500	4 400	7 600	6 700	7 400
Macedonia	17 300	19 200	20 000	18 100	17 700
Norway	92 427	91 687	91 017	90 526	91 222
Poland	850	840	570	780	840
Russia	264 900	254 100	241 800	234 700	231 900
Ukraine	17 100	20 800	21 200	18 600	18 000
United Kingdom	37 400	39 400	42 400	39 100	38 804
Madagascar	—	5 695	25 148	37 053	47 271
Morocco	* 200	* 300	* 200	—	—
South Africa	35 900	32 900	32 200	34 100	41 900
Zimbabwe	3 700	1 800	2 800	4 600	—
Canada	142 445	152 000	153 100	150 000	159 300
Cuba	34 572	34 263	33 542	32 909	33 706
Dominican Republic	13 528	15 186	9 355	—	—
Guatemala	—	—	—	* 4 000	* 10 000
Brazil	43 271	59 779	57 500	82 370	89 320
Colombia	37 817	51 595	49 369	44 300	40 400
Venezuela	13 400	8 100	5 200	2 500	2 581
Burma	—	—	* 3 100	* 19 000	* 23 000
China	435 200	519 200	693 500	690 500	* 600 000
Indonesia	19 690	18 372	21 200	21 900	22 200
Japan	156 900	169 600	177 810	177 782	192 789
Korea (Rep. of)	17 708	19 870	23 325	24 903	34 882
Australia	110 213	128 756	141 519	126 722	119 576
New Caledonia	40 513	45 383	48 370	62 049	77 530
World total	1 625 000	1 772 000	1 976 000	1 993 000	1 968 000

### Note(s)

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

(2) In addition to the countries listed, the USA produces some nickel as a refinery by-product.

## Production of perlite

tonnes (metric)

Country	2011	2012	2013	2014	2015
Armenia	229	181	53	14	—
Bulgaria	—	3 700	—	—	—
Greece	800 000	876 000	890 000	985 000	860 000
Hungary	70 900	72 364	64 944	68 546	65 459
Italy	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Russia	* 45 000	* 45 000	* 45 000	* 45 000	* 45 000
Slovakia	23 000	24 000	16 000	17 000	25 000
Turkey	702 673	887 600	1 075 949	879 125	846 242
Ukraine	* 36 000	* 36 000	* 36 000	* 36 000	* 36 000
South Africa	* 400	* 400	* 400	* 400	* 400
Mexico	30 750	29 950	27 200	26 000	* 26 000
USA	420 000	393 000	419 000	451 000	* 483 000
Argentina	27 446	24 663	* 25 000	* 25 000	* 25 000
Chile	—	—	4 800	800	3 000
China	* 700 000	* 700 000	* 700 000	* 700 000	* 700 000
Iran (a)	* 600 000	836 928	1 120 951	351 009	* 400 000
Philippines	13 800	9 221	14 249	17 134	* 17 100
Thailand	26 500	41 400	14 293	54 100	17 200
Australia (b)	2 362	940	1 300	—	—
New Zealand	—	3 598	—	—	—

### Note(s)

(1) In addition to the countries listed, Algeria, Canada, Djibuti, Georgia, Iceland, Morocco and Mozambique are believed to produce perlite.

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

## Production of crude petroleum

tonnes (metric)

Country	2011	2012	2013	2014	2015
Albania	894 530	1 029 319	1 203 638	1 342 451	* 1 400 000
Austria (a)(b)	919 569	917 889	917 321	945 034	905 999
Azerbaijan	43 195 200	43 000 000	43 200 000	39 321 300	38 978 000
Belarus	1 681 470	1 660 000	1 645 000	1 645 000	1 645 000
Bulgaria	21 400	23 600	27 400	26 200	23 700
Croatia	664 440	620 835	620 795	535 281	613 281
Czech Republic	163 000	150 000	152 000	147 000	126 000
Denmark	10 909 000	9 968 000	8 657 000	8 159 150	7 710 265
Estonia (c)	2 173 132	2 180 313	2 379 253	2 435 466	2 229 172
France	895 000	806 500	793 000	766 000	* 750 000
Georgia	48 942	42 194	47 863	42 631	40 206
Germany	2 677 136	2 633 000	2 638 379	2 429 789	2 412 061
Greece	289 000	363 000	378 000	378 000	378 000
Hungary	657 000	700 931	626 890	616 070	633 072
Italy	5 286 042	5 376 629	5 480 000	5 750 000	5 450 000
Lithuania	113 895	101 644	86 054	80 862	73 540
Netherlands	1 627 000	1 650 000	1 729 000	2 088 000	2 061 000
Norway	100 343 000	94 497 000	90 387 000	93 294 000	96 081 000
Poland	618 163	677 664	960 672	946 900	894 800
Romania	4 081 979	3 992 011	3 994 122	3 922 784	3 862 744
Russia	509 000 000	517 000 000	523 000 000	525 000 000	533 000 000
Serbia	1 020 490	1 124 794	1 163 988	1 112 303	1 026 686
Slovakia	18 000	14 000	13 000	8 000	10 000
Slovenia	263	279	298	366	261
Spain	99 925	143 526	367 569	305 263	229 571
Turkey	* 2 600 000	2 957 000	2 508 894	2 743 565	* 2 700 000
Ukraine	3 363 000	3 345 000	3 071 000	2 758 000	2 531 000
United Kingdom	51 972 000	44 560 000	40 646 000	39 928 000	45 288 000
Algeria	74 300 000	67 200 000	68 900 000	68 800 000	68 500 000
Angola	83 800 000	86 900 000	87 300 000	83 000 000	88 700 000
Cameroon	3 200 000	3 200 000	3 146 000	3 808 000	4 860 000
Chad	6 000 000	5 300 000	4 400 000	4 300 000	4 100 000
Congo	14 828 348	13 250 062	13 324 007	12 594 591	* 12 500 000
Congo, Democratic Republic	1 010 000	1 173 020	1 146 380	1 147 838	1 132 052
Egypt	34 600 000	34 700 000	34 400 000	35 100 000	35 600 000
Equatorial Guinea	12 500 000	14 900 000	14 600 000	13 100 000	13 500 000
Gabon	12 170 000	12 300 000	11 800 000	11 800 000	11 600 000
Ghana	3 833 000	3 928 000	4 960 000	5 311 000	5 161 000
Ivory Coast	1 984 000	1 954 000	1 904 000	1 854 000	1 704 000
Libya	24 361 000	72 387 000	49 459 000	23 897 000	* 21 100 000
Mauritania	385 000	327 000	336 000	299 000	258 900
Morocco	9 620	7 000	6 000	* 6 000	* 6 000
Niger	350 000	995 700	995 000	995 000	995 000
Nigeria	117 400 000	116 200 000	111 300 000	11 480 000	11 300 000
Senegal	54 500	7 700	15 800	30 100	22 900
South Africa	179 000	137 000	79 000	88 803	70 979
South Sudan	—	(d) 1 500 000	4 900 000	7 700 000	7 300 000
Sudan	(d) 14 300 000	5 100 000	5 800 000	5 783 400	5 200 000
Tunisia	3 203 300	3 314 000	3 149 000	2 813 000	* 2 800 000
Barbados	40 179	37 369	34 923	32 161	34 239
Canada	150 200 000	161 000 000	172 600 000	186 300 000	191 400 000
Cuba	3 011 700	2 998 900	2 897 100	2 905 300	* 2 900 000
Guatemala	554 100	537 620	505 573	508 862	508 222
Mexico	151 842 000	150 601 000	148 998 583	144 138 810	133 953 966
Trinidad & Tobago	4 736 250	4 222 897	4 180 844	4 186 801	4 051 369
USA	357 139 824	407 741 117	462 086 835	545 331 586	548 462 226
Argentina	29 439 986	29 284 559	28 675 450	28 249 453	28 243 328
Bolivia	1 644 800	1 925 800	2 922 000	3 143 275	1 918 700
Brazil	113 400 000	111 470 000	109 360 000	121 372 585	130 716 876
Chile	246 810	321 305	357 838	397 268	285 670
Colombia	45 433 683	46 866 079	49 742 675	49 430 000	53 100 000
Ecuador	25 498 000	25 696 000	26 842 000	28 359 000	29 100 000
Peru	7 533 000	7 494 774	8 278 655	8 525 044	7 342 379
Suriname	966 300	958 219	964 672	988 869	998 387
Venezuela	141 600 000	139 200 000	137 600 000	138 200 000	135 200 000

## Production of crude petroleum

tonnes (metric)

Country	2011	2012	2013	2014	2015
Afghanistan	* 3 000	* 3 000	4 507	5 080	* 5 100
Bahrain (b)	2 778 000	2 939 000	3 068 000	3 115 000	3 209 000
Brunei	8 248 000	7 955 925	6 733 840	6 217 262	6 238 268
Burma (e)	935 000	875 000	863 000	826 000	673 000
China (a)	202 875 500	207 478 000	209 918 500	211 429 200	214 742 000
East Timor (b)	3 095 000	3 661 000	2 519 000	1 615 000	1 585 000
India (e)	38 090 000	37 862 000	37 788 000	37 461 000	36 951 000
Indonesia	45 105 000	43 105 000	41 210 000	39 439 000	39 290 000
Iran	222 344 300	189 883 800	179 777 200	186 000 500	195 161 100
Iraq	136 900 000	152 400 000	153 200 000	160 300 000	197 000 000
Israel	4 638	30 690	52 259	60 010	65 383
Japan	759 000	724 000	627 000	588 000	544 000
Jordan	1 000	1 000	1 000	800	500
Kazakhstan	160 121 800	79 225 000	81 731 400	80 825 600	79 456 300
Kuwait (f)	139 700 000	153 700 000	151 300 000	150 800 000	149 100 000
Kyrgyzstan	90 300	83 600	83 500	82 900	106 700
Malaysia	27 200 000	28 000 000	27 500 000	28 800 000	31 200 000
Mongolia	351 000	500 137	705 488	* 705 500	* 705 500
Oman	44 100 000	45 803 815	46 902 251	46 981 924	48 854 229
Pakistan (g)	3 205 500	3 276 442	3 735 038	4 155 885	4 538 165
Philippines	1 016 000	876 595	819 217	995 470	845 024
Qatar	78 200 000	83 300 000	84 200 000	83 500 000	79 300 000
Saudi Arabia (f)	525 800 000	547 000 000	542 300 000	543 400 000	568 500 000
Syria	16 500 000	8 500 000	2 800 000	1 600 000	1 300 000
Taiwan	11 344	11 379	10 511	9 320	9 534
Tajikistan	28 300	29 800	27 300	24 500	24 600
Thailand	12 100 000	16 200 000	16 600 000	16 300 000	17 200 000
Turkmenistan	10 700 000	11 000 000	11 400 000	12 100 000	12 700 000
United Arab Emirates	151 300 000	154 700 000	165 700 000	167 300 000	175 500 000
Uzbekistan	3 600 000	3 200 000	2 900 000	3 100 000	3 000 000
Vietnam (b)	15 769 100	17 305 300	17 390 000	17 392 000	18 746 000
Yemen, Republic of	11 200 000	8 800 000	6 900 000	6 600 000	2 100 000
Australia	21 967 000	21 821 000	18 310 000	19 558 000	17 223 000
New Zealand (b)	2 121 860	1 866 590	1 605 470	1 788 250	1 869 660
Papua New Guinea	1 424 000	1 346 000	1 399 000	* 1 300 000	* 1 300 000
World total	4 075 000 000	4 108 000 000	4 135 000 000	4 127 000 000	4 225 000 000

### Note(s)

(1) The figures shown in this table include natural gas liquids.

- (a) Including oil from shale and coal
- (b) Including natural gas liquids
- (c) From oil shale
- (d) Sudan and South Sudan separated on 9 July 2011
- (e) Years ended 31 March following that stated
- (f) Including shares of production from the Neutral Zone
- (g) Years ended 30 June of that stated

## Production of natural gas

million m<sup>3</sup>

Country	2011	2012	2013	2014	2015
Albania	1	18	19	33	* 35
Austria	1 591	1 729	1 359	1 245	1 183
Azerbaijan	16 361	17 242	17 895	18 827	19 236
Belarus	222	218	228	222	225
Bulgaria	443	390	282	183	85
Croatia	2 471	2 013	1 862	1 804	1 828
Czech Republic	187	204	207	198	200
Denmark	6 262	5 480	4 566	4 381	4 374
France	623	538	340	28	* 28
Georgia	6	5	5	10	11
Germany	12 952	11 706	10 678	10 060	9 323
Greece	6	6	5	5	* 5
Hungary	2 315	2 205	2 028	1 946	1 887
Ireland, Republic of	357	381	343	354	* 350
Italy	8 300	8 540	7 710	7 280	6 880
Netherlands	76 429	76 020	81 479	68 621	51 237
Norway	101 697	114 918	108 746	108 820	95 400
Poland	5 825	5 783	5 790	5 543	5 336
Romania	11 164	11 095	11 135	11 345	11 436
Russia	669 000	653 000	668 000	639 000	633 000
Serbia	616	672	660	631	626
Slovakia	106	93	91	99	104
Slovenia	2	2	3	3	3
Spain	58	65	62	62	12
Turkey	536	547	562	* 550	* 550
Ukraine	20 646	20 491	21 313	20 138	19 757
United Kingdom	47 733	41 054	38 430	38 730	41 276
Algeria	82 700	81 500	81 500	83 300	83 000
Angola	730	740	900	820	* 830
Congo	1 161	1 161	1 740	* 1 750	* 1 750
Egypt	61 400	60 900	56 100	48 800	45 600
Equatorial Guinea	6 880	6 811	* 6 600	* 6 900	* 6 900
Gabon (a)	57	396	396	* 400	340
Ivory Coast	1 606	1 751	2 127	2 162	* 2 200
Libya	7 900	12 200	10 400	11 800	12 800
Morocco	56	76	92	* 92	* 92
Mozambique	3 823	3 851	4 304	5 607	* 5 600
Nigeria	39 900	43 300	36 200	45 000	50 100
South Africa	1 400	1 186	838	849	1 333
Tunisia	2 935	2 826	2 890	2 585	* 2 500
Barbados	20	23	22	21	20
Canada	148 203	144 441	145 367	151 693	154 383
Cuba	1 020	1 035	1 066	1 200	1 245
Mexico	58 300	57 200	58 200	57 100	53 200
Trinidad & Tobago	42 883	42 604	42 831	42 055	39 639
USA (a)	648 506	680 538	689 062	733 095	766 225
Argentina	45 524	44 124	41 708	41 484	42 896
Bolivia	15 790	18 300	20 800	21 954	20 900
Brazil	18 280	20 845	24 290	24 536	24 862
Chile	1 440	1 207	893	907	1 044
Colombia	10 810	10 897	12 930	11 800	11 000
Ecuador	224	510	514	* 510	* 510
Peru	12 034	12 527	12 921	13 687	13 239
Venezuela	31 200	32 800	28 400	28 600	32 400
Afghanistan	144	119	159	141	* 140
Bahrain	15 634	16 755	19 241	20 627	21 283
Bangladesh (b)	20 075	21 056	22 670	23 232	* 23 200
Brunei	12 797	12 565	12 206	11 852	12 452
Burma (c)	12 888	13 217	13 648	18 488	19 201
China	105 337	110 608	120 858	130 157	127 140
East Timor	5 416	5 192	5 906	5 320	6 055
India (c)	47 559	40 679	35 407	33 656	31 114
Indonesia	81 896	77 972	77 263	76 145	75 770
Iran	159 900	166 200	166 800	182 000	192 500



## Production of natural gas

million m<sup>3</sup>

Country	2011	2012	2013	2014	2015
Iraq	900	700	1 200	900	1 000
Israel	4 320	2 558	6 492	7 676	8 438
Japan	3 298	3 276	2 995	2 822	2 734
Jordan	181	164	150	130	122
Kazakhstan	39 531	40 299	41 912	43 177	45 256
Kuwait (d)	13 500	15 500	16 300	15 000	15 000
Kyrgyzstan	27	29	33	34	31
Malaysia	61 260	62 050	64 780	65 400	63 380
Oman	30 848	29 381	32 093	29 915	31 093
Pakistan (b)	41 676	44 145	42 646	42 302	41 511
Philippines	3 976	3 905	3 511	3 693	3 471
Qatar	161 100	170 500	176 500	177 200	181 400
Saudi Arabia (d)	92 300	99 300	100 000	102 400	106 400
Syria	7 100	5 800	5 100	4 700	4 300
Taiwan	330	442	381	387	374
Tajikistan	15	7	2	3	4
Thailand	29 041	* 41 400	41 800	42 100	39 800
Turkmenistan	59 500	62 300	62 300	69 300	72 400
United Arab Emirates	52 300	54 300	56 000	57 800	55 800
Uzbekistan	49 100	56 900	56 900	57 300	57 700
Vietnam	8 480	9 355	9 751	10 210	10 660
Yemen, Republic of	9 000	7 300	9 900	9 300	2 700
Australia	53 925	59 732	61 241	64 774	72 742
New Zealand	3 995	4 277	4 526	5 016	4 630
Papua New Guinea	158	149	156	* 160	* 160
World total	3 418 000	3 496 000	3 538 000	3 592 000	3 609 000

### Note(s)

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

(a) Dry gas

(b) Years ended 30 June of that stated

(c) Years ended 31 March following that stated

(d) Including one-half of the output of the Neutral Zone

## Production of phosphate rock

tonnes (metric)

Country	2011	2012	2013	2014	2015
Finland	869 694	858 005	877 189	946 234	956 564
Russia	9 800 000	10 017 000	10 500 000	10 700 000	* 10 700 000
Turkey	—	—	510 080	604 000	713 230
Algeria	1 281 100	1 250 300	1 150 000	1 127 190	* 1 150 000
Burkina Faso	2 400	2 688	1 414	1 832	* 2 000
Egypt (a)	4 746 000	6 236 000	5 922 000	5 500 000	* 5 500 000
Malawi	—	12 403	* 12 000	* 12 000	* 12 000
Mali	* 18 000	* 7 500	* 7 500	* 10 000	* 10 000
Morocco	28 052 000	27 060 000	26 400 000	27 390 000	26 264 000
Senegal	1 411 000	1 380 900	882 400	806 200	1 062 000
South Africa	2 564 820	2 242 213	2 131 854	2 011 151	1 852 348
Tanzania	10 125	19 984	23 020	* 23 000	* 23 000
Togo	865 616	1 100 000	1 213 657	1 085 546	1 150 194
Tunisia	2 479 400	2 762 300	3 283 500	3 784 000	* 3 800 000
Zimbabwe	48 000	34 600	17 900	6 100	* 6 200
Canada	851 308	516 000	316 000	—	—
Cuba	6 000	1 700	3 000	1 300	—
Mexico	1 690 606	1 724 662	2 217 481	1 663 059	1 676 540
USA	28 100 000	30 100 000	31 200 000	25 300 000	* 27 600 000
Brazil (b)	6 738 000	6 740 000	6 715 000	6 513 000	5 600 000
Chile					
Phosphate rock	15 929	15 601	14 956	22 859	19 549
Guano	1 625	1 266	2 915	2 717	3 408
Colombia	* 50 000	54 000	49 400	30 396	90 505
Peru	8 889 295	10 345 925	14 842 307	10 884 269	11 161 636
Venezuela	167 741	151 539	98 458	35 820	26 324
China	81 223 000	95 296 000	108 510 000	120 438 000	142 039 000
Christmas Island (a)(c)(d)	616 000	653 000	672 000	575 000	671 000
India (e)	2 259 726	1 941 158	1 453 580	1 607 215	1 473 722
Iran (f)	98 081	33 333	119 961	75 092	* 70 000
Iraq	52 720	100 000	140 000	* 140 000	* 140 000
Israel	3 021 955	2 488 496	2 539 166	2 778 715	3 427 469
Jordan	7 594 000	6 383 000	5 398 600	7 143 713	8 335 993
Kazakhstan	1 716 200	1 868 200	1 831 800	* 1 830 000	* 1 830 000
Korea, Dem. P.R. of	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Pakistan (a)	30 950	69 400	104 961	101 971	84 606
Philippines					
Phosphate rock	2 778	2 952	3 478	3 897	* 3 900
Guano	310	331	443	409	* 410
Saudi Arabia	—	1 534 000	1 820 000	1 911 000	2 002 000
Sri Lanka	58 525	47 559	49 106	62 595	52 406
Syria	3 541 900	1 780 300	897 600	1 230 000	750 000
Thailand	3 300	1 990	350	500	* 500
Uzbekistan	652 600	664 300	700 000	* 700 000	* 700 000
Vietnam	2 395 300	2 363 800	2 656 100	2 470 900	2 758 100
Australia (a)	2 388 038	884 643	2 064 291	1 950 050	1 027 622
Nauru (c)	436 563	521 491	347 184	153 418	94 021
World total	205 000 000	220 000 000	238 000 000	242 000 000	265 000 000

### Note(s)

(1) In addition to the countries listed, Indonesia and Nigeria are believed to produce phosphate rock.

- (a) Years ended 30 June of that stated
- (b) Including beneficiated and directly shipped material
- (c) Exports
- (d) Including phosphate dust
- (e) Years ended 31 March following that stated
- (f) Years ended 20 March following that stated

## Mine production of platinum group metals

kilograms (metal content)

Country	2011	2012	2013	2014	2015
Finland					
Platinum	—	429	946	1 060	992
Palladium	—	379	766	808	784
Poland					
Platinum	23	39	51	86	* 90
Palladium	13	23	30	51	* 55
Russia					
Platinum (a)	26 500	24 900	25 000	22 000	20 800
Palladium (a)	107 500	89 900	84 000	81 300	75 500
Other platinum metals (a)	2 100	2 800	2 600	2 800	2 500
Serbia					
Platinum	6	3	3	* 3	* 3
Palladium	4	22	20	* 20	* 20
Botswana					
Platinum	373	435	218	124	31
Palladium	2 115	2 582	1 337	560	156
Ethiopia					
Platinum (b)	1	* —	* —	* —	* —
South Africa					
Platinum	148 008	128 590	137 024	93 991	139 125
Palladium	82 731	74 738	76 008	58 410	82 691
Other platinum metals	58 111	51 010	51 156	36 043	53 699
Zimbabwe					
Platinum	10 827	10 524	13 066	12 483	* 12 800
Palladium	8 422	10 524	10 153	10 138	* 10 500
Other platinum metals	2 162	2 090	2 677	2 667	* 2 700
Canada					
Platinum	* 8 300	* 8 200	* 9 700	* 12 000	* 12 800
Palladium	* 14 400	* 14 400	* 19 800	* 21 000	* 22 300
Other platinum metals	* 900	* 900	* ...	* 1 400	* 1 500
USA					
Platinum	3 700	3 670	3 720	3 660	* 3 700
Palladium	12 400	12 300	12 600	12 400	* 12 500
Colombia	1 231	1 460	1 504	1 135	861
China					
Platinum	* 1 400	* 1 400	* 1 400	* 1 400	* 1 400
Palladium	* 700	* 700	* 700	* 700	* 700
Australia					
Palladium (c)	445	706	786	766	533
World total	492 000	443 000	455 000	377 000	459 000

### Note(s)

- (1) Wherever possible, figures relate to quantities of platinum group metals thought to be recovered from ores originating in the country stated.
- (2) Figures for metal production are only given for countries where recovery is thought to be based predominantly on domestic materials or on imported materials which have not been recorded as mine production elsewhere in the table.
- (3) In addition to the production listed, concentrates produced in Spain, and possibly other countries, are believed to be processed in China to recover platinum group metals.

(a) Sales from mine production and stocks

(b) Years ending 7 July of that stated

(c) Platinum group metals; all forms

## Production of potash

tonnes (K<sub>2</sub>O content)

Country	2011	2012	2013	2014	2015
Belarus	5 305 800	4 830 700	4 178 500	6 339 990	6 467 878
Germany					
Potassic salts	3 214 696	3 149 386	3 075 201	3 178 103	3 109 903
Russia					
Chloride	6 604 470	5 563 200	6 104 270	7 402 350	6 954 000
Spain					
Chloride	520 555	421 652	711 272	706 664	667 959
United Kingdom					
Chloride	* 462 000	* 540 000	* 540 000	* 600 000	* 600 000
Canada					
Chloride	11 005 000	8 962 717	10 140 000	11 345 000	11 350 000
USA					
Potassic salts	1 000 000	900 000	960 000	850 000	* 770 000
Brazil					
Chloride	423 850	346 509	492 151	492 355	289 000
Chile					
Chloride	864 000	996 172	1 158 403	1 108 478	1 118 864
China	2 598 800	2 559 000	3 600 000	* 4 400 000	* 4 200 000
Israel					
Chloride	1 789 721	2 115 468	2 155 414	2 212 923	950 077
Jordan	1 355 160	1 110 200	1 064 000	1 275 500	1 436 600
World total	35 100 000	31 500 000	34 200 000	39 900 000	37 900 000

## Production of rare earth oxides

tonnes (metric)

Country	2011	2012	2013	2014	2015
Russia	1 444	2 131	1 443	2 134	2 312
USA	—	1 800	3 300	3 240	* 2 460
Brazil	* 188	* 134	—	—	—
China (a)	* 105 000	* 100 000	* 95 000	* 140 000	* 140 000
Malaysia	498	114	229	292	365
Vietnam	* —	* —	* 100	* 100	* 100
Australia (b)	2 188	2 612	970	3 965	8 799

### Note(s)

- (1) All the figures in this table are either reported as rare earth oxides or are calculated to rare earth oxide equivalent.  
(2) Prior to the 2005-2009 edition of this book, a table for the production of 'rare earth minerals' was included rather than the current 'rare earth oxides'. Users should exercise caution when comparing statistics over longer time periods.  
(3) Although rare earth minerals are believed to be extracted in other countries, there is insufficient evidence to estimate the quantities of contained oxides.  
(4) Where possible, data are shown against the country where the mineral is mined.

(a) Includes production from iron ore extraction, bastnasite concentrates and ion absorption clays

(b) Years ending 30 June of that stated

## Production of rhenium

tonnes (metric)

Country	2011	2012	2013	2014	2015
Armenia	* 0	* 1	* 0	* 0	—
Poland	3	3	5	5	* 5
Russia	* 1	* 2	* 2	* 2	* 2
USA	9	8	7	9	* 9
Chile	* 27	* 27	* 27	* 25	* 26
China	* 2	* 2	* 2	* 2	* 2
Kazakhstan	* 3	* 3	* 3	* 0	* 0
Uzbekistan	* 0	* 0	* 0	* 0	* 0

## Production of salt

tonnes (metric)

Country	2011	2012	2013	2014	2015
Albania					
Sea salt	* 47 000	* 47 000	* 47 000	* 47 000	* 47 000
Armenia	35 570	37 798	30 786	39 793	27 392
Austria					
Rock salt	169	222	184	245	248
Salt in brine	1 150 474	951 591	982 551	1 170 168	1 052 459
Azerbaijan	* 5 000	5 345	6 268	5 173	4 743
Belarus	2 617 565	2 176 650	2 625 270	1 820 547	2 054 288
Bosnia & Herzegovina	721 046	743 807	727 894	791 047	869 750
Bulgaria	2 200 000	2 100 000	2 000 000	3 300 000	3 100 000
Croatia	53 963	45 992	42 502	33 039	51 877
Denmark	* 595 000	* 590 000	580 000	* 580 000	* 580 000
France (a)	* 8 500 000	6 545 600	7 312 200	6 500 000	* 6 500 000
Germany					
Rock salt	8 765 168	5 938 855	8 510 652	4 928 656	6 027 873
Brine salt	2 217 205	2 182 440	2 164 456	2 133 359	2 286 769
Salt in brine	* 6 500 000	* 10 900 000	7 878 895	4 075 004	8 132 675
Greece	174 500	191 970	189 500	146 402	* 145 000
Italy					
Rock salt & brine salt	2 912 128	2 862 440	2 672 340	2 819 824	3 042 474
Malta	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Montenegro					
Sea salt	10 000	16 000	10 000	* 10 000	* 10 000
Netherlands	6 866 000	6 513 000	6 517 000	6 500 000	6 700 000
Poland					
Rock salt	1 233 800	782 500	1 310 500	763 100	629 700
Brine salt	2 633 300	2 732 200	2 735 500	2 705 100	2 797 700
Other salt	768 000	724 000	499 200	395 000	406 700
Portugal					
Rock salt	631 295	520 284	473 095	69 702	30 008
Sea salt	47 267	88 693	91 282	96 321	117 282
Romania	2 248 940	1 888 516	2 127 780	2 046 740	2 079 600
Russia	373 000	413 000	348 000	361 000	723 000
Serbia	23 334	16 506	13 704	12 994	13 202
Slovenia	4 291	5 684	3 360	—	2 191
Spain					
Rock salt	3 096 383	2 785 959	2 973 993	2 753 802	2 970 054
Sea salt	1 314 529	1 222 060	1 221 018	1 358 647	1 237 070
Other salt	92 850	100 643	114 829	157 188	154 302
Switzerland	478 324	492 700	560 076	418 389	476 941
Turkey	6 545 546	5 254 813	5 564 736	5 931 945	10 994 822
Ukraine	5 938 000	6 181 415	5 796 287	2 497 706	2 136 500
United Kingdom	6 060 000	6 460 000	6 930 000	4 690 000	* 4 600 000
Algeria					
Brine salt & sea salt	245 000	178 000	172 900	192 982	196 600
Angola	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Botswana	446 525	389 481	521 306	515 311	404 295
Djibouti	* 8 000	* 4 000	* 1 000	* 1 000	* 1 000
Egypt (b)	2 460 462	2 883 577	2 192 936	1 543 279	* 1 500 000
Eritrea	* 27 000	* 28 000	* 28 000	* 28 000	* 28 000
Ethiopia (c)	388 153	320 000	318 402	320 000	* 320 000
Ghana	* 250 000	* 250 000	* 250 000	* 250 000	* 250 000
Guinea	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Kenya (d)	24 639	9 980	8 895	18 936	21 201
Libya	* 20 000	* 30 000	* 30 000	* 30 000	* 30 000
Madagascar	* 85 000	* 85 000	* 85 000	* 85 000	* 85 000
Mauritania	690	* 700	* 700	* 700	* 700
Mauritius (e)	4 000	3 800	3 800	3 500	1 800
Morocco	720 814	730 000	488 300	439 160	555 760
Mozambique (e)	* 150 000	* 150 000	* 150 000	* 160 000	* 160 000
Namibia	792 000	810 000	651 141	339 411	287 687
Niger	* 1 300	—	—	—	—
Senegal	258 200	237 300	243 000	244 700	265 700
South Africa	381 177	399 135	479 024	493 828	520 070
Sudan	10 791	26 315	20 800	37 295	* 38 000
Tanzania	32 297	34 016	36 032	54 757	92 152
Tunisia (e)	1 180 500	1 131 200	1 146 000	888 000	* 900 000

## Production of salt

tonnes (metric)

Country	2011	2012	2013	2014	2015
Bahamas (f)	713 138	659 671	956 789	1 493 308	962 486
Bonaire	* 300 000	* 400 000	* 400 000	* 400 000	* 400 000
Canada					
Rock salt	11 629 830	9 820 792	11 223 829	13 173 990	13 312 076
Other salt (g)	994 718	1 023 832	986 253	995 546	974 035
Cuba	280 800	215 900	222 400	243 300	284 900
Dominican Republic (a)	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
El Salvador (e)	98 200	103 100	* 100 000	* 100 000	* 100 000
Guatemala (e)	* 50 000	* 60 000	* 60 000	* 60 000	* 60 000
Honduras	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Jamaica	14 001	14 587	14 166	* 14 000	* 14 000
Mexico	9 361 454	10 100 935	10 126 601	10 520 508	9 193 963
Nicaragua (e)	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Panama (e)	16 577	15 596	27 197	25 660	23 294
USA (h)					
Rock salt	19 360 000	13 392 000	14 508 000	15 876 000	* 17 280 000
Salt in brine	16 720 000	17 484 000	19 223 000	20 727 000	* 22 560 000
Evaporated salt	7 920 000	6 324 000	6 851 000	7 497 000	* 8 160 000
Argentina	1 888 676	1 843 975	* 1 800 000	* 1 800 000	* 2 000 000
Bolivia	1 300	1 905	2 262	* 2 200	2 216
Brazil					
Rock salt	1 335 454	1 403 364	1 349 411	1 451 051	* 1 450 000
Sea salt	4 829 275	6 078 507	5 926 042	6 050 000	* 6 000 000
Chile	9 966 038	8 057 130	6 576 960	10 553 440	11 831 116
Colombia					
Rock salt	305 706	308 547	319 184	340 263	338 804
Sea salt	116 265	211 721	113 226	105 577	78 634
Ecuador	* 75 000	* 75 000	* 75 000	* 75 000	* 75 000
Peru	1 468 266	1 242 765	1 205 435	1 175 157	1 471 131
Venezuela (e)	* 350 000	* 350 000	* 350 000	* 350 000	* 350 000
Afghanistan	5 000	5 250	5 550	5 680	* 5 700
Bangladesh (b)	1 409 239	1 430 329	1 438 805	1 460 698	* 1 461 000
Burma (i)	162 319	207 261	169 109	187 616	129 478
Cambodia (e)(j)	* 95 000	* 80 000	* 85 000	* 85 000	* 85 000
China	67 421 600	69 117 800	73 676 000	70 497 100	59 750 000
India (i)					
Sea salt	18 188 300	19 205 600	17 517 000	21 022 100	21 516 000
Other salt	3 990 800	5 341 300	5 502 300	5 865 000	6 126 800
Indonesia	* 650 000	* 700 000	* 720 000	* 720 000	* 720 000
Iran (k)	2 714 735	2 961 952	3 269 439	3 517 536	* 3 500 000
Iraq	136 007	143 441	181 928	* 182 000	* 182 000
Israel (e)	399 649	414 984	442 417	459 742	333 317
Japan (i)	978 000	925 000	929 000	928 000	938 000
Jordan	—	32 000	* 32 000	* 32 000	* 32 000
Kazakhstan	364 222	463 960	519 188	596 508	608 627
Korea (Rep. of)	372 230	308 847	421 259	303 510	342 844
Korea, Dem. P.R. of	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000
Kuwait	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Laos	35 100	47 600	50 000	51 000	* 51 000
Lebanon	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Mongolia	2 183	2 461	* 2 100	* 2 100	* 2 100
Oman	12 400	12 800	11 800	12 900	12 600
Pakistan (b)					
Rock salt	1 953 711	2 135 760	2 159 939	2 220 347	2 136 361
Sea salt (d)	286 697	292 135	297 047	254 985	205 454
Philippines (e)	720 146	774 815	992 640	* 993 000	* 993 000
Saudi Arabia					
Rock salt & brine salt	1 864 000	1 611 000	1 900 000	1 990 000	2 080 000
Sri Lanka	...	* 100 000	* 100 000	* 100 000	* 100 000
Syria	* 80 000	* 40 000	* 20 000	* 10 000	* 5 000
Taiwan	104 854	70 750	80 966	81 893	78 301
Tajikistan	26 994	27 954	32 062	36 348	35 704
Thailand					
Rock salt	1 359 493	1 363 539	1 300 156	1 381 067	1 385 911
Other salt	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000

## Production of salt

tonnes (metric)

Country	2011	2012	2013	2014	2015
Turkmenistan	* 215 000	* 220 000	* 225 000	* 230 000	* 230 000
Uzbekistan	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Vietnam	862 000	776 400	718 100	905 600	991 000
Yemen, Republic of	* 70 000	* 75 000	* 75 000	* 50 000	* 50 000
Australia	12 849 548	13 167 372	13 503 763	13 574 000	11 904 000
New Zealand	70 000	88 000	55 000	65 000	101 000
World total	288 400 000	281 400 000	289 600 000	286 600 000	289 600 000

### 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) Salt; all forms  
(b) Years ended 30 June of that stated  
(c) Years ended 7 July of that stated  
(d) Lake salt  
(e) Sea salt  
(f) Exports  
(g) Including salt in brine  
(h) Sold or used by producers  
(i) Years ended 31 March following that stated  
(j) Seasons beginning in November and ending in May of the year stated.  
(k) Years ended 20 March following that stated

## Production of refined selenium

tonnes (metric)

Country	2011	2012	2013	2014	2015
Armenia	14	17	20	* 20	* 20
Belgium	* 200	* 200	* 200	* 200	* 200
Finland	86	93	72	94	93
Germany (a)	* 700	* 650	* 700	* 700	* 700
Poland	85	90	80	90	87
Russia	126	115	114	131	143
Serbia	13	13	16	* 16	* 16
Sweden	* 20	* 20	* 20	* 20	* 20
Canada	35	144	159	154	154
Mexico	95	95	132	120	107
USA	* 170	* 130	* 150	* 160	* 90
Chile	90	70	70	41	* 50
Peru	54	42	50	49	* 50
China	* 65	65	65	65	* 65
Japan	809	820	739	782	772
Kazakhstan	* 130	* 130	* 130	* 130	* 130
Philippines	* 65	* 70	* 70	* 70	* 70
Uzbekistan	* 20	* 20	* 20	* 20	* 20

### Note(s)

- (1) In addition to the countries listed, Australia, Iran, the Republic of Korea and Zimbabwe are believed to produce refined selenium.
- (a) Includes selenium produced from imported material



## Production of sillimanite minerals

tonnes (metric)

Country	2011	2012	2013	2014	2015
France					
Andalusite	* 65 000	* 68 000	* 68 000	* 68 000	* 68 000
Madagascar	—	4 500	4 500	* 4 500	* 4 500
South Africa					
Andalusite	* 295 000	* 265 000	* 270 000	* 270 000	* 270 000
USA					
Kyanite (a)	98 000	99 000	110 000	* 110 000	* 110 000
Brazil					
Kyanite (b)	* 200	* 200	* 200	* 200	* 200
India					
Kyanite (c)	4 064	1 048	3 679	6 255	2 901
Sillimanite (c)	59 206	43 736	67 265	66 273	70 447
Nepal					
Kyanite (d)	25	29	19	12	7

### 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 believed to be produced in Brazil, Germany and Hungary
- (3) Production capacity for synthetic mullite also exists in China, India, Japan, the USA and the United Kingdom but output is believed to be zero.

- (a) Including related minerals
- (b) Including beneficiated and directly shipped material
- (c) Years ended 31 March following that stated
- (d) Years ending 15 July of that stated

## Mine production of silver

kilograms (metal content)

Country	2011	2012	2013	2014	2015
Armenia	16 100	14 000	14 083	13 295	14 344
Azerbaijan	4 175	626	2 051	970	890
Bulgaria	* 55 000	* 55 000	* 55 000	* 55 000	* 55 000
Finland	11 160	10 479	14 226	12 830	13 051
Greece	* 33 300	* 39 800	39 759	35 785	36 000
Greenland	9	27	* 3	—	* —
Ireland, Republic of	6 109	9 454	7 822	6 436	3 770
Macedonia	30 000	* 31 000	* 32 000	* 33 000	* 33 000
Poland	1 167 000	1 149 000	1 161 114	1 384 000	1 407 000
Portugal	28 027	29 890	40 621	43 172	41 337
Romania	* 18 000	* 18 000	* 18 000	* 18 000	* 18 000
Russia (a)	1 134 000	1 399 600	1 412 100	1 334 300	1 571 000
Serbia (a)	7 380	8 388	5 800	8 600	7 500
Slovakia	330	441	508	437	532
Spain	29 900	32 943	* 31 000	* 31 000	27 300
Sweden	301 959	309 337	341 346	382 611	479 686
Turkey	246 500	193 890	189 600	183 880	* 190 000
United Kingdom	531	230	82	—	—
Algeria	70	42	27	16	—
Botswana	—	8 700	22 597	22 288	2 801
Burkina Faso	—	—	31 436	25 520	29 000
Congo, Democratic Republic	9 187	12 342	60 431	6 485	2 401
Eritrea	4 417	29 922	15 799	47 398	38 910
Ethiopia (b)	715	* 2 400	* 1 400	* 1 000	* 1 000
Ghana	* 3 900	* 3 900	* 3 900	* 3 900	* 4 000

## Mine production of silver

kilograms (metal content)

Country	2011	2012	2013	2014	2015
Ivory Coast	98	410	572	585	587
Morocco	186 090	170 340	194 077	188 538	216 383
Namibia	1 841	* 1 450	1 401	1 129	877
Niger	197	329	110	67	119
South Africa	73 180	67 304	68 777	37 268	38 824
Sudan	* 700	* 700	* 700	* 1 000	* 1 000
Tanzania	13 524	11 227	11 014	14 493	15 820
Canada	661 089	685 255	640 362	495 403	379 646
Dominican Republic	18 169	27 296	78 228	127 712	91 928
Guatemala	273 058	204 681	281 331	858 349	862 814
Honduras	50 634	51 896	50 916	58 826	34 369
Mexico	4 777 710	5 358 195	5 821 001	5 765 662	5 591 510
Nicaragua	7 927	10 207	13 745	13 587	18 200
USA	1 122 300	1 055 300	1 037 000	1 183 900	* 1 100 000
Argentina	702 000	750 000	774 470	905 100	1 079 300
Bolivia	1 215 586	1 206 000	1 287 200	1 345 022	1 306 098
Brazil	15 238	20 145	22 427	25 381	* 25 000
Chile	1 291 272	1 194 521	1 173 845	1 571 788	1 504 271
Colombia	24 045	19 368	13 968	11 498	10 155
Ecuador	1 589	2 934	1 198	577	122 903
Peru	3 418 862	3 480 587	3 674 283	3 777 800	4 102 113
China	3 231 626	3 639 100	3 670 210	3 499 114	3 393 363
India (c)	207 144	374 046	349 774	327 647	426 443
Indonesia	227 173	247 827	123 109	119 189	151 934
Iran	* 40 000	* 40 000	* 35 000	34 945	* 35 000
Japan	4 486	3 536	3 644	3 541	4 616
Kazakhstan	650 649	963 182	963 580	989 247	1 308 926
Korea (Rep. of)	2 649	2 925	3 897	3 289	4 600
Korea, Dem. P.R. of	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Laos	17 976	20 221	32 262	39 823	51 764
Malaysia	459	1 628	361	533	945
Mongolia	19 107	19 118	29 332	39 160	48 989
Philippines	45 530	49 211	40 043	23 005	29 780
Saudi Arabia	5 839	5 500	4 158	4 888	5 530
Tajikistan	1 800	1 800	1 800	1 700	* 2 700
Thailand	16 423	32 047	32 381	29 216	26 438
Uzbekistan	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Australia	1 725 006	1 726 933	1 839 782	1 846 848	1 373 798
Fiji	418	342	462	361	354
New Zealand	14 324	5 630	11 223	15 811	12 498
Papua New Guinea	90 055	81 332	89 666	81 096	44 588
Solomon Islands	592	902	685	280	—
World total	23 374 000	25 003 000	25 989 000	27 203 000	27 511 000

### Note(s)

- (a) Smelter and/or refinery production
- (b) Years ended 7 July of that stated
- (c) Years ended 31 March following that stated

## Production of natural sodium carbonate

tonnes (metric)

Country	2011	2012	2013	2014	2015
Turkey	1 749 068	1 852 817	1 665 077	1 828 167	1 854 290
Botswana	257 851	248 629	227 913	268 529	243 369
Ethiopia (a)	3 650	* 5 000	* 5 000	* 6 000	6 000
Kenya	499 100	449 269	468 215	409 845	295 417
USA	10 700 000	11 100 000	11 500 000	11 700 000	* 11 700 000

Note(s)

(a) Years ended 7 July of that stated

## Production of strontium minerals

tonnes (metric)

Country	2011	2012	2013	2014	2015
Spain	97 102	96 888	90 972	128 077	110 765
Mexico	40 669	46 190	67 778	64 931	48 845
Argentina (a)	1 056	22 750	* 5 000	* 10 000	* 10 000
China	* 200 000	* 190 000	* 180 000	* 190 000	* 180 000
Iran (b)	76 000	188 790	46 240	41 050	* 190 000

Note(s)

(1) In addition to the countries listed, Germany is believed to produce strontium minerals

(a) May contain unbeneficiated material

(b) Years ended 20 March following that stated

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2011	2012	2013	2014	2015
Austria					
Recovered (a)	48 612	47 572	45 442	44 560	* 44 000
Belarus					
Recovered (a)	45 625	58 322	58 343	70 379	72 038
Belgium					
Recovered (b)(a)	396 500	382 100	396 900	* 400 000	* 400 000
Bosnia & Herzegovina					
Recovered	4 648	4 473	4 568	4 513	4 138
Bulgaria					
Recovered (b)	411 800	375 800	392 200	* 392 000	* 392 000
Recovered (a)	50 000	55 000	60 000	* 60 000	60 000
Croatia					
Recovered (a)	14 725	17 411	15 902	19 384	17 540
Czech Republic					
Recovered (a)	35 000	35 000	35 000	* 35 000	* 35 000
Denmark					
Recovered (a)	3 045	3 925	3 599	4 435	93 024

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2011	2012	2013	2014	2015
Finland					
Pyrites	338 000	375 000	347 000	353 000	353 000
Recovered (b)	319 971	329 831	315 958	336 168	348 640
Recovered (a)	133 300	121 700	130 000	* 130 000	* 130 000
France					
Recovered (a)	505 000	440 000	370 000	* 370 000	* 370 000
Recovered (c)	78 400	78 400	78 400	* 78 400	* 78 400
Germany					
Recovered (a)	874 639	798 257	754 540	708 146	627 797
Recovered (c)	542 210	493 169	464 776	437 677	383 894
Greece					
Recovered (a)	214 943	227 197	228 000	227 140	161 050
Hungary					
Recovered (a)	60 000	65 000	58 000	* 54 000	* 54 000
Italy					
Recovered	(b) 65 400	(b) 58 800	(b) 40 200	...	...
Recovered (a)	620 000	540 000	510 000	(d) 740 000	(d)* 740 000
Lithuania					
Recovered (a)	76 699	73 040	81 449	76 594	84 001
Netherlands					
Recovered (b)	120 900	117 600	120 900	* 120 000	* 107 000
Recovered (a)	470 000	450 000	430 000	* 410 000	* 400 000
Norway					
Recovered (b)	37 531	78 789	77 329	76 772	76 384
Recovered (a)	19 000	20 000	22 000	* 22 000	* 22 000
Poland					
Frasch	657 100	702 190	526 290	605 420	627 600
Recovered (b)	273 000	267 000	260 000	* 260 000	* 280 000
Recovered (a)	23 000	25 000	24 300	24 200	23 820
Portugal					
Recovered	20 500	20 600	* 21 000	* 21 000	* 21 000
Romania					
Recovered	55 600	50 000	60 000	* 47 000	* 46 000
Russia					
Pyrites	* 71 000	* 71 000	* 71 000	* 71 000	* 71 000
Recovered (a)	6 557 000	6 482 300	6 091 700	* 6 092 000	* 6 092 000
Recovered (c)	897 100	919 300	954 200	* 954 000	* 954 000
Sulphur ore	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Serbia					
Recovered (b)	27 800	29 700	29 400	* 29 400	* 29 400
Slovakia					
Recovered (b)	4 900	4 900	4 900	* 4 900	* 4 900
Recovered (a)	83 300	76 200	85 300	* 85 300	* 85 300
Spain					
Recovered (b)	490 200	578 400	539 200	* 539 000	* 539 000
Recovered (a)	520 000	545 000	515 000	* 515 000	* 515 000
Sweden					
Recovered (b)	211 280	198 850	194 938	205 616	192 499
Recovered (a)	92 973	93 442	64 587	86 538	95 172
Turkey					
Pyrites	56 780	52 080	45 348	42 849	22 271
Recovered (a)(c)	72 900	72 900	* 72 900	* 72 900	* 72 900
Sulphur ore	3 820	5 889	8 069	—	823
Ukraine					
Sulphur ore	102 000	140 000	120 000	* 120 000	* 120 000
United Kingdom					
Recovered (a)	165 000	158 000	145 000	134 000	135 000
Algeria					
Recovered (a)	16 200	10 400	10 000	* 10 000	* 10 000
Egypt					
Recovered (a)	80 000	60 000	80 000	* 80 000	* 80 000
Libya					
Recovered (a)	30 000	(e) 138 200	(e) 133 500	(e) 143 000	* 130 000
Morocco					
Recovered	45 000	60 000	60 000	* 60 000	* 60 000

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2011	2012	2013	2014	2015
South Africa					
Recovered (b)	174 000	133 000	* 130 000	* 130 000	* 144 000
Recovered (a)	163 000	124 000	* 120 000	* 120 000	* 133 000
Zambia					
Recovered (b)	228 800	261 400	* 262 000	* 265 000	* 300 000
Aruba					
Recovered	43 653	16 408	—	* —	* —
Canada					
Recovered (b)	638 000	665 000	677 000	590 000	568 000
Recovered (a)	5 970 000	5 594 000	5 624 000	5 252 000	5 210 000
Cuba					
Recovered (a)	15 000	18 000	20 000	* 20 000	* 20 000
Mexico					
Recovered (b)	522 900	555 600	555 600	* 556 000	* 556 000
Recovered (a)	959 488	1 010 875	1 030 259	992 939	953 509
Trinidad & Tobago					
Recovered (a)	20 000	15 000	10 000	* 15 000	* 15 000
USA					
Recovered (b)	720 000	586 000	616 000	587 000	* 575 000
Recovered (a)	8 230 000	8 410 000	8 600 000	9 040 000	* 8 720 000
Argentina					
Recovered (b)	* 23 000	* 23 000	* 23 000	* 23 000	* 23 000
Brazil					
Pyrites	17 744	21 746	17 581	18 827	* 20 000
Recovered (b)	322 120	274 693	* 324 405	286 754	* 290 000
Recovered (a)	170 136	222 561	218 014	239 970	* 240 000
Chile					
Recovered (b)	1 680 224	1 724 042	1 770 574	1 849 250	1 488 326
Colombia					
Recovered (a)	6 375	7 138	5 969	6 222	8 170
Sulphur ore	58 073	63 790	52 470	48 513	76 239
Ecuador					
Recovered (a)(f)	5 000	7 000	5 000	* 5 000	* 5 000
Peru					
Recovered (d)	539 200	503 600	555 600	* 556 000	* 556 000
Venezuela					
Recovered (a)	420 000	465 000	415 000	* 420 000	* 420 000
Bahrain					
Recovered (a)	125 648	* 120 181	* 120 000	* 120 000	* 120 000
China					
Pyrites	6 964 300	7 464 300	7 703 600	* 7 700 000	* 7 700 000
Recovered	7 026 100	7 228 700	7 516 300	* 7 500 000	* 7 500 000
Sulphur ore	4 000 000	4 660 000	4 975 000	* 5 000 000	* 5 000 000
India					
Recovered (b)(g)	1 138 000	1 113 000	* 1 200 000	* 1 200 000	* 1 200 000
Recovered (a)	* 1 600 000	* 1 600 000	* 1 600 000	* 1 600 000	* 1 600 000
Indonesia					
Recovered (b)	215 700	225 500	163 400	* 160 000	* 160 000
Recovered (a)	120 000	120 000	120 000	* 120 000	* 120 000
Iran					
Recovered (d)	1 780 000	1 890 000	1 890 000	2 100 000	* 2 100 000
Iraq					
Recovered (a)	140 000	250 000	190 000	* 190 000	* 190 000
Israel					
Recovered (a)	50 000	61 009	65 000	61 009	71 627
Japan					
Recovered (b)(h)	1 626 500	1 755 600	1 685 700	1 751 694	1 687 571
Recovered (a)	1 755 329	1 747 246	1 778 963	1 750 938	1 733 338
Jordan					
Recovered (a)	502 000	460 000	486 000	* 490 000	* 490 000
Kazakhstan					
Recovered (b)	549 000	588 200	604 600	* 604 000	* 604 000
Recovered (a)	2 311 000	2 150 500	2 452 700	2 464 600	2 514 900

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2011	2012	2013	2014	2015
Korea (Rep. of)					
Recovered (b)	1 078 400	1 078 400	1 078 400	* 1 078 000	* 1 078 000
Recovered (a)	1 350 000	1 525 000	1 600 000	1 200 000	1 450 000
Kuwait					
Recovered (a)	743 000	844 300	850 000	* 850 000	* 850 000
Oman					
Recovered (a)	36 000	59 000	51 000	* 50 000	* 50 000
Pakistan					
Recovered (i)	27 645	25 560	20 610	35 672	19 730
Philippines					
Recovered (b)	169 000	88 200	169 900	* 169 900	* 169 900
Recovered (a)	45 000	45 000	45 000	* 45 000	* 45 000
Qatar					
Recovered (a)	1 655 937	1 843 982	1 978 862	* 1 754 000	* 1 665 000
Saudi Arabia					
Recovered (a)	3 300 000	4 092 000	3 900 000	* 3 800 000	* 3 800 000
Singapore					
Recovered (a)	300 000	330 000	300 000	* 300 000	* 300 000
Syria					
Recovered (a)	60 000	20 000	* 6 000	* 3 000	* 1 500
Taiwan					
Recovered	219 975	231 296	192 292	195 280	211 219
Thailand					
Recovered (b)	45 800	45 800	45 800	* 45 800	* 45 800
Recovered (a)	200 000	210 000	220 000	* 210 000	* 210 000
Turkmenistan					
Recovered (a)	200 000	240 000	400 000	* 410 000	* 410 000
United Arab Emirates					
Recovered (a)	1 875 000	2 200 000	2 510 000	* 2 530 000	* 2 530 000
Uzbekistan					
Recovered (b)	124 800	130 700	130 700	* 131 000	* 131 000
Recovered (a)	362 000	360 000	385 000	* 385 000	* 385 000
Australia					
Recovered (b)	931 400	882 400	817 000	* 800 000	* 800 000
Recovered (a)	60 000	60 000	50 000	* 50 000	* 50 000
New Zealand					
Recovered (a)	35 000	32 700	35 000	* 35 000	* 35 000
World total					
Pyrites	7 400 000	8 000 000	8 200 000	8 200 000	8 200 000
Frasch	700 000	700 000	500 000	600 000	600 000
Recovered	67 400 000	68 900 000	69 700 000	69 300 000	68 600 000
Sulphur ore	4 200 000	4 900 000	5 200 000	5 200 000	5 200 000

### Note(s)

(1) In addition to the countries listed Dem. P.R. of Korea may also produce pyrites and may recover sulphur from metal processing

- (a) From petroleum refining and/or natural gas
- (b) From metal sulphide processing
- (c) Other
- (d) Sulphur; all forms
- (e) Exports
- (f) Including frasch
- (g) Years ended 31 March following that stated
- (h) Including S content of sulphur ore
- (i) Years ended 30 June of that stated

## Production of talc

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria	132 018	134 665	134 814	131 108	122 306
Finland	429 494	396 332	361 840	380 821	332 174
France	400 000	350 000	350 000	350 000	* 350 000
Italy	140 000	140 000	162 234	* 165 000	* 165 000
Macedonia	547	286	—	—	—
Norway	8 191	7 983	8 459	* 8 000	* 8 000
Portugal	15 462	15 131	11 348	14 942	11 204
Romania	131	13	—	—	—
Russia	* 150 000	* 150 000	* 150 000	* 150 000	* 150 000
Slovakia	7 000	2 000	10 000	3 000	1 000
Spain					
Talc	11 957	8 857	* —	* —	* —
Pyrophyllite	5 600	* —	—	—	—
Sweden	3 000	—	—	—	—
Turkey					
Talc	9 959	14 537	1 132	5 048	9 681
Pyrophyllite	115 462	85 251	101 872	109 366	172 681
United Kingdom	3 708	3 667	2 947	4 907	5 430
Egypt (a)	12 934	21 516	63 358	31 066	* 30 000
Morocco					
Talc	516	200	—	—	—
Pyrophyllite	4 613	—	—	—	—
South Africa					
Talc	4 453	4 765	4 924	4 827	4 569
Pyrophyllite	121 368	18 734	17 336	18 900	16 801
Canada	147 000	154 000	175 000	81 000	164 000
Guatemala	3 273	2 449	3 253	3 368	3 779
Mexico	51 221	463 214	846 813	752 077	* 750 000
USA	616 000	515 000	542 000	610 000	* 633 000
Argentina (b)	24 379	23 576	* 25 000	* 25 000	* 25 000
Brazil (b)	443 533	459 539	592 844	644 478	* 650 000
Colombia (b)	—	—	90	* 100	* 100
Peru					
Talc	28 296	31 559	32 899	28 847	26 781
Pyrophyllite	—	30 399	31 678	17 859	26 209
Uruguay	54 880	370	710	360	590
Bhutan	8 562	16 063	9 584	12 601	3 592
China	2 000 000	* 2 100 000	* 2 200 000	* 2 200 000	* 2 200 000
India					
Pyrophyllite (c)	255 891	247 968	224 677	147 431	* 140 000
Steatite (c)	998 438	971 778	887 925	774 281	* 770 000
Iran (d)	80 000	116 087	93 116	112 500	* 100 000
Japan					
Talc	* 24 000	* 25 000	* 25 000	* 25 000	* 25 000
Pyrophyllite	* 350 000	* 340 000	* 340 000	* 340 000	345 000
Korea (Rep. of)					
Talc	15 068	21 625	2 808	5 484	6 371
Pyrophyllite	510 708	483 133	524 881	622 865	596 860
Korea, Dem. P.R. of	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Nepal (e)	3 556	6 935	5 140	5 703	3 183
Pakistan (a)	47 561	55 515	93 214	89 022	116 223
Saudi Arabia					
Pyrophyllite	8 000	6 000	6 000	7 000	8 000
Taiwan	659	778	362	133	162
Thailand					
Talc	2 304	5 856	7 880	8 208	6 768
Pyrophyllite	5 300	35 000	26 820	49 100	45 500
Vietnam					
Pyrophyllite	* 16 000	* 16 000	* 16 000	* 16 000	* 16 000

## Production of talc

tonnes (metric)

Country	2011	2012	2013	2014	2015
Australia (a)	99 000	135 000	* 104 000	* 115 000	* 80 000
World total	7 400 000	7 700 000	8 200 000	8 200 000	8 200 000

### Note(s)

- (a) Years ended 30 June of that stated
- (b) Including talc, agalmatolite and pyrophyllite
- (c) Years ended 31 March following that stated
- (d) Years ended 20 March following that stated
- (e) Years ended 15 July of that stated

## Production of tantalum and niobium minerals

tonnes (metric)

Country	2011	2012	2013	2014	2015
Russia					
Nb content	431	450	511	581	628
Ta content	27	31	32	40	32
Burundi					
Columbite-tantalite	159	259	74	106	53
Congo, Democratic Republic					
Columbite-tantalite	383	586	500	1 140	2 102
Ethiopia					
Tantalite (a)	95	91	10	40	* 40
Madagascar					
Columbite	8	* 8	* 8	* 8	* 8
Mozambique					
Tantalite	39	83	43	23	* 20
Nigeria					
Tantalite	64	63	60	* 60	* 60
Columbite	22	22	21	* 22	* 22
Rwanda					
Columbite-tantalite	829	* 1 100	* 2 500	2 303	1 652
Canada					
Pyrochlore	* 10 800	* 10 900	* 12 300	* 13 000	* 11 600
Tantalite	—	—	121	—	—
Nb content	4 532	4 819	4 910	5 480	5 753
Bolivia					
Tantalite	—	—	—	—	1
Brazil					
Pyrochlore	* 243 000	* 268 000	* 250 000	* 280 000	* 250 000
Columbite-tantalite	* 240	* 210	* 329	* 210	* 200
Nb content	102 167	112 631	104 939	117 424	104 858
China					
Columbite-tantalite	* 240	* 260	* 240	* 240	* 240
Malaysia					
Struverite	110	262	190	255	86
Australia					
Tantalite	* 240	* 100	—	—	—
World total concentrates (b)	363 000	399 000	376 000	420 000	377 000
Nb content	108 100	118 500	111 300	124 600	112 400
Ta content	700	800	1 000	1 100	1 100

See the following page for notes



## Production of tantalum and niobium minerals

### Note(s)

- (1) Niobium and tantalum minerals are believed to be produced in Namibia and South Africa.
- (2) The figures in this table refer to gross tonnage of tantalum and niobium concentrates, except where otherwise indicated.
- (3) Tantalum is also recovered from tin slags and is believed to have accounted for approximately 20% of raw material supplied.

- (a) Years ended 7 July of that stated
- (b) Excluding Russia

## Production of refined tellurium

tonnes (metric)

Country	2011	2012	2013	2014	2015
Russia	37	30	31	33	34
Sweden	—	7	24	31	33
Canada	6	11	12	9	9
USA	* 50	* 50	* 50	* 50	* 50
China	* 7	7	7	7	* 7
Japan	47	43	31	32	34

### Note(s)

- (1) In addition to the countries listed, Germany and Belgium are believed to produce refined tellurium

## Mine production of tin

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Portugal	39	42	84	75	42
Russia	75	249	156	321	360
Spain	9	69	0	—	—
Burundi	41	92	24	59	56
Congo, Democratic Republic	10 229	10 439	3 427	4 012	4 566
Egypt	...	—	69	85	3
Niger	10	1	8	5	8
Nigeria	1 406	2 408	2 516	2 485	2 298
Rwanda	7 986	3 477	3 671	4 447	2 885
Tanzania	22	68	118	59	62
Uganda	0	0	19	33	135
Bolivia	20 373	19 702	19 287	19 791	20 135
Brazil	10 725	13 667	16 830	25 534	* 25 000
Peru (a)	28 882	26 105	23 668	23 105	19 511
Burma	* 2 100	* 2 100	* 9 000	* 26 000	* 43 000
China	127 400	115 700	149 000	158 000	135 000
India (b)	37	36	26	19	10
Indonesia	* 97 400	* 101 000	* 88 000	* 70 000	* 70 000
Laos	337	521	579	868	815
Malaysia	3 340	3 725	3 697	3 777	4 158
Mongolia	42	(c)* 54	(c)* 60	(c)* 60	(c)* 3
Thailand	282	199	132	156	72
Vietnam	* 5 400	* 5 400	* 5 400	* 5 400	* 5 400
Australia	14 014	6 158	6 472	7 207	7 158
World total	330 000	311 000	332 000	351 000	341 000

### Note(s)

(a) Recoverable

(b) Years ended 31 March following that stated

(c) Estimate based on reported exports

## Smelter production of tin

tonnes (metric)

Country	2011	2012	2013	2014	2015
Belgium	10 008	11 350	10 346	9 718	8 788
Poland	82	1 375	1 900	2 253	2 171
Russia	726	900	800	—	—
Rwanda	—	—	—	—	0
Bolivia (a)	14 518	14 280	14 863	15 439	15 464
Brazil	9 382	11 955	14 721	22 334	* 22 000
Peru	32 290	24 811	24 181	24 460	20 396
China	155 499	147 863	159 601	187 094	166 900
India (b)	23	14	23	9	—
Indonesia	* 73 000	* 79 800	* 63 000	* 63 800	* 69 800
Japan	947	1 133	1 786	1 746	1 688
Malaysia	40 267	37 792	32 668	34 971	30 209
Thailand	23 944	22 992	23 087	16 661	10 502
Vietnam	* 3 900	* 4 800	* 5 500	* 5 500	* 5 500
World total	365 000	359 000	352 000	384 000	353 000

### Note(s)

(1) Figures relate to both primary and secondary metal.

(2) In addition to the countries listed, many countries produce small amounts of secondary metal.

(a) Refined, including alloys

(b) Years ended 31 March following that stated

## Production of titanium minerals

tonnes (metric)

Country	2011	2012	2013	2014	2015
Norway					
Ilmenite	870 000	830 614	826 126	863 660	630 323
Russia					
Ilmenite	63 490	125 095	150 458	178 426	193 236
Ukraine					
Ilmenite	* 600 000	* 600 000	* 600 000	* 600 000	* 600 000
Rutile	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Burundi	21	—	—	—	* —
Egypt					
Ilmenite	* —	* —	* 20 000	* —	* —
Kenya					
Ilmenite	—	—	—	281 543	444 999
Rutile	—	—	—	52 465	78 947
Madagascar					
Ilmenite	511 000	562 000	562 000	334 000	* 200 000
Rutile	* 9 300	* 11 000	* 12 000	* 10 700	* 11 000
Mozambique					
Ilmenite	636 800	574 500	720 100	854 600	763 500
Rutile	6 500	5 100	4 000	6 100	6 000
Senegal					
Ilmenite	—	—	—	100 590	427 690
Leucoxene	—	—	—	(e) 663	(e) 5 311
Sierra Leone					
Ilmenite	14 576	21 400	32 350	35 839	48 420
Rutile	67 970	94 490	120 350	115 078	* 123 000
South Africa					
Ilmenite (a)	* 1 369 000	* 1 203 000	* 1 070 000	* 1 105 000	* 1 000 000
Rutile	133 000	* 141 000	* 734 000	* 133 000	* 130 000

## Production of titanium minerals

tonnes (metric)

Country	2011	2012	2013	2014	2015
Canada					
Ilmenite (a)(b)	* 2 500 000	* 2 700 000	* 2 800 000	* 2 500 000	* 1 900 000
USA	* 300 000	* 300 000	* 200 000	* 100 000	* 100 000
Brazil					
Ilmenite	68 804	69 071	78 264	81 278	* 80 000
Rutile	2 350	1 881	2 021	1 834	* 2 000
China					
Ilmenite	* 1 700 000	* 1 600 000	* 1 700 000	* 1 600 000	* 1 600 000
India					
Ilmenite (c)	718 612	738 524	721 959	* 720 000	* 720 000
Rutile (c)	20 225	16 527	13 459	* 13 000	* 13 000
Kazakhstan	* 17 000	* 17 000	* 17 000	* 17 000	* 17 000
Korea (Rep. of)					
Ilmenite	183 463	201 976	229 723	240 892	204 082
Malaysia					
Ilmenite	28 782	22 275	16 043	8 159	5 814
Rutile	10 810	20 008	5 983	3 069	198
Sri Lanka					
Ilmenite	68 085	44 707	42 685	32 972	39 439
Rutile	1 970	1 590	1 406	2 111	1 808
Vietnam					
Ilmenite	760 000	978 300	1 025 800	558 000	282 200
Australia					
Ilmenite (d)	1 275 400	1 331 400	1 313 800	1 138 000	1 005 230
Rutile (d)	466 700	439 600	250 400	340 700	294 600
Leucoxene (d)	200 000	228 000	225 500	241 000	246 000
World total					
Ilmenite (wt of concs)	11 700 000	11 900 000	12 100 000	11 300 000	10 300 000
Rutile (wt of concs)	800 000	800 000	1 200 000	800 000	800 000
All forms (TiO <sub>2</sub> content)	* 6 400 000	* 6 500 000	* 7 000 000	* 6 300 000	* 5 800 000

### Note(s)

(1) The figures in this table refer to gross tonnage of titanium concentrates.

(2) Some ilmenite is converted to synthetic rutile in Australia, India, Japan and USA.

(a) It is believed that the majority of this is processed into slag.

(b) Canada produces some ilmenite which is sold as such and not processed into slag, but tonnages are small

(c) Years ended 31 March following that stated

(d) Years ended 30 June of that stated

(e) Including natural rutile

## Mine production of tungsten

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Austria	861	706	851	830	870
Portugal (a)	818	763	692	671	474
Russia	3 380	3 451	2 982	2 659	* 2 700
Spain	337	393	487	822	835
United Kingdom	—	—	—	—	195
Burundi	306	342	7	30	12
Congo, Democratic Republic	23	37	60	8	55
Rwanda	726	1 388	1 344	1 313	1 081
Uganda	6	13	44	48	28
Canada	2 368	2 505	2 762	2 689	2 114
Bolivia	859	953	957	956	1 116
Brazil (b)	244	381	494	510	* 500
Peru	546	365	35	77	139
Burma (c)	* 140	* 130	* 140	* 140	* 90
China	61 802	62 009	64 895	65 369	* 65 000
Korea, Dem. P.R. of	* 110	* 100	* 60	* 70	* 70
Kyrgyzstan	* 100	* 100	* 100	* 100	* 100
Mongolia	13	42	—	—	—
Thailand (a)	181	85	161	110	39
Uzbekistan	* 300	* 300	* 300	* 300	* 300
Vietnam	—	—	—	4 134	5 123
Australia	17	31	33	13	25
World total	73 100	74 100	76 400	80 800	80 900

### Note(s)

(1) In addition to the countries listed, the USA is known to produce tungsten

(a) Wolframite and scheelite

(b) Mainly scheelite

(c) Including tungsten content of tin-wolframite concentrates

## Mine production of uranium

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Czech Republic	252	222	232	165	134
Germany	52	50	27	33	—
Romania	* 77	* 90	* 80	* 77	* 77
Russia	2 993	2 862	3 135	2 990	3 055
Ukraine	* 890	* 960	* 922	* 926	* 1 200
Malawi	785	1 102	1 133	369	—
Namibia	3 262	4 500	4 328	3 311	2 950
Niger	4 159	4 821	4 277	4 156	4 116
South Africa	556	467	531	566	448
Canada	9 145	8 998	9 331	9 101	13 324
USA	1 537	1 596	1 794	1 884	1 287
Brazil	265	231	192	231	40
China	* 885	* 1 500	* 1 500	* 1 500	1 616
India	* 400	* 385	* 385	* 385	* 385
Kazakhstan	19 451	21 317	22 567	23 127	23 800
Pakistan	* 45	* 45	* 45	* 45	* 45
Uzbekistan	* 3 000	* 3 000	* 2 400	* 2 400	* 2 385
Australia	5 961	7 022	6 370	5 634	5 655
World total	53 700	59 200	59 300	56 900	60 500
World total (U <sub>3</sub> O <sub>8</sub> equivalent)	63 400	69 800	70 000	67 100	71 400

### Note(s)

(1) Excluding uranium production from decommissioning operations

## Mine production of vanadium

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Russia	12 860	14 856	14 403	15 125	16 196
South Africa	21 652	19 957	* 14 000	* 10 000	* 10 000
USA	590	106	591	—	* —
Brazil	—	—	—	578	3 254
China	* 36 400	* 40 000	* 44 000	* 45 000	* 42 000
Kazakhstan	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
World total	73 000	76 000	74 000	72 000	72 000

### Note(s)

(1) This table includes vanadium in slag products but excludes vanadium recovered as a by-product of the refining and burning of heavy oils.

## Production of vermiculite

tonnes (metric)

Country	2011	2012	2013	2014	2015
Bulgaria	* 15 000	* 18 600	* 18 600	* 18 000	* 18 000
Russia	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Turkey	...	...	1 604	716	425
Egypt	2 093	* 2 500	2 743	* —	* —
Kenya	515	457	400	840	410
South Africa	170 571	132 886	127 658	143 007	138 290
Uganda	6 882	4 165	243	* —	801
Zimbabwe	7 228	21 625	28 808	* 30 000	* 40 000
Mexico	241	500	425	226	* 200
USA (a)	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Argentina	1 000	* 320	* 1 000	* 1 000	* 1 000
Brazil	54 970	51 986	60 379	56 444	* 60 000
China	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
India (b)	10 194	7 947	11 851	19 336	23 267
Japan	* 6 200	* 6 200	* 6 200	* 6 000	* 6 000
Australia (c)	8 297	9 256	9 091	—	—

### Note(s)

(a) Sold or used by producers

(b) Years ended 31 March following that stated

(c) Years ended 30 June of that stated

## Production of wollastonite

tonnes (metric)

Country	2011	2012	2013	2014	2015
Finland	11 500	* 11 500	* 11 500	* 10 000	* 10 000
Spain	7 417	10 918	16 738	15 298	17 700
Canada	—	—	—	3 000	5 500
Mexico	47 523	55 204	57 302	54 579	57 451
USA	* 70 000	* 70 000	* 70 000	* 70 000	* 70 000
China	745 000	* 750 000	* 750 000	* 1 100 000	* 1 000 000
India (a)	184 445	145 667	192 712	186 524	175 348
Australia (b)	—	—	—	—	2 428

### Note(s)

(a) Years ended 31 March following that stated

(b) Years ended 30 June of that stated

## Mine production of zinc

tonnes (metal content)

Country	2011	2012	2013	2014	2015
Armenia	9 353	9 729	9 570	8 825	6 791
Bosnia & Herzegovina	6 862	7 600	9 100	8 100	8 800
Bulgaria	(a) 10 977	(a) 12 116	(a) 13 902	11 872	15 616
Finland	64 115	52 200	41 124	46 100	25 332
Greece	21 200	20 800	22 549	23 085	13 174
Ireland, Republic of	344 000	337 500	326 700	282 600	236 300
Kosovo	2 872	3 818	4 983	5 514	3 986
Macedonia	28 132	28 037	30 907	31 570	29 150
Montenegro	* 3 300	4 677	5 487	7 200	7 068
Poland	87 200	76 700	75 000	56 000	53 000
Portugal	4 227	30 006	53 382	67 378	61 921
Romania	* 8 800	* 8 400	* 2 000	* 3 300	* 3 000
Russia	197 000	189 000	193 000	192 000	201 000
Serbia	3 100	6 000	5 800	7 100	4 400
Slovakia	103	134	190	176	200
Spain	33 197	28 634	30 428	26 756	41 765
Sweden	194 021	188 325	176 582	221 841	246 983
Turkey	158 057	195 793	195 025	210 152	173 589
Burkina Faso	—	—	23 713	76 290	72 792
Congo, Democratic Republic	7 379	5 300	6 057	6 369	6 301
Morocco	45 065	46 441	41 625	45 412	53 747
Namibia	192 500	193 600	188 402	173 370	123 672
Nigeria	3 100	13 800	7 000	7 000	14 200
South Africa	36 629	37 034	30 145	26 141	29 040
Tunisia	600	7 400	7 700	7 400	—
Canada	622 600	641 134	426 545	352 125	276 519
Dominican Republic	—	—	—	—	4 655
Guatemala	—	442	1 221	13 394	14 810
Honduras	26 000	26 000	25 000	30 000	23 000
Mexico	631 859	660 349	642 542	659 878	677 018
USA	768 900	738 400	784 400	832 000	824 700
Argentina	38 000	42 000	47 650	43 967	33 787
Bolivia	427 129	389 911	407 332	448 970	442 154
Brazil	197 840	164 258	152 147	169 766	* 160 000
Chile	36 602	26 762	29 759	45 094	48 071
Peru	1 256 383	1 281 282	1 351 273	1 315 000	1 422 000
Burma	* 9 200	* 8 000	* 4 800	* 6 100	* 4 800
China	4 050 000	4 859 100	5 187 747	5 118 394	4 750 000
India (b)	726 518	759 527	769 927	769 262	761 224
Iran	138 000	138 000	130 000	* 150 000	* 150 000
Kazakhstan	429 000	425 000	417 000	386 300	384 000
Korea (Rep. of)	743	1 434	1 749	1 919	2 070
Korea, Dem. P.R. of	* 34 000	* 35 000	* 36 000	* 32 000	* 32 000
Laos	1 642	883	1 900	* 2 000	—
Mongolia	52 350	59 550	52 050	46 600	44 800
Pakistan (c)	11 123	10 024	—	—	—
Philippines	18 170	19 559	16 730	—	—
Saudi Arabia	4 934	21 213	26 293	41 804	37 600
Tajikistan	9 000	29 900	24 300	54 300	57 800
Thailand	22 259	24 996	25 887	34 033	27 154
Vietnam	* 34 000	* 25 000	* 20 000	* 17 000	* 17 000
Australia	1 514 756	1 541 224	1 524 504	1 554 738	1 600 255
World total	12 500 000	13 400 000	13 600 000	13 700 000	13 200 000

### Note(s)

- (a) Metal content of ore
- (b) Years ended 31 March following that stated
- (c) Years ended 30 June of that stated



## Production of slab zinc

tonnes (metric)

Country	2011	2012	2013	2014	2015
Belgium (a)	282 000	250 000	252 000	262 000	260 000
Bulgaria	88 400	73 100	69 600	74 200	75 500
Finland	307 352	314 742	311 686	302 024	305 717
France	164 000	161 000	152 000	171 000	169 000
Germany	170 000	169 000	162 000	168 000	169 000
Italy	110 200	97 200	111 000	138 100	139 200
Netherlands	261 000	257 000	275 000	290 000	291 000
Norway	153 200	152 647	143 444	165 600	162 878
Poland	144 100	138 300	146 300	154 000	161 000
Russia	249 000	250 000	216 000	223 000	216 000
Spain	490 000	486 000	484 000	501 000	509 300
Ukraine	6 600	7 000	3 900	8 100	700
Algeria	15 611	8 090	* 8 000	6 976	7 600
Namibia	145 639	145 342	128 291	117 783	71 961
South Africa	73 000	—	—	—	—
Canada	662 151	648 619	651 638	649 217	683 118
Mexico	322 116	323 569	322 781	320 923	326 642
USA	247 600	261 400	233 200	180 000	172 300
Argentina	43 500	37 500	37 900	29 100	30 300
Brazil	284 770	245 526	245 417	246 120	231 000
Peru	313 714	319 280	346 400	336 500	335 422
China	5 212 200	4 881 200	5 279 600	5 806 970	6 155 000
India (a)	783 647	704 228	767 994	732 792	758 944
Iran	132 000	148 000	140 000	132 000	* 140 000
Japan	544 674	571 312	587 291	583 021	566 619
Kazakhstan	319 847	319 847	320 150	324 946	323 848
Korea (Rep. of)	828 735	881 100	886 000	901 000	940 195
Korea, Dem. P.R. of	* 30 000	* 32 000	* 32 000	* 27 000	* 15 000
Thailand	98 370	101 263	76 576	65 694	74 121
Uzbekistan	65 000	62 000	54 000	66 000	72 000
Vietnam	* 18 000	* 18 000	* 12 000	* 12 000	* 10 000
Australia	507 316	498 259	498 291	481 573	489 030
World total	13 100 000	12 600 000	13 000 000	13 500 000	13 900 000

Note(s)

(a) Years ended 31 March following that stated.

## Production of zirconium minerals

tonnes (metric)

Country	2011	2012	2013	2014	2015
Russia (a)	8 914	8 000	8 504	7 900	* 7 900
Ukraine	* 35 000	* 35 000	* 35 000	* 35 000	* 35 000
Kenya	—	—	—	40 123	25 951
Madagascar	13 075	22 500	22 500	27 000	* 25 000
Mozambique	43 600	46 900	31 400	50 800	51 800
Senegal	—	—	—	9 040	45 248
Sierra Leone	8 350	610	2 950	2 416	* 1 400
South Africa	383 000	* 393 000	* 292 000	* 393 000	* 390 000
USA	* 100 000	* 90 000	* 80 000	* 70 000	* 60 000
Brazil (b)	23 283	20 425	24 687	23 659	* 25 000
China	* 33 500	* 33 500	* 33 500	* 33 500	* 33 500
India (c)	25 996	21 125	19 017	* 19 000	* 19 000
Indonesia (d)	* 127 000	* 109 000	* 49 000	* 21 000	* 21 000
Malaysia	1 685	442	379	677	826
Sri Lanka	641	293	228	1 335	614
Vietnam	24 020	* 21 000	* 7 000	* 7 000	* 1 000
Australia (e)	674 200	706 300	497 550	581 600	597 550
World total	1 502 000	1 508 000	1 104 000	1 323 000	1 341 000

### Note(s)

(1) In this table the term 'zirconium minerals' is understood to mean zircon, unless otherwise stated

- (a) Baddeleyite concentrate
- (b) Including caldasite rock containing zircon and baddeleyite
- (c) Years ending 31 March following that stated
- (d) Conservative BGS estimates, based on exports
- (e) Years ended 30 June of that stated

## **APPENDIX**

Additional tables relating to Europe only

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

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria					
Sand and gravel (a)	35 507 353	31 285 739	30 123 970	30 276 160	29 487 409
Crushed rock (a)	26 866 150	26 348 996	25 973 740	26 946 973	25 309 156
Belgium					
Sand and gravel	* 23 000 000	* 21 000 000	* 21 000 000	* 19 000 000	* 19 000 000
Crushed rock	* 49 000 000	* 46 000 000	* 46 000 000	* 45 000 000	* 45 000 000
Bulgaria					
Sand and gravel	10 054 205	9 293 819	8 433 198	9 384 908	* 9 500 000
Crushed rock	17 979 678	18 281 353	18 963 207	21 786 053	* 21 800 000
Croatia					
Sand and gravel	5 012 106	4 345 920	3 779 919	3 496 693	3 544 899
Cyprus					
Crushed rock	11 816 397	7 308 056	4 561 152	4 039 087	3 941 378
Czech Republic					
Sand and gravel	21 424 000	18 785 000	17 363 000	17 668 000	19 546 000
Crushed rock	36 717 000	32 535 000	33 004 000	35 972 000	39 749 000
Denmark					
Sand and gravel	42 878 000	39 332 000	38 798 333	41 016 667	* 41 000 000
Crushed rock	337 000	293 000	243 000	223 000	233 000
Estonia					
Sand and gravel	3 568 680	3 954 600	5 201 380	5 107 280	6 736 020
Crushed rock	5 919 500	6 170 200	6 463 100	5 805 200	5 342 000
Finland					
Sand and gravel	* 36 000 000	* 34 000 000	* 34 000 000	* 32 000 000	* 32 000 000
Crushed rock	* 53 000 000	* 54 000 000	* 49 000 000	* 47 000 000	* 44 000 000
France					
Sand and gravel	148 680 000	138 280 000	135 543 000	* 127 000 000	* 117 000 000
Crushed rock	204 980 000	196 600 000	205 638 000	* 199 000 000	* 182 000 000
Germany					
Sand and gravel	252 000 000	235 300 000	228 000 000	238 000 000	239 000 000
Crushed rock	229 000 000	211 000 000	207 000 000	211 000 000	210 000 000
Greece	* 38 000 000	* 29 000 000	* 30 000 000	* 38 000 000	21 632 000
Hungary					
Sand and gravel	23 361 598	* 22 250 000	27 252 746	42 444 954	32 820 501
Crushed rock	9 128 819	* 9 000 000	7 483 894	8 526 891	10 016 477
Iceland					
Sand and gravel	221 920	232 112	291 384	* 291 000	* 291 000
Ireland, Republic of					
Sand and gravel	* 7 000 000	* 7 000 000	* 7 000 000	* 7 000 000	* 7 000 000
Crushed rock	* 25 000 000	* 22 000 000	* 22 000 000	* 22 000 000	* 22 000 000
Italy					
Sand and gravel	(a) 131 770 340	118 143 574	79 086 763	41 038 798	23 543 097
Crushed rock	86 547 652	75 406 269	49 075 806	39 669 853	39 510 725
Latvia					
Sand and gravel	7 855 125	8 358 839	7 297 980	12 491 577	7 411 254
Crushed rock	2 050 976	2 072 775	2 664 580	2 229 552	* 2 400 000
Lithuania					
Sand and gravel	5 776 850	5 081 166	6 930 916	7 164 096	7 751 342
Crushed rock	4 456 089	3 241 831	3 801 100	4 084 594	4 528 671
Malta					
Crushed rock	1 713 651	1 658 807	1 407 948	1 332 800	1 347 325
Montenegro					
Sand and gravel	133 947	201 896	213 002	289 469	258 120
Crushed rock	167 405	112 630	143 179	137 299	124 141
Netherlands					
Sand and gravel	60 795 000	49 900 000	48 974 000	48 000 000	* 62 000 000
Norway					
Sand and gravel	13 215 000	14 262 000	13 984 000	14 111 000	13 000 000
Crushed rock	63 855 000	67 670 000	66 259 000	64 828 000	61 000 000
Poland					
Sand and gravel (b)	* 176 000 000	* 145 000 000	* 141 000 000	* 104 000 000	* 108 000 000
Crushed rock	88 696 900	64 859 600	57 945 100	61 117 900	60 806 100
Portugal					
Sand and gravel	7 658 205	6 093 188	5 964 368	5 983 054	* 6 283 000
Crushed rock	48 737 535	32 966 351	23 369 495	26 532 644	* 24 500 000
Romania					
Sand and gravel	25 319 433	21 068 344	50 829 386	51 812 555	69 894 594
Crushed rock	6 189 078	5 593 429	36 888 195	35 115 670	40 091 390

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

tonnes (metric)

Country	2011	2012	2013	2014	2015
Slovakia					
Sand and gravel	6 020 641	3 794 873	3 953 525	3 863 467	1 199 550
Crushed rock	13 834 800	10 157 400	8 526 598	10 188 851	14 274 900
Slovenia					
Sand and gravel	1 899 770	1 707 455	2 143 013	2 799 006	2 943 870
Crushed rock	9 626 791	7 557 431	7 067 895	8 123 587	8 108 113
Spain					
Sand and gravel	60 603 982	41 834 967	33 300 000	33 600 000	34 000 000
Crushed rock	143 579 886	96 056 496	67 800 000	64 600 000	65 000 000
Sweden					
Sand and gravel	* 17 000 000	13 809 028	11 399 554	10 970 490	10 778 329
Crushed rock	* 58 000 000	71 839 600	66 621 935	68 034 725	75 271 803
Switzerland					
Sand and gravel	51 940 000	49 780 000	49 480 000	53 940 000	* 49 368 000
Crushed rock	2 432 977	2 328 758	2 445 464	2 401 627	2 463 037
United Kingdom					
Sand and gravel	63 100 000	56 600 000	58 000 000	61 100 000	* 62 900 000
Crushed rock (c)	102 800 000	94 800 000	94 300 000	110 300 000	* 110 500 000
European total	2 578 000 000	2 296 000 000	2 214 000 000	2 188 000 000	2 157 000 000

### 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.
  - (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 European 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.
- (a) Sales  
 (b) Includes an estimate for small producers  
 (c) Includes small quantities for other purposes in Northern Ireland

## Production of cement clinker

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria	131 734	* 125 000	* 120 000	* 120 000	* 120 000
Belgium	* 700 000	726 690	911 116	* 900 000	* 900 000
Bulgaria	35 200	72 300	77 200	36 700	44 500
Cyprus	—	23 363	807 041	1 106 605	981 117
Czech Republic	3 132 268	2 837 600	2 472 196	2 792 101	2 919 190
Denmark	25	24 256	—	9 081	—
Estonia	719 000	714 600	691 400	721 000	356 000
France	15 229 000	14 178 000	13 778 000	13 146 000	12 513 000
Germany	24 775 000	24 581 000	23 127 000	23 871 000	23 355 000
Greece	4 569 167	5 544 951	6 754 154	7 025 675	* 7 000 000
Hungary	1 167 942	1 332 354	1 065 349	* 1 100 000	* 1 100 000
Italy	22 282 388	18 700 700	15 691 270	14 105 796	16 830 997
Latvia	1 277 000	1 485 720	* 1 500 000	* 1 500 000	* 1 500 000
Luxembourg	770 232	* 740 000	* 710 000	* 700 000	* 700 000
Norway	1 382 809	1 435 497	1 399 012	1 364 866	1 284 156
Poland	13 629 500	11 807 300	10 855 278	11 864 000	11 660 000
Portugal	5 351 024	4 881 543	5 427 443	5 967 865	5 626 409
Romania	5 751 215	5 873 601	5 061 670	5 466 540	6 203 413
Serbia	1 529 226	1 264 333	1 121 538	1 122 964	1 218 213
Slovakia	1 823 306	1 490 768	* 1 500 000	* 1 600 000	* 1 700 000
Spain	17 000 000	16 719 769	14 600 000	16 968 987	* 17 000 000
Sweden	* 1 750 000	* 1 750 000	* 1 750 000	* 1 750 000	* 1 750 000
Turkey	53 228 248	* 53 000 000	56 905 641	58 598 068	61 971 380
United Kingdom	7 096 000	6 555 000	6 712 000	7 197 000	* 7 200 000
European total	183 000 000	176 000 000	173 000 000	179 000 000	184 000 000

## Production of finished cement

tonnes (metric)

Country	2011	2012	2013	2014	2015
Austria (a)	4 291 449	4 162 406	3 967 440	4 048 146	4 175 987
Belgium	6 844 000	6 280 000	6 119 000	6 364 000	6 275 000
Bulgaria	1 889 502	1 754 204	1 796 021	1 770 508	2 040 853
Croatia	2 578 017	4 255 014	4 543 358	4 670 807	4 498 264
Cyprus	1 206 786	1 025 666	854 778	734 692	788 168
Czech Republic	3 831 000	3 434 000	3 211 000	3 731 000	3 781 000
Denmark	1 852 804	1 817 334	1 852 445	1 876 095	2 027 843
Estonia	451 000	481 500	456 700	447 000	390 000
Finland (a)	1 387 479	1 292 855	1 271 378	1 255 468	1 188 387
France	19 443 000	18 018 000	17 469 000	16 426 000	15 597 000
Germany	33 540 000	32 432 000	31 308 000	32 099 000	31 160 000
Greece	5 822 967	5 422 499	5 553 411	(a) 5 142 177	(a) 5 123 122
Hungary	1 694 000	1 870 000	2 022 000	2 000 000	* 2 000 000
Ireland, Republic of	2 112 000	1 573 000	2 083 000	2 533 000	* 2 500 000
Italy	34 114 018	27 831 741	23 114 037	20 913 094	22 308 481
Latvia	953 000	1 077 000	1 092 000	1 197 000	* 1 200 000
Lithuania	996 284	1 014 977	1 069 593	902 733	979 565
Luxembourg	1 232 633	1 177 000	1 128 000	1 057 000	* 1 100 000
Macedonia	930 175	644 852	729 672	660 035	671 542
Netherlands	2 318 000	2 056 000	2 030 000	1 984 000	* 1 900 000
Norway	1 579 505	1 661 157	1 694 150	1 693 379	1 647 566
Poland	18 929 000	15 918 614	14 831 323	15 357 000	15 485 000
Portugal (a)	6 072 751	5 392 995	5 342 661	5 480 202	5 050 802
Romania (a)	7 646 612	7 727 046	7 120 934	7 554 605	7 909 342
Serbia	(a) 2 091 865	1 830 708	1 591 703	1 631 633	(a) 1 667 004
Slovakia	3 219 557	2 915 166	3 121 000	3 319 320	3 465 597
Slovenia	760 000	745 000	614 000	706 000	* 706 000
Spain	22 178 237	15 938 965	* 13 700 000	14 554 039	* 15 000 000
Sweden	2 546 000	2 611 000	2 654 000	2 885 000	* 2 900 000
Switzerland (b)	4 687 138	4 395 084	4 563 931	4 583 355	4 219 466
Turkey	66 656 800	67 019 400	72 899 430	72 412 441	71 418 945
United Kingdom (c)	8 529 000	7 952 000	8 203 000	8 958 000	* 9 000 000
European total	272 000 000	252 000 000	248 000 000	249 000 000	248 000 000

Note(s)

(a) Sales

(b) Includes production in Liechtenstein

(c) Great Britain only



**Price £30**

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