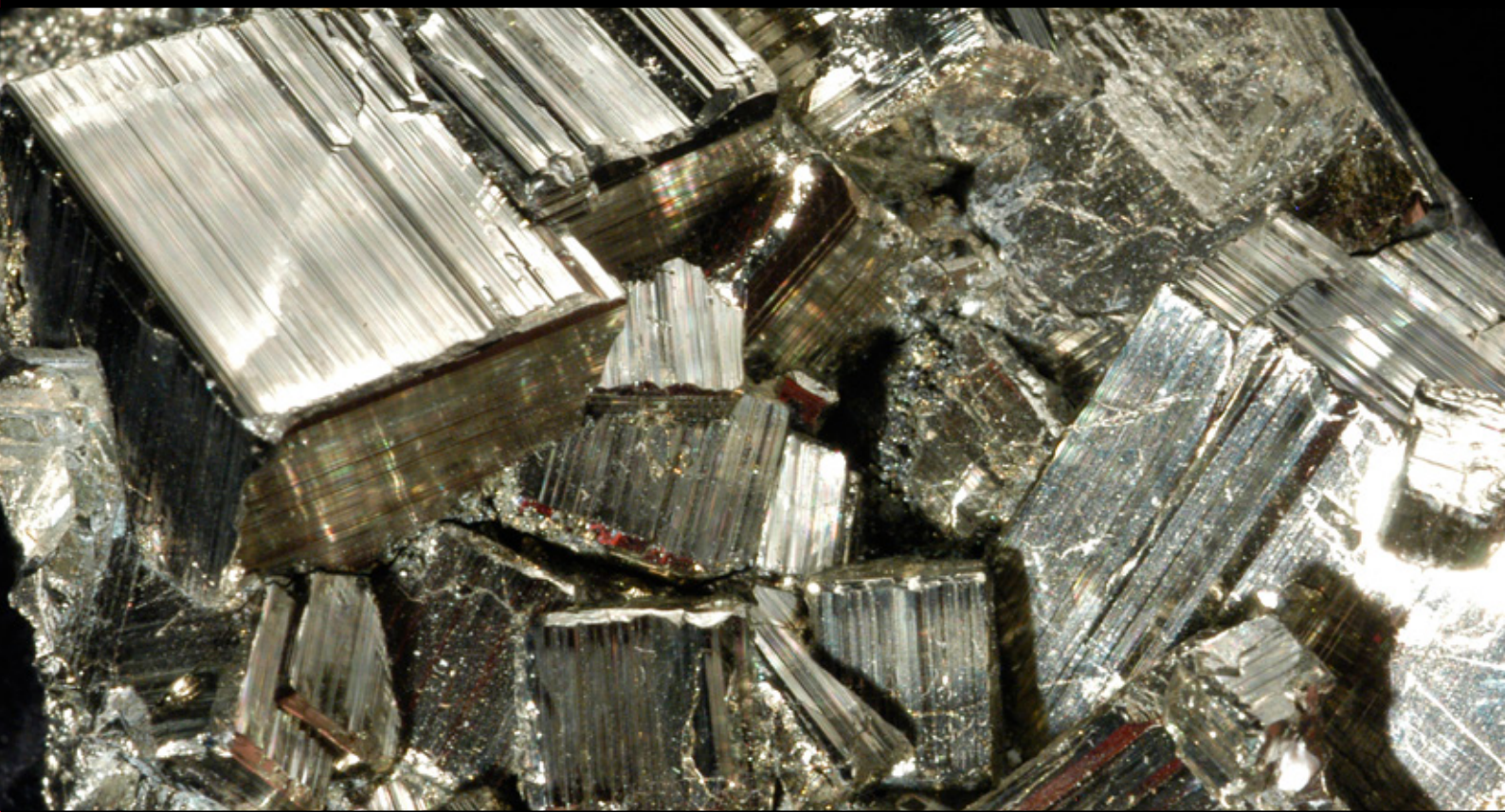


# World Mineral Production



**2009–2013**



**British  
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL



BRITISH GEOLOGICAL SURVEY

# WORLD MINERAL PRODUCTION 2009–13

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## PREFACE

Following the celebratory ‘Centenary Edition’ released last year, this volume is the latest in the series *World Mineral Production*, published by the British Geological Survey. It includes global mineral production data for 2013, and is a continuation of the dataset which 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 2009 to 2013. 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 statistics contained in this volume for 2013 reveal some interesting trends in the global outputs of several commodities. The largest increase in 2013 compared to 2012 was in the production of bauxite which increased by nearly 16 per cent, followed by mine production of tin (up nearly 14 per cent compared to 2012) and chromium ores and concentrates (up 12 per cent on the previous year). By contrast the largest decrease in 2013 was in the global output of zirconium minerals, which was down by 17 per cent compared to 2012 and barytes (down nearly 14 per cent in 2013 compared to the previous year).

Over the five year period covered by this volume the largest increases in global output are for magnesite (132 per cent between 2009 and 2013), mined nickel (up 88 per cent) and potash (up 66 per cent). Only four of the commodities included in this volume show a decrease over the five year period and these are mined bismuth (down nearly 21 per cent between 2009 and 2013), asbestos (down 8.5 per cent), graphite (down nearly three per cent) and the mine production of platinum group metals (down nearly five per cent). For the latter, the majority of this decrease occurred in 2012 and, although there has been a two per cent increase in 2013, global output of platinum group metals remained lower than in 2009, 2010 or 2011.

The concern surrounding the worldwide security of supply of minerals, which has been evident for a few years now, has continued especially with regard to 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.

In the UK, the Natural Environment Research Council (NERC) is funding a Security of Supply (SoS) research programme aimed at improving our understanding of the formation of deposits for critical metals and developing the extractive metallurgy of their ores. At the European level, a number of recent projects have been completed or are ongoing in this subject area. These include: the recent update of the criticality assessment which increased the list of the EU’s ‘critical’ minerals (or groups of minerals) from 14 to 20; a study on the competitiveness of the EU mineral raw materials sector; European intelligence network on the supply of raw materials (Minerals4EU; [www.minerals4eu.eu](http://www.minerals4eu.eu)); a study relating to raw material system analysis; Blue Mining ([www.bluemining.eu](http://www.bluemining.eu)), which relates to sustainable deep sea mining; the European rare earth element project (EURARE; [www.eurare.eu](http://www.eurare.eu)); and many others. BGS is involved as a collaborating partner in a number of these, or, where we are not directly involved, our expertise has proved to be invaluable to the project team. All these studies require data, such as that provided in this volume, as a foundation for the research.

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 2015

## CONTENTS

### *Commodity Index*

Alumina 3	Manganese 46
Aluminium 4	Mercury 47
Antimony 5	Mica 48
Arsenic 5	Molybdenum 49
Asbestos 6	Natural gas 55
Barytes 7	Natural sodium carbonate 66
Bauxite 2	Nepheline syenite 50
Bentonite 8	Nickel 50
Beryl 10	Niobium 70
Bismuth 10	Perlite 52
Borates 11	Petroleum 53
Bromine 11	Phosphates 57
Cadmium 12	Platinum 58
Chromium 13	Potash 59
Coal 14	Pyrites 67
Cobalt 17	Rare earths 60
Copper 19	Rhenium 60
Diamond 22	Salt 61
Diatomite 23	Selenium 64
Feldspar 24	Silicon 61
Ferro alloys 37	Sillimanite 64
Fluorspar 25	Silver 65
Fuller's earth 8	Strontium 66
Gallium 26	Sulphur 67
Germanium 26	Talc 69
Gold 27	Tantalum 70
Graphite 29	Tellurium 71
Gypsum 30	Tin 72
Indium 32	Titanium 73
Iodine 32	Tungsten 74
Iron ore 33	Uranium 75
Iron and steel 35	Vanadium 75
Kaolin 40	Vermiculite 76
Lead 42	Wollastonite 76
Lithium 44	Zinc 77
Magnesite 45	Zirconium 79
Magnesium 45	

## 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 Minérale, *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; Agnico Eagle Mines; Altona Mining; Aluminium de Greece; Amara Mining plc; Altyntau; Anglo American; AngloGold Ashanti; ARMZ; Aura Minerals Inc; Avocet Mining plc; Belvedere Resources; BHP Biliton; Breakwater Resources; Centamin; Centerra Gold; Consolidated Murchison; CNW Group; CZP; Dominion Salt; Dragon Mining; Dundee Precious Metals; Eagle Graphite; ElektroZinc; Endeavour Mining; Endomines; ENRC; Eramet; Exxaro; Eurozinc Mining Corporation; Evraz; First Quantum; Glamis Gold; Glencairn Gold; Glencore Xstrata; GoldBridges; Goldcorp Inc; Iamgold Corporation; Inmet Mining; IRC Group; Kazzinc; Kazakhmys; Lappland Goldminers; Lundin Mining; MMG; Nevsun; New Boliden; Nickel Asia; Nordgold; Norilsk Nickel; Norsk Hydro; Nyrstar; Orosur Mining Inc; Outokumpu; Paladin Energy Ltd; PanAust Mining; Phosagro; Phosphate Resources Ltd; Polymetal Internationa; Qatalum; Qatar Steel Company; RandGold Resources; Resolute Mining; Rich Metal Group; Rio Narcea; Rio Tinto; Ronphos Corporation; RNC Gold; Rusal; Semafo; Sherritt Internationa; SMR; SMZ company; Stillwater Mining; Sun-gold; Talvivaara; UMMC; Uralkali; Vitmetco; Weatherly International Plc; Aluar Aluminio, Argentina; Alumbrera, Argentina; Institute of Argentinean Petroleum and Gas, Argentina; Institute of Argentinean Steel, Argentina; Acero Argentinos; Northern Territory Government, Australia; Department of Primary Industries Victoria, Australia; Mineral Resources Tasmania, Australia; Bureau of Resources and Energy Economics, Australia; Vereinigung der Osterreichischen Zementindustrie, Austria; Energy Bangla, Bangladesh; Petrobangla, Bangladesh; Central Bank of Barbados; Federation de l'Industrie Cimentiere Belge, Belgium; Belgian Steel Federation; Statistics Belgium; Instituto Nacional de Estadística Bolivia; Cámara Boliviana de Hidrocarburos, Bolivia; Ministry of Mining and Metallurgy, Bolivia; Republika Srpska Institute of Statistics, Bosnia & Herzegovina; Agency for Statistics; Bosnia & Herzegovina; Departamento Nacional De Producao Mineral, Brazil; Grupo Paranapanema, Brazil; Agencia Nacional do Petroleo, Brazil;

Associação Brasileira do Alumínio, Brazil; Ministerio de Minas y Energia, Brazil; Sindicato da Indústria Carbonífera de Santa Catarina, Brazil; Natural Resources Canada; Statistics Canada; Canadian Association of Petroleum Producers; Mineral Resources of Quebec, Canada; Canadian Clay Products; Chilean Copper Commission; National Service for Geology and Mining, Chile; China Mining Association; National Bureau of Statistics, China; Ministerio De Minas Y Energia, Columbia; Oficina Nacional de Estadísticas, Cuba; Czech Republic Statistical Office; Statistics Denmark; Danish Energy Agency, Denmark; Ministerio de Recursos Naturales, Ecuador; Geological Survey of Finland; Federation des Minerais, Mineraux Industrielles et Metaux non Ferreux, France; Comite Professionel de Petrole, France; Unicem, France; Infociments, France; Statistisches Bundesamt Deutschland, Germany; RW Silicium, Germany; BEB Erdgas und Erdol, Germany; Verband der Kali, Germany; National Statistical Service of Greece; National Bank of Guyana; Ministerio de Energia y Minas, Guatemala; Federacciai, Italy; Unione Petrolifera, Italy; Istituto Nazionale di Statistica, Italy; Salt Industry Centre, Japan; Metal Economics Research Institute, Japan; Statistics Agency of Kazakhstan; Korea Institute of Geoscience and Mineral Resources, Republic of Korea; Statistical Office of Kosovo; State Agency of Geology and Mineral Resources, Kyrgyz Republic; Statec, Luxembourg; Bank Negara Malaysia; Pemex, Mexico; Cámara Nacional de la Industria del Hierro y del Acero, Mexico; Servicio Geologico de Mexico; Penoles, Mexico; Mineral Autlan, Mexico; Grupo Mexico; Mineral Resources & Petroleum Authority of Mongolia; Statistics Office of Montenegro; Bank al Maghrib, Morocco; Ministry of Mines, Morocco; Ministry of Mines and Energy, Namibia; Bank of Namibia; 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 Sentralbyra, 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; Instituto Nacional de Estadística, Portugal; Ministry of Agriculture, Portugal; Centre National de la Statistique et des Etudes Economiques, Republic of Congo; 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; Statistical Office of the Republic of Slovenia; Central Bank of Solomon Islands; Unesid, Spain; Staatsolie Maatschappij, Suriname; Sveriges Geologiska Undersokning, Sweden; Jernkontoret, Sweden; Statistiska Centralbyran, Sweden; Bureau of Mines, Taiwan; National Statistics, Taiwan; Bank of Thailand; Central Bank of Trinidad and Tobago; Department of Business, Innovation and Skills, United Kingdom; Department of Energy and Climate Change, United Kingdom; Office for National Statistics, United Kingdom; Energy Information Administration, United States of America; Direccion Nacional de Minería y Geología, Uruguay; General Statistics Office, Vietnam; Central Statistical Organisation, Republic of Yemen.

### *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	2009	2010	2011	2012	2013
Bosnia and Herzegovina	555 800	827 909	707 712	800 316	657 115
Croatia	500	2 300	4 800	5 700	* 6 000
France	129 700	93 100	80 800	69 500	* 70 000
Greece	1 935 000	1 902 000	2 324 000	1 816 000	1 844 000
Hungary	317 000	365 000	277 800	255 000	94 000
Montenegro	45 779	61 205	158 614	—	61 154
Russia	5 300 000	5 035 000	5 380 000	5 166 000	5 322 000
Turkey	406 700	700 000	500 000	450 000	* 400 000
Ghana	440 000	512 208	400 069	752 771	826 994
Guinea	14 774 240	16 427 300	17 593 100	17 823 000	18 763 000
Mozambique	3 612	8 556	10 352	8 352	7 500
Sierra Leone	742 820	1 089 131	1 457 507	734 480	543 380
Tanzania	122 920	* 31 000	* 30 000	43 244	49 952
Dominican Republic	53 317	8 888	—	10 522	769 530
Jamaica	8 103 884	8 539 853	10 188 916	9 339 291	9 435 214
Mexico	20 000	21 250	14 400	96 000	—
USA (a)	30 240	59 143	63 121	128 152	* 128 000
Brazil (b)	26 074 400	32 028 000	33 624 600	34 987 800	33 848 700
Guyana	1 484 935	1 082 512	1 818 399	2 213 972	1 713 242
Suriname	3 388 419	3 096 650	3 236 111	2 904 509	2 705 700
Venezuela	3 610 859	3 126 242	2 454 769	2 285 949	2 301 863
China	29 213 100	36 837 200	37 173 800	44 052 300	* 50 000 000
India (c)	14 124 093	12 722 820	13 599 566	16 611 610	21 666 011
Indonesia	14 720 000	27 410 000	40 643 000	31 443 000	55 655 000
Iran (d)	522 018	681 235	818 224	898 437	* 900 000
Iraq	250	3 350	—	—	—
Kazakhstan	5 130 000	5 310 000	5 495 000	5 170 000	5 192 800
Malaysia	274 456	124 274	188 141	121 873	208 770
Pakistan (e)	15 629	11 131	9 033	28 768	25 288
Saudi Arabia	—	284 000	206 000	760 114	1 044 360
Vietnam	* 80 000	* 80 000	* 80 000	* 80 000	* 80 000
Australia	66 169 000	68 584 000	70 231 000	76 281 000	81 119 000
Fiji	—	—	—	349 556	564 777
World total	198 000 000	227 000 000	249 000 000	256 000 000	296 000 000

### Notes

(1) This table includes production of refractory bauxite

(a) Data for Alabama only

(b) Including beneficiated and direct shipping ore

(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 alumina

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

Country	2009	2010	2011	2012	2013
Azerbaijan	9 590	—	6 188	101 780	—
Bosnia and Herzegovina	191 792	269 414	261 874	202 416	175 961
France	348 000	481 000	470 000	430 000	430 000
Germany	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000
Greece	642 900	661 882	683 030	653 011	527 500
Hungary	* 185 000	* 214 000	* 250 000	* 170 000	* 130 000
Ireland, Republic of	806 000	1 211 600	1 249 300	1 250 600	1 264 689
Italy	92 000	—	—	—	—
Montenegro	58 528	—	—	—	—
Romania	44 000	414 000	484 000	414 000	391 000
Russia	2 794 000	2 857 000	2 825 000	2 719 000	2 659 000
Spain	* 1 300 000	* 1 300 000	* 1 300 000	* 1 100 000	1 530 000
Turkey	* 100 000	* 160 000	* 210 000	* 220 000	* 186 000
Ukraine	1 524 000	1 534 000	1 601 000	1 429 000	1 493 000
Guinea	530 000	597 000	574 000	150 000	—
Canada	1 232 604	1 416 594	1 473 271	1 498 600	1 554 600
Jamaica	1 773 600	1 590 658	1 959 926	1 757 693	1 854 910
USA	2 369 000	3 468 000	3 792 000	4 387 000	4 390 000
Brazil	8 617 900	9 523 900	10 306 800	10 320 600	9 942 100
Suriname	1 536 187	1 486 449	1 421 464	1 202 806	1 149 400
Venezuela	1 376 000	1 244 000	1 265 530	808 000	600 230
China	23 805 100	29 064 900	34 077 600	37 715 000	44 375 700
India (a)	3 432 716	3 576 890	3 930 950	* 4 350 000	* 4 040 000
Iran (b)	210 385	236 476	232 000	* 400 000	247 700
Japan	* 550 000	* 550 000	* 500 000	* 350 000	* 250 000
Kazakhstan	1 608 000	1 640 000	1 670 000	1 510 000	1 590 000
Vietnam	—	—	—	—	* 106 000
Australia	19 939 000	19 990 000	19 399 000	21 357 000	21 528 000
World total	76 100 000	84 500 000	90 900 000	95 500 000	101 400 000

### Notes

- (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	2009	2010	2011	2012	2013
Azerbaijan	10 145	379	6 817	54 890	53 290
Bosnia and Herzegovina	130 042	150 488	163 924	159 660	157 082
Croatia	—	666	600	—	—
France	345 000	356 000	334 000	349 000	343 000
Germany	291 750	402 480	432 472	410 413	492 368
Greece	134 737	137 000	165 150	165 050	169 480
Iceland	804 605	825 803	780 853	802 827	736 429
Italy	165 800	129 500	141 900	99 600	—
Montenegro	63 960	82 043	92 838	74 813	47 951
Netherlands	165 000	217 000	* 200 000	86 300	81 000
Norway	1 098 200	1 090 000	1 201 000	1 110 900	1 154 900
Romania	228 630	241 000	261 000	249 000	250 000
Russia	3 815 000	3 947 000	3 992 000	4 024 000	3 724 000
Slovakia	149 604	163 000	162 840	160 662	163 000
Slovenia	35 148	40 177	75 300	83 300	* 83 000
Spain	329 500	456 500	408 400	386 395	* 250 000
Sweden	69 708	93 000	111 000	129 000	131 000
Turkey	30 000	54 100	56 400	43 700	32 200
Ukraine	50 000	25 000	7 000	—	—
United Kingdom	252 000	186 000	213 000	60 000	45 000
Cameroon	73 000	76 000	69 000	52 000	75 000
Egypt (a)	400 369	352 818	353 904	393 696	325 300
Ghana	—	—	35 000	38 000	36 600
Mozambique	545 000	551 000	562 000	562 000	562 000
Nigeria	11 000	18 000	15 000	22 000	2 000
South Africa	809 000	807 000	810 000	665 000	822 000
Canada	3 030 269	2 963 200	2 987 964	2 780 556	2 967 364
USA	1 727 200	1 727 200	1 983 500	2 070 300	1 946 000
Argentina	411 990	416 509	420 299	412 692	434 758
Brazil	1 535 900	1 536 200	1 440 400	1 436 400	1 304 300
Venezuela	569 000	353 658	330 000	203 000	171 717
Bahrain	847 700	850 700	881 310	890 200	912 700
China	12 890 500	16 244 100	18 134 700	20 251 000	22 046 100
India (b)	1 480 568	1 621 033	1 654 156	1 720 427	1 171 946
Indonesia	257 600	253 300	246 300	253 000	255 300
Iran (c)	281 300	282 000	321 900	338 000	* 331 900
Japan	5 100	4 700	4 700	4 500	3 000
Kazakhstan	127 000	227 000	249 000	249 000	248 000
Malaysia	15 000	60 000	188 100	121 900	* 290 000
Oman	351 000	367 000	373 000	360 000	354 000
Qatar	10 000	125 177	468 789	627 971	606 000
Saudi Arabia	—	—	—	—	187 000
Tajikistan	359 400	348 900	277 600	272 500	216 369
United Arab Emirates	1 009 800	1 400 000	1 750 000	1 820 000	1 864 000
Australia	1 945 000	1 928 000	1 945 000	1 864 000	1 778 000
New Zealand	271 000	344 000	357 000	325 000	324 000
World total	37 100 000	41 500 000	44 700 000	46 200 000	47 100 000

### Notes

(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	2009	2010	2011	2012	2013
Russia	1 100	6 039	6 348	* 6 400	6 520
Turkey	1 346	1 403	2 340	7 119	* 7 500
South Africa	2 090	2 257	2 391	3 044	2 332
Canada	64	69	68	65	90
Guatemala	—	—	—	62	159
Mexico	74	98	105	169	294
Bolivia	2 990	4 980	3 947	5 081	5 053
Peru (a)	145	—	—	—	—
China	112 000	129 831	123 900	128 600	120 937
Kazakhstan	597	840	800	569	911
Kyrgyzstan	918	842	892	924	* 900
Laos	887	530	1 456	1 042	1 100
Pakistan (b)	75	25	—	12	89
Tajikistan	4 200	8 500	6 642	6 645	* 6 600
Thailand	555	705	442	672	488
Australia (b)	1 794	707	1 751	1 950	3 277
World total	129 000	157 000	151 000	162 000	156 000

### Notes

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

(2) In addition, Burma, Honduras and Vietnam are believed to produce antimony

(a) Including Sb content of antimonial lead plus Sb content of ores for export

(b) Years ended 30 June of that stated

## Production of white arsenic

tonnes (metric)

Country	2009	2010	2011	2012	2013
Belgium	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Portugal	* 15	* 15	* 15	* 15	* 15
Russia	* 1 500	* 1 500	* 1 500	* 1 500	* 1 500
Bolivia	115	155	99	104	* 100
Chile	* 11 000	* 11 000	* 10 000	* 10 000	* 10 000
Peru	300	—	—	—	—
China	* 25 000	* 25 000	* 25 000	* 26 000	* 25 000
Japan	* 40	* 40	* 40	* 40	* 40

### Notes

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

(2) In addition to the countries listed, Austria, Finland, Hungary, Spain and the United Kingdom are believed to produce arsenic

## Production of asbestos

tonnes (metric)

Country	2009	2010	2011	2012	2013
Russia	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000
Zimbabwe Chrysotile	4 971	2 031	—	614	600
Canada Chrysotile	* 150 000	* 100 000	* 50 000	* —	—
Argentina	322	341	105	102	* 30
Brazil	288 452	302 257	306 320	305 000	290 800
China	* 440 000	* 400 000	* 440 000	* 420 000	* 400 000
India Amphibole (a)	243	268	276	389	227
Kazakhstan	230 000	214 100	223 200	241 000	243 300
World total	2 100 000	2 000 000	2 000 000	2 000 000	1 900 000

### Notes

(1) In addition to the countries listed, Romania is believed to produce asbestos

(a) Years ended 31 March following that stated

## Production of barytes

tonnes (metric)

Country	2009	2010	2011	2012	2013
Bosnia and Herzegovina	30	57	13	28	—
Bulgaria	14 300	500	200	—	1 000
Germany	45 606	55 887	55 342	52 030	45 446
Italy	* 3 500	* 3 500	* 3 500	* 3 500	* 3 500
Portugal	1 078	15	—	—	—
Russia	* 64 000	* 64 000	* 64 000	* 64 000	* 64 000
Slovakia	30 000	17 000	13 000	21 000	14 000
Spain	5 212	2 050	—	—	—
Turkey	213 187	172 618	250 786	* 250 000	* 250 000
United Kingdom	36 000	34 099	31 000	30 000	29 000
Algeria	37 981	42 254	36 500	36 000	30 250
Egypt	1 587	1 170	1 168	* 1 600	* 1 600
Morocco	586 937	572 429	769 504	* 1 000 000	* 920 000
Nigeria	14 314	10 749	* 11 000	* 6 000	* 6 000
Tunisia	—	—	5 700	* 5 700	* 5 700
Zimbabwe	—	—	—	—	10 000
Canada	15 000	22 000	22 000	22 000	25 000
Guatemala	13	11	334	91	343
Mexico	152 791	143 225	134 727	139 997	343 585
USA (a)	383 000	662 000	710 000	666 000	660 000
Argentina	3 416	2 900	3 000	3 000	4 200
Bolivia	1 900	7 845	21 297	20 400	29 900
Brazil (b)	49 847	41 385	7 039	3 025	* 3 000
Colombia	* 2 000	* 2 000	* 2 000	* 2 000	2 039
Peru	27 881	52 275	86 790	79 451	52 491
Afghanistan	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Burma (c)	7 008	14 119	32 183	21 539	31 295
China	2 900 000	3 900 000	4 300 000	4 400 000	3 500 000
India (c)	2 152 552	2 338 806	1 776 980	1 789 431	1 136 814
Iran (d)	361 217	326 275	271 454	314 769	* 350 000
Kazakhstan	306 000	358 000	466 000	590 000	530 200
Laos	12 460	17 500	12 400	15 000	* 15 000
Malaysia	22 390	1 000	—	—	500
Pakistan (e)	62 997	57 166	31 836	48 510	118 471
Saudi Arabia	—	30 000	30 000	32 000	34 000
Thailand	51 895	33 465	67 703	64 499	107 437
Vietnam	70 000	90 000	90 000	90 000	90 000
Australia	16 634	16 529	10 569	10 273	13 176
World total	7 700 000	9 100 000	9 300 000	9 800 000	8 400 000

### Notes

- (1) This table may include small quantities of witherite  
(2) In addition to the countries listed, Cuba is believed to produce barytes

- (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	2009	2010	2011	2012	2013
Armenia					
Bentonite	238	1 397	835	4 987	15 387
Azerbaijan					
Bentonite	10 581	18 100	20 679	36 700	91 958
Bosnia and Herzegovina					
Bentonite (a)	16 042	314	—	—	18 808
Bulgaria					
Bentonite	108 400	99 700	53 900	77 900	—
Cyprus					
Bentonite	152 722	162 969	160 625	160 180	158 386
Czech Republic					
Bentonite	177 000	183 000	160 000	221 000	226 000
Denmark					
Bentonite	24 040	23 832	38 300	30 330	56 355
France					
Bentonite	25 000	25 000	20 000	28 000	* 25 000
Germany					
Bentonite	326 461	362 623	375 332	366 220	358 844
Greece					
Bentonite	1 500 000	844 804	1 250 000	1 235 110	1 200 000
Hungary					
Bentonite	5 298	17 200	22 931	1 392	1 671
Italy					
Bentonite	114 212	104 279	105 952	109 576	118 235
Macedonia					
Bentonite	9 033	7 084	8 918	2 355	18 520
Poland					
Bentonite	2 800	2 000	900	800	1 050
Romania					
Bentonite	13 756	21 637	19 864	19 241	24 127
Russia					
Bentonite	* 460 000	* 460 000	* 460 000	* 460 000	* 460 000
Slovakia					
Bentonite	109 000	153 000	213 000	177 000	184 000
Slovenia					
Bentonite	104	135	168	98	143
Spain					
Bentonite	147 090	157 001	110 371	96 605	102 709
Attapulgitite	21 110	27 841	26 021	23 537	25 439
Sepiolite	573 937	557 862	566 270	622 372	576 608
Turkey					
Bentonite	753 155	718 260	379 917	251 667	* 255 000
Sepiolite	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Ukraine					
Bentonite	195 000	185 000	211 000	219 000	* 219 000
Algeria					
Bentonite	31 612	34 126	29 000	26 000	27 670
Egypt					
Bentonite (b)	35 384	28 865	33 132	17 709	* 18 000
Malawi					
Bentonite	8 050	2 100	2 450	—	—
Morocco					
Bentonite	84 097	110 703	97 071	* 100 000	* 100 000
Fuller's earth (c)	132 110	82 570	103 682	* 100 000	* 100 000
Mozambique					
Bentonite	577	459	493	1 459	* 1 500
Senegal					
Attapulgitite	180 900	204 300	179 900	180 500	234 600
South Africa					
Bentonite	40 340	82 341	120 417	120 566	177 187
Attapulgitite	52 103	57 606	14 448	15 850	21 233
Canada					
Bentonite (d)	3 947	4 542	2 266	2 015	3 451
Cuba					
Bentonite	670	228	1 244	668	335



## Production of bentonite and fuller's earth

tonnes (metric)

Country	2009	2010	2011	2012	2013
Guatemala					
Bentonite	14 287	22 423	12 270	16 183	18 377
Mexico					
Bentonite	511 430	590 998	563 795	956 224	617 632
Fuller's earth	108 139	170 350	107 436	227 496	301 462
USA					
Bentonite (e)	3 650 000	4 630 000	4 950 000	4 980 000	4 950 000
Fuller's earth (e)	2 010 000	2 050 000	1 950 000	1 980 000	2 040 000
Argentina					
Bentonite	148 099	229 301	236 125	193 795	* 200 000
Brazil					
Bentonite	264 243	531 693	566 267	512 975	* 500 000
Chile					
Bentonite	—	—	1 255	893	358
Colombia					
Bentonite	* 8 500	* 8 500	* 8 500	* 8 500	9 056
Peru					
Bentonite	119 452	44 266	27 534	22 977	47 743
Uruguay					
Bentonite	210	430	1 210	5 530	8 974
Burma					
Bentonite (f)	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
China					
Bentonite	* 3 400 000	* 3 400 000	* 3 500 000	* 3 500 000	* 3 500 000
India					
Bentonite (f)	* 561 000	* 761 000	* 1 154 000	* 1 093 000	* 1 566 000
Fuller's earth (f)	* 5 600	* 5 700	* 5 600	* 5 600	* 5 600
Indonesia					
Bentonite	* 6 000	* 6 500	* 6 500	* 7 000	* 7 000
Iran					
Bentonite (g)	387 437	350 208	377 398	430 231	* 430 000
Iraq					
Bentonite	3 959	6 127	6 452	6 530	6 288
Japan					
Bentonite	* 432 000	* 430 000	* 425 000	* 420 000	* 420 000
Fuller's earth	* 110 000	* 110 000	* 110 000	* 110 000	* 110 000
Korea (Rep. of)					
Bentonite	84 963	88 255	94 987	88 543	80 188
Fuller's earth	99 802	83 476	46 623	57 787	51 309
Pakistan					
Bentonite (b)	32 032	34 596	30 840	16 520	26 077
Fuller's earth (b)	10 213	11 219	6 774	9 942	4 259
Philippines					
Bentonite	1 413	1 475	2 087	2 699	3 329
Bentonite and fuller's earth					
Thailand					
Bentonite	110	130	55 220	81 000	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)	* 124 400	* 126 600	* 72 000	* 82 100	* 105 900
Fuller's earth	* 10 000	* 10 000	* 14 300	* 16 900	10 543
New Zealand					
Bentonite	880	1 216	—	2 263	762
World total bentonite	14 200 000	15 100 000	16 100 000	16 300 000	16 600 000
World total fuller's earth (a)	3 300 000	3 400 000	3 100 000	3 400 000	3 500 000

See notes on following page

## Production of bentonite and fuller's earth

### Notes

- (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, Austria and Ecuador may produce bentonite and France 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	2009	2010	2011	2012	2013
Madagascar (a)	* 12	* 12	* 12	* 16	* 16
Mozambique	45	57	58	58	* 60
Zambia	* 1	* 3	* 1	* 2	* 2
USA (b)	3 030	4 460	5 920	5 570	* 5 600
China	* 500	* 550	* 550	* 550	* 550

### Notes

- (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	2009	2010	2011	2012	2013
Bulgaria	* —	* 3	* 3	* 3	* 3
Russia	* 65	* 50	* 45	* 45	* 45
Canada	86	92	92	121	35
Mexico	854	982	935	800	824
Bolivia	54	87	41	10	* 10
Peru (a)	423	—	—	—	—
China	1 688	1 589	1 544	* 1 500	* 1 450
Japan (a)	423	448	476	446	485
World total	3 600	3 300	3 100	2 900	2 900

### Notes

- (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
- (3) In addition to the countries listed, Brazil is believed to produce bismuth

- (a) Metal production

## Production of borates

tonnes (metric)

Country	2009	2010	2011	2012	2013
Russia	* 400 000	* 400 000	* 400 000	* 400 000	* 250 000
Turkey	1 687 102	2 504 249	2 729 849	1 814 725	* 1 800 000
USA (a)	* 1 200 000	* 1 200 000	* 1 250 000	* 1 300 000	* 1 300 000
Argentina	505 983	622 968	648 806	* 660 000	* 670 000
Bolivia	93 829	109 922	138 767	142 532	164 803
Chile	613 135	503 609	491 421	449 572	582 074
Peru	187 221	292 855	—	104 072	224 454
China	* 190 000	* 200 000	* 200 000	* 200 000	* 200 000
Iran (b)	388	* 500	1 044	* 1 000	* 1 000
Kazakhstan	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000

### Notes

(a) Sold or used by producers

(b) Years ended 20 March following that stated

## Production of bromine

kilograms

Country	2009	2010	2011	2012	2013
Russia	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Ukraine	* 400 000	* 400 000	* 400 000	* 400 000	* 400 000
USA (a)	* 230 000 000	* 230 000 000	* 225 000 000	* 225 000 000	* 225 000 000
China	* 140 000 000	* 150 000 000	* 150 000 000	* 100 000 000	* 100 000 000
India (b)	1 862 480	1 587 000	1 572 160	1 773 010	2 131 260
Israel	127 689 000	184 696 000	202 313 000	173 940 000	184 943 000
Japan	* 20 000 000	* 20 000 000	* 20 000 000	* 20 000 000	* 20 000 000
Jordan	69 000 000	329 200 000	147 988 000	* 200 000 000	* 250 000 000
World total	589 000 000	916 000 000	747 000 000	721 000 000	783 000 000

### Notes

(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	2009	2010	2011	2012	2013
Bulgaria	413	389	427	363	* 360
Germany	* 400	* 400	* 400	* 400	* 400
Netherlands	* 490	* 560	* 570	* 560	* 560
Norway	249	300	309	* 310	* 310
Poland	534	451	526	370	460
Russia	944	1 064	1 100	1 000	900
Canada (a)	1 299	1 357	1 203	1 286	1 313
Mexico	1 510	1 464	1 485	1 482	1 451
USA (a)	633	637	600	* 600	* 600
Argentina	36	32	* 31	* 30	* 30
Brazil	* 200	* 200	* 200	* 200	* 200
Peru	289	357	572	684	695
China	7 053	7 363	6 672	* 7 000	* 7 000
India (b)	553	550	449	391	228
Japan	1 824	2 053	1 755	1 856	1 821
Kazakhstan	1 270	1 407	1 278	1 166	1 335
Korea (Rep. of)	2 500	4 166	3 005	3 904	3 904
Korea, Dem. P.R. of	* 200	* 200	* 200	* 200	* 200
Australia	* 370	* 350	* 390	* 380	* 380
World total	20 800	23 300	21 200	22 200	22 100

### Notes

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

(a) Including cadmium sponge and/or secondary metal

(b) Years ended 31 March following that stated

## Production of chromium ores and concentrates

tonnes (metric)

Country	2009	2010	2011	2012	2013
Albania	288 759	334 467	330 938	380 349	529 592
Finland	247 000	598 000	693 000	452 000	981 752
Kosovo	—	—	—	2 000	* 2 000
Russia	347 000	699 000	662 000	552 000	* 552 000
Turkey	1 770 029	2 461 314	2 281 981	2 029 403	* 2 000 000
Madagascar	131 800	134 500	66 700	111 500	* 88 000
South Africa	6 864 938	10 871 095	10 721 360	11 310 223	13 644 699
Sudan	14 087	56 823	64 130	* 18 300	* 18 000
Zimbabwe	193 674	516 776	599 079	119 409	* 120 000
Brazil	365 210	520 129	542 512	472 501	444 507
Afghanistan	6 000	* 6 000	* 6 000	* 6 000	* 6 000
China	* 220 000	* 220 000	* 220 000	* 220 000	* 220 000
India (a)	3 425 580	4 325 699	2 923 435	2 833 895	2 852 854
Iran (b)(c)	274 511	350 000	417 554	411 566	* 410 000
Kazakhstan	4 678 000	5 092 000	5 059 000	5 233 000	5 255 000
Oman	636 482	865 400	616 700	554 800	787 700
Pakistan	* 300 000	* 540 000	* 450 000	* 500 000	* 490 000
Philippines (b)	14 322	14 807	25 483	36 628	26 164
Vietnam	* 37 100	* 58 600	* 24 900	* 1 800	* 24 800
Australia	182 000	181 200	323 800	452 300	355 200
World total	20 000 000	27 800 000	26 000 000	25 700 000	28 800 000

### Notes

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

(a) Years ended 31 March following that stated

(b) Including foundry sand and/or lumpy ore

(c) Years ended 20 March following that stated

## Production of coal

tonnes (metric)

Country	2009	2010	2011	2012	2013
Albania					
Lignite	2 000	3 000	100	—	—
Bosnia and Herzegovina					
Brown coal and lignite	11 515 138	10 976 163	12 738 225	12 311 623	11 764 827
Bulgaria					
Lignite	25 014 800	27 148 300	34 496 200	31 040 700	26 459 300
Brown coal	2 243 800	2 321 200	2 743 500	2 556 700	2 301 500
Czech Republic					
Bituminous	10 621 000	11 193 000	10 967 000	10 796 000	8 610 000
Lignite	262 000	—	—	—	—
Brown coal	45 354 000	43 931 000	46 848 000	43 710 000	40 585 000
Georgia	213 188	267 664	352 872	424 998	371 845
Germany					
Anthracite and Bituminous	14 971 000	14 110 000	12 960 000	11 558 000	8 260 000
Brown coal	169 857 142	169 402 544	176 502 048	185 432 000	182 696 000
Greece					
Lignite	61 800 000	53 600 000	58 400 000	62 334 800	54 000 000
Hungary					
Lignite	8 026 587	8 202 859	8 800 783	8 438 000	8 834 000
Brown coal	944 139	813 403	699 129	875 944	749 000
Kosovo					
Lignite	7 839 173	7 958 090	8 212 103	8 028 397	8 219 393
Macedonia					
Lignite	7 395 915	6 583 074	7 902 084	7 309 546	6 633 560
Montenegro					
Lignite	957 164	1 937 847	1 972 671	1 706 302	1 692 535
Norway					
Bituminous (a)	2 437 000	1 685 000	1 640 000	1 325 000	2 135 000
Poland					
Bituminous	78 064 462	76 727 802	76 447 604	79 854 904	77 016 910
Lignite	57 108 304	56 510 125	62 841 269	64 297 772	65 848 670
Romania					
Anthracite and Bituminous	—	—	2 121 574	1 876 062	* 2 000 000
Lignite	28 460 152	28 774 244	33 779 130	31 529 377	22 902 291
Brown coal	63 458	62 448	46 071	17 700	—
Russia	298 000 000	317 000 000	334 000 000	354 000 000	347 000 000
Serbia					
Bituminous	69 000	108 000	134 000	141 000	155 000
Lignite (b)	38 070 579	37 562 840	40 467 132	37 707 017	39 752 741
Brown coal	209 660	193 492	349 861	316 507	340 892
Slovakia					
Lignite	155 000	176 000	124 000	136 000	179 000
Brown coal	2 221 000	2 026 000	1 989 000	1 964 000	2 009 000
Slovenia					
Lignite	3 921 746	4 010 930	4 066 278	3 967 064	3 721 188
Brown coal	510 769	419 466	435 800	314 262	50 744
Spain					
Anthracite	4 306 033	3 212 603	2 489 797	2 259 236	2 213 775
Bituminous	2 898 340	2 776 918	1 774 992	1 651 496	1 799 242
Sub-bituminous	2 493 577	2 428 877	2 358 930	2 275 409	1 870 569
Turkey					
Anthracite	3 773 603	6 312 137	5 619 316	3 358 843	* 3 100 000
Bituminous	* 3 000 000	* 3 000 000	3 542 223	3 502 009	* 3 500 000
Lignite	82 263 104	86 943 392	79 968 510	75 036 558	* 75 000 000
Ukraine					
Bituminous	54 977 000	54 952 000	62 661 000	65 705 000	64 203 000
Lignite	175 000	* 175 000	* 175 000	* 175 000	* 175 000
United Kingdom					
Bituminous (c)	17 874 000	18 417 000	18 627 000	17 047 000	12 839 000
Botswana	737 798	988 240	787 729	1 454 724	1 495 653
Congo, Democratic Republic					
Bituminous	133 400	133 400	143 335	132 449	* 132 000
Egypt (d)	—	109 884	233 283	* 250 000	* 250 000
Ethiopia					
Lignite	15 000	20 000	20 000	* 20 000	* 20 000
Malawi	59 201	79 186	83 146	70 552	* 71 000

# Production of coal

tonnes (metric)

Country	2009	2010	2011	2012	2013
Mozambique					
Bituminous	25 924	35 737	82 920	54 432	40 926
Niger	225 072	246 558	246 016	235 072	241 792
Nigeria					
Sub-bituminous	* 40 000	44 148	* 44 000	* 44 000	* 44 000
South Africa					
Anthracite	1 657 860	2 073 889	2 553 635	3 005 136	3 621 283
Bituminous	248 923 814	255 131 918	250 203 209	255 570 657	252 660 850
Swaziland					
Anthracite	129 647	145 903	121 050	152 284	257 090
Tanzania					
Bituminous	16 500	179 500	82 856	78 672	84 772
Zambia					
Bituminous	* 14 000	* —	* —	* —	* —
Zimbabwe					
Bituminous	1 667 346	2 668 183	2 562 054	1 593 600	4 980 200
Canada					
Bituminous	27 959 000	33 704 000	34 621 000	35 374 000	38 282 000
Sub-bituminous	24 425 000	23 927 000	22 762 000	21 625 000	21 657 000
Lignite	10 550 000	10 264 000	9 731 000	9 496 000	8 969 000
Mexico					
Bituminous	13 555 680	16 318 120	20 967 630	16 276 556	15 717 587
USA					
Anthracite (e)	1 724 000	1 633 000	2 082 940	2 148 000	* 2 100 000
Bituminous (e)	457 320 000	444 074 000	454 054 000	440 321 000	* 440 000 000
Sub-bituminous	450 334 000	467 027 000	441 167 731	436 395 960	* 435 000 000
Lignite	65 772 000	70 943 000	73 440 875	71 602 574	* 72 000 000
Argentina					
Bituminous	181 474	140 000	178 000	* 160 000	* 150 000
Brazil					
Bituminous and lignite (f)	5 947 364	5 611 467	5 985 489	6 440 998	8 009 895
Chile					
Bituminous	118 305	106 018	131 430	141 120	144 313
Lignite	517 769	512 775	522 672	570 594	2 758 131
Colombia					
Bituminous	72 807 412	74 350 133	85 803 229	89 024 321	85 496 062
Peru					
Anthracite and Bituminous	156 372	91 960	164 392	226 908	188 591
Venezuela					
Bituminous	3 258 146	2 630 820	* 2 270 000	* 3 120 000	* 3 000 000
Afghanistan					
Bituminous	453 592	657 618	* 658 000	* 658 000	* 658 000
Bangladesh (d)	857 648	730 866	666 635	861 072	854 804
Bhutan	48 545	87 814	148 244	98 731	77 743
Burma (g)	231 271	235 743	355 693	471 022	380 272
China	2 973 000 000	3 235 000 000	3 520 000 000	3 660 000 000	3 680 000 000
India					
Bituminous (g)	532 042 000	532 694 000	539 950 000	556 402 000	563 085 000
Lignite (g)	34 071 000	37 733 000	42 332 000	46 453 000	44 275 000
Indonesia					
Anthracite and Bituminous	256 181 000	275 164 196	353 270 937	359 490 000	375 060 000
Iran					
Bituminous (h)	2 180 810	* 2 500 000	2 499 495	2 819 792	* 2 800 000
Kazakhstan					
Bituminous	95 770 000	103 646 000	108 081 000	112 780 000	113 349 000
Lignite	5 084 000	7 283 000	8 368 000	7 748 000	6 511 000
Korea (Rep. of)					
Anthracite	2 518 940	2 083 972	2 084 474	2 094 000	1 814 000
Korea, Dem. P.R. of (i)	* 36 000 000	* 41 000 000	* 41 000 000	41 492 000	* 41 000 000
Kyrgyzstan	606 900	575 000	830 700	1 106 700	* 1 106 700
Laos	466 082	501 600	511 700	510 100	* 510 000
Malaysia	2 138 390	2 397 340	2 915 788	2 951 124	2 893 962
Mongolia (i)	14 365 500	25 161 900	32 029 700	28 561 000	29 163 600
Nepal					
Sub-bituminous (j)	14 819	11 799	13 165	10 904	14 084

## Production of coal

tonnes (metric)

Country	2009	2010	2011	2012	2013
Pakistan (k)(d)	3 679 185	3 535 828	3 291 617	3 178 986	2 813 079
Philippines					
Bituminous	4 687 277	6 650 357	6 881 474	7 348 647	* 7 349 000
Tajikistan	178 300	199 700	236 400	412 000	515 600
Thailand					
Lignite	16 360 261	18 399 399	21 324 406	18 652 557	18 110 763
Uzbekistan					
Bituminous	100 698	197 766	59 874	232 239	* 230 000
Lignite	3 553 443	3 101 665	3 783 867	3 803 825	* 3 800 000
Vietnam					
Anthracite	44 078 000	44 835 000	46 611 000	42 383 000	41 193 900
Australia					
Bituminous (l)	350 000 000	357 000 000	350 000 000	381 000 000	408 000 000
Brown coal (d)	68 252 000	68 751 000	66 733 000	69 124 000	* 69 000 000
New Zealand					
Bituminous	2 085 486	2 597 400	2 330 400	2 276 300	2 279 300
Sub-bituminous	2 218 143	2 438 200	2 294 200	2 324 000	2 055 700
Lignite	259 704	294 900	320 100	325 900	290 400
World total	6 888 000 000	7 251 000 000	7 690 000 000	7 886 000 000	7 906 000 000

### Notes

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

- (a) 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) Coal; all forms
- (j) Years ended 15 July of that shown
- (k) Including lignite
- (l) Including sub-bituminous



## Mine production of cobalt

tonnes (metal content)

Country	2009	2010	2011	2012	2013
Finland	* 27	* 140	480	1 381	2 061
Russia (a)	2 352	2 460	2 337	2 186	2 368
Botswana	342	272	149	195	248
Congo, Democratic Republic	56 258	97 693	99 475	86 433	76 874
Madagascar	—	—	—	493	2 083
Morocco (a)	1 600	1 582	1 518	1 314	1 353
South Africa (a)	238	840	862	1 102	1 294
Uganda (a)	673	624	661	556	291
Zambia (a)	1 535	5 134	5 956	5 665	6 389
Zimbabwe	39	58	174	121	200
Canada	3 919	4 636	7 071	3 652	4 002
Cuba	3 721	3 706	3 853	3 792	3 319
Brazil	2 075	3 139	3 623	3 650	3 140
China	6 003	6 382	6 843	* 7 000	* 7 500
Indonesia	* 650	* 650	* 650	* 650	* 650
Philippines	* 1 500	* 1 500	* 1 500	2 269	2 126
Australia (b)	5 365	4 838	4 254	5 413	6 853
New Caledonia	913	1 735	2 404	2 631	3 080
Papua New Guinea	—	—	—	473	1 224
World total	87 000	135 000	142 000	129 000	125 000

### Notes

- (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

(b) Years ended 30 June of that stated

## Production of cobalt metal

tonnes (metric)

Country	2009	2010	2011	2012	2013
Belgium (a)	2 150	2 600	3 187	4 200	5 415
Finland	8 970	9 429	10 627	10 562	10 798
France	368	302	354	326	308
Norway	3 510	3 208	3 067	2 969	3 348
Russia	2 352	2 460	2 337	2 186	2 368
Congo, Democratic Republic (b)	2 950	4 182	3 083	2 999	3 000
Morocco	1 600	1 582	1 518	1 314	1 353
South Africa (c)	238	840	862	1 102	1 294
Uganda	673	624	661	556	291
Zambia	1 535	5 134	5 956	5 665	5 000
Canada (d)	4 918	4 711	6 038	5 994	4 789
Brazil	1 012	1 369	1 614	1 750	1 653
China (a)	25 544	35 929	34 969	29 784	36 062
India	1 001	1 187	1 299	800	295
Japan	1 332	1 935	2 007	2 542	2 747
Australia	4 050	4 117	4 722	4 769	4 981
World total	62 200	79 600	82 300	77 500	83 700

### Notes

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

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

(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	2009	2010	2011	2012	2013
Albania	2 600	2 672	4 379	5 691	5 454
Armenia	23 233	31 062	33 597	40 908	48 891
Azerbaijan	—	183	611	502	327
Bulgaria (a)	110 652	112 904	114 603	118 255	115 149
Cyprus	2 380	2 595	3 660	4 328	3 631
Finland	14 600	14 700	14 000	25 446	34 451
Georgia	16 600	10 700	10 200	6 800	26 000
Macedonia	7 440	7 912	7 555	9 506	9 802
Poland	439 365	425 725	426 665	427 064	428 879
Portugal	86 462	74 426	79 686	74 043	77 236
Romania	3 129	5 127	6 355	5 902	6 700
Russia	675 700	702 700	713 100	* 720 000	* 720 000
Serbia	19 400	19 000	25 800	32 200	32 600
Slovakia	14	22	28	31	...
Spain	17 663	54 335	68 511	97 452	104 600
Sweden	55 414	76 514	82 967	82 422	82 904
Turkey	72 400	79 900	92 500	104 300	120 500
Botswana	24 382	48 026	31 929	35 768	51 254
Congo, Democratic Republic	299 300	378 300	480 000	619 900	914 600
Eritrea	—	—	—	—	21 800
Mauritania	36 608	36 969	35 281	37 670	37 970
Morocco	11 830	14 986	12 076	17 700	* 18 000
Namibia	—	—	3 366	5 304	4 896
South Africa	107 600	102 600	96 600	88 800	80 821
Tanzania	3 079	6 400	6 748	5 840	5 740
Zambia	601 200	731 700	739 759	699 020	763 805
Zimbabwe	3 572	4 629	6 555	4 724	8 300
Canada	484 605	525 129	566 124	578 586	631 856
Dominican Republic	12 937	10 015	11 777	11 737	10 379
Mexico	240 648	270 136	443 621	500 275	480 124
USA	1 180 000	1 110 000	1 110 000	1 170 000	1 220 000
Argentina	143 084	140 300	116 700	135 700	109 600
Bolivia	620	2 100	4 176	8 653	6 629
Brazil	211 692	213 548	213 760	223 141	271 000
Chile	5 394 400	5 418 900	5 262 800	5 433 900	5 776 000
Colombia	1 140	711	808	781	* 1 000
Ecuador	300	700	1 400	1 800	2 600
Peru	1 276 249	1 247 184	1 235 345	1 298 761	1 375 641
Burma	9 800	* 12 000	* 12 000	* 12 000	* 20 000
China	1 062 000	1 179 500	1 294 700	1 642 300	* 1 600 000
India (b)	28 491	31 778	31 518	29 875	33 656
Indonesia	995 500	862 500	538 300	398 100	509 000
Iran	262 500	256 600	259 100	245 200	222 700
Kazakhstan	406 100	380 600	405 300	419 200	442 200
Korea, Dem. P.R. of	* 3 700	* 4 600	* 4 400	* 6 600	* 5 500
Laos	121 581	132 047	138 756	149 580	154 915
Malaysia	240	—	—	—	—
Mongolia	132 300	127 600	124 000	123 900	186 655
Oman	15 563	16 530	21 166	19 684	10 906
Pakistan	19 600	19 400	20 600	24 000	* 20 000
Philippines	49 060	58 412	63 835	65 444	90 861
Saudi Arabia	1 719	1 603	1 954	2 150	* 3 000
Uzbekistan	* 80 000	* 80 000	* 80 000	* 80 000	* 80 000
Vietnam	12 935	12 260	11 888	11 266	* 14 000
Australia	855 000	871 000	959 000	921 000	996 000
Papua New Guinea	166 669	159 821	130 456	125 348	121 571
World total	15 800 000	16 100 000	16 200 000	16 900 000	18 100 000

## Notes

(a) Metal content of ore

(b) Years ended 31 March following that stated

## Smelter production of copper

tonnes (metric)

Country	2009	2010	2011	2012	2013
Armenia	6 858	7 644	8 876	10 075	10 771
Bulgaria	256 200	265 000	285 900	264 200	283 000
Finland	110 479	112 687	116 455	124 527	118 552
Germany	251 000	378 700	346 200	352 400	295 200
Norway	33 900	36 200	36 000	37 891	37 461
Poland	457 510	469 656	481 875	466 715	456 100
Russia	620 700	647 100	652 200	633 200	870 700
Serbia	27 000	20 000	28 200	36 800	41 300
Spain	264 971	259 119	260 730	270 200	224 400
Sweden	183 400	181 500	206 100	207 300	140 400
Turkey	—	—	* 25 000	* 25 000	* 35 800
Namibia	21 500	31 900	36 100	31 900	30 500
South Africa	86 900	75 900	82 400	62 300	69 700
Zambia (a)	402 000	535 000	520 000	519 200	565 000
Canada	316 510	318 006	304 724	310 400	283 300
Mexico	178 672	168 861	336 739	367 852	344 140
USA	597 200	601 200	538 400	485 300	516 500
Brazil	204 500	208 800	223 500	175 700	257 000
Chile	1 522 300	1 559 800	1 522 300	1 342 400	1 358 000
Peru	325 788	312 968	299 004	290 088	412 966
China	2 693 900	2 825 600	3 036 700	3 438 000	3 700 000
India	705 100	653 900	671 200	695 400	617 000
Indonesia	310 200	262 700	276 200	198 400	217 700
Iran	192 700	188 200	185 200	179 400	154 600
Japan	1 302 120	1 356 289	1 173 275	1 274 690	1 261 348
Kazakhstan	369 000	370 900	375 900	341 700	325 600
Korea (Rep. of)	455 400	475 900	449 200	477 300	478 800
Korea, Dem. P.R. of	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Oman	11 830	8 815	7 515	721	* 12 000
Pakistan (b)	17 799	18 121	15 672	17 931	12 285
Philippines	230 100	216 200	205 000	97 000	160 000
Uzbekistan	* 90 000	* 90 000	* 90 000	* 90 000	* 90 000
Vietnam	* 6 000	* 8 000	* 8 000	* 8 000	* 8 000
Australia	422 000	410 000	442 000	422 000	446 000
World total	12 700 000	13 100 000	13 300 000	13 300 000	13 800 000

### Notes

(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	2009	2010	2011	2012	2013
Austria	96 200	113 700	112 500	113 600	108 100
Belgium	372 700	381 200	394 200	396 700	389 400
Bulgaria	196 900	216 000	226 100	226 000	230 100
Cyprus	2 380	2 595	3 660	4 328	3 631
Finland	105 411	112 687	124 360	129 256	135 840
Germany	668 945	704 300	708 800	682 132	679 700
Italy	6 500	1 800	7 600	7 700	4 900
Macedonia	—	—	—	1 100	1 900
Norway	33 900	36 200	36 000	37 891	37 461
Poland	502 462	547 074	571 041	565 834	565 155
Romania	4 600	—	—	—	—
Russia	855 000	899 600	912 000	890 900	874 900
Serbia	27 400	22 200	28 400	34 700	35 800
Spain	329 356	347 518	353 790	406 600	351 000
Sweden	205 759	190 497	219 316	214 050	206 000
Turkey	33 500	47 300	74 354	59 673	* 60 000
Ukraine	20 100	23 400	23 400	24 000	16 500
Congo, Democratic Republic	169 900	258 600	354 800	453 400	642 600
Egypt (a)	2 842	2 620	2 789	* 2 800	* 2 800
South Africa	85 330	81 129	86 166	66 416	80 800
Zambia	689 600	767 000	739 800	700 100	735 400
Zimbabwe	3 000	4 500	4 400	5 000	* 5 000
Canada	335 896	319 619	273 761	275 990	321 500
Mexico	260 700	247 300	400 200	374 100	350 100
USA	1 161 200	1 097 700	1 029 700	1 001 000	1 014 000
Argentina	* 16 000	* 16 000	* 16 000	* 16 000	* 16 000
Bolivia	200	900	1 000	904	1 271
Brazil	252 399	245 297	245 300	210 700	261 000
Chile	3 276 600	3 243 900	3 092 400	2 902 000	2 755 000
Peru	423 393	393 638	367 554	311 197	271 792
Burma	9 800	* 12 000	* 12 000	* 12 000	* 20 000
China	4 051 300	4 540 300	5 163 100	5 879 100	6 490 000
India (b)	532 865	512 124	504 677	493 519	644 193
Indonesia	286 000	277 500	274 900	197 200	214 300
Iran	210 300	219 800	227 200	226 800	190 300
Japan	1 439 843	1 548 688	1 328 288	1 516 354	1 468 123
Kazakhstan	312 767	323 368	338 524	367 161	350 837
Korea (Rep. of)	531 701	564 600	595 447	591 000	586 000
Korea, Dem. P.R. of	* 12 000	* 12 000	* 12 000	* 12 000	* 12 000
Laos	67 562	64 241	78 859	86 295	90 030
Mongolia	2 470	2 746	2 389	2 282	2 201
Oman	11 830	8 815	7 515	721	* 12 000
Philippines	178 000	176 000	164 100	98 400	149 000
Thailand	490	529	459	486	203
Uzbekistan	82 500	82 500	90 000	* 90 000	* 90 000
Vietnam	* 6 000	* 8 000	* 8 000	* 8 000	* 8 000
Australia	445 000	424 000	477 000	460 000	480 000
World total	18 300 000	19 100 000	19 700 000	20 200 000	21 000 000

### Notes

(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 30 June of that stated

(b) Years ended 31 March following that stated

## Production of diamond

Carats

Country	2009	2010	2011	2012	2013
Russia	34 759 400	34 856 600	35 139 800	34 927 650	37 884 140
Angola	13 827 609	8 362 139	8 328 519	8 330 996	9 360 470
Botswana	17 734 000	22 019 000	22 903 000	20 478 000	22 693 000
Cameroon (a)	* 8 000	* 6 000	* 6 000	* 5 000	* 5 000
Central African Republic	310 469	301 558	323 576	365 917	(c) ...
Congo	68 000	381 242	76 548	51 588	56 495
Congo, Democratic Republic	21 298 459	20 166 220	19 249 057	20 157 000	17 624 000
Ghana	354 443	308 679	283 369	215 118	159 074
Guinea	696 732	374 096	235 400	266 800	202 365
Lesotho	91 816	108 827	224 180	478 926	414 013
Liberia	36 828	22 018	39 866	34 271	44 334
Namibia	939 916	1 521 625	1 344 932	1 667 000	1 762 378
Sierra Leone	400 480	437 552	355 890	532 560	604 740
South Africa	6 118 974	8 870 967	7 046 644	7 245 403	8 168 113
Tanzania	181 874	80 498	40 691	127 174	179 633
Togo	125	96	71	456	24
Zimbabwe	963 502	8 435 224	8 502 648	12 060 163	10 411 818
Canada	10 946 098	11 773 000	10 795 000	10 529 215	10 561 600
Brazil	21 153	25 394	45 536	46 292	48 580
Guyana	143 982	49 920	52 273	40 763	63 961
Venezuela	7 730	2 099	—	—	—
China	* 1 100 000	* 1 100 000	* 1 100 000	* 1 100 000	* 1 100 000
India (b)	16 891	11 222	18 490	31 988	37 515
Australia	10 795 000	9 998 000	7 561 000	8 626 000	11 482 000
World total	120 800 000	129 200 000	123 700 000	127 300 000	132 900 000

### Notes

- (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 has been under United Nations sanctions since 2004. It is believed illegal production continues but it is not possible to estimate the quantity involved

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

## Production of diatomite

tonnes (metric)

Country	2009	2010	2011	2012	2013
Czech Republic	—	32 000	46 000	43 000	49 000
Denmark					
Moler (a)	126 000	124 000	126 000	111 000	128 125
France	* 75 000	* 75 000	* 75 000	* 85 000	* 85 000
Hungary	1 277	1 197	1 309	1 229	434
Poland	670	1 000	580	600	600
Spain (b)	29 194	64 346	83 624	60 777	53 713
Turkey	27 634	18 448	45 187	86 403	* 85 000
Algeria	1 847	2 231	2 000	2 000	2 124
Ethiopia (c)	4 104	4 104	* 4 100	* 4 000	* 4 000
Kenya	231	224	713	1 731	1 054
Mozambique	213	123	48	541	* 550
Costa Rica	24 500	29 900	13 844	4 029	...
Mexico	80 807	91 710	84 231	84 537	87 463
USA (d)	575 000	595 000	813 000	735 000	* 770 000
Argentina	62 270	54 467	60 651	55 000	* 55 000
Brazil	7 500	9 300	4 415	3 427	* 3 000
Chile	23 027	30 925	22 938	23 021	27 092
Peru	9 946	18 886	54 163	93 786	124 917
China	* 440 000	* 400 000	* 440 000	* 420 000	* 420 000
Japan	* 110 000	* 110 000	* 100 000	* 100 000	* 100 000
Korea (Rep. of)	2 440	2 200	5 150	6 000	34 000
Saudi Arabia	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Thailand	5 600	7 100	38 130	8 500	—
Vietnam	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Australia (e)	* 14 000	* 13 000	* 12 000	* 12 000	* 21 000
New Zealand	10	95	—	—	4
World total	1 632 000	1 696 000	2 044 000	1 953 000	2 063 000

### Notes

(1) In addition to the countries listed, Armenia, Egypt, Georgia, Iran and Russia 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 30 June of that stated

## Production of feldspar

tonnes (metric)

Country	2009	2010	2011	2012	2013
Bulgaria	* 80 000	* 80 000	* 80 000	* 80 000	* 80 000
Czech Republic	431 000	388 000	407 000	445 000	411 000
Finland	23 120	28 013	26 292	43 124	47 636
France	* 550 000	* 650 000	* 600 000	* 600 000	* 550 000
Germany	106 837	150 000	218 000	205 000	* 200 000
Greece	55 737	23 050	10 200	13 000	—
Italy	* 4 700 000	* 4 700 000	* 4 700 000	* 4 700 000	* 4 700 000
Macedonia	19 377	23 188	25 032	17 168	15 168
Norway	48 000	56 000	25 271	—	—
Poland	445 500	513 700	538 800	487 200	483 000
Portugal (a)	210 266	169 722	187 159	167 287	138 715
Romania	14 317	6 049	3 814	4 112	7 060
Russia	* 160 000	* 160 000	* 160 000	* 160 000	* 160 000
Serbia	149	253	23 586	19 927	* 20 000
Slovakia	13 000	—	—	—	—
Spain	597 496	691 894	662 418	530 238	602 908
Sweden	18 000	22 000	30 000	27 000	30 000
Turkey	4 212 547	6 281 597	7 076 068	9 479 699	* 9 000 000
Ukraine	84 757	146 016	178 614	146 286	133 933
Algeria	131 046	163 939	132 000	162 000	258 700
Egypt	353 700	405 600	406 000	* 400 000	* 400 000
Ethiopia (b)	199	199	441	* 400	* 400
Morocco	* 35 000	* 40 000	43 889	* 45 000	* 45 000
Nigeria	13 631	1 616	* 1 600	* 1 600	* 1 600
South Africa	101 394	94 307	101 559	94 458	191 443
Sudan	—	923	9 519	26 283	* 30 000
Cuba	4 700	2 800	3 100	3 800	3 200
Guatemala	5 672	15 720	7 516	19 356	19 611
Mexico	347 510	398 849	382 497	380 441	164 484
USA	550 000	500 000	590 000	525 000	* 490 000
Argentina	213 551	217 213	216 721	273 896	* 270 000
Brazil	115 264	276 448	333 352	247 152	* 100 000
Chile	9 079	7 723	7 563	6 399	3 874
Colombia	* 85 000	* 85 000	* 85 000	* 85 000	46 195
Ecuador	111 985	156 888	130 498	152 590	356 538
Peru	5 154	3 589	11 645	26 359	22 695
Uruguay	910	—	—	—	4
Venezuela	100 451	57 760	* 100 000	* 100 000	* 100 000
China	* 2 000 000	* 2 100 000	* 2 100 000	* 2 100 000	* 2 100 000
India (c)	496 997	546 472	835 526	1 459 008	1 412 518
Indonesia	10 730	* 20 000	* 18 000	* 19 000	* 19 000
Iran (d)	634 503	652 020	576 643	* 580 000	* 650 000
Japan (e)	* 115 000	* 110 000	104 109	* 100 000	* 100 000
Korea (Rep. of)	622 770	496 511	384 221	360 413	343 241
Malaysia	410 053	455 497	379 629	482 906	314 399
Pakistan (f)	37 881	54 198	23 254	53 235	38 218
Philippines	16 394	15 882	22 050	24 969	30 388
Saudi Arabia	58 000	42 300	160 000	168 000	176 000
Sri Lanka	73 365	75 405	53 337	* 55 000	* 55 000
Taiwan	—	20	50	40	15
Thailand	718 692	641 900	1 041 152	1 100 619	1 072 656
Uzbekistan	* 4 300	* 4 300	* 4 300	* 4 300	* 4 300
Vietnam	* 200 000	* 200 000	* 200 000	* 200 000	* 200 000
Australia (f)	* 100 000	* 103 000	* 94 000	* 108 000	* 107 000
World total	19 453 000	22 036 000	23 511 000	26 490 000	25 706 000

See notes on following page



## Production of feldspar

### Notes

(1) In addition to the countries listed, Slovakia is believed to produce feldspar

- (a) Includes feldspathic sand
- (b) Years ended 6 July of that stated
- (c) Years ended 31 March following that stated
- (d) Years ended 20 March following that stated
- (e) Including weathered granite feldspar
- (f) Years ended 30 June of that stated

## Production of fluorspar

tonnes (metric)

Country	2009	2010	2011	2012	2013
Bulgaria	32	10	31 800	69 700	82 500
Germany	49 962	59 086	65 619	54 202	48 744
Russia	127 300	67 000	120 000	130 000	* 130 000
Spain	122 533	132 341	117 063	113 570	128 512
Turkey	3 756	25 189	4 524	5 197	* 5 000
United Kingdom	18 536	26 420	—	—	30 000
Egypt (a)	4 343	5 953	3 808	* 4 000	* 4 000
Kenya	15 667	40 800	95 100	91 000	78 002
Morocco	72 096	89 680	79 207	* 78 000	* 75 000
Namibia	80 857	104 494	94 032	90 834	* 90 000
South Africa	* 204 000	* 160 000	* 240 000	* 225 000	* 180 000
Mexico	1 045 940	1 067 386	1 206 907	1 237 091	1 210 477
Argentina	13 424	17 657	25 099	35 874	* 35 000
Brazil (b)	43 964	24 447	25 040	24 148	* 25 000
China	* 3 800 000	4 780 000	6 550 000	* 6 600 000	* 6 600 000
India (c)	13 781	7 544	4 856	3 092	2 486
Iran (d)	71 409	* 70 000	55 976	* 60 000	* 60 000
Kazakhstan	* 66 000	* 66 000	* 66 000	* 66 000	* 66 000
Korea, Dem. P.R. of	* 12 500	* 12 500	* 12 500	* 12 500	* 12 500
Kyrgyzstan	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
Mongolia	459 500	367 000	404 000	428 900	337 800
Pakistan (a)	493	222	3 156	6 866	* 7 000
Thailand	119 840	30 487	5 093	9 602	* 9 600
Vietnam	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
World total	6 400 000	7 200 000	9 200 000	9 400 000	9 200 000

### Notes

(1) In addition, the USA produced the following amounts of fluorspar equivalent in fluorosilicic acid derived from processing phosphate rock ('000 t): 2009: 114; 2010: 128; 2011: 124; 2012: 130; 2013: 134

- (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, Germany, Kazakhstan and Ukraine, with smaller quantities produced in the Republic of Korea, Russia, 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: 2009, 78 tonnes; 2010, 182 tonnes; 2011, 292 tonnes; 2012, 273 tonnes and 2013, 280 tonnes.

There is also believed to be significant production of refined gallium from scrap recycling, particularly in China, Japan, United Kingdom and USA.

tonnes (metric)					
Country	2009	2010	2011	2012	2013
Russia	* 13	13	* 13	* 13	* 13
Japan	7	5	5	8	8
Kazakhstan	19	19	19	16	* 16

## Production of germanium metal

tonnes (metric)					
Country	2009	2010	2011	2012	2013
Finland	—	12	12	16	17
USA (a)	5	3	3	* 3	* 3
China	* 100	* 100	* 100	* 100	* 100
Japan	* 2	* 2	* 2	* 2	* 2

### Notes

(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

kilograms

Country	2009	2010	2011	2012	2013
Armenia	1 207	1 780	2 125	1 941	2 324
Azerbaijan	353	2 092	1 775	1 562	1 619
Bulgaria	4 482	4 489	5 302	7 058	7 385
Finland	5 749	7 628	8 461	10 886	9 981
Georgia	* 3 100	* 3 100	* 3 100	* 3 100	* 3 100
Greece	—	—	—	26	823
Greenland	—	—	103	307	25
Poland	600	500	400	469	431
Romania	* 500	* 500	* 500	* 500	* 500
Russia	205 236	201 300	185 263	182 580	213 977
Serbia (a)	818	856	1 534	1 400	* 1 000
Slovakia	346	534	398	546	533
Spain	—	—	290	1 333	2 053
Sweden	5 542	6 285	5 994	6 015	6 530
Turkey	14 470	16 890	24 000	29 390	31 044
United Kingdom	187	177	202	102	42
Algeria	998	723	340	264	140
Botswana	1 626	1 774	1 562	1 522	1 206
Burkina Faso	11 581	22 926	31 720	28 900	32 613
Burundi	980	2 933	1 052	2 046	2 823
Cameroon	* 600	* 600	* 600	* 600	* 600
Congo, Democratic Republic	2 000	3 500	3 500	2 403	2 860
Egypt	—	4 675	6 305	8 175	11 102
Eritrea	* 30	* 30	11 788	9 735	2 862
Ethiopia (b)	4 005	6 003	10 322	12 581	12 300
Gabon	* 300	* 300	* 300	684	1 201
Ghana	91 143	92 380	90 959	89 768	90 510
Guinea	17 545	24 836	15 779	16 153	18 139
Ivory Coast	6 947	5 316	11 009	11 232	12 949
Kenya	1 055	2 355	1 636	3 600	2 100
Liberia	524	666	449	641	600
Madagascar	17	46	1	157	* 150
Mali	42 364	38 524	40 415	41 079	41 751
Mauritania	7 838	8 326	8 211	7 647	9 518
Morocco (a)	470	650	520	532	* 530
Mozambique	511	106	103	178	180
Namibia	2 057	2 683	2 112	2 402	2 045
Niger	1 985	1 950	1 957	1 677	1 151
Nigeria	1 350	3 718	* 3 700	* 4 000	* 4 000
Senegal	5 655	5 354	4 089	6 666	6 445
Sierra Leone	157	270	164	141	96
South Africa	197 628	188 702	180 184	154 178	159 724
Sudan (c)	14 914	26 317	23 739	46 133	24 813
Tanzania	39 113	39 448	40 390	39 012	43 390
Togo	12 955	10 452	16 469	18 551	21 086
Zambia (d)	3 108	3 410	3 493	4 232	5 207
Zimbabwe	4 966	9 620	12 993	8 112	14 000
Canada	97 235	102 693	100 379	104 644	124 054
Costa Rica	* 205	* 300	* 500	—	—
Dominican Republic	425	533	495	4 106	26 084
Guatemala	8 484	9 213	11 898	6 473	6 386
Honduras	2 127	2 200	1 893	1 859	1 985
Mexico	62 439	79 376	88 649	102 802	117 848
Nicaragua	2 590	4 877	6 395	* 6 980	* 8 610
Panama	973	1 667	2 057	2 208	1 120
USA	223 323	231 000	234 000	235 000	228 000
Argentina	48 824	63 523	59 140	54 651	52 486
Bolivia	7 217	6 400	6 513	6 973	6 751
Brazil	60 330	62 047	65 200	31 300	79 563
Chile	40 834	39 494	45 137	49 936	51 309
Colombia	47 838	53 606	55 908	66 178	55 745
Ecuador	5 392	4 573	4 924	5 139	7 118
French Guiana	1 250	1 140	* 1 300	* 1 000	* 1 000
Guyana	9 326	9 593	11 293	13 643	14 963

## Mine production of gold

kilograms

Country	2009	2010	2011	2012	2013
Peru	182 390	164 070	166 168	161 545	151 486
Suriname	12 834	12 932	12 605	12 507	11 001
Uruguay (e)	2 010	1 705	1 702	1 881	2 092
Venezuela	12 232	6 991	* 7 000	* 7 000	* 7 000
Burma (a)	* 100	* 100	* 100	* 100	* 100
China (a)	313 980	340 880	360 960	403 050	428 000
India (f)	2 084	2 399	2 194	1 588	1 564
Indonesia	140 488	119 726	76 764	69 291	59 066
Iran (a)	* 350	* 350	* 1 000	* 1 000	* 2 000
Japan	7 709	8 223	8 692	7 232	7 411
Kazakhstan	22 839	30 272	38 247	42 561	* 43 470
Korea (Rep. of)	274	235	209	336	413
Korea, Dem. P.R. of	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
Kyrgyzstan	17 100	18 500	18 900	10 600	19 400
Laos	5 021	5 138	3 984	6 415	6 838
Malaysia	2 794	3 766	4 219	4 625	3 823
Mongolia	9 803	6 037	5 703	5 995	8 900
Philippines	37 047	40 847	31 120	15 762	17 248
Saudi Arabia	4 857	4 400	4 611	4 285	4 158
Tajikistan	1 361	2 049	2 240	2 400	2 670
Thailand	5 400	5 300	5 568	4 895	4 419
Uzbekistan	* 73 000	* 73 000	* 73 000	* 73 000	* 73 000
Vietnam	* 2 000	* 2 000	* 2 400	* 2 400	2 556
Australia	224 000	260 000	259 000	253 000	265 000
Fiji	1 091	1 903	1 572	1 439	1 218
New Zealand	13 073	12 240	11 738	10 049	12 468
Papua New Guinea	68 173	66 901	62 271	55 839	56 035
Solomon Islands	130	130	1 588	2 109	1 826
<b>World total</b>	<b>2 500 000</b>	<b>2 620 000</b>	<b>2 630 000</b>	<b>2 630 000</b>	<b>2 790 000</b>

### Notes

- (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, Oman and Taiwan produce less than 100 kg gold per year
- (3) Norway is believed to produce gold

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

## Production of graphite

tonnes (metric)

Country	2009	2010	2011	2012	2013
Austria (a)	750	420	925	219	...
Bosnia and Herzegovina	133 819	45 079	—	—	—
Czech Republic	3 000	—	—	—	—
Germany	—	—	—	109	269
Norway	4 562	6 270	7 789	6 992	6 207
Romania	24 352	6 633	—	—	—
Russia	* 14 000	* 14 000	* 14 000	* 14 000	* 14 000
Turkey	2 400	—	5 250	31 500	* 32 000
Ukraine	4 300	2 800	600	4 600	* 4 600
Madagascar	3 400	3 654	3 951	3 500	* 4 600
Zimbabwe	2 463	741	7 252	4 421	* 4 500
Canada	* 7 000	* 20 000	* 20 000	* 20 000	* 20 000
Mexico	5 105	6 628	7 348	7 520	7 024
Brazil (b)	59 425	92 364	105 188	88 110	83 600
China (c)	* 1 800 000	* 1 800 000	* 1 800 000	* 1 800 000	* 1 800 000
India (a)(d)	124 625	115 697	153 339	134 735	146 009
Korea (Rep. of)	48	34	—	—	—
Korea, Dem. P.R. of	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Pakistan (e)	700	950	1 268	912	6 188
Sri Lanka	3 171	3 437	3 357	* 3 100	* 3 000
World total	2 200 000	2 100 000	2 200 000	2 100 000	2 200 000

### Notes

- (1) This table includes all forms of amorphous and crystalline graphite but excludes synthetic material  
(2) In addition to the countries listed, Egypt, Namibia and the USA are believed to produce graphite

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

# Production of gypsum

tonnes (metric)

Country	2009	2010	2011	2012	2013
Albania	* 78 000	* 80 000	* 80 000	91 021	126 399
Armenia	40 100	38 700	34 000	30 400	* 27 000
Austria (a)	910 945	872 273	815 438	791 961	635 299
Azerbaijan	44 413	48 887	107 328	149 983	169 028
Bosnia and Herzegovina (a)	74 302	64 570	71 870	73 365	73 300
Bulgaria	127 600	109 200	114 800	113 700	119 100
Croatia	318 139	248 675	231 008	182 557	114 450
Cyprus	317 000	333 000	335 000	327 800	315 000
Czech Republic	13 000	5 000	11 000	14 000	11 000
France (a)	1 887 260	2 065 814	2 452 204	2 314 788	2 189 971
Germany (a)	1 898 000	1 822 000	2 021 000	1 949 000	1 778 000
Greece (a)	730 000	* 600 000	587 000	700 000	760 000
Hungary (a)	19 766	20 000	3 000	—	—
Ireland, Republic of	* 400 000	* 300 000	* 300 000	* 200 000	* 200 000
Italy	* 1 600 000	* 1 600 000	* 1 600 000	* 1 600 000	* 1 600 000
Latvia (a)	175 870	176 510	216 000	252 714	* 250 000
Macedonia (a)	154 550	143 118	162 984	157 844	162 661
Moldova (b)	* 200 000	* 300 000	* 400 000	375 900	* 400 000
Norway (a)(c)	68 103	36 395	88 953	85 296	* 80 000
Poland (a)	1 326 928	1 398 500	1 225 600	1 227 900	1 270 100
Portugal	335 189	336 755	337 272	321 988	299 038
Romania	720 713	639 010	834 009	765 251	736 099
Russia	* 2 900 000	* 2 900 000	* 3 000 000	* 3 100 000	* 6 000 000
Slovakia (a)	131 000	87 000	88 000	88 000	60 000
Spain	8 181 315	6 990 249	7 825 747	6 359 923	7 125 463
Switzerland	* 300 000	* 300 000	* 350 000	* 320 000	* 340 000
Turkey	4 369 589	6 321 891	5 723 439	8 248 446	* 8 000 000
Ukraine	711 490	678 610	(a) 2 969 750	(a) 2 185 800	(a) 2 175 400
United Kingdom	* 1 200 000	* 1 200 000	* 1 200 000	* 1 200 000	* 1 200 000
Algeria	1 756 781	1 609 605	1 800 000	2 000 000	2 077 700
Angola	* 120 000	* 200 000	* 200 000	* 200 000	* 200 000
Egypt (a)	1 035 300	* 1 668 000	* 2 138 000	* 2 193 000	* 2 200 000
Eritrea	* 900	* 1 000	* 1 000	* 1 000	* 1 000
Ethiopia (d)	* 36 000	* 36 000	* 36 000	* 36 000	* 36 000
Kenya (a)	5 345	5 500	6 520	6 653	* 6 500
Libya	* 250 000	* 250 000	* 125 000	* 150 000	* 150 000
Madagascar	156	127	* 120	* 100	* 80
Mauritania	36 928	65 245	72 153	* 72 000	* 72 000
Morocco	* 600 000	* 600 000	* 600 000	* 600 000	* 600 000
Niger	19 737	7 559	6 058	600	—
Nigeria	* 160 000	—	* —	* —	* —
Somalia	* 1 500	* 1 500	* 1 500	* 1 500	* 1 500
South Africa	597 571	1 026 620	476 118	558 242	559 443
Sudan	30 000	31 000	31 000	117	* 100
Tanzania	8 105	26 918	38 659	91 610	171 567
Tunisia	360 000	435 000	* 435 000	* 435 000	* 435 000
Canada (a)	3 540 000	2 717 000	2 555 000	2 550 000	2 654 000
Cuba	77 800	111 300	131 400	131 000	87 100
Dominican Republic	77 201	85 880	61 161	185 890	104 010
Guatemala	18 733	58 924	77 009	99 628	117 619
Honduras	* 5 500	* 5 500	* 5 500	* 5 500	* 5 500
Jamaica	156 877	147 143	79 521	64 753	48 322
Mexico	7 542 721	6 477 590	6 463 861	9 456 478	7 903 159
Nicaragua	37 400	20 300	29 700	* 34 900	* 36 500
USA	11 500 000	10 200 000	10 500 000	15 800 000	* 16 300 000
Argentina	1 356 025	1 346 535	1 469 447	1 432 517	* 1 400 000
Brazil	2 348 390	2 638 096	3 228 931	3 749 860	* 3 700 000
Chile	723 928	758 011	917 759	799 064	1 015 158
Colombia	* 190 000	* 200 000	* 200 000	* 200 000	* 200 000
Paraguay	* 4 500	* 4 500	* 4 500	* 4 500	* 4 500
Peru	321 012	313 025	479 950	390 705	297 527
Afghanistan	42 120	57 243	* 57 250	* 57 250	* 57 250
Bhutan	299 735	344 034	352 234	313 173	351 420

## Production of gypsum

tonnes (metric)

Country	2009	2010	2011	2012	2013
Burma (e)	84 516	76 391	77 413	38 579	43 715
China	* 37 000 000	* 37 000 000	* 37 000 000	* 37 000 000	* 37 000 000
India (e)(f)	3 370 322	4 924 906	3 991 853	3 564 300	2 930 444
Indonesia	8 133	* 7 000	* 7 500	* 8 000	* 8 000
Iran (g)	13 615 547	11 913 979	14 657 191	14 178 577	* 14 000 000
Iraq	5 026 495	8 276 733	11 350 170	9 424 214	10 461 708
Israel	9 152	99 730	20 437	45 407	27 200
Jordan	304 356	292 340	254 860	275 000	* 275 000
Kazakhstan	* 700 000	* 700 000	* 700 000	* 700 000	* 700 000
Laos	761 331	553 300	686 100	619 300	* 619 000
Mongolia	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Oman	333 400	653 200	1 254 100	1 915 300	2 785 000
Pakistan (h)	800 084	853 590	885 368	1 260 021	1 249 967
Saudi Arabia	2 415 000	2 100 000	2 239 000	1 700 000	1 785 000
Sri Lanka	358	104	542	* 500	* 500
Syria	403 137	* 405 000	* 405 000	* 405 000	* 405 000
Tajikistan	26 400	14 600	11 300	13 700	11 700
Thailand	8 631 797	10 172 629	10 994 074	11 447 199	12 382 648
Thailand Anhydrite	633 820	536 120	614 148	857 172	* 857 000
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)	3 708 700	3 680 000	3 401 300	3 830 522	* 3 890 000
World total	140 600 000	143 700 000	154 600 000	162 400 000	166 700 000

### Notes

(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	2009	2010	2011	2012	2013
Belgium	* 30	* 30	* 30	* 30	* 30
Germany	* 10	* 10	* 10	* 10	* 10
Italy	* 5	* 5	* 5	* 5	* 5
Netherlands	* 5	* 5	* 5	* 5	* 5
Russia	6	7	6	7	7
United Kingdom	* 5	* 5	* 5	* 5	* 5
Canada	* 50	* 67	* 64	* 62	* 65
Brazil	* 5	* 5	* 5	* 5	* 5
Peru	2	—	* 2	* 11	* 10
China	* 330	* 340	* 380	* 405	* 410
Japan	67	69	70	70	70
Korea (Rep. of)	* 100	* 100	* 100	* 100	* 100

### Note

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

## Production of iodine

kilograms

Country	2009	2010	2011	2012	2013
Azerbaijan	148 700	191 300	200 000	240 400	249 100
Russia	* 105 000	* 105 000	* 105 000	* 105 000	* 105 000
USA	* 1 250 000	* 1 250 000	* 1 270 000	* 1 270 000	* 1 270 000
Chile	17 399 000	15 793 000	16 000 000	17 494 000	20 656 000
China	* 580 000	* 590 000	* 590 000	* 600 000	* 600 000
Indonesia	* 75 000	* 75 000	* 75 000	* 75 000	* 75 000
Japan	8 232 000	9 216 000	9 277 000	9 315 000	* 9 400 000
Turkmenistan	* 270 000	* 270 000	* 270 000	* 270 000	* 270 000
Uzbekistan	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
World total	28 100 000	27 500 000	27 800 000	29 400 000	32 600 000



## Production of iron ore

tonnes (metric)

Country	2009	2010	2011	2012	2013
Austria (a)	2 002 131	2 068 853	2 206 910	2 142 255	2 323 323
Azerbaijan	30 000	57 800	214 300	207 300	141 400
Bosnia and Herzegovina	2 727 452	1 401 000	1 891 000	2 075 732	2 121 908
Germany (b)(c)	363 699	390 353	489 091	447 515	413 404
Norway	896 000	3 266 000	2 532 100	3 420 684	3 409 269
Russia	92 000 000	95 500 000	104 000 000	104 000 000	102 100 000
Sweden	20 646 000	28 797 000	30 840 000	32 198 000	37 411 000
Turkey	4 169 972	5 378 455	6 308 448	7 599 511	* 7 700 000
Ukraine	66 452 000	78 541 000	80 900 000	67 149 000	70 389 000
Algeria	1 307 000	1 474 279	1 700 000	1 700 000	1 066 700
Egypt (d)	1 780 162	2 314 425	3 320 878	3 930 002	* 4 200 000
Mauritania	10 275 049	11 109 000	11 176 000	11 500 000	* 11 500 000
Morocco	30 523	44 665	78 926	* 80 000	* 80 000
Nigeria	99 424	50 000	70 000	* 70 000	* 70 000
Sierra Leone	—	—	339 330	5 203 490	11 894 580
South Africa (e)	55 313 053	58 709 330	58 056 897	67 100 474	71 543 088
Swaziland	—	—	79 553	1 032 230	1 258 560
Tunisia	151 200	180 500	171 200	223 000	243 100
Uganda	972	3 795	2 134	4 431	2 282
Zimbabwe	—	28	—	—	—
Canada (f)	31 699 000	37 001 000	33 573 000	39 427 100	42 769 700
Guatemala	5 463	1 604	1 160	10 808	778
Mexico	17 693 000	21 210 000	19 403 000	22 600 000	28 545 000
USA	26 700 000	49 500 000	54 700 000	54 000 000	* 52 000 000
Brazil	331 000 000	372 300 000	460 400 000	400 600 000	316 800 000
Chile	8 242 300	9 129 500	12 624 600	17 330 000	17 108 000
Colombia	280 773	77 048	174 459	391 503	710 047
Peru	5 435 000	7 432 000	8 623 000	8 221 983	6 680 659
Venezuela	14 206 621	14 330 761	* 17 400 000	* 15 400 000	* 11 000 000
Bhutan	—	—	—	3 742	22 505
China	880 171 400	1 077 705 100	1 326 942 000	1 309 637 000	1 451 011 000
India (g)	218 553 000	207 157 000	168 582 000	136 618 000	152 433 000
Indonesia	4 561 059	8 975 507	11 814 544	11 545 752	* 20 000 000
Iran (h)	31 993 513	35 548 974	44 355 304	39 783 479	* 40 000 000
Iraq	—	—	26 639	—	—
Kazakhstan	46 248 000	50 190 000	51 742 000	52 614 000	51 758 500
Korea (Rep. of)	455 405	512 642	541 539	592 743	663 045
Korea, Dem. P.R. of	* 5 300 000	* 5 300 000	* 5 300 000	* 5 100 000	* 5 100 000
Malaysia (h)	1 470 186	3 557 813	8 077 879	12 143 985	12 133 556
Mongolia	1 379 000	3 203 200	5 678 300	7 561 400	6 011 200
Pakistan (d)	320 214	447 541	329 100	384 893	412 108
Philippines	—	—	292 608	216 176	71 654
Thailand	616 399	976 937	489 359	303 233	389 620
Vietnam	1 904 500	1 972 100	2 371 300	1 523 100	* 1 500 000
Australia	394 403 000	433 452 000	477 331 000	519 859 000	609 205 000
New Zealand	2 092 640	2 438 641	2 357 440	2 394 848	3 156 619
World total	2 283 000 000	2 632 000 000	3 018 000 000	2 968 000 000	3 157 000 000

### Notes

- (a) Including micaceous iron oxide
- (b) Including manganese 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) Years ended 31 March following that stated
- (h) Years ended 20 March following that stated

## Production of pig iron

tonnes (metric)

Country	2009	2010	2011	2012	2013
Austria	4 353 000	5 621 000	5 815 000	5 751 000	6 200 000
Belgium	3 087 000	4 688 000	4 700 000	4 073 000	4 343 000
Bosnia and Herzegovina	482 469	620 935	684 734	749 539	759 100
Czech Republic	3 483 000	3 987 000	4 137 000	3 935 207	4 039 528
Finland	2 042 000	2 564 000	2 600 000	2 461 000	2 100 000
France	8 104 318	10 136 827	9 697 535	9 531 844	10 300 000
Germany	20 104 000	28 560 000	27 943 000	27 046 000	27 177 000
Hungary	1 050 000	1 325 000	1 315 000	1 229 000	600 000
Italy	5 670 000	8 555 000	9 824 000	9 424 000	6 935 000
Netherlands	4 655 000	5 799 000	5 943 000	5 909 000	5 700 000
Norway	83 000	108 000	101 000	100 000	* 100 000
Poland	2 983 500	3 637 995	3 974 930	3 943 968	4 013 877
Romania	1 576 679	1 723 418	1 595 000	1 580 000	* 1 300 000
Russia	43 900 000	48 200 000	48 200 000	50 500 000	50 000 000
Serbia	964 607	1 158 628	1 197 693	318 651	366 277
Slovakia	3 019 000	3 649 000	3 346 000	3 519 755	3 616 850
Spain	2 920 000	3 572 000	3 540 000	3 081 000	3 949 000
Sweden	1 966 000	3 447 000	3 240 000	2 805 000	3 000 000
Turkey	6 913 325	16 362 115	14 877 155	18 289 109	* 18 000 000
Ukraine	25 683 000	27 366 000	28 878 000	28 487 000	29 088 700
United Kingdom	7 671 100	7 233 000	6 625 000	7 183 100	9 471 000
Algeria	680 000	696 000	360 000	350 000	* 350 000
Egypt	3 851 000	3 565 000	3 532 000	3 618 000	3 400 000
Libya	1 077 000	1 270 000	165 000	508 000	1 000 000
South Africa	5 784 000	6 549 000	6 018 000	6 092 000	6 404 000
Canada	5 615 000	8 266 000	8 025 000	8 496 000	7 300 000
Mexico	8 065 305	10 074 620	10 462 912	10 197 841	11 011 091
Trinidad and Tobago	1 181 700	1 751 800	1 705 600	1 684 300	1 749 700
USA	19 018 000	26 843 000	30 233 000	32 062 000	30 381 000
Argentina	2 849 000	4 098 500	4 470 900	3 683 000	4 115 390
Brazil	25 135 000	30 898 000	33 416 000	32 448 000	31 552 000
Chile	923 000	635 000	1 130 000	1 068 000	869 000
Colombia	342 000	327 000	295 000	345 000	264 000
Paraguay	71 000	81 000	42 000	67 000	69 000
Peru	100 000	100 000	94 000	98 000	91 000
Venezuela	5 508 000	3 760 000	4 470 000	4 594 000	2 600 000
China	552 834 600	597 333 400	629 693 000	657 905 000	708 970 000
India	61 677 000	64 987 000	66 460 000	62 057 000	64 893 000
Indonesia	1 119 000	1 274 000	1 228 000	524 000	* 600 000
Iran	10 760 000	10 532 000	12 670 000	13 725 000	16 465 000
Japan	66 942 610	82 283 358	81 028 352	81 405 470	83 849 049
Kazakhstan	2 997 000	2 864 000	3 141 000	2 707 000	2 622 745
Korea (Rep. of)	27 474 604	35 064 568	42 212 717	41 718 000	41 045 000
Korea, Dem. P.R. of	* 250 000	* 250 000	* 250 000	* 250 000	* 250 000
Malaysia	2 388 000	2 390 000	2 877 000	2 329 000	* 2 300 000
Pakistan (a)	791 052	* 750 000	* 750 000	* 750 000	* 750 000
Qatar	2 096 282	2 040 037	2 212 999	2 424 000	2 385 493
Saudi Arabia	4 623 000	4 937 000	5 153 000	4 976 000	5 300 000
Taiwan	7 939 000	9 358 000	12 940 000	11 784 000	12 122 000
Vietnam	275 000	* 500 000	* 600 000	* 650 000	* 650 000
Australia	4 370 000	6 259 000	5 296 000	3 480 000	3 435 000
New Zealand	608 000	667 000	659 000	670 000	678 000
World total	978 000 000	1 109 000 000	1 160 000 000	1 183 000 000	1 239 000 000

### Notes

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

(a) Years ended 30 June of that stated

# Production of crude steel

tonnes (metric)

Country	2009	2010	2011	2012	2013
Albania	221 000	390 000	464 000	390 000	312 000
Austria	5 662 000	7 206 000	7 474 000	7 421 000	7 953 000
Azerbaijan	78 874	129 125	234 002	267 660	222 800
Belarus	2 329 694	2 530 829	2 778 792	2 869 373	2 394 489
Belgium	5 635 000	7 973 000	8 026 000	7 301 000	7 127 000
Bosnia and Herzegovina	495 150	590 952	649 085	700 341	722 155
Bulgaria	726 000	744 000	835 000	633 000	523 000
Croatia	54 266	103 429	162 709	1 016	125 000
Czech Republic	4 594 000	5 180 000	5 583 000	5 072 082	5 171 255
Estonia	—	—	1	185	395
Finland	3 066 000	4 029 000	3 989 000	3 759 000	3 517 000
France	12 840 108	15 413 577	15 780 639	15 607 227	15 685 000
Germany	32 670 000	43 830 000	44 284 000	42 661 000	42 645 000
Greece	2 000 000	1 821 000	1 934 000	1 247 000	1 030 000
Hungary	1 403 000	1 678 000	1 733 000	1 543 000	883 000
Italy	19 848 000	25 750 000	28 735 000	27 257 000	24 079 000
Latvia	692 000	655 000	568 000	805 000	198 000
Luxembourg	2 141 000	2 548 000	2 521 000	2 214 000	2 090 000
Macedonia	299 332	344 866	348 576	225 224	145 633
Moldova (a)	380 000	240 000	313 000	335 000	* 185 000
Montenegro	90 404	48 272	61 164	28 161	19 723
Netherlands	5 194 000	6 651 000	6 937 000	6 879 000	6 713 000
Norway	595 000	520 000	620 000	683 000	605 000
Poland	7 128 482	7 993 025	8 776 458	8 539 302	8 199 353
Portugal	1 557 000	1 504 000	1 871 000	1 960 000	2 050 000
Romania	2 772 679	3 720 775	3 835 000	3 780 000	2 985 000
Russia	59 200 000	66 300 000	68 400 000	70 400 000	68 800 000
Serbia	1 054 336	1 254 386	1 304 954	346 000	396 000
Slovakia	3 747 000	4 583 000	4 236 000	4 403 447	4 510 535
Slovenia	430 000	606 000	648 000	632 000	618 000
Spain	14 358 000	16 343 000	15 504 000	13 639 000	14 130 000
Sweden	2 803 700	4 845 600	4 867 000	4 326 000	4 404 000
Switzerland	934 000	1 320 000	1 400 000	* 1 450 000	* 1 530 000
Turkey	25 303 741	29 029 789	30 562 184	35 885 000	34 658 000
Ukraine	30 301 844	33 345 586	35 512 156	33 509 180	33 198 653
United Kingdom	10 074 500	9 708 000	9 478 000	9 579 100	11 857 500
Algeria	543 000	662 000	551 000	557 000	* 440 000
Egypt	5 541 000	6 676 000	6 486 000	6 627 000	6 754 000
Ethiopia	150 000	150 000	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	914 000	825 000	100 000	315 000	712 000
Mauritania	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Morocco	499 000	485 000	654 000	539 000	558 000
Nigeria	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
South Africa	7 484 000	7 617 000	7 546 000	6 938 000	7 254 000
Tunisia	99 500	115 100	150 000	150 000	* 150 000
Uganda	30 000	30 000	30 000	30 000	30 000
Canada	9 286 000	13 009 000	12 891 000	13 507 000	12 415 000
Cuba	267 752	279 040	283 982	280 899	268 814
Dominican Republic	* 67 000	* 60 000	* 76 000	* 56 000	* 56 000
El Salvador	56 000	51 000	97 000	72 000	108 000
Guatemala	224 000	274 000	445 000	334 000	370 000
Mexico	14 131 810	16 869 675	18 110 111	18 073 052	18 208 004
Trinidad and Tobago	417 000	571 600	603 400	623 800	615 800
USA	58 196 000	80 495 000	86 000 000	88 695 000	86 955 000
Argentina	4 013 000	5 138 500	5 610 500	4 996 000	5 185 710
Brazil	26 506 000	32 948 000	35 220 000	34 524 000	34 163 000
Chile	1 308 000	1 011 000	1 615 000	1 671 000	1 398 000
Colombia	1 052 000	1 207 000	1 244 000	1 302 000	1 107 000
Ecuador	259 000	357 000	463 000	425 000	531 000
Paraguay	54 000	59 000	28 000	44 000	* 40 000
Peru	718 000	867 000	882 000	981 000	1 057 000
Uruguay	57 000	65 000	81 000	78 000	78 000
Venezuela	3 808 000	2 207 000	2 980 000	2 359 000	2 494 000

## Production of crude steel

tonnes (metric)

Country	2009	2010	2011	2012	2013
Burma	* 25 000	* 25 000	* 25 000	* 25 000	* 30 000
China	572 182 300	637 229 900	683 883 000	716 542 000	779 041 000
India	63 527 000	68 321 000	72 200 000	76 715 000	81 213 000
Indonesia	3 501 000	3 664 000	3 621 000	2 254 000	* 2 400 000
Iran	10 873 000	11 995 000	13 040 000	14 463 000	15 422 000
Israel	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Japan	87 534 137	109 598 507	107 601 194	107 232 297	110 594 771
Jordan	* 150 000	* 150 000	* 150 000	* 150 000	* 150 000
Kazakhstan	4 146 000	4 220 000	4 699 000	3 851 000	3 250 000
Korea (Rep. of)	48 572 000	58 914 125	68 519 191	69 073 000	66 061 000
Korea, Dem. P.R. of	* 1 255 000	* 1 300 000	* 1 300 000	* 1 280 000	* 1 300 000
Kuwait	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000
Malaysia	5 354 000	5 694 000	5 941 000	5 612 000	* 5 600 000
Mongolia	53 000	68 000	63 600	72 400	* 58 600
Pakistan	* 800 000	* 800 000	* 850 000	* 850 000	* 972 000
Philippines	824 009	1 050 000	1 200 000	1 260 000	* 1 300 000
Qatar	1 472 612	1 974 937	2 005 000	2 148 000	2 236 000
Saudi Arabia	4 690 000	5 015 000	5 275 000	5 203 000	5 471 000
Singapore	664 000	728 000	752 000	688 000	434 000
Syria	* 70 000	* 70 000	* 70 000	* 70 000	* 10 000
Taiwan	15 873 000	20 498 146	22 879 000	19 927 000	21 466 000
Thailand	3 645 586	4 144 908	4 238 000	3 328 000	* 3 500 000
United Arab Emirates	* 90 000	* 500 000	* 2 000 000	2 408 000	2 878 000
Uzbekistan	716 000	716 000	733 000	736 000	755 000
Vietnam	2 700 000	4 314 000	4 900 000	5 298 000	5 600 000
Australia	5 135 000	7 408 000	6 538 000	4 904 000	4 645 000
New Zealand	765 000	853 000	844 000	912 000	900 000
World total	1 232 000 000	1 431 000 000	1 517 000 000	1 546 000 000	1 607 000 000

### Notes

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

(a) Production from the region east of the River Nistru

# Production of ferro-alloys

tonnes (metric)

Country	2009	2010	2011	2012	2013
Albania					
Ferro-chrome	5 705	23 233	28 433	24 018	24 692
Armenia					
Ferro-molybdenum	5 144	5 126	5 525	5 836	6 619
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	6 200	8 000	8 000	8 000	8 000
Bosnia and Herzegovina					
Ferro-alloys	10 242	17 972	17 527	15 874	16 707
Bulgaria					
Ferro-silicon	3 000	—	—	—	* —
Czech Republic					
Ferro-vanadium	* 1 900	* 3 400	* 4 600	* 5 800	* 6 400
Finland					
Ferro-chrome	123 310	238 000	231 000	229 000	434 000
France					
Ferro-manganese	46 000	138 100	130 500	* 131 000	* 131 000
Ferro-silico-manganese	54 100	62 400	63 400	* 64 000	* 64 000
Ferro-silicon	* 18 300	* 27 000	* 59 000	* 60 000	* 60 000
Silicon metal	* 80 000	* 112 000	* 128 000	* 110 000	* 110 000
Georgia					
Ferro-manganese	* 4 500	* 4 500	* 4 500	* 4 500	* 4 500
Ferro-silico-manganese	112 016	203 791	242 746	257 421	254 115
Germany					
Ferro-chrome	13 667	* 18 300	* 18 900	* 17 800	* 17 800
Other ferro-alloys	6 336	* 9 200	9 985	8 248	* 8 200
Silicon metal	27 620	30 105	30 134	28 574	30 283
Greece					
Ferro-nickel	42 400	69 600	94 000	96 435	86 850
Iceland					
Ferro-silicon	112 992	114 230	120 076	131 818	125 204
Italy					
Ferro-manganese	* 20 000	* 25 000	* 25 000	* 27 000	* 27 000
Ferro-silico-manganese	56 000	108 000	145 000	110 000	* 110 000
Macedonia					
Ferro-silico-manganese	—	36 705	50 756	14 179	—
Ferro-nickel	12 000	14 413	17 292	19 247	20 001
Ferro-silicon	7 657	30 044	56 167	42 402	72 279
Norway					
Ferro-manganese	196 700	297 300	337 900	* 320 000	* 780 000
Ferro-silico-manganese	247 615	281 266	266 000	* 250 000	* 250 000
Ferro-silicon	233 974	* 200 000	170 102	203 886	349 389
Silicon metal	169 643	* 170 000	* 170 000	* 150 000	* 150 000
Poland					
Ferro-manganese	1 736	800	800	800	820
Ferro-silico-manganese	72	100	400	200	100
Ferro-silicon	9 673	53 206	72 668	79 400	73 590
Other ferro-alloys	4 190	200	300	300	11 250
Romania					
Ferro-chrome	15 377	14 353	—	—	—
Ferro-silico-manganese	—	20 605	* 30 000	* 30 000	* 30 000
Russia					
Spiegeleisen	* 7 000	* 7 000	* 7 000	* 7 000	* 7 000
Ferro-chrome	378 000	414 000	* 414 000	* 414 000	* 414 000
Ferro-silico-chrome	8 285	4 200	* 4 200	* 4 200	* 4 200
Ferro-manganese	88 000	171 000	* 170 000	* 170 000	* 170 000
Ferro-silico-manganese	98 700	147 900	* 148 000	* 148 000	* 148 000
Ferro-molybdenum	6 726	6 491	6 917	7 018	5 297
Ferro-nickel	31 529	34 363	* 34 400	* 34 000	* 34 000
Ferro-silicon	745 000	916 000	* 916 000	* 916 000	* 916 000
Ferro-vanadium	8 029	13 507	16 683	14 381	14 059
Other ferro-alloys	* 34 000	* 34 000	* 34 000	* 34 000	* 34 000
Silicon metal	23 900	48 700	* 48 700	* 48 000	* 48 000
Slovakia					
Ferro-silico-manganese	32 000	34 960	25 036	50 089	* 50 000
Ferro-silicon	4 600	26 419	32 304	32 726	41 664
Other ferro-alloys	22 250	38 860	18 575	20 059	* 20 000

## Production of ferro-alloys

tonnes (metric)

Country	2009	2010	2011	2012	2013
Spain					
Ferro-manganese	* 60 100	* 134 000	* 108 000	* 108 000	* 108 000
Ferro-silico-manganese	* 59 200	* 132 000	* 164 000	* 165 000	* 166 000
Ferro-silicon	* 44 000	* 64 400	* 57 000	* 57 000	* 57 000
Silicon metal	* 23 000	* 32 500	* 43 000	* 45 000	* 45 000
Sweden					
Ferro-chrome	31 100	64 400	80 140	35 800	55 078
Turkey					
Ferro-chrome	41 028	* 50 000	* 40 000	* 40 000	* 40 000
Ferro-silico-chrome	2 903	* 3 000	* 3 000	* 3 000	* 3 000
Ukraine					
Ferro-manganese	135 339	285 643	187 897	163 921	88 626
Ferro-silico-manganese	771 950	1 000 329	930 337	823 131	724 892
Ferro-nickel	76 487	102 940	89 903	119 652	121 586
Ferro-silicon	193 034	253 801	186 306	150 265	191 207
Other ferro-alloys	23 882	28 546	25 126	22 115	15 908
Egypt					
Ferro-silicon (a)	78 355	47 205	25 516	52 421	...
Other ferro-alloys (a)	* 30 000	37 194	* 30 000	* 30 000	* 30 000
South Africa					
Ferro-chrome	2 346 132	3 607 132	3 421 911	* 3 000 000	* 3 000 000
Ferro-manganese	* 265 000	* 517 000	* 696 000	* 654 000	* 650 000
Ferro-silico-manganese	* 140 000	* 273 000	* 368 000	* 346 000	* 350 000
Ferro-silicon	* 110 000	* 128 000	* 135 000	* 133 000	* 130 000
Ferro-vanadium	* 13 000	* 19 000	* 18 000	* 16 000	* 16 000
Silicon metal	* 39 000	* 46 000	* 48 000	* 47 000	* 50 000
Zimbabwe					
Ferro-chrome	72 223	154 336	161 839	60 205	* 145 000
Ferro-silicon	603	—	—	—	* —
Canada					
Ferro-niobium	4 620	4 620	4 620	* 4 600	* 4 600
Ferro-silicon	25 820	36 786	31 039	* 31 000	* 31 000
Silicon metal	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Dominican Republic					
Ferro-nickel	—	—	13 528	15 186	17 590
Mexico					
Ferro-manganese	42 492	81 019	73 684	61 845	60 674
Ferro-silico-manganese	85 065	134 470	139 047	161 221	157 855
USA					
Ferro-silicon	194 000	370 000	* 294 000	* 294 000	* 294 000
Silicon metal	* 143 000	* 143 000	* 143 000	* 143 000	* 143 000
Argentina					
Ferro-silico-manganese	6 644	10 900	* 11 000	* 11 000	* 11 000
Ferro-silicon	11 300	* 11 000	* 11 000	* 11 000	* 11 000
Brazil					
Ferro-chrome	108 893	172 800	145 000	181 425	174 200
Ferro-silico-chrome	1 750	13 100	11 600	18 890	* 19 000
Ferro-silico-magnesium	18 300	33 600	20 900	21 200	* 20 000
Ferro-manganese	44 600	87 200	77 000	88 714	* 90 000
Ferro-silico-manganese	109 500	218 700	218 600	241 705	* 240 000
Ferro-nickel	31 600	23 800	45 600	94 400	34 500
Ferro-niobium	48 900	77 200	81 900	50 400	46 600
Ferro-silicon	175 000	247 300	210 900	203 881	* 200 000
Other ferro-alloys	21 200	36 650	32 700	38 784	* 40 000
Silicon metal	154 000	184 100	210 400	230 000	230 000
Colombia					
Ferro-nickel	153 628	145 239	103 371	138 966	137 995
Venezuela					
Ferro-manganese	15 800	5 300	12 000	* 12 000	* 12 000
Ferro-silico-manganese	45 800	16 500	24 000	* 24 000	* 24 000
Ferro-nickel	40 113	45 200	51 800	* 50 000	* 50 000
Ferro-silicon	52 100	76 800	70 000	* 70 000	* 70 000

## Production of ferro-alloys

tonnes (metric)

Country	2009	2010	2011	2012	2013
<b>Bhutan</b>					
Ferro-silicon	* 90 800	* 97 500	* 79 600	* 82 000	* 83 000
<b>China</b>					
Ferro-chrome	1 813 000	(d) ...	(d) ...	(d) ...	(d) ...
Ferro-silico-chrome	116 000	(d) ...	(d) ...	(d) ...	(d) ...
Other ferro-alloys	20 171 000	* 26 100 000	* 28 400 000	* 30 000 000	* 31 000 000
Silicon metal	992 900	1 142 700	1 355 300	* 1 500 000	* 1 500 000
<b>India</b>					
Ferro-aluminium (b)	* 5 500	5 854	5 850	4 935	5 497
Ferro-chrome (b)	922 000	938 000	943 000	944 000	944 000
Ferro-silico-magnesium (b)	12 465	17 574	19 491	19 205	21 964
Ferro-manganese (b)	513 000	511 000	517 000	518 000	518 000
Ferro-silico-manganese (b)	166 810	175 225	201 066	236 541	225 395
Ferro-molybdenum (b)	699	1 122	1 058	1 076	1 231
Ferro-silicon (b)	81 000	81 000	89 000	90 000	90 000
Ferro-titanium (b)	406	485	595	630	821
Ferro-vanadium (b)	455	646	695	796	906
Other ferro-alloys (b)	5	79	93	42	43
<b>Indonesia</b>					
Ferro-manganese	* 12 000	* 12 000	* 12 000	* 13 000	* 13 000
Ferro-silico-manganese	* 7 000	* 8 000	* 8 000	* 9 000	* 9 000
Ferro-nickel	62 750	93 440	98 450	91 860	91 245
<b>Iran</b>					
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
<b>Japan</b>					
Ferro-chrome	7 698	16 208	17 217	19 392	21 671
Ferro-manganese	361 375	453 265	456 798	436 171	460 936
Ferro-silico-manganese	49 205	49 865	49 798	52 287	24 741
Ferro-molybdenum	3 598	4 615	5 167	4 616	4 550
Ferro-nickel	284 884	348 420	279 944	371 913	402 768
Ferro-vanadium	2 560	4 190	3 980	4 403	4 433
Other ferro-alloys	12 957	16 374	20 913	19 364	19 394
<b>Kazakhstan</b>					
Ferro-chrome	1 173 286	1 311 302	1 289 917	1 305 343	1 337 275
Ferro-silico-chrome	60 829	159 765	143 296	164 853	165 195
Ferro-silico-manganese	200 374	224 627	232 039	251 530	203 926
Ferro-silicon	33 100	4 813	1 683	464	470
Other ferro-alloys	1 205	1 283	1 754	1 845	646
<b>Korea (Rep. of)</b>					
Ferro-manganese	182 308	286 259	355 047	* 355 000	* 355 000
Ferro-silico-manganese	148 509	120 779	195 650	* 196 000	* 196 000
Other ferro-alloys	3 921	4 059	4 162	* 4 200	* 4 200
<b>Korea, Dem. P.R. of</b>					
Ferro-alloys	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
<b>Australia</b>					
Ferro-manganese and ferro-silico-manganese (a)	212 000	219 000	267 000	198 000	234 000
Silicon metal	* 36 000	* 37 000	* 34 000	* 43 000	* 52 000
<b>New Caledonia</b>					
Ferro-nickel	156 553	165 506	169 513	184 476	174 078

### Notes

- (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	2009	2010	2011	2012	2013
Austria	18 148	18 914	18 897	* 14 000	* 13 000
Belgium	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Bosnia and Herzegovina	148 384	41 808	232 147	149 495	44 940
Bulgaria	* 11 829	* 16 832	7 700	33 900	22 600
Czech Republic (a)	488 000	636 000	660 000	624 000	609 000
France	350 000	350 000	310 000	308 000	* 300 000
Germany (b)	4 513 753	4 578 097	4 898 516	4 398 796	4 348 562
Greece	—	3 493	7 250	6 268	5 786
Italy	* 180 000	* 180 000	* 180 000	* 180 000	* 180 000
Poland (c)	136 561	125 000	163 600	137 800	166 000
Portugal	274 925	273 890	322 041	321 689	246 308
Romania	651	326	—	—	32 722
Russia	* 45 000	* 45 000	* 45 000	* 45 000	* 45 000
Serbia	163 616	76 197	90 472	69 487	* 70 000
Slovakia	10 000	—	4 000	3 000	6 000
Spain (c)	270 298	310 993	384 179	402 251	393 427
Turkey	234 614	787 287	1 229 352	* 1 300 000	* 1 300 000
Ukraine (a)	* 157 000	* 195 000	* 271 000	* 243 000	* 285 000
United Kingdom	1 059 848	* 1 140 000	* 1 290 000	* 1 150 000	* 1 110 000
Algeria	87 766	71 065	108 000	100 000	42 500
Egypt	523 300	304 200	304 000	* 300 000	* 300 000
Eritrea	* 175	* 200	* 200	* 200	* 200
Ethiopia (d)	1 613	1 613	4 498	* 4 000	* 4 000
Kenya	* 850	* 900	* 900	* 900	* 900
Madagascar	90	259	* —	* —	* —
Nigeria	* 100 000	* 100 000	* 100 000	* 100 000	100 000
South Africa	31 048	29 929	15 220	20 499	22 295
Sudan	66 799	32 696	15 096	11 579	* 10 000
Tanzania	18 624	42 649	1 177	1 422	907
Uganda	4 721	27 237	20 883	42 886	43 875
Cuba	—	100	3 000	4 000	3 600
Guatemala	1 879	2 143	1 620	1 866	1 339
Mexico	406 421	516 850	372 506	514 730	669 860
USA (e)	5 290 000	5 950 000	5 950 000	5 980 000	5 950 000
Argentina	78 792	78 722	54 166	66 574	70 000
Brazil (a)	1 987 000	1 900 000	2 200 000	1 800 000	2 100 000
Chile	48 354	62 226	59 912	60 429	60 000
Ecuador	28 775	41 089	95 062	42 564	40 000
Paraguay	* 66 000	* 66 000	* 66 000	* 66 000	* 66 000
Peru	9 655	16 446	18 169	34 585	32 249
Venezuela	300	9 444	* 10 000	* 10 000	* 10 000
China	* 3 000 000	3 260 000	3 200 000	* 3 200 000	* 3 200 000
India (g)(h)	79 963	76 498	76 134	101 354	66 598
Indonesia	* 186 000	* 170 000	* 175 000	* 180 000	* 180 000
Iran (i)	907 487	1 480 291	* 1 500 000	1 503 377	* 1 500 000
Iraq	1 980	2 606	—	—	—
Japan	* 12 000	* 12 000	* 13 000	* 13 000	* 13 000
Jordan	177 471	114 931	89 903	76 000	* 65 000
Korea (Rep. of)	890 157	962 275	1 051 772	796 603	847 172
Malaysia	487 632	530 331	442 550	438 923	293 480
Pakistan (f)	17 169	22 769	16 055	21 555	22 917
Philippines	2 389	2 490	3 529	4 631	6 568
Saudi Arabia	4 166	66 166	70 000	74 000	78 000
Sri Lanka	9 538	8 207	11 157	* 10 000	* 10 000
Taiwan	18 413	18 097	16 936	26 376	15 963
Thailand (a)	131 131	156 827	175 881	175 464	* 175 000
Uzbekistan (g)	* 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	2009	2010	2011	2012	2013
Australia (f)	120 013	114 157	46 388	89 229	* 81 000
New Zealand	9 016	107 761	21 545	11 578	13 066
World total	24 000 000	26 200 000	27 500 000	26 400 000	26 400 000

### Notes

(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) Years ended 30 June of that stated
- (g) Beneficiated; excludes directly used natural kaolin
- (h) Years ended 31 March following that stated
- (i) Years ended 20 March following that stated

## Mine production of lead

tonnes (metal content)

Country	2009	2010	2011	2012	2013
Bosnia and Herzegovina	2 080	3 196	3 656	3 700	4 400
Bulgaria (a)	12 981	12 705	14 369	15 949	16 914
Greece	10 000	12 200	13 400	18 060	18 010
Ireland, Republic of	49 500	39 100	50 700	47 400	42 950
Italy	17 000	—	—	—	—
Kosovo	6 500	5 700	4 530	5 295	6 378
Macedonia	46 788	41 293	37 295	39 184	42 826
Montenegro	—	—	1 200	1 500	1 700
Poland	62 910	48 050	40 492	73 231	74 000
Portugal	—	—	—	87	1 496
Romania	* 3 000	* 7 700	* —	* 5 300	* 400
Russia	72 000	97 000	123 000	134 000	143 000
Serbia	1 800	1 800	2 100	2 500	3 100
Slovakia	63	94	114	166	...
Spain	1 000	229	5 705	6 800	6 000
Sweden	69 293	67 697	62 028	63 551	59 556
Turkey	21 600	39 000	38 682	57 017	* 78 000
United Kingdom (b)	243	251	280	61	36
Morocco	34 517	32 647	30 850	* 27 500	* 32 500
Namibia	10 129	10 140	8 330	9 270	10 851
Nigeria	5 200	3 300	9 100	11 300	11 500
South Africa	49 149	50 625	54 460	52 489	41 848
Canada	68 839	64 844	67 505	64 116	20 188
Guatemala	—	—	—	2 300	* 1 100
Honduras	14 471	16 954	13 100	12 400	11 600
Mexico	143 838	192 062	223 717	238 091	253 361
USA	405 800	369 000	340 000	345 000	340 000
Argentina	24 753	22 600	26 100	* 28 000	* 17 000
Bolivia	84 538	72 803	100 051	81 095	82 131
Brazil	8 917	12 832	8 545	8 922	* 10 000
Chile	1 511	695	841	410	1 829
Peru	302 459	261 990	230 199	249 236	266 472
Burma	* 5 000	* 7 000	* 8 700	* 9 800	* 11 700
China	1 604 100	1 981 300	2 405 700	2 613 200	* 3 000 000
India (c)	82 629	84 442	89 910	102 482	108 004
Iran	27 000	* 32 000	* 29 600	* 50 000	* 45 000
Kazakhstan	34 000	35 000	38 800	38 000	40 800
Korea (Rep. of)	1 032	584	1 289	1 940	2 500
Korea, Dem. P.R. of	* 27 000	* 20 000	* 28 500	* 38 000	* 59 000
Laos	1 000	1 355	1 361	164	1 600
Pakistan	—	* 900	* 900	* 600	* 400
Saudi Arabia	685	543	396	* —	—
Tajikistan	2 400	3 900	8 900	16 000	17 000
Vietnam	* 6 000	* 3 700	* 4 100	* 300	* —
Australia	567 000	711 000	621 000	621 000	711 000
World total	3 900 000	4 400 000	4 700 000	5 100 000	5 600 000

### Notes

(a) Metal content of ore

(b) By-product of gold mining in Northern Ireland

(c) Years ended 31 March following that stated

## Production of refined lead

tonnes (metric)

Country	2009	2010	2011	2012	2013
Austria	22 200	25 500	26 200	24 504	38 786
Belgium	109 000	121 000	119 000	119 000	129 000
Bosnia and Herzegovina	35	4 474	3 370	3 327	2 382
Bulgaria	83 100	80 600	71 000	68 000	71 000
Czech Republic	29 000	30 000	34 000	30 000	28 000
Estonia	5 000	7 200	7 800	8 046	7 581
France	62 000	71 000	80 000	83 000	71 000
Germany	390 600	405 400	429 100	423 000	400 000
Greece	* 11 000	* 11 000	* 7 000	* 6 000	* 6 000
Ireland, Republic of	19 000	19 000	18 000	16 000	17 000
Italy	149 000	150 000	149 500	138 400	151 000
Netherlands	* 27 000	* 27 000	* 27 000	* 27 000	* 27 000
Poland	100 400	120 300	135 500	141 000	145 400
Portugal	7 000	9 000	6 000	5 000	4 000
Romania	8 687	11 263	6 854	13 000	14 000
Russia	90 000	96 000	103 000	107 000	109 000
Slovenia	14 000	14 000	15 000	12 000	12 000
Spain	138 000	165 000	177 000	160 000	157 000
Sweden	51 574	59 179	52 438	61 528	69 000
Switzerland	800	—	—	—	—
Turkey	* 42 000	* 42 000	* 48 000	* 50 000	* 50 000
Ukraine	60 600	71 500	55 300	43 200	48 800
United Kingdom	312 000	301 000	275 000	311 930	329 200
Algeria	6 000	11 000	10 000	6 000	9 000
Burkina Faso	—	—	—	—	2 160
Ghana (a)	* 2 000	* 2 000	2 403	2 961	3 076
Kenya	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Morocco	20 100	38 237	36 469	* 16 000	* 14 000
Mozambique	400	600	800	900	1 700
Nigeria	8 000	11 000	9 000	9 000	* 9 000
Senegal (a)	* 2 000	* 2 000	2 383	3 366	2 607
South Africa	58 000	51 000	56 000	54 000	52 000
Uganda	800	800	800	800	800
Zambia	* 800	* 2 482	* 3 100	* 2 000	* 2 000
Canada	258 854	272 937	282 589	275 461	288 300
Costa Rica	—	—	4 000	4 000	7 000
Dominican Republic	—	—	2 000	5 000	7 000
Guatemala	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Honduras	—	—	956	—	—
Mexico	228 800	257 200	281 700	279 100	271 200
USA (b)	1 215 000	1 252 000	1 250 000	1 221 000	1 264 000
Argentina	83 000	77 200	84 600	* 81 000	* 77 000
Brazil	155 000	172 000	184 000	188 000	152 000
Colombia	34 000	42 000	42 000	42 000	42 000
Peru	26 082	* —	* —	5 000	62 900
Venezuela	* 36 000	* 31 000	* 26 000	* 25 000	* 22 000
Burma	* 200	* 200	* 200	* 200	* 200
China	3 772 900	4 157 500	4 603 600	4 590 100	4 475 100
India	332 000	367 000	419 000	460 000	473 000
Indonesia	* 45 000	* 45 000	* 47 000	* 45 000	* 45 000
Iran	72 000	75 000	82 000	81 000	85 000
Israel	26 000	27 000	27 000	26 000	26 000
Japan	247 634	267 206	252 562	258 527	251 854
Kazakhstan	80 994	103 400	111 518	88 099	90 750
Korea (Rep. of)	332 500	327 900	416 900	460 000	427 700
Korea, Dem. P.R. of	* 4 000	* 3 000	* 3 000	* 3 000	* 3 000
Malaysia	54 000	26 000	44 000	32 000	38 000
Pakistan (c)	385	1 545	1 569	1 414	* 1 400
Philippines	* 32 000	* 30 000	* 34 000	* 32 000	* 32 000
Saudi Arabia	37 000	39 000	35 000	39 000	40 000
Sri Lanka	1 000	1 000	1 000	2 100	3 800
Taiwan	36 000	35 000	36 000	35 000	* 35 000
Thailand	55 504	55 504	42 223	86 507	87 385
United Arab Emirates	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000

## Production of refined lead

tonnes (metric)

Country	2009	2010	2011	2012	2013
Australia	235 000	213 000	232 000	207 000	232 000
New Zealand	* 11 000	* 11 000	* 13 000	* 3 000	—
World total	9 300 000	9 900 000	10 500 000	10 500 000	10 500 000

### Notes

(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 stated

## Production of lithium minerals

tonnes (metric)

Country	2009	2010	2011	2012	2013
Portugal					
Lepidolite	37 359	40 109	37 534	20 698	19 940
Spain					
Lepidolite	4 270	7 824	—	—	—
Zimbabwe	50 000	42 000	44 000	47 000	44 000
Canada	* 10 000	* —	* —	* —	* —
USA (a)	* 1 500	* 1 500	* 1 500	* 1 500	* 1 500
Argentina (b)(c)	17 570	12 853	14 706	* 13 000	* 12 500
Brazil					
Spodumene	15 929	15 733	7 820	7 084	* 7 000
Chile (b)	30 538	52 851	69 597	71 594	60 646
China	* 53 000	* 55 000	* 58 000	* 60 000	* 61 000
Australia					
Spodumene	197 482	303 729	421 228	452 921	* 421 000
World total (Li content)	17 300	22 500	27 900	28 300	25 500

### Notes

(1) In addition to the countries listed, Russia has also produced lithium minerals in the past

- (a) Li content
- (b) Carbonate
- (c) Chloride

## Production of magnesite

tonnes (metric)

Country	2009	2010	2011	2012	2013
Austria	544 716	757 063	867 912	778 810	714 422
Greece	380 834	396 497	393 880	349 998	368 588
Netherlands (a)	183 256	236 053	274 877	290 873	249 568
Poland	47 000	63 000	75 350	84 000	97 000
Russia	* 2 600 000	* 2 600 000	* 2 600 000	* 2 600 000	* 2 600 000
Slovakia	477 600	650 100	751 700	618 400	584 000
Spain	390 311	462 959	577 725	649 977	643 827
Turkey	861 180	2 316 763	2 588 276	2 443 478	* 2 400 000
South Africa	* 80 000	* 80 000	* 80 000	* 80 000	* 80 000
Zimbabwe	449	—	169	—	* —
Canada (b)	* 140 000	* 150 000	* 150 000	* 150 000	* 150 000
Guatemala	17 247	—	311	27 132	17 196
Mexico	—	—	—	100 724	101 000
Brazil (c)	409 909	483 882	476 805	479 304	* 500 000
Colombia	* —	* —	* —	—	1 774
China	* 13 000 000	28 410 000	33 010 000	* 35 000 000	* 37 000 000
India (d)	301 070	235 762	224 104	224 315	195 105
Iran (e)	130 575	126 702	172 697	* 170 000	* 170 000
Israel (f)	132 636	135 930	126 988	105 610	91 040
Korea, Dem. P.R. of	* 150 000	* 150 000	* 150 000	* 150 000	* 150 000
Pakistan (g)	2 639	5 159	4 908	5 444	6 705
Philippines	3 872	4 186	4 784	4 822	5 998
Saudi Arabia	—	—	159 000	254 000	235 000
Australia (g)	366 188	301 142	671 073	614 139	522 187
World total	20 200 000	37 600 000	43 400 000	45 200 000	46 900 000

### Notes

(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 30 June of that stated

## Production of primary magnesium metal

tonnes (metric)

Country	2009	2010	2011	2012	2013
Russia	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
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	* 5 000	* 5 000
China	525 600	650 800	674 900	698 300	769 200
India	* 200	* 200	* 200	* 200	* 200
Israel	19 405	23 309	26 284	27 292	27 399
Kazakhstan (a)	* 21 000	* 21 000	* 21 000	* 21 000	* 23 000
Korea (Rep. of)	—	—	—	* 2 500	* 7 500
Malaysia	—	—	200	200	500
Oman	—	—	41 300	37 500	49 000

### Note

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

## Production of manganese ore

tonnes (metric)

Country	2009	2010	2011	2012	2013
Bulgaria	28 300	106 000	85 600	39 100	103 600
Georgia (a)	* 370 000	* 370 000	* 370 000	* 370 000	* 370 000
Hungary	43 000	55 000	58 000	51 000	35 000
Romania	20 304	13 120	3 180	8 993	21 300
Russia	...	...	2 600	8 200	* 8 200
Turkey	141 246	134 336	172 480	192 756	* 200 000
Ukraine	(a) 932 000	(a) 1 589 000	1 391 228	1 234 007	1 524 696
Burkina Faso	—	57 355	49 715	—	—
Egypt (b)	* 12 500	6 508	37 194	62 388	* 65 000
Gabon	1 992 060	3 200 570	3 831 215	3 363 170	4 091 399
Ghana	1 012 941	1 194 074	1 827 692	1 490 634	2 003 176
Ivory Coast	* 100 000	* 80 000	* 60 000	* 50 000	* 40 000
Morocco	51 788	75 614	58 000	90 200	123 200
Namibia	51 471	35 728	41 876	* 42 000	* 42 000
South Africa					
Metallurgical	4 564 855	7 156 338	8 635 863	8 931 472	* 10 930 000
Chemical	10 911	15 407	15 979	11 943	* 22 000
Sudan	500	—	—	—	* —
Mexico	330 328	466 649	437 264	510 942	580 309
Brazil	2 320 000	3 125 000	3 483 000	3 571 000	2 502 259
Chile	1 642	—	—	—	—
Burma	* 607 000	* 754 000	* 586 000	* 286 000	* 394 000
China	* 12 000 000	* 13 000 000	* 14 000 000	* 14 500 000	* 15 500 000
India (c)	2 491 950	3 056 385	2 411 871	2 342 169	2 588 313
Iran (d)	125 506	131 561	194 428	172 560	* 170 000
Kazakhstan	2 457 400	3 045 000	2 963 000	2 975 000	2 852 100
Malaysia	567 963	899 703	597 917	1 099 585	1 125 127
Thailand	64 930	50 450	398	8 151	14 320
Australia	4 445 000	6 474 000	6 961 000	7 179 000	7 448 000
World total	34 700 000	45 100 000	48 300 000	48 600 000	52 800 000

### Notes

(1) In addition to the countries listed, Colombia, Cuba and Vietnam are believed to 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	2009	2010	2011	2012	2013
Finland	6 210	9 000	5 000	—	—
Russia	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Morocco	* 18 000	* 20 000	* 20 000	* 20 000	* 20 000
Mexico (a)	* 10 600	* 11 000	* 120 300	* 235 300	* 532 383
USA	* 15 000	* 15 000	* 15 000	* 15 000	15 000
Argentina	9 468	24 600	11 000	18 800	11 000
Chile (b)	* 88 000	* 176 000	(a)* 89 200	(a)* 48 600	(a)* 19 325
China	1 425 000	1 585 000	1 493 000	1 347 000	1 613 000
Kyrgyzstan	140 000	99 000	112 000	74 000	* 75 000
Tajikistan	19 000	15 000	15 000	103 000	30 000
World total	1 800 000	2 000 000	1 900 000	1 900 000	2 400 000

### Notes

(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	2009	2010	2011	2012	2013
Finland	7 855	13 809	12 896	12 112	11 244
France (a)	* 18 000	* 19 000	* 19 000	* 18 000	* 19 700
Russia	* 9 000	* 9 000	* 9 000	* 9 000	* 9 000
Spain (a)	3 655	4 034	3 775	3 518	3 462
Turkey	40 681	36 009	17 542	1 253	* 1 260
Egypt	* 50	* 50	* 50	* 50	* 50
Madagascar	358	2 069	3 950	12 532	* 13 000
South Africa	299	904	633	400	309
Sudan	100	10	378	324	* 350
Canada	* 18 000	* 19 000	* 21 000	* 22 000	* 22 000
Mexico	5 000	160	—	160	160
USA (a)(b)	51 100	56 100	52 000	47 500	* 50 000
Argentina	8 668	9 638	10 226	5 785	* 6 000
Brazil	4 379	4 709	6 193	5 220	* 5 000
China (c)	* 91 000	* 126 000	* 132 000	* 149 000	* 161 000
India (d)	1 061	1 333	1 899	1 256	1 610
Iran (e)	6 797	2 860	7 130	* 7 000	* 5 000
Korea (Rep. of) (f)	27 078	36 486	31 260	25 594	25 143
Malaysia (g)	4 324	4 515	4 245	3 967	4 363
Sri Lanka	2 347	2 095	2 927	* 2 900	* 2 900
Taiwan	557	—	1 455	6 844	8 931
World total	300 000	348 000	338 000	334 000	350 000

### Notes

(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	2009	2010	2011	2012	2013
Armenia	4 365	4 377	4 822	5 446	5 934
Norway	...	...	...	4	8
Russia	4 561	4 495	4 842	4 838	* 4 800
Canada	8 721	8 648	8 674	8 954	9 000
Mexico	10 167	10 849	10 787	11 366	12 562
USA	47 800	59 400	63 700	60 400	* 61 000
Argentina	1 148	468	1 708	3 233	3 829
Brazil	262	337	263	185	* 200
Chile	34 786	37 044	40 698	35 090	38 715
Peru	12 297	16 963	19 141	16 790	18 140
China	90 270	96 615	103 320	104 000	* 110 000
Iran (a)	3 882	3 676	3 365	3 512	* 3 500
Mongolia	2 410	2 198	1 957	1 904	1 819
World total	221 000	245 000	263 000	256 000	270 000

### Notes

(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	2009	2010	2011	2012	2013
Norway	270 000	327 000	330 000	320 000	320 000
Russia					
Nepheline syenite	4 400 000	4 900 000	4 608 000	4 947 000	4 662 000
Nepheline concentrates	500 000	1 000 000	997 000	1 056 700	990 600
Canada	513 000	581 000	610 000	592 000	674 000

## Mine production of nickel

tonnes (metal content)

Country	2009	2010	2011	2012	2013
Albania	550	1 954	914	750	2 151
Finland	1 600	12 100	18 800	19 600	19 300
Greece	9 600	16 100	21 700	18 630	16 890
Kosovo	10 565	9 100	7 728	4 436	7 607
Macedonia	12 000	14 200	25 600	10 800	21 100
Norway	336	348	339	351	296
Poland	600	600	900	800	600
Russia	261 900	270 000	270 000	268 700	240 000
Spain	8 029	6 296	—	2 398	7 574
Turkey	1 199	2 539	848	3 805	* 1 200
Botswana	29 616	24 931	15 675	17 948	22 848
Madagascar	—	—	—	5 695	25 148
Morocco	733	317	217	* 300	* 300
South Africa (a)	34 610	39 960	43 321	45 945	51 208
Zambia	1 500	2 809	2 869	—	—
Zimbabwe	4 858	6 133	7 992	5 716	13 000
Canada	135 037	160 063	219 025	211 701	223 295
Cuba	65 000	65 400	68 600	64 600	62 000
Dominican Republic	—	—	13 528	15 186	9 400
Guatemala	—	—	—	2 400	9 200
Brazil	36 200	54 100	74 600	89 600	77 400
Colombia	51 802	49 433	37 800	51 595	49 369
Venezuela	13 749	12 063	13 400	8 100	* —
China	84 800	79 800	89 800	93 300	107 200
Indonesia	192 900	305 200	552 300	720 000	868 300
Philippines	137 350	184 330	319 354	317 621	315 633
Australia	165 800	168 500	215 000	243 600	234 000
New Caledonia	95 649	131 309	128 732	131 693	150 451
Papua New Guinea	—	—	—	4 758	12 918
World total	1 356 000	1 618 000	2 149 000	2 360 000	2 548 000

### Notes

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

## Smelter/refinery production of nickel

tonnes (metric)

Country	2009	2010	2011	2012	2013
Austria	700	1 000	1 000	1 000	1 000
Finland	41 556	49 772	49 823	46 275	44 498
France	13 900	12 900	13 700	13 200	12 100
Greece	8 269	13 960	18 530	18 630	17 500
Kosovo	6 365	7 200	7 500	8 000	7 600
Macedonia	12 000	14 400	17 300	19 200	20 000
Norway	88 577	92 185	92 427	91 687	91 017
Poland	600	600	900	840	600
Russia	244 800	262 300	263 000	256 000	240 000
Ukraine	15 800	21 900	17 100	20 800	22 800
United Kingdom	17 800	31 600	37 400	34 300	40 400
Madagascar	—	—	—	5 695	25 148
South Africa	34 200	34 700	35 900	32 900	32 200
Zimbabwe	9 200	4 000	3 700	1 800	2 800
Canada	116 909	105 413	142 445	139 800	137 410
Cuba	33 599	33 972	34 572	34 263	33 542
Dominican Republic	—	—	13 528	15 186	9 400
Brazil	32 800	41 900	43 271	59 779	57 500
Colombia	51 802	49 443	37 817	51 595	49 369
Venezuela	10 400	11 700	13 400	8 100	—
China	253 800	332 300	435 200	519 200	693 500
Indonesia	12 550	18 688	19 690	18 372	21 200
Japan	143 500	166 100	156 900	169 600	177 800
Korea (Rep. of)	19 333	21 461	18 580	21 769	25 744
Australia	131 200	101 600	110 300	128 800	142 000
New Caledonia	38 230	39 802	40 513	43 030	40 459
World total	1 338 000	1 469 000	1 624 000	1 760 000	1 946 000

### Note

- (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	2009	2010	2011	2012	2013
Armenia	27	95	229	181	53
Bulgaria	14 800	—	—	3 700	—
Greece	862 935	760 000	720 000	790 000	700 000
Hungary	82 058	70 990	70 900	72 364	* 64 220
Italy	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Russia	* 45 000	* 45 000	* 45 000	* 45 000	* 45 000
Slovakia	25 000	23 000	23 000	24 000	16 000
Turkey	522 832	545 585	702 673	887 600	* 900 000
Ukraine	* 36 000	* 36 000	* 36 000	* 36 000	* 36 000
South Africa	* 400	* 400	* 400	* 400	* 400
Mexico	51 395	31 779	30 750	29 950	27 200
USA	348 000	414 000	420 000	396 000	* 376 000
Argentina	21 802	27 182	27 446	24 663	* 25 000
China	* 700 000	* 700 000	* 700 000	* 700 000	* 700 000
Iran (a)	753 183	547 617	* 500 000	* 500 000	* 500 000
Japan	* 220 000	* 210 000	* 200 000	* 200 000	* 200 000
Philippines	10 100	10 500	13 800	9 221	14 249
Thailand	13 500	14 700	26 500	41 400	14 293
Australia (b)	7 649	6 616	2 362	940	1 300
New Zealand	8 848	5 088	—	3 598	—

### Notes

(1) In addition to the countries listed, Algeria, Canada, Djibouti, Iceland 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	2009	2010	2011	2012	2013
Albania	576 739	742 012	894 530	1 112 000	1 224 000
Austria	905 031	875 969	838 052	837 561	847 952
Azerbaijan	48 353 700	48 580 900	43 195 200	43 000 000	43 200 000
Belarus	1 720 010	1 700 140	1 681 470	1 660 000	1 645 000
Bulgaria	23 800	22 400	21 400	23 600	27 400
Croatia	807 424	748 791	664 440	620 835	620 795
Czech Republic	217 000	173 000	163 000	150 000	152 000
Denmark	13 045 000	12 090 000	10 909 000	9 968 000	8 657 000
Estonia (a)	1 733 000	2 080 000	2 173 132	2 180 313	2 379 253
France	971 000	903 000	901 000	888 000	* 800 000
Georgia	52 731	50 413	48 942	42 194	52 248
Germany	2 800 063	2 511 174	2 677 136	2 633 000	2 645 000
Greece	87 000	86 000	87 126	83 143	62 233
Hungary	796 000	735 900	657 000	700 931	607 132
Italy	4 550 816	5 080 498	5 286 042	5 376 629	5 480 000
Lithuania	114 956	114 464	113 895	101 644	86 054
Netherlands	1 704 000	1 414 000	1 464 000	1 467 000	1 519 000
Norway	115 612 000	105 146 000	100 343 000	94 497 000	90 347 000
Poland	686 992	686 487	618 163	677 664	962 090
Romania	4 388 940	4 172 411	4 081 979	3 992 011	3 994 122
Russia	494 000 000	505 000 000	509 000 000	517 000 000	523 000 000
Serbia	663 005	865 499	1 020 490	1 124 794	1 163 988
Slovakia	19 000	16 000	18 000	14 000	13 000
Slovenia	138	233	263	279	298
Spain	106 817	121 528	99 925	143 526	367 645
Turkey	2 489 914	2 602 114	* 2 600 000	* 2 500 000	* 2 600 000
Ukraine	3 960 000	3 549 000	3 363 000	3 345 000	3 071 000
United Kingdom	68 198 000	62 962 000	51 972 000	44 560 000	40 646 000
Algeria	77 800 000	75 500 000	74 300 000	67 200 000	68 900 000
Angola	87 600 000	90 500 000	83 800 000	86 900 000	87 400 000
Cameroon	3 700 000	3 200 000	3 200 000	3 200 000	3 200 000
Chad	6 200 000	6 400 000	6 000 000	5 300 000	5 000 000
Congo	13 335 006	15 581 948	14 828 348	13 250 062	13 567 146
Congo, Democratic Republic	1 100 000	1 050 000	1 010 000	1 173 020	1 153 640
Egypt	35 300 000	35 000 000	34 600 000	34 700 000	34 500 000
Equatorial Guinea	15 200 000	13 600 000	12 500 000	14 900 000	14 600 000
Gabon	11 829 000	12 431 000	12 170 000	12 300 000	11 800 000
Ghana	301 000	360 000	3 832 875	3 928 071	4 905 079
Ivory Coast	2 897 000	2 197 000	1 984 000	1 898 902	1 853 809
Libya	77 400 000	77 700 000	22 500 000	71 100 000	46 500 000
Mauritania	550 143	412 000	385 000	327 000	338 000
Morocco	9 300	10 400	9 600	* 9 600	* 9 600
Niger	—	—	350 000	1 042 857	1 042 857
Nigeria	101 500 000	117 200 000	117 400 000	116 200 000	111 300 000
Senegal	33 600	53 800	54 500	7 700	15 800
South Africa	270 000	316 000	179 000	137 000	79 000
South Sudan	—	—	—	(b) 1 500 000	4 900 000
Sudan	23 400 000	22 800 000	(b) 14 300 000	5 100 000	6 000 000
Tunisia	3 902 000	3 731 400	3 203 300	3 160 400	2 807 400
Barbados	38 030	42 069	40 179	37 369	35 619
Canada	139 300 000	141 600 000	150 200 000	160 900 000	172 500 000
Cuba	2 731 300	3 024 800	3 011 700	2 998 900	2 858 000
Guatemala	523 700	605 100	554 100	537 620	505 573
Mexico	153 600 000	152 670 000	151 842 000	150 601 000	148 999 000
Trinidad and Tobago	5 056 600	5 061 410	4 736 250	4 222 897	3 828 769
USA	333 967 163	346 357 633	359 501 561	408 705 215	463 755 343
Argentina	32 027 302	31 298 213	29 439 986	29 328 026	28 670 771
Bolivia	1 565 000	1 599 700	1 644 800	1 925 800	2 922 000
Brazil	105 000 000	110 600 000	113 400 000	111 470 000	109 360 000
Chile	192 000	217 750	246 810	321 305	357 838
Colombia	33 288 500	38 990 438	45 433 683	46 866 079	49 742 675
Ecuador	24 747 000	24 810 000	25 498 000	25 696 000	26 869 791
Peru	7 175 000	7 753 000	7 533 000	7 494 774	8 278 655

## Production of crude petroleum

tonnes (metric)

Country	2009	2010	2011	2012	2013
Suriname	945 300	953 300	966 300	958 219	964 672
Venezuela	149 900 000	142 500 000	139 600 000	139 700 000	135 100 000
Afghanistan	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
Bahrain (c)	2 399 000	2 294 000	2 346 000	2 711 000	3 024 000
Brunei	8 291 000	8 448 000	8 248 000	7 955 925	7 875 300
Burma (e)	983 000	958 000	935 000	875 000	864 000
China (f)	189 489 600	203 014 000	203 646 000	207 478 000	208 129 000
East Timor	(d) 3 066 000	(d) 2 760 000	(c) 3 095 000	(c) 3 661 000	(c) 2 519 000
India (e)	33 691 000	37 712 000	38 090 000	37 862 000	37 778 000
Indonesia	47 440 000	47 245 000	45 105 000	43 105 000	41 292 000
Iran	202 400 000	207 100 000	205 800 000	177 100 000	166 100 000
Iraq	117 533 000	120 400 000	136 900 000	152 400 000	153 200 000
Israel	2 010	1 791	4 638	30 690	52 259
Japan	840 000	796 000	759 000	724 000	627 000
Jordan	1 500	1 200	900	1 100	* 1 100
Kazakhstan	76 482 000	79 684 000	80 060 900	79 225 000	81 731 400
Kuwait (g)	121 300 000	122 500 000	139 700 000	153 700 000	151 300 000
Kyrgyzstan	77 300	82 800	90 300	83 600	* 83 600
Malaysia	31 500 000	30 500 000	27 200 000	28 000 000	29 600 000
Mongolia	257 000	300 000	351 000	500 137	705 488
Oman	40 500 000	43 100 000	44 100 000	45 803 815	46 902 251
Pakistan (h)	3 204 400	3 160 800	3 205 500	3 276 442	3 712 130
Philippines	1 150 000	1 092 000	1 016 000	876 596	* 877 000
Qatar	57 900 000	65 700 000	78 200 000	83 300 000	84 200 000
Saudi Arabia (g)	459 500 000	466 600 000	525 800 000	547 000 000	542 300 000
Syria	18 853 258	19 100 000	16 500 000	8 500 000	2 800 000
Taiwan	15 995	14 477	11 344	11 379	10 511
Tajikistan	26 200	27 000	28 300	29 800	27 300
Thailand	12 900 000	13 000 000	12 100 000	* 12 950 000	* 12 950 000
Turkmenistan	10 200 000	10 700 000	10 700 000	11 000 000	11 400 000
United Arab Emirates	126 300 000	130 800 000	151 300 000	154 700 000	465 700 000
Uzbekistan	4 500 000	3 600 000	3 600 000	3 200 000	2 900 000
Vietnam (c)	16 579 500	15 562 700	15 769 100	17 305 300	17 390 000
Yemen, Republic of	14 000 000	18 000 000	14 600 000	13 200 000	16 684 524
Australia	22 527 000	24 796 000	21 967 000	21 814 000	18 194 000
New Zealand (c)	2 574 440	2 468 440	2 129 540	1 868 670	1 608 260
Papua New Guinea	1 813 000	1 683 000	1 424 000	1 346 000	1 399 000
<b>World total</b>	<b>3 849 000 000</b>	<b>3 932 000 000</b>	<b>3 980 000 000</b>	<b>4 095 000 000</b>	<b>4 425 000 000</b>

### Notes

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

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

## Production of natural gas

million m<sup>3</sup>

Country	2009	2010	2011	2012	2013
Albania	9	2	2	—	—
Austria	1 559	1 713	1 591	1 729	1 359
Azerbaijan	16 325	16 673	16 361	17 242	17 895
Belarus	205	213	222	218	228
Bulgaria	15	74	443	390	282
Croatia	2 591	2 727	2 471	2 013	3 724
Czech Republic	180	201	187	204	207
Denmark	7 998	7 792	6 262	5 480	4 566
France	813	736	623	538	340
Georgia	12	8	6	5	5
Germany	15 554	13 666	12 952	11 706	10 678
Greece	11	7	6	6	5
Hungary	2 748	2 600	2 315	2 205	2 065
Ireland, Republic of (a)	414	402	361	380	354
Italy	7 909	8 265	8 339	8 511	7 710
Netherlands	74 659	83 944	76 429	76 020	81 479
Norway	104 800	107 800	101 697	114 918	108 746
Poland	5 537	5 666	5 921	5 871	5 380
Romania	11 273	11 138	11 164	11 095	11 135
Russia	584 000	649 000	669 000	653 000	668 000
Serbia	279	423	616	672	660
Slovakia	114	106	106	93	91
Slovenia	3	7	2	1	3
Spain	19	58	58	65	62
Turkey	660	626	536	547	* 550
Ukraine	24 189	20 382	20 646	20 491	21 313
United Kingdom	63 022	59 674	47 911	41 396	38 090
Algeria	79 600	80 400	78 000	81 500	78 600
Angola	690	733	752	760	925
Congo	538	934	1 161	1 161	1 161
Egypt	62 700	61 300	61 400	60 900	56 100
Equatorial Guinea	5 900	6 136	6 235	6 811	* 6 800
Gabon (b)	85	85	57	85	* 85
Ivory Coast	1 300	1 352	1 317	1 317	1 329
Libya	15 900	16 800	7 900	12 200	12 000
Morocco	41	50	53	* 80	* 80
Mozambique	3 600	3 744	3 548	3 600	3 631
Nigeria	24 800	36 600	39 900	43 300	36 100
South Africa	1 200	1 600	1 400	1 186	838
Tunisia	3 056	3 402	2 935	2 826	* 2 890
Barbados	19	20	20	20	* 20
Canada	156 046	151 023	145 285	141 274	140 146
Cuba	1 155	1 073	1 020	1 035	1 066
Mexico	59 400	57 600	58 300	56 900	56 600
Trinidad and Tobago	43 221	44 624	42 883	42 604	42 831
USA (b)	584 001	603 596	648 506	681 246	687 589
Argentina	48 416	47 097	45 524	44 124	44 124
Bolivia	12 786	14 923	15 790	18 300	20 800
Brazil	13 370	16 152	18 280	20 845	24 290
Chile	1 889	1 792	1 440	1 207	893
Colombia	10 378	10 599	10 810	10 897	12 930
Ecuador	296	340	224	510	514
Peru	3 470	7 149	12 034	12 527	12 921
Venezuela	28 700	30 200	31 200	32 800	28 400
Afghanistan	142	142	* 142	* 142	* 142
Bahrain	12 478	12 781	12 651	13 610	15 800
Bangladesh (c)	18 511	19 919	20 075	21 056	22 670
Brunei	10 733	12 283	12 797	12 565	12 206
Burma (d)	12 441	12 746	12 888	12 806	13 163
China	85 269	94 848	102 500	107 200	117 050
East Timor	5 504	5 120	5 416	5 192	5 906
India (d)	47 510	52 222	47 559	40 679	34 412
Indonesia	86 699	86 342	81 896	89 933	87 040
Iran	131 200	146 200	151 800	165 600	166 600

## Production of natural gas

million m<sup>3</sup>

Country	2009	2010	2011	2012	2013
Iraq	1 200	1 300	900	700	600
Israel	2 825	3 234	4 320	2 558	6 492
Japan	3 539	3 396	3 298	3 276	2 995
Jordan	220	185	179	162	* 150
Kazakhstan	35 942	37 406	39 531	40 299	41 912
Kuwait (e)	11 200	11 600	13 500	15 500	15 600
Kyrgyzstan	15	23	27	29	* 29
Malaysia	59 970	61 250	61 260	62 050	69 100
Oman	24 800	29 279	30 848	37 919	34 723
Pakistan (c)	41 367	41 995	41 676	44 145	42 641
Philippines	3 910	3 683	3 976	3 905	3 511
Qatar	89 300	116 700	145 300	150 800	158 500
Saudi Arabia (e)	77 500	87 700	99 200	102 800	103 000
Syria	7 948	7 700	8 300	5 300	4 500
Taiwan	351	290	330	442	381
Tajikistan	20	23	15	7	2
Thailand	26 347	29 565	29 041	* 32 700	* 41 800
Turkmenistan	36 400	42 400	59 500	62 300	62 300
United Arab Emirates	59 100	60 500	52 300	54 300	56 000
Uzbekistan	60 000	59 600	49 100	56 900	55 200
Vietnam	8 010	9 402	8 480	9 403	9 681
Australia	42 813	52 081	53 925	59 733	61 163
New Zealand	4 168	4 420	3 995	4 277	4 525
Papua New Guinea	156	151	158	149	156
World total	3 095 000	3 300 000	3 379 000	3 473 000	3 509 000

### Notes

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

- (a) Sales
- (b) Dry gas
- (c) Years ended 30 June of that stated
- (d) Years ended 31 March following that stated
- (e) Including one-half of the output of the Neutral Zone



## Production of phosphate rock

tonnes (metric)

Country	2009	2010	2011	2012	2013
Finland	658 347	817 289	869 694	858 005	877 189
Russia	9 537 800	10 843 500	10 304 300	10 282 400	10 743 300
Algeria	1 017 000	1 525 234	1 281 100	1 250 300	1 150 000
Egypt (a)	6 227 424	3 021 335	1 392 990	2 456 562	* 3 000 000
Malawi	—	—	—	12 403	* 12 000
Morocco	18 307 000	26 603 000	28 052 000	27 000 000	26 400 000
Senegal	948 600	976 200	1 411 000	1 380 900	882 400
South Africa	2 237 128	2 493 904	2 564 820	2 242 213	2 131 854
Tanzania	18 000	17 180	10 125	19 984	23 020
Togo	725 547	695 123	865 616	1 100 000	1 213 657
Tunisia	7 409 000	8 148 500	2 479 400	2 762 300	3 283 500
Zimbabwe	32 100	56 656	46 047	34 600	17 900
Canada	901 388	826 858	851 308	516 000	316 000
Cuba	2 400	6 200	6 000	1 700	3 000
Mexico	1 421 823	1 507 402	1 690 606	1 724 662	2 391 451
USA	26 400 000	25 800 000	28 100 000	30 100 000	* 32 300 000
Brazil (b)	6 084 000	6 192 000	6 738 000	6 740 000	6 334 984
Chile					
Phosphate rock	13 292	50 528	15 929	15 601	14 956
Guano	1 649	845	1 625	1 266	2 915
Colombia	* 48 000	* 50 000	* 50 000	54 000	49 400
Peru	—	1 134 086	8 889 295	10 345 925	14 842 307
Venezuela	362 753	85 240	81 500	159 400	106 400
China	60 208 900	68 070 000	81 223 000	95 296 000	108 510 000
Christmas Island (a)(c)(d)	563 000	566 645	616 000	653 000	672 000
India (e)	1 605 489	2 097 490	2 259 726	1 941 158	1 383 998
Iran	61 231	* 62 000	98 081	* 100 000	* 100 000
Iraq	45 000	55 000	52 720	100 000	140 000
Israel	2 697 000	2 777 200	3 021 955	2 488 496	2 539 166
Jordan	5 280 693	6 528 708	7 594 000	6 383 000	5 398 600
Kazakhstan	1 204 700	1 755 000	1 716 200	1 868 200	1 831 800
Korea, Dem. P.R. of	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Pakistan (a)	17 625	47 385	30 950	69 400	104 961
Philippines					
Phosphate rock	2 257	2 308	2 778	2 952	3 478
Guano	251	272	310	331	409
Saudi Arabia	—	—	—	1 534 000	1 611 000
Sri Lanka	36 347	47 778	58 254	47 600	49 100
Syria	2 466 150	3 764 900	3 541 900	1 780 300	897 600
Thailand	658	35 783	3 300	1 990	350
Uzbekistan	700 000	657 900	652 600	664 300	700 000
Vietnam	2 047 400	2 324 500	2 395 300	2 364 500	2 656 000
Australia (a)	1 962 893	2 135 801	2 388 038	884 643	2 064 291
Nauru (c)	146 816	407 654	436 563	521 491	347 184
World total	161 000 000	182 000 000	202 000 000	216 000 000	235 000 000

### Notes

(1) In addition to the countries listed, Indonesia, Mali 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

## Mine production of platinum group metals

kilograms (metal content)

Country	2009	2010	2011	2012	2013
Finland					
Platinum	—	—	—	429	946
Palladium	—	—	—	379	766
Poland					
Platinum	30	30	* 30	* 30	* 30
Palladium	20	20	* 20	* 20	* 20
Russia					
Platinum (a)	24 400	26 500	26 500	24 900	25 000
Palladium (a)	113 100	115 700	107 500	89 900	84 000
Other platinum metals (a)	2 200	2 200	2 100	2 800	2 600
Serbia					
Platinum	12	—	6	3	2
Palladium	38	22	20	22	25
Botswana					
Platinum	746	498	373	435	218
Palladium	4 728	2 830	2 115	2 613	1 337
Ethiopia					
Platinum (b)	8	1	1	* 1	* 1
South Africa					
Platinum	140 819	147 790	148 008	128 590	137 024
Palladium	75 118	82 222	82 731	74 738	76 008
Other platinum metals	55 456	57 292	58 111	51 010	51 156
Zimbabwe					
Platinum	6 849	8 639	10 827	7 664	* 8 000
Palladium	5 354	6 916	8 422	5 901	* 6 000
Other platinum metals	1 190	1 536	2 162	2 090	* 2 000
Canada					
Platinum	* 4 000	* 3 600	* 8 000	* 7 000	* 9 000
Palladium	* 6 900	* 6 200	* 14 000	* 12 000	* 16 000
Other platinum metals	* 500	* 400	* 900	* 800	* 100
USA					
Platinum	3 826	3 450	3 700	3 670	* 3 700
Palladium	12 659	11 600	12 400	12 300	* 12 500
Colombia	929	997	1 231	1 460	1 504
China					
Platinum	* 1 400	* 1 400	* 1 400	* 1 400	* 1 400
Palladium	* 700	* 700	* 700	* 700	* 700
Australia					
Palladium (c)	1 034	781	445	706	786
<b>World total</b>	<b>462 000</b>	<b>481 000</b>	<b>492 000</b>	<b>432 000</b>	<b>441 000</b>

### Notes

- (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	2009	2010	2011	2012	2013
Belarus	2 485 400	5 222 600	5 305 800	4 830 700	4 178 500
Germany					
Potassic salts	1 825 139	3 023 941	3 214 696	3 149 386	3 075 201
Russia	3 690 900	6 128 100	6 526 300	5 403 300	6 000 000
Spain					
Chloride	481 455	418 778	436 026	421 652	961 865
United Kingdom					
Chloride	* 403 800	* 403 800	* 462 000	* 540 000	* 540 000
Canada					
Chloride	4 318 000	9 788 000	11 005 000	8 962 717	10 140 000
USA					
Potassic salts	700 000	930 000	1 000 000	900 000	* 970 000
Brazil					
Chloride	452 698	417 990	423 850	346 509	492 100
Chile					
Chloride	713 000	961 000	864 000	996 172	1 158 403
China	2 062 000	2 344 500	2 598 800	2 559 000	3 600 000
Israel					
Chloride	2 446 200	2 041 342	1 789 721	2 115 468	2 155 414
Jordan	1 199 400	1 284 791	1 355 160	1 094 400	1 046 500
World total	20 800 000	33 000 000	35 000 000	36 300 000	34 300 000

## Production of rare earth oxides

tonnes (metric)

Country	2009	2010	2011	2012	2013
Russia	1 898	1 496	1 444	2 131	1 443
USA	—	—	—	* 480	* 2 400
Brazil	* 200	* 160	* 188	* 134	* 130
China (a)	* 129 400	* 118 900	* 105 000	* 100 000	* 95 000
India (b)(c)	16	—	—	—	—
Malaysia	20	471	498	114	229
Australia (d)	—	—	2 188	2 612	970

### Notes

- (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 31 March following that stated  
 (c) May include small quantities of other rare earth compounds  
 (d) Years ending 30 June of that stated

## Production of rhenium

tonnes (metric)

Country	2009	2010	2011	2012	2013
Armenia	* 0	* 0	* 0	* 1	* 0
Poland	4	4	5	* 5	* 9
Russia	* 2	* 2	* 1	* 2	* 2
USA	6	6	9	8	* 8
Chile	* 25	* 25	* 27	* 27	* 27
Peru	* 5	* 5	* —	* —	* —
China	* 1	* 1	* 1	* 1	* 1
Kazakhstan	* 3	* 2	* 3	* 3	* 3
Uzbekistan	* 0	* 0	* 0	* 0	* 0

## Production of salt

tonnes (metric)

Country	2009	2010	2011	2012	2013
Albania					
Sea salt	* 47 000	* 47 000	* 47 000	* 47 000	* 47 000
Armenia	29 402	29 440	35 570	37 798	31 000
Austria					
Rock salt	50	95	169	222	184
Salt in brine	1 035 044	1 071 842	1 150 474	3 193 216	3 717 419
Azerbaijan	5 466	4 449	* 5 000	5 345	6 268
Belarus	2 089 282	2 411 683	2 617 565	2 176 650	2 625 270
Bosnia and Herzegovina	556 089	566 101	721 046	743 807	727 894
Bulgaria	1 300 000	1 900 000	2 200 000	2 100 000	2 000 000
Croatia	57 186	66 835	53 963	45 992	42 502
Denmark	511 063	601 046	* 595 000	* 590 000	580 000
France (a)	* 6 100 000	* 6 100 000	* 6 100 000	* 6 100 000	* 6 300 000
Germany					
Rock salt	7 709 844	9 992 156	8 765 168	5 938 855	8 510 652
Brine salt	1 862 630	2 118 484	2 217 205	2 182 440	2 164 456
Salt in brine	* 7 300 000	* 4 500 000	* 6 500 000	* 10 900 000	7 878 895
Greece	* 189 000	* 190 000	* 190 000	191 970	189 500
Italy					
Rock salt and brine salt	3 678 234	4 006 882	2 912 128	2 862 440	2 879 174
Montenegro					
Sea salt	17 000	11 200	10 000	16 000	10 000
Netherlands	5 967 000	5 982 000	6 866 000	6 513 000	6 517 000
Poland					
Rock salt	988 545	1 221 700	1 254 000	793 000	1 310 500
Brine salt	2 533 413	2 464 363	2 633 300	2 732 200	2 735 500
Other salt	763 385	763 515	768 000	724 000	499 200
Portugal					
Rock salt	594 578	618 961	631 295	520 284	473 095
Sea salt	72 325	44 574	47 267	88 693	91 282
Romania	2 072 744	2 388 357	2 248 940	1 888 516	2 113 752
Russia	1 600 000	704 000	373 000	413 000	348 000
Serbia	28 782	30 816	23 334	16 506	13 704
Slovakia	41 000	—	—	—	—
Slovenia	2 924	59	4 291	5 684	3 360
Spain					
Rock salt	2 763 081	3 115 940	3 096 383	2 785 959	2 902 729
Sea salt	1 338 789	1 242 718	1 314 529	1 222 060	1 229 000
Other salt	99 853	92 644	92 850	100 643	147 553
Switzerland	554 000	643 000	478 324	* 528 000	* 652 000
Turkey	3 765 564	4 044 254	6 545 546	5 251 878	* 5 000 000
Ukraine	5 394 512	4 908 186	5 938 000	6 181 415	5 796 287
United Kingdom	6 166 000	6 666 000	6 060 000	6 460 000	* 6 500 000
Algeria					
Brine salt and sea salt	269 255	187 160	245 000	178 000	172 900
Angola	* 70 000	* 50 000	* 40 000	* 40 000	* 40 000
Botswana	241 114	364 761	446 525	389 481	521 306
Djibouti	—	* 12 000	* 12 000	* 12 000	* 12 000
Egypt (b)	2 951 636	2 703 250	2 460 462	2 883 577	* 2 900 000
Eritrea	* 26 000	* 26 000	* 26 000	* 26 000	* 26 000
Ethiopia (c)	41 847	31 401	125 087	* 100 000	* 100 000
Ghana	* 250 000	* 85 000	* 100 000	* 150 000	* 150 000
Guinea	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Kenya (d)	24 125	* 24 000	24 639	9 980	8 895
Libya	* 40 000	* 40 000	* 20 000	* 30 000	* 30 000
Madagascar	* 70 000	* 70 000	* 70 000	* 70 000	* 70 000
Mali	* 6 000	* 6 000	* 6 000	* 6 000	* 6 000
Mauritania	455	391	690	* 700	* 700
Mauritius (e)	2 301	3 000	4 000	3 800	3 800
Morocco	310 376	503 351	720 814	* 720 000	* 720 000
Mozambique (e)	* 110 000	* 120 000	* 120 000	* 130 000	* 130 000
Namibia	807 348	783 036	792 000	810 000	826 985
Niger	* 1 300	* 1 300	* 1 300	—	—
Senegal	222 500	231 400	258 200	237 300	243 000
Somalia	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
South Africa	408 422	394 493	381 177	399 135	479 024

## Production of salt

tonnes (metric)

Country	2009	2010	2011	2012	2013
Sudan	35 793	141 840	10 791	26 315	* 30 000
Tanzania	27 393	34 455	32 297	34 016	36 032
Tunisia (e)	1 260 100	1 804 000	1 180 500	1 131 200	1 146 000
Bahamas (f)	767 691	1 310 915	713 138	659 671	956 789
Bonaire	—	—	* 300 000	* 400 000	* 400 000
Canada					
Rock salt	13 644 520	9 536 288	11 629 830	9 820 792	11 223 829
Other salt (g)	1 006 375	1 001 200	994 718	1 023 832	986 253
Cuba	265 700	271 800	280 800	215 900	222 400
Dominican Republic (a)	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
El Salvador (e)	87 300	114 100	98 200	103 100	* 100 000
Guatemala (e)	* 50 000	* 50 000	* 50 000	* 60 000	* 60 000
Honduras	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Mexico	7 445 025	8 634 098	9 361 454	10 100 935	10 297 955
Netherlands Antilles	303 565	337 321	—	—	—
Nicaragua (e)	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Panama (e)	19 548	27 587	16 577	15 596	27 197
USA					
Rock salt (h)	20 700 000	19 052 000	19 360 000	13 392 000	* 14 436 000
Salt in brine (h)	17 480 000	16 454 000	16 720 000	17 484 000	* 18 847 000
Evaporated salt (h)	8 280 000	7 794 000	7 920 000	6 324 000	* 6 817 000
Argentina	1 477 532	1 532 124	1 888 676	1 843 975	* 1 800 000
Brazil					
Rock salt	1 443 000	1 415 373	1 335 454	1 403 364	* 1 400 000
Sea salt	4 462 000	5 614 959	4 829 275	11 078 507	* 11 000 000
Chile	8 382 215	7 694 879	9 966 038	8 057 130	6 576 960
Colombia					
Rock salt	255 332	288 676	305 706	308 547	319 184
Sea salt	356 797	139 810	116 265	211 721	113 226
Ecuador	* 75 000	* 75 000	* 75 000	* 75 000	* 75 000
Peru	1 567 279	1 228 900	1 468 266	1 242 765	1 205 435
Venezuela (e)	* 350 000	* 350 000	* 350 000	* 350 000	* 350 000
Afghanistan	163 641	168 827	* 169 000	* 169 000	* 169 000
Bangladesh (b)	1 368 323	1 388 557	1 409 239	1 430 329	1 438 805
Burma (i)	408 767	125 218	162 319	207 261	169 109
Cambodia (e)(j)	* 30 000	* 170 000	* 95 000	* 80 000	* 85 000
China	66 627 900	70 377 600	64 294 000	62 158 000	64 603 000
India					
Rock salt (i)	2 300	1 200	—	—	—
Sea salt (i)	17 478 600	14 202 300	18 188 300	19 205 600	17 517 000
Other salt (i)	6 470 400	4 406 600	3 990 800	5 341 300	5 502 300
Indonesia	585 000	* 600 000	* 650 000	* 700 000	* 700 000
Iran (k)	2 816 235	3 291 063	2 714 735	2 961 952	* 3 000 000
Iraq	113 130	102 000	136 007	143 441	181 928
Israel (e)	356 889	420 749	399 649	414 984	442 417
Japan (i)	1 095 000	1 122 000	978 000	925 000	929 000
Jordan	23 000	32 542	—	32 000	* 32 000
Kazakhstan	222 942	276 131	364 222	463 960	519 188
Korea (Rep. of)	382 270	222 509	372 230	308 847	421 259
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	27 700	32 240	35 100	47 600	* 48 000
Lebanon	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Mongolia	1 402	1 862	2 183	2 461	* 2 100
Oman	30 600	12 300	12 400	12 800	11 800
Pakistan					
Rock salt (b)	1 917 486	1 943 527	1 953 711	2 135 760	2 159 939
Sea salt (b)	31 293	174 786	286 697	292 135	297 047
Philippines (e)	516 066	557 644	720 146	774 815	992 640
Saudi Arabia					
Rock salt and brine salt	1 680 000	1 800 000	1 864 000	1 611 000	1 691 000
Sri Lanka	102 500	104 000	87 256	* 87 000	* 87 000
Syria	78 263	* 80 000	* 80 000	* 80 000	* 80 000
Taiwan	171 583	262 594	104 854	70 750	80 966
Tajikistan	49 772	50 365	26 994	27 954	31 762

## Production of salt

tonnes (metric)

Country	2009	2010	2011	2012	2013
Thailand					
Rock salt	1 376 037	1 405 406	1 359 493	1 363 539	1 300 156
Other salt	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Turkmenistan	* 215 000	* 215 000	* 215 000	* 215 000	* 215 000
Uzbekistan	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Vietnam	679 000	975 300	862 000	1 177 900	* 1 200 000
Yemen, Republic of	* 70 000	* 70 000	* 70 000	* 70 000	* 70 000
Australia	11 560 000	12 186 996	12 849 548	13 167 372	13 503 763
New Zealand	67 000	60 000	70 000	88 000	55 000
World total	280 400 000	276 800 000	282 700 000	281 500 000	287 300 000

### Notes

(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 selenium metal

tonnes (metric)

Country	2009	2010	2011	2012	2013
Belgium	* 200	* 200	* 200	* 200	* 200
Finland	59	73	86	93	101
Germany	* 230	* 250	* 250	* 250	* 250
Poland	80	79	85	90	80
Russia	* 160	* 170	* 265	* 172	* 155
Sweden	129	72	* 70	* 70	* 70
Canada	173	97	35	144	159
Mexico	—	62	95	95	132
Peru	61	59	54	42	* 40
China	* 65	* 65	* 65	* 65	* 65
Japan	709	804	809	820	739
Kazakhstan	* 120	* 130	* 130	* 130	* 130
Philippines	* 65	* 65	* 65	* 70	* 70
Uzbekistan	* 20	* 20	* 20	* 20	* 20

### Notes

(1) In addition to the countries listed, Australia, Chile, the Republic of Korea and Zimbabwe are believed to produce selenium metal

## Production of sillimanite minerals

tonnes (metric)

Country	2009	2010	2011	2012	2013
France					
Andalusite	* 65 000	* 65 000	* 65 000	* 68 000	* 68 000
Madagascar	—	—	—	4 500	4 500
South Africa					
Andalusite	* 245 000	* 245 000	* 295 000	* 265 000	* 270 000
USA					
Kyanite (a)	71 000	93 000	98 000	99 000	* 95 000
Brazil					
Kyanite (b)	* 200	* 200	* 200	* 200	* 200
India					
Kyanite (c)	5 495	5 954	4 064	1 048	1 922
Sillimanite (c)	33 687	48 784	59 206	43 736	61 597
Nepal					
Kyanite (d)	10	* 24	25	29	19

### Notes

(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	2009	2010	2011	2012	2013
Armenia	9 000	16 400	16 100	14 000	14 083
Azerbaijan	—	1 400	3 805	3 700	1 900
Bulgaria	* 55 000	* 55 000	* 55 000	* 55 000	* 55 000
Finland	70 062	64 596	73 081	128 200	100 890
Greece	27 500	29 000	* 33 300	* 39 800	39 759
Greenland	—	—	9	27	* 3
Ireland, Republic of	5 267	3 818	6 109	9 454	7 822
Macedonia	* 35 000	* 32 000	* 30 000	* 31 000	* 32 000
Poland	1 221 000	1 183 000	1 167 000	1 200 000	1 100 000
Portugal	20 483	20 561	28 027	29 890	40 621
Romania	* 18 000	* 18 000	* 18 000	* 18 000	18 000
Russia (a)	1 312 600	1 144 600	1 134 000	1 399 600	1 412 100
Serbia (a)	4 424	4 384	7 380	8 388	8 400
Slovakia	201	320	330	441	508
Spain	2 200	20 800	29 900	32 943	* 31 000
Sweden	288 590	302 145	301 959	309 337	341 346
Turkey	351 600	363 520	246 500	193 890	186 621
United Kingdom	514	506	531	230	82
Algeria	200	147	70	42	27
Botswana	—	—	—	8 700	22 597
Burkina Faso	—	—	—	—	31 320
Congo, Democratic Republic	—	5 875	9 187	12 342	60 431
Eritrea	—	—	4 417	29 922	15 799
Ethiopia (b)	771	771	715	* 2 400	* 1 400
Ghana	3 928	* 3 900	* 3 900	* 3 900	* 3 900
Ivory Coast	—	—	98	410	572
Morocco	210 000	243 000	227 100	230 200	255 000
Namibia	(a) 700	—	1 841	2 376	2 010
Niger	256	326	197	329	* 300
South Africa	77 780	79 315	73 180	67 304	68 777
Sudan	413	631	* 700	* 700	* 700
Tanzania	8 231	12 040	13 524	11 227	11 014
Canada	617 777	591 482	661 089	685 255	645 976
Dominican Republic	23 120	22 816	18 169	27 296	78 228
Guatemala	127 836	194 242	272 771	204 555	265 943
Honduras	58 768	59 787	50 634	51 896	50 900
Mexico	3 553 841	4 410 749	4 777 710	5 358 195	5 821 001
Nicaragua	4 491	6 995	7 928	* 10 200	13 745
USA	1 245 000	1 270 000	1 120 000	1 060 000	1 090 000
Argentina	415 235	693 600	702 000	750 000	682 600
Bolivia	1 325 730	1 259 000	1 215 586	2 413 000	1 288 000
Brazil	14 590	14 630	15 238	20 145	* 20 000
Chile	1 301 018	1 286 688	1 291 272	1 194 521	1 173 845
Colombia	10 827	15 300	24 045	19 368	13 968
Ecuador	116	1 200	1 589	2 934	1 197
Peru	3 922 708	3 640 444	3 418 862	3 480 587	3 674 283
China	* 2 900 000	3 085 441	3 231 626	3 639 100	3 670 210
India (c)	138 780	148 303	207 144	374 046	349 774
Indonesia	359 451	335 040	227 173	247 800	* 200 000
Iran	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Japan	4 469	4 981	4 486	3 536	3 644
Kazakhstan	618 141	552 060	650 649	963 182	963 580
Korea (Rep. of)	1 700	2 025	2 649	2 925	3 897
Korea, Dem. P.R. of	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Laos	14 726	17 234	17 976	20 221	32 262
Malaysia	367	436	459	1 628	361
Mongolia	20 397	19 641	19 107	19 118	29 332
Oman	2 162	1 290	1 979	486	—
Philippines	33 808	41 004	45 530	49 211	40 043
Saudi Arabia	7 527	7 670	5 839	5 500	4 158
Tajikistan	3 100	3 100	1 800	1 800	1 800
Thailand	15 300	15 300	16 423	32 047	32 381
Uzbekistan	52 900	59 100	* 60 000	* 60 000	* 60 000

## Mine production of silver

kilograms (metal content)

Country	2009	2010	2011	2012	2013
Australia	1 702 000	1 879 000	1 725 000	1 728 000	1 840 000
Fiji	313	328	418	342	462
New Zealand	14 264	17 136	14 324	5 630	11 223
Papua New Guinea	55 082	83 957	90 055	81 332	89 666
Solomon Islands	—	—	592	902	685
<b>World total</b>	<b>22 379 000</b>	<b>23 436 000</b>	<b>23 476 000</b>	<b>26 449 000</b>	<b>26 107 000</b>

### Notes

(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	2009	2010	2011	2012	2013
Botswana	215 188	240 898	257 851	248 629	227 913
Ethiopia (a)	4 046	4 046	3 650	* 4 000	* 4 000
Kenya	404 904	473 689	499 100	449 269	468 215
<b>USA</b>	<b>9 310 000</b>	<b>10 600 000</b>	<b>10 700 000</b>	<b>11 100 000</b>	<b>* 11 400 000</b>

### Note

(a) Years ended 7 July of that stated

## Production of strontium minerals

tonnes (metric)

Country	2009	2010	2011	2012	2013
Spain	57 466	83 035	97 102	96 888	90 972
Morocco	* 2 600	* 2 500	* 2 500	* 2 500	* 2 500
Mexico	36 127	31 429	40 669	46 190	67 778
Argentina (a)	8 169	8 512	1 056	* 5 000	* 5 000
China	* 700 000	* 700 000	* 700 000	* 700 000	* 700 000
Iran	15 396	—	40 000	* 20 000	* 20 000
Pakistan (b)	470	160	—	—	—

### Notes

(1) In addition to the countries listed, Germany and Poland are believed to produce strontium minerals

(a) May contain unbeneficiated material

(b) Years ended 30 June of that stated

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2009	2010	2011	2012	2013
Austria					
Recovered (a)	48 624	40 512	48 612	47 572	* 48 000
Belarus					
Recovered (a)	47 188	41 606	45 625	58 322	58 343
Denmark					
Recovered (a)	4 200	3 246	3 045	3 925	3 599
Finland					
Pyrites	153 600	250 000	338 000	375 000	347 000
Recovered (b)	273 600	270 000	940 000	990 000	947 000
Recovered (a)	127 000	122 000	133 300	121 700	130 000
Germany					
Recovered (a)	1 504 000	1 455 000	1 465 000	1 312 000	1 255 000
Recovered (c)	565 000	513 000	542 210	493 169	464 776
Lithuania					
Recovered (a)	69 722	73 470	76 699	73 040	81 449
Norway					
Recovered (b)	* 90 000	* 96 000	* 96 000	126 801	118 487
Recovered (a)	25 000	22 000	19 000	20 000	22 000
Poland					
Frasch	262 769	516 742	657 100	676 500	526 300
Recovered (b)	257 000	253 000	310 500	310 500	310 500
Recovered (a)	214 382	250 075	259 000	285 000	* 280 000
Russia					
Pyrites	71 000	* 71 000	* 71 000	* 71 000	* 71 000
Recovered (a)	5 514 000	6 406 000	6 557 000	6 482 300	6 091 700
Recovered (c)	703 000	898 700	897 100	919 300	954 200
Sulphur ore	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Spain					
Recovered (b)	533 000	547 000	492 000	578 400	539 200
Recovered (a)	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Sweden					
Recovered (b)	186 100	179 833	202 289	195 032	189 750
Recovered (a)	83 646	83 947	92 973	93 442	64 587
Other Europe (d)	3 606 000	3 571 000	3 577 000	3 385 000	3 459 000
South Africa					
Pyrites	60 244	30 309	—	—	—
Recovered (b)	185 000	141 000	174 000	133 000	* 130 000
Recovered (a)	291 000	205 000	163 000	124 000	* 120 000
Other Africa (d)	436 000	505 000	403 000	501 000	570 000
Canada					
Recovered (b)	890 899	979 232	638 000	665 000	699 000
Recovered (a)	6 570 503	6 492 699	5 970 000	5 594 000	5 666 000
Mexico					
Recovered (b)	412 000	425 000	522 900	555 600	555 600
Recovered (a)	1 114 028	991 802	959 463	1 010 900	1 028 800
USA					
Recovered (b)	749 000	791 000	720 000	586 000	* 650 000
Recovered (a)	8 190 000	8 320 000	8 230 000	8 410 000	* 8 500 000
Other North and Central America (d)	79 000	39 000	99 000	69 000	50 000
Brazil					
Pyrites	25 110	24 803	17 744	21 746	* 20 000
Recovered (b)	275 593	286 875	290 000	255 693	307 200
Recovered (a)	143 599	143 147	170 136	222 561	240 300
Chile					
Recovered (b)	1 601 000	1 601 000	1 650 300	1 650 300	1 514 100
Colombia					
Recovered (a)	7 311	7 013	6 375	7 138	5 969
Sulphur ore	54 367	59 556	58 073	63 790	52 470
Other South America (d)	1 047 000	868 000	987 000	1 059 000	999 000
Abu Dhabi					
Recovered (a)	1 760 000	1 800 000	1 875 000	2 200 000	2 510 000
Bahrain					
Recovered (a)	108 439	138 477	125 648	* 140 000	* 160 000

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2009	2010	2011	2012	2013
China					
Pyrites	4 946 000	6 342 900	6 964 300	7 464 300	7 703 600
Recovered	5 843 000	6 403 900	7 026 100	7 228 700	7 516 300
Sulphur ore	1 700 000	3 200 000	4 000 000	4 660 000	4 975 000
India					
Recovered (b)	1 078 000	1 143 800	1 209 100	1 209 100	1 111 100
Recovered (a)(c)	1 451 000	1 600 000	1 675 000	1 850 000	2 150 000
Iran					
Recovered (a)	1 429 000	1 500 000	1 575 000	1 660 000	1 600 000
Japan					
Recovered (b)(e)	1 675 000	1 818 600	1 626 500	1 755 600	1 685 700
Recovered (a)	1 863 596	1 891 875	1 755 329	1 747 246	1 778 963
Jordan					
Recovered (a)	* 310 000	* 310 000	* 310 000	* 310 000	* 310 000
Kazakhstan					
Recovered (b)	490 000	522 900	549 000	588 200	604 600
Recovered (a)	2 250 000	2 350 000	2 311 000	2 150 500	2 452 700
Korea (Rep. of)					
Recovered (b)	899 000	1 029 400	1 078 400	1 078 400	1 078 400
Recovered (a)	* 660 000	* 660 000	1 350 000	1 525 000	1 600 000
Oman					
Recovered (a)	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Pakistan					
Recovered (f)	25 784	26 641	27 645	25 560	20 610
Qatar					
Recovered (a)	657 954	1 124 210	1 655 937	1 843 982	1 978 862
Saudi Arabia					
Recovered (a)	3 214 000	3 200 000	3 300 000	4 092 000	3 900 000
Syria					
Recovered (a)	40 000	50 000	60 000	20 000	20 000
Taiwan					
Recovered	252 392	231 700	219 975	231 296	192 292
Other Asia (d)	2 495 000	2 530 000	2 657 000	2 789 000	2 719 000
Australasia (d)	1 024 000	1 026 000	1 026 000	975 000	902 000
World total					
Pyrites	5 400 000	6 800 000	7 500 000	8 000 000	8 200 000
Frasch	300 000	500 000	700 000	700 000	500 000
Recovered	63 300 000	65 900 000	68 100 000	69 700 000	70 300 000
Sulphur ore	1 900 000	3 400 000	4 200 000	4 900 000	5 200 000

### Notes

- (1) Other Europe includes: Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, France, Greece, Hungary, Italy, Netherlands, Portugal, Romania, Serbia, Slovakia, Turkey, Ukraine and the United Kingdom
- (2) Other Africa includes: Algeria, Egypt, Libya, Morocco, Namibia and Zambia
- (3) Other North and Central America includes: Aruba, Cuba, Curacao and Trinidad and Tobago
- (4) Other South America includes: Argentina, Ecuador, Peru and Venezuela
- (5) Other Asia includes: Indonesia, Iraq, Israel, Korea (Dem. P.R of), Kuwait, Philippines, Singapore, Thailand and Uzbekistan
- (6) Australasia includes: Australia and New Zealand

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

## Production of talc

tonnes (metric)

Country	2009	2010	2011	2012	2013
Austria	111 388	138 367	132 018	134 665	134 814
Finland	375 302	419 345	429 494	396 332	361 840
France	400 000	400 000	400 000	* 400 000	* 400 000
Greece	* 200	* 200	* 200	* 200	* 200
Italy	* 110 000	* 110 000	* 110 000	* 110 000	* 110 000
Macedonia	682	1 292	547	286	—
Norway	23 350	6 392	8 191	7 983	8 459
Portugal	11 567	11 981	15 462	15 131	11 348
Romania	570	296	131	13	—
Russia	* 150 000	* 150 000	* 150 000	* 150 000	* 150 000
Slovakia	200	7 000	7 000	2 000	10 000
Spain					
Talc	47 218	51 897	11 957	8 857	* 8 000
Pyrophyllite	—	—	5 600	* —	—
Sweden	4 000	4 000	3 000	—	—
Turkey					
Talc	6 887	1 826	9 959	14 537	* 19 000
Pyrophyllite	140 263	192 643	115 462	85 251	* 80 000
United Kingdom	2 861	2 633	3 708	3 667	2 947
Egypt (a)	72 090	35 474	12 934	21 516	* 21 500
Morocco					
Talc	—	—	516	* 500	* 500
Pyrophyllite	33 442	27 066	4 613	* 4 600	* 4 600
South Africa					
Talc	4 718	3 150	4 453	4 765	4 924
Pyrophyllite	114 666	122 511	121 368	18 734	17 336
Sudan	1 167	—	—	—	* —
Canada	44 000	100 000	147 000	154 000	175 000
Guatemala	6 355	2 175	3 273	2 449	3 253
Mexico	33 421	870	51 221	463 214	846 813
USA	511 000	604 000	616 000	515 000	* 531 000
Argentina (b)	22 762	24 820	24 379	23 576	* 24 000
Brazil (b)	442 663	412 359	443 533	459 569	* 500 000
Chile	790	238	—	—	—
Colombia (b)	—	—	—	—	90
Peru					
Talc	13 359	19 767	28 296	31 559	32 899
Pyrophyllite	—	—	—	30 399	31 678
Uruguay	1 070	830	54 880	370	780
Bhutan	64 948	26 302	8 562	16 063	9 584
China	* 2 300 000	2 000 000	2 000 000	* 2 200 000	* 2 200 000
India					
Pyrophyllite (c)	240 747	240 082	255 891	247 968	208 454
Steatite (c)	876 548	902 686	998 438	971 778	865 126
Iran (d)	66 383	95 767	58 987	* 60 000	* 60 000
Japan					
Talc	* 25 000	* 24 000	* 24 000	* 25 000	* 26 000
Pyrophyllite	* 340 000	* 340 000	* 350 000	* 340 000	* 350 000
Korea (Rep. of)					
Talc	5 997	5 729	15 068	21 625	2 808
Pyrophyllite	617 411	673 936	510 708	483 133	524 881
Korea, Dem. P.R. of	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Nepal (e)	6 601	5 674	3 556	6 935	5 140
Pakistan (a)	13 923	53 991	47 561	55 515	93 214
Saudi Arabia					
Pyrophyllite	40	24	8	8	10
Taiwan	—	360	659	778	362
Thailand					
Talc	504	672	2 304	5 856	7 880
Pyrophyllite	124 384	2 205	5 300	35 000	* 35 000
Vietnam					
Pyrophyllite	* 16 000	* 16 000	* 16 000	* 16 000	* 16 000

## Production of talc

tonnes (metric)

Country	2009	2010	2011	2012	2013
Australia (a)	* 92 000	* 80 000	* 99 000	* 135 000	* 104 000
World total	7 500 000	7 400 000	7 400 000	7 700 000	8 000 000

### Notes

- (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	2009	2010	2011	2012	2013
Russia					
Nb content	511	397	431	450	511
Ta content	35	31	27	31	32
Burundi					
Columbite-tantalite	44	67	159	229	3
Congo, Democratic Republic					
Columbite-tantalite	490	279	383	586	697
Ethiopia					
Tantalite (a)	206	400	207	* 200	* 200
Madagascar					
Columbite	—	21	8	* 8	* 8
Mozambique					
Tantalite	405	55	139	140	* 150
Nigeria					
Tantalite	83	...	...	...	...
Columbite	* 300	128	* 128	* 128	* 128
Rwanda					
Columbite-tantalite	952	560	829	* 1 100	* 2 500
Canada					
Pyrochlore	* 9 500	* 10 100	* 10 800	* 10 900	* 12 200
Tantalite	88	—	—	—	121
Brazil					
Pyrochlore	* 276 000	* 276 000	* 282 000	* 268 000	* 250 000
Columbite-tantalite	* 250	* 310	* 240	* 210	* 200
China					
Columbite-tantalite	* 350	* 350	* 350	* 350	* 350
Malaysia					
Struverite	176	84	110	262	190
Australia					
Tantalite	* 140	—	* 240	* 100	—
World total concentrates (b)	289 000	288 000	296 000	282 000	267 000
Nb content	121 000	121 000	123 000	118 300	111 700
Ta content	900	600	700	900	1 100

### Notes

- (1) Niobium and tantalum minerals are believed to be produced in Namibia, Russia and South Africa
- (2) The figures in this table refer to gross tonnage of tantalum and niobium concentrates
- (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 tellurium metal

tonnes (metric)

Country	2009	2010	2011	2012	2013
Russia	30	31	31	30	* 30
Sweden	—	—	—	7	24
Canada	16	8	6	11	12
USA	50	50	* 50	* 50	* 50
Peru	7	—	—	—	—
Japan	* 49	47	47	43	31

### Note

(1) In addition to the countries listed, Germany is believed to produce tellurium metal

## Mine production of tin

tonnes (metal content)

Country	2009	2010	2011	2012	2013
Portugal	34	22	39	42	84
Russia	126	143	75	249	* 250
Spain	—	—	9	69	* 0
Burundi	20	29	52	69	74
Congo, Democratic Republic	8 532	9 330	10 229	10 440	10 175
Niger	6	6	10	...	...
Nigeria	1 800	1 300	1 800	* 2 400	* 2 600
Rwanda	3 154	3 970	4 508	* 3 500	* 3 600
Uganda	—	24	0	0	19
Bolivia	19 575	20 190	20 373	19 702	19 287
Brazil	9 500	10 400	10 725	13 667	13 800
Peru (a)	37 503	33 848	28 882	26 105	23 668
Burma	* 600	* 800	* 2 100	* 2 100	* 9 000
China	* 128 000	129 600	127 400	115 900	149 000
Indonesia	* 84 000	* 84 000	* 78 000	* 91 000	* 95 000
Laos	389	723	434	965	800
Malaysia	2 410	2 668	3 340	3 725	3 697
Mongolia	8	7	42	(b) 54	(b) 60
Thailand	166	291	282	199	132
Vietnam	* 5 400	* 5 400	* 5 400	* 5 400	* 5 400
Australia	13 268	18 263	14 014	6 158	6 472
World total	314 000	321 000	308 000	302 000	343 000

### Notes

(a) Recoverable

(b) Estimate based on reported exports

## Smelter production of tin

tonnes (metric)

Country	2009	2010	2011	2012	2013
Belgium	8 700	9 900	10 000	11 400	10 300
Russia	1 429	1 381	726	900	* 900
Bolivia (a)	14 715	15 000	14 500	14 280	14 863
Brazil	8 311	9 098	9 382	11 955	16 100
Peru	34 388	36 451	32 290	24 811	24 181
China	140 400	149 000	155 500	148 100	158 500
India (b)	27	24	23	14	23
Indonesia	50 859	49 810	53 428	* 50 000	* 50 000
Japan	757	841	947	1 133	1 786
Malaysia	35 443	38 771	40 281	37 822	32 633
Thailand	19 423	23 551	20 670	19 996	19 088
Vietnam	2 747	3 042	3 900	4 800	5 500
World total	317 000	337 000	342 000	325 000	334 000

### Notes

(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	2009	2010	2011	2012	2013
Norway					
Ilmenite	671 000	864 000	870 000	830 614	826 126
Russia					
Ilmenite	...	2 500	63 490	125 095	150 458
Ukraine					
Ilmenite	* 600 000	* 600 000	* 600 000	* 600 000	* 600 000
Rutile	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Egypt					
Ilmenite	88 000	11 000	11 000	* —	* —
Gambia					
Ilmenite	54 655	69 940	—	* —	* —
Madagascar					
Ilmenite	160 000	* 273 000	511 000	562 000	562 000
Rutile	* 3 200	* 5 700	* 9 400	* 12 000	* 14 000
Mozambique					
Ilmenite	471 524	678 400	636 800	574 500	720 100
Rutile	1 800	4 700	6 500	5 100	4 000
Sierra Leone					
Ilmenite	15 200	18 206	14 576	21 400	32 350
Rutile	63 860	68 198	67 970	94 490	120 350
South Africa					
Ilmenite (a)	* 1 445 000	* 1 200 000	* 1 369 000	* 1 210 000	* 1 120 000
Rutile	134 000	135 000	133 000	* 124 000	* 130 000
Canada					
Ilmenite (b)(a)	* 2 000 000	* 2 400 000	* 2 500 000	* 2 700 000	* 2 800 000
USA	* 200 000	* 200 000	* 300 000	* 300 000	* 300 000
Brazil					
Ilmenite	39 000	53 928	68 804	69 071	* 70 000
Rutile	3 000	2 331	2 350	1 881	* 2 000
China					
Ilmenite	* 900 000	* 1 000 000	* 1 100 000	* 1 100 000	* 1 100 000
India					
Ilmenite (c)	713 605	663 217	751 163	* 750 000	* 750 000
Rutile (c)	18 573	26 593	16 598	* 16 000	* 16 000
Kazakhstan	* 17 000	* 17 000	* 17 000	* 17 000	* 17 000
Korea (Rep. of)					
Ilmenite	120 236	—	—	—	—
Malaysia					
Ilmenite	15 983	19 036	28 782	22 275	16 043
Rutile	1 502	7 567	10 810	20 008	5 983
Sri Lanka					
Ilmenite	122 424	52 637	62 955	44 707	42 685
Rutile	2 276	2 568	1 970	1 590	1 406
Vietnam					
Ilmenite (d)	* 700 000	* 881 000	* 870 000	* 1 164 000	* 606 000
Rutile	631	592	...	...	...
Australia					
Ilmenite	1 577 000	1 339 000	1 277 000	1 344 000	* 1 340 000
Rutile	285 000	438 000	474 000	425 000	* 430 000
Leucoxene	137 000	160 000	225 000	228 000	* 230 000
World total					
Ilmenite (wt of concs)	9 900 000	10 300 000	11 100 000	11 400 000	11 100 000
Rutile (wt of concs)	600 000	800 000	800 000	800 000	800 000
All forms (TiO <sub>2</sub> content)	* 5 400 000	* 5 700 000	* 6 100 000	* 6 300 000	* 6 100 000

See notes on following page

## Production of titanium minerals

### Notes

- (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, Taiwan and USA  
 (3) In 2013 South Africa produced an estimated 700 000 tonnes of slag (85% TiO<sub>2</sub>) and Canada produced an estimated 1 200 000 tonnes of slag (80-95% TiO<sub>2</sub>)

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

## Mine production of tungsten

tonnes (metal content)

Country	2009	2010	2011	2012	2013
Austria	887	975	861	706	850
Portugal (a)	823	799	818	763	692
Russia	5 696	5 588	7 103	7 252	* 7 300
Spain	284	303	425	496	702
Burundi	106	105	164	* 165	* 165
Congo, Democratic Republic	190	40	23	37	31
Rwanda	690	630	950	1 105	* 1 800
Uganda	7	44	8	34	57
Canada	2 501	364	2 368	2 505	2 762
Bolivia	1 023	1 203	1 418	1 573	1 580
Brazil (b)	192	166	244	381	* 380
Peru	634	716	546	365	35
Burma (c)	87	163	* 140	* 130	* 140
China	49 432	51 287	61 802	64 000	* 60 000
Korea, Dem. P.R. of	* 200	* 200	* 200	* 200	* 100
Kyrgyzstan	* 100	* 100	* 100	* 100	* 100
Mongolia	27	13	13	42	—
Thailand (a)	274	481	229	107	203
Uzbekistan	* 300	* 300	* 300	* 300	* 300
Australia (d)(e)	17	11	40	22	42
<b>World total</b>	<b>63 500</b>	<b>63 500</b>	<b>77 800</b>	<b>80 300</b>	<b>77 200</b>

### Notes

- (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  
 (d) Scheelite  
 (e) Years ended 30 June of that stated

## Mine production of uranium

tonnes (metal content)

Country	2009	2010	2011	2012	2013
Czech Republic	286	259	252	222	232
Germany	—	* 8	52	50	27
Romania	* 75	* 77	* 77	* 90	* 77
Russia	3 565	3 563	2 993	2 862	3 135
Ukraine	840	850	890	960	922
Malawi	90	671	785	1 102	1 133
Namibia	4 631	4 500	3 262	4 500	4 328
Niger	3 241	4 198	4 159	4 821	4 237
South Africa	533	579	556	467	531
Canada	10 176	9 518	9 145	8 998	9 331
USA	1 428	1 628	1 537	1 596	1 794
Brazil	345	148	265	231	198
China	* 750	* 827	* 1 500	* 1 500	* 1 500
India	* 290	* 400	* 400	* 385	* 400
Kazakhstan	13 900	17 803	19 451	21 317	22 574
Pakistan	* 50	* 45	* 45	* 45	* 45
Uzbekistan	2 429	2 400	3 000	3 000	2 400
Australia	7 942	5 971	5 961	7 022	6 432
World total	50 600	53 400	54 300	59 200	59 300
World total (U <sub>3</sub> O <sub>8</sub> equivalent)	59 700	63 000	64 100	69 800	70 000

### Note

(1) Excluding uranium production from decommissioning operations

## Mine production of vanadium

tonnes (metal content)

Country	2009	2010	2011	2012	2013
Russia	13 106	12 293	12 860	14 856	14 402
South Africa	14 353	22 606	21 652	19 500	* 14 000
USA	230	1 060	590	272	* —
China	* 29 000	* 32 000	* 36 000	* 39 000	* 40 000
Kazakhstan	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
World total	58 000	69 000	72 000	75 000	69 000

### Notes

(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	2009	2010	2011	2012	2013
Russia	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Egypt	4 650	—	2 865	2 093	* 2 000
Kenya	315	395	515	457	* 450
South Africa	193 334	199 285	170 571	132 886	127 658
Uganda	—	1 121	6 882	4 165	243
Zimbabwe	3 211	—	—	—	* —
Mexico	291	98	241	500	425
USA (a)	* 110 000	* 100 000	* 100 000	* 100 000	* 100 000
Argentina	2 150	2 500	1 000	* 320	...
Brazil	50 438	49 976	54 970	51 986	* 50 000
China	* 12 000	* 15 000	* 15 000	* 15 000	* 50 000
India (b)	11 662	19 234	10 194	7 947	10 176
Japan	* 6 000	* 6 000	* 6 200	* 6 200	* 6 200
Australia (c)	6 548	7 922	8 297	9 256	9 091

### Notes

(1) In addition to the countries listed Malawi is believed to produce vermiculite

(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	2009	2010	2011	2012	2013
Finland	9 200	12 100	11 500	* 11 500	* 12 000
Spain	7 000	6 000	7 417	10 918	16 738
Mexico	29 728	46 548	47 523	55 204	57 302
USA	* 65 000	* 67 000	* 70 000	* 70 000	* 70 000
China	* 650 000	710 000	745 000	* 750 000	* 750 000
India (a)	132 385	183 381	184 445	145 667	192 642

### Notes

(1) In addition to the countries listed, Turkey is believed to produce wollastonite

(a) Years ended 31 March following that stated

## Mine production of zinc

tonnes (metal content)

Country	2009	2010	2011	2012	2013
Armenia	3 564	7 468	8 106	8 431	8 294
Bosnia and Herzegovina	3 425	5 514	6 862	7 600	9 000
Bulgaria (a)	9 339	9 904	10 977	12 116	13 902
Finland	30 233	55 562	64 115	52 200	40 290
Greece	17 800	18 400	21 200	20 800	22 500
Ireland, Republic of	385 700	342 500	344 000	337 500	326 700
Kosovo	2 500	4 100	2 872	3 818	4 983
Macedonia	38 648	32 872	28 132	28 037	30 907
Montenegro	—	500	3 300	4 600	4 600
Poland	115 500	107 700	87 200	76 700	75 200
Portugal	501	6 422	4 227	30 006	53 382
Romania	* 3 000	* 7 700	* 8 800	* 8 400	* 2 000
Russia	214 000	235 000	243 000	227 000	209 000
Serbia	2 700	2 600	3 100	6 000	5 800
Slovakia	54	82	103	134	...
Spain	5 900	17 323	33 197	28 634	24 975
Sweden	192 502	198 687	194 021	188 325	176 582
Turkey	135 800	195 500	158 057	195 793	* 200 000
Burkina Faso	—	—	—	—	35 640
Congo, Democratic Republic	9 848	4 612	7 379	* 5 300	* 6 200
Morocco	44 800	43 680	45 065	47 600	44 200
Namibia	198 000	204 200	192 500	193 600	187 500
Nigeria	1 400	200	3 100	13 800	7 000
South Africa	28 200	36 142	36 629	37 034	30 145
Tunisia	200	200	600	7 400	7 700
Canada	699 145	649 065	622 600	641 134	426 089
Guatemala	—	—	6 800	3 300	1 000
Honduras	36 370	33 839	26 000	26 000	25 000
Mexico	489 766	570 004	631 859	660 349	642 542
USA	736 000	748 000	769 000	738 000	777 000
Argentina	31 869	32 600	38 000	42 000	47 650
Bolivia	430 879	411 409	427 129	389 911	407 332
Brazil	172 688	211 203	197 840	164 258	152 414
Chile	27 801	27 662	36 602	26 762	29 759
Peru	1 512 931	1 470 450	1 256 383	1 281 282	1 351 273
Burma	* 5 400	* 8 600	* 9 200	* 8 000	* 4 800
China	3 324 400	3 842 200	4 050 000	4 859 100	5 100 000
India (b)	677 824	729 886	725 776	767 140	766 051
Iran	115 000	128 000	138 000	140 000	134 000
Kazakhstan	458 400	465 300	436 700	429 700	421 100
Korea (Rep. of)	2 221	355	743	1 434	1 749
Korea, Dem. P.R. of	* 29 000	* 38 000	* 34 000	* 35 000	* 36 000
Laos	760	1 140	1 642	883	* 1 000
Mongolia	70 750	56 300	52 350	59 550	52 050
Pakistan (c)	1 000	10 000	11 123	10 024	* 600
Philippines	10 035	9 268	18 170	19 559	16 730
Saudi Arabia	4 952	4 879	4 934	* 15 000	* 18 000
Tajikistan	—	—	9 000	29 900	24 400
Thailand	27 493	21 971	22 259	24 996	25 887
Vietnam	* 38 000	* 36 000	* 34 000	* 25 000	* 22 000
Australia	1 234 000	1 480 000	1 515 000	1 542 000	1 523 000
World total	11 600 000	12 500 000	12 600 000	13 500 000	13 500 000

### Notes

(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	2009	2010	2011	2012	2013
Belgium	137 000	260 000	282 000	250 000	252 000
Bulgaria	92 700	93 800	88 400	73 100	* 72 000
Finland	295 049	307 144	307 352	314 742	311 686
France	161 000	163 000	164 000	161 000	152 000
Germany	153 000	165 000	170 000	169 000	162 000
Italy	103 400	104 700	110 200	97 200	111 000
Netherlands	224 000	264 000	261 000	257 000	275 000
Norway	138 973	148 862	153 200	152 647	143 444
Poland	139 100	135 000	144 100	138 300	146 300
Romania	1 000	—	—	—	—
Russia	208 000	241 000	252 000	257 000	244 000
Spain	515 000	517 100	527 100	528 300	* 530 000
Ukraine	8 800	7 600	6 600	7 000	3 900
Algeria	28 000	31 000	15 611	8 090	* 8 000
Namibia	153 815	151 688	145 639	145 342	124 924
South Africa	87 000	90 000	73 000	—	—
Canada	685 504	691 222	662 151	648 614	651 634
Mexico	335 400	327 700	322 100	323 600	322 700
USA	203 000	249 000	248 000	261 000	233 000
Argentina	35 600	42 700	43 500	37 500	37 900
Brazil	242 136	288 107	284 770	246 526	242 000
Peru	149 494	223 112	313 714	319 280	346 400
China	4 286 300	5 208 900	5 212 200	4 881 200	5 302 200
India	636 000	746 000	780 000	715 000	788 000
Iran	115 000	120 000	132 000	148 000	140 000
Japan	540 604	574 008	544 674	571 312	587 291
Kazakhstan	327 873	318 858	319 847	319 847	319 897
Korea (Rep. of)	722 000	750 000	828 735	881 100	1 044 300
Korea, Dem. P.R. of	* 26 000	* 36 000	* 30 000	* 32 000	* 32 000
Thailand	104 695	95 219	98 370	101 263	76 576
Uzbekistan	19 000	50 000	65 000	62 000	* 55 000
Vietnam	* 17 000	* 16 000	* 18 000	* 18 000	* 18 000
Australia	525 000	498 000	507 000	498 000	498 000
World total	11 400 000	12 900 000	13 100 000	12 600 000	13 200 000

## Production of zirconium minerals

tonnes (metric)

Country	2009	2010	2011	2012	2013
Russia	8 249	9 308	8 914	(a)* 9 000	(a)* 6 900
Ukraine	* 35 000	* 35 000	* 35 000	* 35 000	* 35 000
Madagascar	(b)* 3 300	(b)* 9 600	18 600	22 500	22 500
Mozambique	21 100	37 100	43 600	46 900	31 400
Sierra Leone	5 560	7 092	8 350	610	2 950
South Africa	392 000	381 000	383 000	* 468 000	* 292 000
USA	* 100 000	* 110 000	* 115 000	* 115 000	* 115 000
Brazil (a)	34 248	23 235	23 283	20 425	* 20 000
China	* 31 500	* 33 500	* 33 500	* 33 500	* 33 500
India (c)	28 049	33 209	25 996	* 26 000	* 26 000
Indonesia	* 63 000	* 50 000	* 127 000	* 109 000	* 49 000
Malaysia	1 145	1 267	1 685	442	379
Sri Lanka	10 267	9 200	641	...	...
Vietnam	19 368	23 730	24 020	* 21 000	* 7 000
Australia	400 000	549 000	762 000	605 000	* 610 000
World total	1 153 000	1 312 000	1 611 000	1 512 000	1 252 000

### Notes

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

- (a) Including caldasite rock containing zircon and baddeleyite
- (b) Conservative BGS estimates, based on exports
- (c) Years ending 31 March following that stated



**Price £30**

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