

# World Mineral Production



2001–2005



**British  
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL



BRITISH GEOLOGICAL SURVEY

# WORLD MINERAL PRODUCTION 2001–05

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## 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 (1913-1970) can be obtained from the predecessors to this series entitled *World Mineral Statistics* and the *Statistical Summary of the Mineral Industry*.

### *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

So far as possible the nomenclature follows the London Diplomatic List.

### *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.

### *World totals*

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

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

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

Supplementary information is also obtained from publications dealing with a wider range of commodities such as *Société de l'Industrie Minérale*, *Annuaire Statistique Mondial des Minerais et Métaux*; Mining Journal, *Mining Annual Review*; 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; Kaolin & Plastic Clays Europe; International Iron and Steel Institute; Eurofer; World Nuclear Association; Eurostat; European Aggregates Association; South East Asia Iron and Steel Institute; Instituto Latinoamericano del Fierro y el Acero; RNC Gold; Glencairn Gold; Glamis Gold; Break Water Resources; Falconbridge Ltd; Inmet Mining; Stillwater Mining; Aluminium de Grece; New Boliden; Eurozinc Mining Corporation; Northern Territory Government, Australia; Department of Primary Industries Victoria, Australia; Mineral Resources Tasmania, Australia; Australian Bureau of Agricultural & Resource Economics; Vereinigung der Osterreichischen Zementindustrie, Austria; Federation de l'Industrie Cimentiere Belge, Belgium; Statistics Belgium; Instituto Nacional de Estadística Boliva; Departamento Nacional De Producao Mineral, Brazil; Grupo Paranapanema, Brazil; Agencia Nacional do Petroleo, Brazil; Natural Resources Canada; Statistics Canada; Canadian Association of Petroleum Producers; Mineral Resources of Quebec, Canada; China Mining Association; Czech Republic Statistical Office; Statistics Denmark; Banco Central de la Republica Dominicana, Dominican Republic, Banco Central del Ecuador; Geological Survey of Finland; New Boliden, Finland; Federation des Minerais, Mineraux Industrielles et Metaux non Ferreux, France; Comite Professionel de Petrole, France; Ministere de l'Economie, des Finances et de l'Industrie, France; Infociments, France;

Statistisches Bundesamt Deutschland, Germany; National Statistical Service of Greece; Federacciai, Italy; Unione Petrolifera, Italy; Istituto Nazionale di Statistica, Italy; Salt Industry Centre, Japan; Korea Institute of Geoscience and Mineral Resources, Republic of Korea; Statec, Luxembourg; Bank Negara Malaysia; Pemex, Mexico; Sectaría de Economía, Mexico; Servicio Geológico de México; Centraal Bureau voor de Statistiek, Netherlands; Staatstoezicht op de Mijnen, Netherlands; Ministry of Economic Development, New Zealand; Central Bank, Nicaragua; Statistisk Sentralbyrå, Norway; Chamber of Mines and Petroleum, Papua New Guinea; PeruPetro; Ministerio de Energía y Minas, Peru; Sociedad Nacional de Minería Petróleo y Energía, Peru; Mines and Geosciences Bureau, Philippines; Instituto Nacional de Estatística, Portugal; Unesid, Spain; Staatsolie Maatschappij, Suriname; Sveriges Geologiska Undersökning, Sweden; Jernkontoret, Sweden; Statistiska Centralbyrån, Sweden; Bank of Thailand; Central Bank of Trinidad and Tobago; Department of Trade and Industry, United Kingdom; Energy Information Administration, United States of America; Dirección Nacional de Minería y Geología, Uruguay; 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  
 1 metric ton unit = 10 kilograms

#### Symbols

... figures not available  
 0 quantity less than half unit shown  
 — nil  
 \* estimated  
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# **STATISTICAL TABLES**

## Production of bauxite

tonnes

Country	2001	2002	2003	2004	2005
Bosnia & Herzegovina	90 000	71 300	573 000	480 000	480 000
France	153 000	150 000	170 000	170 000	175 000
Greece	1 903 280	2 492 000	2 418 000	2 396 065	2 441 443
Hungary	1 000 044	720 000	665 904	646 726	535 337
Russia	4 805 000	4 585 700	5 441 800	6 017 600	6 409 300
Serbia and Montenegro	630 000	611 500	540 051	610 000	600 000
Turkey	242 040	287 403	364 306	365 836	356 480
Ghana	692 620	683 654	494 716	498 060	606 700
Guinea	17 312 100	17 480 000	17 072 200	18 799 800	19 236 900
Mozambique	8 597	9 119	11 793	6 723	9 518
Jamaica	12 369 647	13 119 449	13 444 528	13 296 481	14 118 319
USA (b) (d)	*200 000	*200 000	*200 000	*200 000	*200 000
Brazil (c)	13 388 100	13 147 900	18 456 800	20 948 800	22 034 600
Guyana	2 011 301	1 639 266	1 712 236	1 478 897	1 675 842
Suriname	4 393 640	4 001 602	4 215 061	4 087 107	4 756 998
Venezuela	4 584 893	5 190 806	5 445 516	5 814 705	5 900 000
China	*8 650 000	12 958 700	14 567 000	17 518 000	*18 000 000
India (f)	8 688 752	9 867 455	10 924 786	11 964 011	12 335 198
Indonesia	1 237 006	1 283 485	1 262 705	1 330 827	1 081 739
Iran (a)	283 877	323 600	391 388	420 000	*500 000
Kazakhstan	3 685 100	4 376 700	4 737 100	4 705 400	4 815 400
Malaysia	64 161	39 975	5 732	2 040	4 735
Pakistan (e)	3 728	12 233	4 098	4 847	6 504
Vietnam	20 000	*20 000	*20 000	*20 000	20 000
Australia	53 799 000	54 135 000	55 602 000	56 593 000	59 959 000
World Total	140 000 000	147 000 000	159 000 000	168 000 000	176 000 000

### Note(s):-

(1) This table includes production of refractory bauxite

- (a) Years ended 20 March following that stated
- (b) Data for Alabama only
- (c) Including beneficiated and direct shipping ore
- (d) Years ended 30 September of that stated
- (e) Years ended 30 June of that stated
- (f) Years ended 31 March following that stated



## Production of alumina

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

Country	2001	2002	2003	2004	2005
Azerbaijan	87 500	90 960	179 995	232 300	314 800
Bosnia & Herzegovina	30 900	-----	35 011	*30 000	—
France	*510 000	*500 000	*500 000	*500 000	*500 000
Germany	*750 000	*825 000	*830 000	*835 000	*830 000
Greece	463 000	490 000	496 000	514 000	511 000
Hungary	330 000	293 700	300 000	304 000	*300 000
Irish Republic	1 448 730	1 400 000	1 500 000	*1 500 000	*1 800 000
Italy	993 000	1 010 000	1 021 000	1 064 000	1 070 000
Romania	319 403	361 047	332 853	560 243	688 829
Russia	3 046 400	3 130 884	3 230 478	3 269 416	3 259 200
Serbia and Montenegro	200 660	237 396	239 739	245 000	235 200
Spain	1 199 000	1 350 000	1 380 000	*1 400 000	*1 400 000
Turkey	145 993	152 869	160 675	169 991	112 558
Ukraine	1 343 400	1 350 900	1 434 050	1 562 970	1 632 000
United Kingdom	83 900	73 800	—	—	—
Guinea	674 300	669 835	723 026	778 000	729 600
Canada	1 196 470	1 283 000	1 269 600	1 328 842	1 400 340
Jamaica	3 542 385	3 630 587	3 843 610	4 022 722	4 085 634
USA	4 340 000	4 338 000	4 861 000	5 354 000	5 215 000
Brazil	3 519 700	3 855 400	4 713 800	5 126 500	5 201 100
Suriname	1 893 254	1 902 706	2 004 538	2 014 624	1 939 615
Venezuela	1 833 162	1 901 000	1 882 007	*1 900 000	1 920 000
China	4 746 500	5 449 600	6 112 100	6 980 000	8 512 000
India	2 120 000	2 556 000	2 856 000	*2 900 000	3 045 000
Iran (a)	—	101 339	102 785	137 002	*150 000
Japan	739 000	723 900	725 000	780 000	*780 000
Kazakhstan	1 231 126	1 386 457	1 419 237	1 467 966	1 505 415
Australia	16 313 000	16 429 000	16 529 000	16 700 000	17 704 000
World Total	53 100 000	55 500 000	58 700 000	61 700 000	64 800 000

Note(s):-

(1) Where possible figures in this table show the alumina equivalent (Al<sub>2</sub>O<sub>3</sub>) of total hydrate produced, whether or not calcined

(a) Years ended 20 March following that stated

## Production of primary aluminium

tonnes

Country	2001	2002	2003	2004	2005
Azerbaijan	57	58	18 565	29 537	31 762
Bosnia & Herzegovina	96 000	103 500	110 600	120 900	127 700
France	461 000	463 000	444 000	447 000	440 000
Germany	651 592	652 845	660 783	667 800	647 900
Greece	164 000	165 262	167 797	166 634	165 300
Hungary	34 600	35 294	34 000	34 300	31 000
Iceland	245 135	285 394	286 022	284 700	273 318
Italy	187 500	190 400	191 400	195 400	192 900
Netherlands	293 068	284 364	282 800	330 000	333 800
Norway	1 034 000	1 044 000	1 180 200	1 318 000	1 376 000
Poland	52 600	52 200	52 600	54 200	53 600
Romania	181 830	187 052	196 844	222 347	243 605
Russia	3 302 000	3 348 247	3 478 057	3 594 747	3 647 100
Serbia and Montenegro	108 123	111 919	116 744	115 551	120 400
Slovakia	110 062	111 600	132 089	156 893	158 400
Slovenia	76 632	87 600	109 800	120 700	138 500
Spain	376 400	380 100	389 100	397 500	395 000
Sweden	101 420	100 125	100 707	100 591	102 107
Switzerland	36 288	40 224	43 865	44 879	44 800
Turkey	61 730	62 501	63 140	64 002	—
Ukraine	121 034	112 459	113 640	113 212	114 200
United Kingdom	340 778	344 318	342 748	359 631	368 477
Cameroon	80 900	67 000	77 200	85 900	90 400
Egypt	190 800	195 000	194 600	216 000	243 800
Ghana	161 670	131 858	15 909	—	13 400
Mozambique	266 000	273 200	407 400	547 100	553 700
South Africa	662 497	706 916	732 717	866 074	846 213
Canada	2 582 746	2 708 910	2 791 915	2 592 160	2 894 204
Mexico	51 500	39 000	17 600	—	—
USA	2 637 000	2 707 000	2 703 300	2 516 400	2 481 000
Argentina	243 840	267 776	273 524	273 575	275 071
Brazil	1 132 000	1 318 400	1 380 600	1 457 400	1 499 600
Venezuela	579 000	604 000	601 290	631 100	624 000
Bahrain	522 042	517 004	526 000	530 000	749 987
China	3 575 800	4 321 000	5 546 900	6 688 800	7 806 000
Dubai	536 000	538 000	560 000	683 000	*750 000
India (b)	635 573	688 921	810 282	883 960	930 543
Indonesia	208 800	162 800	197 300	240 800	252 300
Iran (a)	148 844	169 491	182 477	212 602	232 000
Japan	6 632	6 413	6 463	6 433	6 400
Tajikistan	324 000	307 589	319 360	358 082	379 600
Australia	1 797 000	1 836 000	1 857 000	1 895 000	1 903 000
New Zealand	322 300	333 900	334 970	350 299	351 449
World Total	24 700 000	26 000 000	28 000 000	30 000 000	31 900 000

Note(s):-

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

## Mine production of antimony

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Russia	4 152	*3 000	*3 000	*3 000	*3 000
Turkey	*20	*20	*20	*20	*20
South Africa	5 476	5 746	5 291	4 967	*6 000
Canada	278	173	153	105	96
Guatemala	8 162	401	20	2 686	2 700
Mexico	81	155	434	503	565
Bolivia	2 072	2 343	2 432	3 036	5 225
Peru (a)	274	352	616	*600	807
China	97 000	121 547	126 000	125 400	*126 000
Kyrgyzstan	*2 200	*1 500	*1 200	*1 500	*1 500
Tajikistan	*2 500	*3 000	*3 000	4 069	4 073
Thailand	50	13	46	61	415
Australia (b)	*1 800	1 838	206	157	192
World Total	124 000	140 000	142 000	146 000	150 000

Note(s):-

- (1) This table includes antimony content of antimonial lead alloys  
(2) In addition, Hungary is 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

Country	2001	2002	2003	2004	2005
Belgium	*1 000	*1 000	*1 000	*1 000	*1 000
France	*1 000	*1 000	*1 000	*1 000	*1 000
Germany	*200	*200	*200	*200	*200
Portugal	*50	*50	*50	*50	*50
Russia	*1 500	*1 500	*1 500	*1 500	*1 500
Namibia (a)	738	852	389	1 264	29
Canada	*250	*250	*250	*250	*250
Mexico	3 143	2 569	2 283	2 415	2 197
Bolivia	846	237	276	168	120
Chile (c)	*10 000	*10 000	*10 000	*10 000	*10 000
Peru	2 800	2 970	*3 000	3 500	3 600
China	*39 500	*40 000	*40 000	*30 000	*30 000
Iran (b)	219	142	275	89	100
Japan	*40	*40	*40	*40	*40
Kazakhstan	*1 500	*1 500	*1 500	—	—

Note(s):-

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

- (a) Output of Tsumeb Corp. only, trioxide equivalent of reported black arsenic  
(b) Orpiment and realgar concentrates  
(c) Exports

## Production of asbestos

tonnes

Country	2001	2002	2003	2004	2005
Greece	*1 000	—	*13 000	*4 000	—
Russia	735 000	785 142	883 888	923 000	*925 000
Serbia and Montenegro	194	372	111	370	*100
South Africa					
Chrysotile	13 393	13 311	6 218	—	—
Zimbabwe					
Chrysotile	136 327	167 954	143 087	104 457	122 041
Canada					
Chrysotile	262 000	242 241	200 500	200 000	*200 000
USA (a)	5 260	2 720	—	—	—
Argentina	203	155	166	267	290
Brazil	172 695	194 732	231 115	252 067	236 047
Colombia (c)	96 140	62 785	*60 000	*60 000	*60 000
China	257 581	*480 000	*430 000	438 962	332 407
India					
Amphibole (e)	11 148	14 139	10 107	6 392	2 366
Iran (d)	3 500	2 400	1 470	1 300	*1 300
Kazakhstan	271 200	291 200	353 000	346 500	305 500
Pakistan (b)	...	100	60	380	—
World Total	2 000 000	2 300 000	2 300 000	2 300 000	2 200 000

Note(s):-

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

(a) Sold or used by producers

(b) Years ended 30 June of that stated

(c) Crude

(d) Years ended 20 March following that stated

(e) Years ended 31 March following that stated

## Production of barytes

tonnes

Country	2001	2002	2003	2004	2005
Bosnia & Herzegovina	*2 500	*2 200	*1 900	*1 900	*1 900
Bulgaria	131 100	123 200	91 200	75 400	79 500
France	81 000	85 200	81 100	81 000	*81 000
Georgia	1 093	1 042	—	—	—
Germany	108 111	100 993	109 506	93 624	88 591
Italy	10 809	10 215	12 214	9 608	*10 000
Poland	—	2 708	3 030	3 183	2 357
Romania	2 851	100	23	—	—
Russia	64 000	58 900	79 000	63 400	63 400
Slovakia	14 450	25 820	12 000	27 063	26 589
Spain	45 473	50 071	44 660	40 776	39 133
Turkey	102 323	106 943	119 648	134 504	70 925
United Kingdom	*66 000	*59 000	*57 000	*61 000	*62 000
Algeria	43 020	51 773	47 340	47 753	54 773
Morocco	467 056	487 626	356 394	355 800	475 700
Nigeria	*5 000	*5 000	*15 000	*15 000	*30 000
Tunisia	2 208	5 539	5 000	1 813	—
Zimbabwe	7 464	5 233	4 676	3 486	—
Canada	27 000	15 000	27 000	21 000	23 000
Mexico	142 017	163 620	287 451	306 668	268 657
USA (b)	400 000	420 000	468 000	532 000	*500 000
Argentina	6 955	3 048	6 934	2 762	3 910
Bolivia	6 253	1 556	1 851	11 379	738
Brazil (d)	54 790	53 098	57 452	59 612	44 041
Chile	584	384	229	31	91
Colombia	*800	*600	*2 400	*2 000	*2 000
Ecuador	1 181	...	2 139	3 694	3 879
Peru	11 031	3 806	2 906	3 606	5 647
Afghanistan	*2 000	*2 000	*2 000	*2 000	*1 500
China	3 985 200	2 700 000	3 300 000	3 700 000	4 100 000
India (a)	915 976	679 628	723 075	1 159 031	1 189 839
Iran (c)	238 257	193 579	196 169	207 466	250 000
Kazakhstan	44 600	51 700	78 000	119 900	119 900
Korea, Dem. P.R. of	*70 000	*70 000	—	—	—
Laos	4 400	12 695	18 070	18 000	18 000
Malaysia	649	3 082	—	—	—
Myanmar	26 800	15 100	4 900	2 200	3 000
Pakistan (e)	25 831	19 480	40 745	44 207	42 087
Saudi Arabia	9 000	9 000	10 800	10 000	—
Thailand	23 559	137 469	115 600	211 278	115 000
Vietnam	71 100	60 200	81 500	101 000	116 000
Australia	*16 000	*19 000	*22 000	*29 000	18 020
World Total	7 200 000	5 800 000	6 500 000	7 600 000	7 900 000

### Note(s):-

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

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

## Production of bentonite and fuller's earth

tonnes

Country	2001	2002	2003	2004	2005
Armenia					
Bentonite	995	328	642	561	732
Azerbaijan					
Bentonite	—	1 500	19 900	55 000	53 700
Bosnia & Herzegovina					
Bentonite	*10 000	9 829	16 967	24 353	...
Bulgaria					
Bentonite	171 092	211 500	145 500	224 900	181 200
Croatia					
Bentonite	10 580	12 102	13 568	15 674	17 391
Cyprus					
Bentonite	127 000	128 400	144 859	155 717	172 366
Czech Republic					
Bentonite	224 000	174 000	199 000	201 000	186 000
Denmark					
Bentonite	12 166	14 539	16 303	18 352	18 515
Georgia					
Bentonite	*7 000	*7 000	9 747	1 804	7 876
Germany					
Bentonite	447 913	495 310	478 796	404 549	352 374
Greece					
Bentonite	1 258 872	1 056 598	1 156 642	1 030 556	1 124 795
Hungary					
Bentonite	30 441	3 700	87 200	9 300	4 900
Italy					
Bentonite	579 029	463 231	474 475	437 659	...
Fuller's earth	19 815	24 595	250	300	...
Macedonia					
Bentonite	9 927	17 420	6 013	16 373	14 958
Romania					
Bentonite	24 779	15 389	17 637	18 161	18 190
Russia					
Bentonite	*500 000	*500 000	*500 000	*500 000	*500 000
Slovakia					
Bentonite	73 000	65 500	74 700	73 280	75 860
Spain					
Bentonite	*120 000	123 457	103 174	156 760	145 000
Attapulgitite	24 477	22 918	18 975	20 796	18 100
Sepiolite	*600 000	564 610	548 728	655 346	631 033
Turkey					
Bentonite	674 178	559 224	831 146	643 153	582 735
Sepiolite	10 253	...	...	...	...
Ukraine					
Bentonite	*25 000	*25 000	*25 000	*25 000	*25 000
United Kingdom					
Fuller's earth (a)	52 000	44 200	33 900	27 540	6 200
Algeria					
Bentonite	21 282	30 699	28 064	32 200	29 029
Fuller's earth	3 254	3 521	2 573	2 284	*2 200
Morocco					
Bentonite	71 741	58 754	71 544	...	...
Fuller's earth (f)	40 664	43 243	14 944	*15 000	*15 000
Mozambique					
Bentonite	1 611	580	684	578	547
Senegal					
Attapulgitite	121 100	176 454	176 857	*180 000	*180 000
South Africa					
Bentonite	108 306	98 313	145 060	55 859	139 833
Attapulgitite	9 200	13 918	14 585	20 419	34 241

## Production of bentonite and fuller's earth

tonnes

Country	2001	2002	2003	2004	2005
Guatemala					
Bentonite	18 469	12 415	6 438	...	...
Mexico					
Bentonite	415 133	488 215	464 056	564 015	425 630
Fuller's earth	148 194	147 064	152 917	129 502	107 265
Nicaragua					
Bentonite	*6 000	*6 000	*6 300	*6 300	*6 300
USA					
Bentonite (c)	3 970 000	*3 790 000	3 770 000	4 060 000	*4 430 000
Fuller's earth (c)	2 890 000	*2 730 000	3 610 000	3 260 000	*3 170 000
Argentina					
Bentonite	135 450	120 006	146 845	163 028	243 590
Fuller's earth	*1 500	*1 500	*1 500	*1 500	*1 500
Brazil					
Bentonite	260 282	304 782	392 422	428 183	463 025
Chile					
Bentonite	1 695	632	748	101	—
Colombia					
Bentonite	*8 500	*8 500	*8 500	*8 500	*8 500
Peru					
Bentonite	18 217	20 760	14 980	18 471	19 028
China					
Bentonite	1 289 700	*1 900 000	*2 400 000	*3 000 000	*3 100 000
India					
Bentonite (b)	*280 000	*250 000	*227 000	*430 000	...
Fuller's earth (b)	*150 000	*190 000	*204 000	...	...
Indonesia					
Bentonite	*5 000	*5 000	*5 000	*5 000	*5 000
Iran					
Bentonite (d)	174 642	157 571	186 422	176 425	*180 000
Japan					
Bentonite	405 738	437 772	425 945	455 282	*450 000
Fuller's earth	120 522	117 099	123 545	109 657	*110 000
Korea, Republic of					
Bentonite	116 098	89 905	40 095	99 173	85 177
Fuller's earth	38 378	18 757	32 685	26 487	84 632
Myanmar					
Bentonite (b)	634	*600	*600	*500	*500
Pakistan					
Bentonite (e)	16 441	17 799	9 432	6 316	15 671
Fuller's earth (e)	13 668	15 951	14 723	13 986	17 001
Philippines					
Bentonite	5 128	2 550	3 722	3 556	*3 600
Thailand					
Bentonite	200	1 700	1 100	1 350	32 500
Uzbekistan					
Bentonite	*15 000	*15 000	*15 000	*15 000	*15 000
Vietnam					
Bentonite	...	...	...	...	20 000

## Production of bentonite and fuller's earth

tonnes

Country	2001	2002	2003	2004	2005
Australia					
Bentonite (e)	95 429	113 047	144 755	264 038	*223 000
Fuller's earth	13 194	11 926	11 187	10 142	9 784
New Zealand					
Bentonite	8 300	7 800	10 940	10 050	7 590
World Total Bentonite	11 800 000	11 800 000	12 800 000	13 900 000	14 400 000
World Total Fullers Earth (g)	4 300 000	4 100 000	5 000 000	4 700 000	4 600 000

Note(s):-

- (1) Bentonites consist of montmorillonite (one of the smectite group of clay minerals) and occur in two main varieties, calcium bentonite, the most commonly occurring, and sodium bentonite, industrially the more important
  - (2) Calcium bentonite can be converted to sodium bentonite by a sodium-exchange process
  - (3) In some countries, such as the United Kingdom, calcium bentonite is known as fuller's earth, a term which is also used to refer attapulgite, a mineralogically distinct clay mineral but exhibiting similar properties
  - (4) In addition to the countries listed, Austria is believed to produce bentonite and France may produce fuller's earth
- (a) Saleable production based on data from producing companies
  - (b) Years ended 31 March following that stated
  - (c) Sold or used by producers
  - (d) Years ended 20 March following that stated
  - (e) Years ended 30 June of that stated
  - (f) Smectite
  - (g) Including attapulgite and sepiolite

## Production of beryl

tonnes

Country	2001	2002	2003	2004	2005
Madagascar (a)	7	1	*1	12	*12
Mozambique	1	54	78	45	146
Uganda	...	...	...	207	19
Zambia	7	7	7	7	*7
USA	2 480	1 970	2 100	2 210	2 780
Brazil	—	*4	*4	*4	*4
China	*500	*500	*500	*500	*500
Kazakhstan (a)	737	—	—	—	—

Note(s):-

- (a) Includes ornamental and industrial products



## Mine production of bismuth

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Bulgaria	*40	*40	*40	*40	*40
Romania	*40	*40	*40	*40	*40
Russia	*50	*50	*50	*50	*50
Canada	310	244	166	223	160
Mexico	1 390	1 126	1 064	1 014	970
Peru (b)	640	568	832	861	807
China (a)	1 245	944	1 036	1 857	*2 000
Japan (b)	551	474	513	522	463
Kazakhstan	252	161	*150	—	—
Tajikistan	*5	—	—	—	—
Australia	*100	*100	*100	*100	*100
World Total	4 600	3 700	4 000	4 700	4 600

### Note(s):-

- (1) The figures in this table are in some instances derived from reported bismuth content of refined and impure metal plus recoverable in ores and concentrates exported
  - (2) Production for some countries may include bismuth produced from imported ores but it is thought that any resulting duplication is insignificant in the countries shown
  - (3) In addition to the countries listed, Brazil is believed to produce bismuth
- (a) Exports of metal have always been higher than mine production in recent years  
(b) Metal production

## Production of borates

tonnes

Country	2001	2002	2003	2004	2005
Russia	*1 000 000	*1 000 000	*1 000 000	*500 000	500 000
Turkey	1 399 000	1 328 000	1 324 000	1 727 000	2 087 000
USA (a)	1 050 000	1 050 000	1 150 000	1 210 000	*1 230 000
Argentina	633 520	515 555	512 167	821 031	632 792
Bolivia	32 477	40 479	109 545	110 000	*100 000
Chile	327 743	431 293	400 603	594 191	460 683
Peru	9 374	8 814	11 072	9 729	8 290
China	346 500	*283 000	*270 000	*275 000	*280 000
Iran (b)	2 890	2 074	2 126	2 142	*2 100
Kazakhstan	*30 000	27 100	*30 000	*30 000	*30 000

### Note(s):-

- (a) Sold or used by producers
- (b) Years ended 20 March following that stated

## Production of bromine

kilograms

Country	2001	2002	2003	2004	2005
France	*8 000 000	*8 000 000	*8 000 000	*8 000 000	*8 000 000
Germany	*500 000	*500 000	*500 000	—	—
Italy	*300 000	*300 000	*300 000	*300 000	*300 000
Russia	*60 000	*60 000	*60 000	*60 000	*60 000
Spain	*100 000	*100 000	*100 000	*100 000	*100 000
Ukraine	1 878 000	846 000	1 324 000	1 878 000	3 138 000
United Kingdom	27 854 000	24 542 000	*25 000 000	—	—
USA (a)	212 000 000	222 000 000	216 000 000	222 000 000	*212 000 000
China	*40 000 000	*42 000 000	*42 000 000	*43 000 000	*43 000 000
India	927 660	1 579 000	1 560 000	1 730 000	2 420 000
Israel	177 000 000	185 000 000	176 000 000	202 000 000	207 048 000
Japan	*20 000 000	*20 000 000	*20 000 000	*20 000 000	*20 000 000
Jordan	—	5 000	*20 000	46 339	*50 000
World Total	489 000 000	505 000 000	491 000 000	499 000 000	496 000 000

Note(s):-

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

## Production of cadmium

tonnes

Country	2001	2002	2003	2004	2005
Belgium	1 236	117	—	—	—
Bulgaria	333	345	307	356	319
Finland	604	400	—	—	—
France	176	154	*120	*120	*100
Germany	539	422	640	*640	*640
Italy	352	362	22	—	—
Macedonia	73	111	75	—	—
Netherlands	455	485	495	572	*570
Norway	371	215	323	141	153
Poland	330	440	375	356	408
Russia	*620	*650	*650	*650	*650
United Kingdom	425	292	22	—	—
Canada (a)	1 493	1 706	1 759	1 880	1 703
Mexico	1 421	1 382	1 590	1 594	1 627
USA (a)	1 449	1 432	1 416	1 013	1 065
Argentina	34	—	25	39	56
Brazil	*140	*170	*180	*180	*180
Peru	456	422	529	532	481
China	2 507	2 426	2 705	4 528	*3 000
India (b)	431	483	478	480	409
Japan	2 460	2 444	2 509	2 233	2 297
Kazakhstan	170	479	930	2 358	1 624
Korea, Dem. P.R. of	*200	*200	*200	*200	*200
Korea, Republic of	1 879	1 827	2 175	2 362	2 582
Australia	416	524	673	469	429
World Total	18 600	17 500	18 200	20 700	18 500

Note(s):-

(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

Country	2001	2002	2003	2004	2005
Albania	85 890	72 600	98 000	160 300	170 000
Finland	575 126	566 090	549 000	580 000	572 000
Russia	117 700	71 000	169 200	447 300	*772 000
Turkey	454 549	326 390	281 783	436 639	688 377
Madagascar	60 923	10 737	45 040	77 386	140 847
South Africa	5 502 010	6 435 746	7 405 391	7 676 799	7 502 762
Sudan	20 500	14 000	37 000	26 000	*21 654
Zimbabwe	780 150	725 822	572 558	668 391	614 720
Cuba	50 000	46 000	34 000	*34 000	*34 000
Brazil	419 049	283 991	376 862	593 476	616 534
Afghanistan	5 682	6 136	6 364	—	—
China	181 900	164 200	197 800	230 000	220 000
India (a)	1 548 900	3 068 631	2 904 809	3 621 394	3 442 880
Iran (b) (c)	178 120	232 068	150 316	134 872	*223 563
Kazakhstan	2 045 700	2 369 500	2 927 900	3 287 100	3 581 242
Myanmar (a)	*3 000	*3 000	*3 000	*3 000	*3 000
Oman	30 100	27 400	13 800	24 300	18 386
Pakistan (d)	21 535	16 679	30 657	29 230	46 359
Philippines (b)	27 926	22 000	33 778	42 139	36 070
United Arab Emirates	10 000	—	—	7 089	—
Vietnam	80 000	*80 000	*120 000	*150 000	90 000
Australia	15 750	57 142	67 271	110 273	70 334
World Total	12 200 000	14 600 000	16 000 000	18 300 000	18 900 000

### Note(s):-

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

## Production of coal

tonnes

Country	2001	2002	2003	2004	2005
Albania					
Lignite	15 700	15 000	—	20 000	19 000
Austria					
Anthracite & bituminous	...	...	...	...	7 793
Brown coal & lignite	(i) 1 193 970	(i) 1 411 824	(i) 1 152 389	(i) 235 397	6 138
Bosnia & Herzegovina					
Brown coal & lignite	7 900 000	9 000 000	9 342 222	8 896 257	...
Bulgaria					
Anthracite & bituminous	115 000	122 000	53 000	170 000	...
Brown coal & lignite	26 095 516	26 433 500	27 641 000	26 455 000	(i) 26 200 000
Czech Republic					
Bituminous	14 808 000	14 097 000	13 382 000	14 648 000	12 778 000
Lignite	507 000	501 000	470 000	450 000	467 000
Brown coal	51 036 000	48 834 000	49 920 000	47 840 000	48 658 000
France					
Anthracite & bituminous	1 972 000	1 483 000	1 728 000	200 000	—
Lignite	324 000	147 000	9 000	—	—
Georgia	5 000	6 100	7 900	8 100	5 100
Germany					
Anthracite & bituminous	27 361 079	26 363 084	25 873 043	25 871 882	24 906 867
Brown coal	175 364 780	181 778 432	179 086 923	181 926 060	177 881 773
Greece					
Lignite	66 621 437	71 087 609	69 410 756	71 237 228	71 700 000
Hungary					
Bituminous	635 200	660 000	667 126	280 000	—
Lignite	8 043 062	7 573 971	8 564 000	8 470 258	8 153 968
Brown coal	5 392 000	4 530 000	4 128 000	2 500 000	1 426 000
Italy					
Lignite	130 000	100 000	...	...	...
Macedonia					
Lignite	8 047 003	7 443 360	7 200 793	7 129 535	6 879 726
Norway					
Bituminous (d)	1 787 784	2 131 691	2 944 000	3 018 500	1 667 000
Poland					
Bituminous	103 991 700	103 546 000	103 016 400	100 087 100	97 903 730
Lignite	59 557 400	58 209 600	60 919 100	61 197 500	61 636 445
Romania					
Anthracite & bituminous	4 033 000	3 976 000	3 309 000	*3 000 000	*3 000 000
Brown coal & lignite	30 750 000	28 015 000	31 121 000	31 792 000	31 122 000
Russia	269 000 000	256 000 000	277 000 000	280 000 000	298 000 000
Serbia and Montenegro					
Bituminous	69 711	70 312	53 906	72 152	...
Lignite	31 789 143	32 936 248	34 542 677	35 267 074	...
Brown coal	375 620	422 661	377 187	352 474	...
Slovakia					
Brown coal	3 421 100	3 406 400	3 076 100	2 578 273	2 513 030
Slovenia					
Brown coal & lignite	4 133 000	4 684 710	4 828 786	4 807 302	4 539 556
Spain					
Anthracite	4 693 831	4 399 365	3 857 364	3 692 220	3 888 638
Bituminous	5 797 496	5 349 027	5 547 150	5 220 407	4 664 589
Sub-bituminous	3 456 000	3 537 710	3 182 572	3 426 001	5 854 014
Lignite	8 787 000	8 726 121	7 977 546	8 146 908	7 587 113
Turkey					
Anthracite	3 369 727	3 312 690	3 090 458	2 842 952	2 785 505
Bituminous	55 860	118 235	336 714	738 915	737 701
Lignite	58 172 982	49 626 612	43 749 420	43 754 159	60 867 574
Ukraine					
Bituminous	82 400 000	81 650 000	78 700 000	79 629 000	78 425 000
Lignite	1 030 000	890 000	640 000	523 000	313 000
United Kingdom					
Bituminous (g)	31 930 000	29 989 000	28 279 000	25 096 000	20 498 000

## Production of coal

tonnes

Country	2001	2002	2003	2004	2005
Botswana	930 374	953 081	822 780	913 087	984 876
Congo, Democratic Republic					
Bituminous	40 000	37 000	*35 000	*33 000	*31 000
Egypt	*58 000	*37 000	*35 000	*35 000	*35 000
Madagascar	13 375	...	...	...	...
Malawi	34 410	43 372	47 037	40 891	44 900
Morocco					
Anthracite	1 908	302	214	...	...
Mozambique					
Bituminous	27 600	43 512	36 742	16 525	3 417
Niger	163 275	182 916	188 915	200 384	*200 000
Nigeria					
Sub-bituminous	10 000	10 000	*10 000	*10 000	*10 000
South Africa					
Anthracite	1 607 000	1 304 965	1 206 105	1 486 619	1 639 414
Bituminous	222 105 086	218 900 000	236 670 504	241 884 911	242 724 560
Swaziland					
Bituminous	*450 000	553 000	*550 000	488 314	221 701
Tanzania					
Bituminous	77 789	79 210	54 610	65 041	30 795
Zambia					
Bituminous	*150 000	*150 000	*150 000	*150 000	*150 000
Zimbabwe					
Bituminous	4 511 447	3 938 175	2 824 362	3 797 669	2 890 662
Canada					
Bituminous	34 140 918	29 715 000	26 618 000	29 284 000	30 741 000
Sub-bituminous	24 939 381	25 528 000	24 880 000	25 147 000	25 742 000
Lignite	11 390 275	11 365 000	10 665 000	11 588 000	11 017 000
Mexico					
Bituminous	12 176 884	11 405 034	11 305 023	12 034 844	11 749 126
USA					
Anthracite (b)	1 760 000	1 240 000	1 169 000	1 542 000	*1 542 000
Bituminous (b)	554 563 000	519 012 000	491 240 000	509 384 000	*504 848 000
Sub-bituminous	394 101 000	397 674 000	401 520 000	422 204 000	*445 609 000
Lignite	72 615 000	74 807 000	78 380 000	75 750 000	*76 113 000
Argentina					
Bituminous	149 851	56 324	117 832	120 060	320 000
Brazil					
Bituminous & lignite (e)	5 645 578	5 143 488	4 643 319	5 408 278	6 048 105
Chile					
Bituminous	123 320	129 939	136 495	140 186	138 056
Lignite	444 767	321 687	210 783	98 121	594 309
Colombia					
Bituminous	43 440 700	39 484 000	50 028 000	53 693 000	59 064 000
Peru					
Anthracite	20 219	21 579	15 688	22 252	12 707
Bituminous	*45 000	*45 000	*45 000	*45 000	26 266
Venezuela					
Bituminous	7 685 476	8 097 016	7 033 729	8 107 304	*8 100 000
Afghanistan					
Bituminous	*2 000	*2 000	*2 000	*2 000	*2 000
Bangladesh (j)	...	...	22 322	64 605	87 143
Bhutan	84 596	88 567	66 324	29 631	85 279
China					
Anthracite	190 000 000	250 000 000	218 000 000	220 000 000	246 000 000
Bituminous	965 000 000	1 110 000 000	1 470 000 000	1 690 000 000	1 888 000 000
Lignite	47 800 000	53 000 000	52 000 000	50 000 000	56 000 000

## Production of coal

tonnes

Country	2001	2002	2003	2004	2005
India					
Bituminous (h)	327 787 000	341 272 000	361 156 000	382 615 000	407 222 000
Lignite (h)	24 813 000	26 018 000	27 958 000	30 337 000	30 049 000
Indonesia					
Anthracite & bituminous	91 928 000	103 372 000	114 278 000	132 352 000	146 943 000
Iran					
Bituminous (c)	2 017 998	2 075 619	2 170 079	2 079 604	*2 000 000
Japan					
Bituminous	3 208 000	1 315 655	1 353 379	1 339 447	1 146 491
Kazakhstan					
Bituminous	76 454 900	70 735 300	80 497 400	82 929 900	81 869 200
Lignite	2 680 300	2 995 800	4 219 500	3 945 200	4 498 500
Korea, Dem. P.R. of					
Anthracite	16 000 000	17 000 000	16 000 000	16 300 000	16 500 000
Lignite	7 000 000	7 000 000	6 300 000	6 500 000	7 000 000
Korea, Republic of					
Anthracite	3 817 000	3 318 000	3 298 000	3 191 212	2 831 658
Kyrgyzstan	475 000	459 000	415 300	456 300	300 000
Laos	122 942	233 823	212 819	332 907	232 934
Malaysia	497 733	352 513	174 800	389 176	789 356
Mongolia					
Anthracite & bituminous	1 492 400	1 549 800	...	...	...
Brown coal & lignite	3 707 600	3 850 200	(i) 5 666 100	(i) 6 865 000	(i) 7 517 100
Myanmar (h)	41 736	115 175	109 214	237 949	240 000
Nepal					
Sub-bituminous	16 589	9 612	11 848	10 459	9 259
Pakistan (a) (j)	3 309 244	3 314 712	3 609 338	3 325 408	3 367 021
Philippines					
Bituminous	1 229 822	1 645 659	2 029 303	2 726 500	1 485 000
Tajikistan	27 500	23 600	46 500	88 300	94 900
Thailand					
Lignite	19 616 996	19 601 984	18 843 395	20 059 845	20 878 176
Uzbekistan					
Bituminous	91 700	80 000	61 600	*81 000	95 040
Lignite	2 619 300	2 660 000	1 850 000	*2 700 000	3 072 960
Vietnam					
Anthracite	13 000 000	16 347 000	19 590 000	27 330 000	32 800 000
Australia					
Bituminous (f)	266 710 000	272 560 000	280 700 000	294 810 000	307 000 000
Brown coal (j)	64 958 000	66 661 000	66 809 000	66 343 000	67 152 000
New Zealand					
Bituminous	1 896 771	2 268 906	2 351 021	2 526 613	2 543 404
Sub-bituminous	1 811 681	1 971 794	2 576 555	2 389 352	2 477 312
Lignite	202 944	218 239	252 336	239 429	246 445
World Total	4 638 000 000	4 815 000 000	5 209 000 000	5 548 000 000	5 881 000 000

### Note(s):-

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

- (a) Including lignite
- (b) Includes a small amount of refuse recovery
- (c) Years ended 20 March following that stated
- (d) Spitzbergen: not including production from mines controlled by the former Soviet Union
- (e) Including beneficiated and directly shipped material
- (f) Including sub-bituminous
- (g) Including anthracite
- (h) Years ended 31 March following that stated
- (i) Coal; all forms
- (j) Years ended 30 June of that stated

## Mine production of cobalt

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Russia	*4 600	*4 200	4 654	4 527	4 748
Botswana	325	269	294	223	326
Congo, Democratic Republic	*12 000	*14 500	*14 500	*20 500	*22 000
Morocco	1 337	1 335	1 391	*1 600	*1 600
South Africa	373	366	271	309	268
Zambia	4 665	6 144	6 620	5 791	5 472
Zimbabwe	95	74	44	59	275
Canada	5 326	5 148	4 327	5 060	5 533
Cuba	3 908	3 856	3 643	3 979	*4 000
Brazil	4 400	4 300	4 200	4 300	*4 300
China	150	1 004	707	1 253	*1 000
Indonesia	*650	*650	*650	*650	*650
Australia (a)	2 696	2 763	2 562	2 004	1 809
New Caledonia	3 540	2 780	2 602	2 726	1 769
<b>World Total</b>	<b>44 000</b>	<b>47 000</b>	<b>46 000</b>	<b>53 000</b>	<b>54 000</b>

Note(s):-

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

(a) Years ended 30 June of that stated

## Production of cobalt metal

tonnes

Country	2001	2002	2003	2004	2005
Belgium	*1 090	1 135	1 704	(d) 2 947	(d) 3 298
Finland	8 100	8 240	7 989	7 893	8 171
Norway	3 300	4 000	4 556	4 670	5 021
Russia	4 600	4 200	4 654	4 524	4 748
Congo, Democratic Republic (c)	3 199	2 149	1 200	735	600
Morocco	1 341	1 354	1 341	1 593	1 613
South Africa (b)	373	366	271	329	268
Uganda	512	*450	—	459	638
Zambia	4 665	6 144	6 620	5 791	5 422
Canada (a)	4 378	4 625	4 233	5 144	5 079
Brazil	889	960	1 097	1 155	1 136
China	1 470	1 842	4 576	(d) *8 000	(d) 12 700
India	250	270	255	545	1 220
Japan	350	354	379	421	471
Australia	3 473	3 701	3 839	3 879	3 150
<b>World Total</b>	<b>38 000</b>	<b>40 000</b>	<b>42 700</b>	<b>48 100</b>	<b>53 500</b>

Note(s):-

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

- (a) Including oxides  
(b) Includes metal and metal contained in sulphate  
(c) Excludes white alloy and matte which are believed to be further processed in Belgium and elsewhere  
(d) Some metal production in China is recorded in Belgium



## Mine production of copper

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Albania	—	—	—	642	1 696
Armenia	16 460	16 641	18 068	17 700	16 400
Bulgaria	97 100	84 400	80 240	79 600	94 900
Cyprus	4 600	3 700	2 500	—	—
Finland	11 600	14 400	14 900	15 500	15 500
Georgia	11 500	*13 000	14 700	*12 000	*6 000
Macedonia	6 800	5 600	700	—	6 000
Poland	474 000	502 800	503 544	530 768	511 799
Portugal	82 965	77 227	77 581	95 700	89 500
Romania	19 185	19 323	23 389	20 380	14 868
Russia	*540 000	662 100	630 000	630 000	660 000
Serbia and Montenegro	31 000	36 900	26 400	12 200	12 900
Spain	9 800	1 248	635	1 306	2 459
Sweden	74 269	71 991	83 143	82 415	87 068
Turkey	56 820	48 217	43 245	38 876	30 067
Botswana	19 209	21 590	24 289	21 195	26 704
Congo, Democratic Republic	34 100	28 000	56 900	69 600	98 000
Morocco	5 357	4 994	4 818	4 400	*4 000
Namibia	15 003	18 040	16 175	11 174	10 157
South Africa	141 900	90 000	89 338	85 710	103 907
Tanzania	3 600	4 200	3 700	4 300	3 700
Zambia	306 909	307 834	346 900	412 300	435 500
Zimbabwe	492	1 356	1 374	2 383	2 570
Canada	633 531	603 498	557 082	562 795	594 812
Cuba	*1 000	—	—	—	—
Mexico	371 123	329 574	355 653	405 539	429 042
USA	1 338 600	1 142 400	1 116 000	1 160 000	1 140 000
Argentina	191 667	204 027	199 020	177 143	185 720
Brazil	32 734	32 711	26 275	103 153	133 325
Chile	4 739 000	4 580 600	4 904 200	5 412 500	5 320 500
Colombia	2 000	1 700	1 500	1 600	1 200
Peru	722 035	842 783	842 578	1 035 574	1 009 898
China	587 000	568 100	604 400	742 200	*800 000
India (a)	38 177	32 780	29 529	28 154	25 409
Indonesia	1 048 700	1 171 726	1 005 837	840 318	1 063 849
Iran	146 300	140 700	146 100	153 000	*200 000
Japan	744	1 519	1 000	1 000	*1 000
Kazakhstan	469 500	473 700	484 500	461 800	401 700
Korea, Dem. P.R. of	*12 000	*12 000	*12 000	*12 000	*12 000
Laos	—	—	—	1 700	30 500
Mongolia	133 500	131 700	130 300	130 000	129 000
Myanmar	25 800	27 500	27 900	31 800	34 500
Pakistan	—	—	5 400	14 700	17 700
Philippines	20 321	18 365	20 414	15 984	16 320
Saudi Arabia	1 000	600	800	700	668
Uzbekistan	*70 000	*80 000	*80 000	83 000	103 500
Vietnam	1 600	1 100	1 200	2 000	3 100
Australia	896 000	879 000	830 000	854 000	930 000
Papua New Guinea	203 762	211 315	202 300	173 370	192 978
World Total	13 600 000	13 500 000	13 600 000	14 600 000	15 000 000

Note(s):-

(a) Years ended 31 March following that stated

## Smelter production of copper

tonnes

Country	2001	2002	2003	2004	2005
Armenia	7 056	6 502	6 259	9 470	9 881
Bulgaria	134 700	167 000	199 300	215 800	225 000
Finland	169 251	160 896	160 596	151 647	157 900
Germany	317 700	295 100	288 800	278 600	257 200
Norway	26 704	30 483	35 851	35 643	38 681
Poland	485 869	510 725	559 960	547 228	555 681
Romania	3 000	3 000	3 000	61	—
Russia	608 000	660 300	662 000	661 900	685 500
Serbia and Montenegro	24 000	36 100	10 500	5 500	16 300
Spain	280 015	298 057	290 282	224 249	284 215
Sweden	179 364	186 984	175 475	174 459	153 399
Turkey	23 751	19 375	14 426	6 998	—
Congo, Democratic Republic (a)	25 000	10 000	8 000	20 000	10 000
Namibia	27 718	26 670	26 306	24 704	21 699
South Africa	117 200	117 000	112 000	89 300	105 500
Zambia (a)	203 000	245 000	245 000	280 100	244 800
Canada	601 359	513 934	430 116	446 209	441 325
Mexico	319 151	284 220	260 754	298 702	340 462
USA	834 100	683 300	538 700	542 100	523 000
Brazil	212 243	187 605	173 378	208 020	199 043
Chile	1 503 200	1 438 700	1 542 400	1 517 600	1 558 100
Peru	384 912	380 834	314 228	320 135	321 968
China	1 145 100	1 179 900	1 379 200	1 502 900	2 083 000
India (c)	284 510	195 025	205 187	189 965	310 694
Indonesia	217 500	211 200	247 400	211 600	275 000
Iran (b)	152 704	143 439	145 670	152 463	168 700
Japan	1 304 717	1 283 173	1 278 380	1 220 448	1 266 432
Kazakhstan	433 561	446 198	431 930	444 537	404 817
Korea, Dem. P.R. of	*10 000	*10 000	*10 000	*10 000	*10 000
Korea, Republic of	386 200	380 000	410 000	380 000	425 600
Oman	25 000	25 000	25 000	25 000	25 000
Pakistan	—	—	4 900	13 000	18 600
Philippines	165 000	165 800	227 900	217 300	201 300
Uzbekistan	81 300	77 000	77 000	103 400	115 000
Australia	455 000	458 000	435 000	443 000	412 000
World Total	11 100 000	10 800 000	10 900 000	11 000 000	11 900 000

Note(s):-

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

(a) Including leach cathodes

(b) Years ended 20 March following that stated

(c) Years ended 31 March following that stated

## Production of refined copper

tonnes

Country	2001	2002	2003	2004	2005
Austria	66 154	64 900	65 100	74 200	72 300
Belgium	424 000	422 500	423 000	383 000	382 900
Bulgaria	34 500	40 700	45 900	55 300	60 000
Cyprus	4 604	3 695	2 552	1 344	—
Finland	115 500	126 016	135 713	132 384	132 126
Germany	693 714	695 741	597 531	652 600	638 800
Italy	30 200	32 400	26 700	33 600	32 200
Norway	26 700	30 600	35 852	35 643	38 681
Poland	498 451	508 674	529 616	550 066	560 256
Romania	17 654	11 453	16 739	24 526	20 739
Russia	894 500	855 100	842 000	919 000	934 900
Serbia and Montenegro	32 365	35 897	14 029	12 000	31 300
Slovakia	10 584	6 989	600	—	—
Spain	290 630	312 145	293 495	228 466	313 105
Sweden	216 237	224 402	214 181	235 620	223 482
Turkey	58 400	41 000	36 900	63 000	95 000
Ukraine	—	2 500	16 800	5 500	13 600
Congo, Democratic Republic	—	—	—	...	2 500
Egypt	...	...	...	14 119	*4 000
South Africa	104 700	99 100	93 300	87 300	98 600
Zambia	307 904	347 235	360 100	407 900	445 600
Zimbabwe	5 300	5 400	5 000	5 800	6 000
Canada	567 720	494 522	454 866	526 955	515 223
Mexico	354 200	319 200	295 800	333 700	377 500
USA	1 800 600	1 511 900	1 306 300	1 310 800	1 255 800
Argentina	*16 000	*16 000	*16 000	*16 000	*16 000
Brazil	212 243	187 605	173 378	208 020	199 043
Chile	2 882 200	2 850 100	2 901 900	2 836 700	2 824 000
Peru	471 875	502 749	517 046	505 306	510 392
China	1 523 300	1 632 500	1 836 300	2 198 700	2 583 400
India (b)	335 769	378 850	395 967	413 354	529 248
Indonesia	212 500	192 400	223 300	210 500	262 900
Iran (a)	181 526	171 592	168 613	182 814	180 000
Japan	1 425 691	1 401 079	1 430 365	1 380 144	1 395 284
Kazakhstan	425 670	452 989	432 401	445 792	418 865
Korea, Dem. P.R. of	*15 000	*15 000	*15 000	*15 000	*15 000
Korea, Republic of	476 094	499 116	509 970	496 006	519 296
Laos	—	—	—	—	30 500
Mongolia	1 476	1 500	1 341	2 376	2 475
Myanmar	25 800	27 500	27 900	31 800	34 500
Oman	24 760	23 975	17 040	15 090	24 500
Philippines	164 500	144 300	171 200	174 600	172 000
Thailand	—	—	—	20 000	26 100
Uzbekistan	75 500	77 100	77 000	85 000	115 000
Australia	558 000	542 000	484 000	498 000	471 000
World Total	15 600 000	15 300 000	15 200 000	15 800 000	16 600 000

### Note(s):-

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

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

(a) Years ended 20 March following that stated

(b) Years ended 31 March following that stated

## Production of diamond

carats

Country	2001	2002	2003	2004	2005
Armenia	186 000	229 000	289 504	262 852	221 700
Russia	20 500 000	*20 000 000	33 020 000	*35 520 000	*38 000 000
Angola	5 100 000	*5 700 000	*6 300 000	7 500 000	10 000 000
Botswana	26 190 000	28 368 000	30 412 155	31 125 000	31 890 000
Cameroon (b)	...	*12 000	*12 000	*12 000	*12 000
Central African Republic	550 000	480 000	*500 000	*500 000	*500 000
Congo, Democratic Republic	19 637 000	21 985 000	29 000 000	*29 000 000	27 000 000
Ghana	1 132 102	963 493	904 089	905 344	1 065 923
Guinea	323 232	491 160	666 000	739 784	*740 000
Ivory Coast	309 000	306 000	230 000	*230 000	*230 000
Lesotho	1 140	721	1 899	26 607	52 036
Liberia	155 000	80 000	60 000	30 000	*30 000
Namibia	1 487 316	1 537 505	1 454 756	2 003 868	1 902 484
Sierra Leone	224 188	351 860	506 819	693 104	668 709
South Africa	11 162 630	10 882 614	12 673 379	14 294 662	15 775 720
Tanzania	254 271	239 761	236 382	303 920	219 640
Zimbabwe	—	—	—	44 454	243 928
Canada	3 685 173	4 975 021	10 755 654	12 618 080	12 300 000
Brazil	*700 000	*500 000	*400 000	*300 000	*300 000
Guyana	179 463	248 437	412 538	454 940	356 948
Venezuela	52 804	141 463	38 489	40 036	...
China	1 185 000	1 190 000	1 190 000	*1 190 000	1 190 000
India (a)	81 436	84 407	71 259	78 315	44 171
Indonesia	*30 000	*30 000	*30 000	*30 000	21 606
Australia	26 176 000	33 648 000	31 013 000	20 620 000	30 678 000
World Total	119 300 000	132 400 000	160 200 000	158 500 000	173 500 000

Note(s):-

- (1) This table does not show production of synthetic diamond
- (2) So far as possible the amounts shown include estimates for illegal production

- (a) Years ended 31 March following that stated
- (b) Including artisanal production

## Production of diatomite

tonnes

Country	2001	2002	2003	2004	2005
Commonwealth of Independent States (f)	*80 000	*80 000	*80 000	*80 000	*80 000
Czech Republic	5 200	5 600	4 800	5 100	4 100
Denmark					
Moler (d)	192 000	211 000	221 000	188 000	209 000
France	*85 000	*80 000	*80 000	*75 000	*75 000
Hungary	1 323	1 656	1 770	1 640	2 190
Iceland	30 434	26 494	27 693	20 625	—
Poland	*1 000	*1 000	*700	*800	*700
Portugal	387	—	—	—	—
Romania	9 743	20 922	33 296	20 626	1 402
Spain (b)	70 000	53 558	57 934	33 799	35 000
Algeria	2 863	3 185	2 335	2 665	*2 600
Ethiopia	...	...	...	2 000	420
Kenya	441	1 333	353	330	243
Costa Rica	26 350	*26 400	26 450	*27 000	27 000
Mexico	69 474	62 322	53 395	59 818	62 132
USA (c)	644 000	624 000	599 000	620 000	*635 000
Argentina	17 090	23 314	35 518	8 180	29 495
Brazil	10 010	8 030	9 981	8 847	7 549
Chile	22 705	30 274	25 594	30 015	27 091
Colombia	*4 000	*4 000	*4 000	*4 000	*4 000
Peru	*35 000	*35 000	*35 000	*35 000	*35 000
China	*350 000	*370 000	*380 000	370 000	400 000
Iran (a)	50	300	1 000	1 000	*1 000
Japan	129 267	123 827	111 690	126 255	*100 000
Korea, Republic of	27 530	20 666	15 636	2 441	2 193
Saudi Arabia	1 000	1 000	1 000	*1 000	*1 000
Thailand	720	780	1 288	1 372	990
Vietnam	...	...	...	...	10 000
Australia (e)	28 407	31 122	31 758	34 571	*36 000
World Total	1 844 000	1 846 000	1 841 000	1 760 000	1 789 000

### Note(s):-

(1) In addition to the countries listed, Egypt and Turkey are believed to produce diatomite

(a) Years ended 20 March following that stated

(b) Including tripoli

(c) Sold or used by producers

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

(e) Years ended 30 June of that stated

(f) Diatomite is produced in Armenia, Georgia and Russia but information is not available to provide estimates for individual countries

## Production of feldspar

tonnes

Country	2001	2002	2003	2004	2005
Bulgaria	23 000	*34 000	*35 000	*35 000	*35 000
Czech Republic	373 000	401 000	421 000	488 000	472 000
Finland	36 145	39 552	59 362	44 495	42 783
France	720 000	659 000	654 000	628 000	651 000
Germany	302 650	243 368	233 028	182 842	168 640
Greece	126 400	124 100	102 800	88 274	100 586
Italy	3 240 457	3 159 569	2 972 187	2 941 272	*3 000 000
Macedonia	20 449	22 800	25 640	22 921	27 076
Norway	79 510	75 184	70 000	67 000	*67 000
Poland	145 980	209 226	276 264	373 459	426 914
Portugal	112 923	141 125	129 366	98 262	*100 000
Romania	43 037	51 959	72 827	60 924	74 927
Russia	...	90 533	121 405	156 391	*160 000
Serbia and Montenegro	4 451	7 813	3 045	180	...
Spain	*520 000	548 964	563 580	552 507	570 000
Sweden	40 000	37 000	44 000	38 000	30 000
Turkey	1 510 293	1 766 387	1 862 310	1 983 336	2 331 971
Ukraine	...	...	...	48 800	63 930
United Kingdom (c)	2 995	1 896	1 309	2 274	2 000
Egypt (d)	*300 000	*350 000	*350 000	*350 000	*350 000
Morocco	12 015	19 402	*20 000	*20 000	*20 000
South Africa	66 062	66 616	57 738	53 721	56 574
Zimbabwe	1 055	824	816	79	—
Cuba	*7 000	*7 000	*7 000	*7 000	*7 000
Guatemala	6 809	13 044	9 320	4 473	*4 500
Mexico	329 591	332 101	346 315	364 166	373 411
USA	800 000	790 000	800 000	770 000	*760 000
Argentina	48 522	82 642	90 857	125 684	151 307
Brazil	139 644	97 742	102 077	280 293	196 419
Chile	2 867	3 069	6 690	4 838	5 820
Colombia	*55 000	93 450	*100 000	*100 000	*100 000
Ecuador	60 688	31 254	44 268	53 469	56 142
Peru	3 062	6 018	7 349	6 005	8 876
Uruguay	3 522	1 550	2 450	1 950	2 150
Venezuela	142 425	146 619	149 450	175 864	180 000
China	*2 000 000	*2 000 000	*2 000 000	2 300 000	2 300 000
India (a)	228 735	239 093	332 220	379 055	322 929
Indonesia	*24 000	*24 000	*24 000	*24 000	*24 000
Iran (b)	157 243	228 848	293 370	248 710	*250 000
Japan (e)	1 333 441	1 143 618	1 006 093	*889 000	*800 000
Jordan	611	530	13 057	13 063	*13 000
Korea, Republic of	467 161	519 125	477 012	541 788	508 644
Malaysia	40 509	30 819	42 662	79 220	83 580
Myanmar	*10 000	*10 000	*10 000	*10 000	*10 000
Pakistan (d)	45 145	35 071	37 344	30 373	25 032
Philippines	33 122	32 874	34 546	32 106	11 853
Saudi Arabia	27 500	30 470	33 700	42 000	42 300
Sri Lanka	27 438	28 866	32 586	38 600	45 492
Taiwan	147	—	510	900	—
Thailand	710 543	783 733	824 990	1 001 053	1 149 717
Uzbekistan	*4 300	*4 300	*4 300	*4 300	*4 300
Vietnam	...	...	...	...	200 000
Australia (d)	113 917	100 560	118 115	108 073	*97 000
World Total	15 000 000	15 000 000	15 500 000	16 000 000	16 500 000

Note(s):-

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

(a) Years ended 31 March following that stated

(d) Years ended 30 June of that stated

(b) Years ended 20 March following that stated

(e) Including weathered granite feldspar

(c) China stone

## Production of fluorspar

tonnes

Country	2001	2002	2003	2004	2005
France	123 000	122 000	90 000	70 000	53 000
Germany	30 381	34 429	33 289	33 203	35 364
Italy	70 160	53 260	26 387	17 915	...
Romania	*15 000	*15 000	*15 000	*15 000	*15 000
Russia	*200 000	*169 000	*170 000	*200 000	*210 000
Spain	134 039	141 434	139 266	145 694	146 890
Turkey	3 752	5 344	718	880	800
United Kingdom	*50 000	*53 000	*56 000	50 080	60 980
Egypt	304	502	*500	*500	*500
Kenya (d)	118 850	85 015	80 201	117 986	109 594
Morocco	96 500	94 910	81 225	*81 000	*85 000
Namibia	81 245	81 084	79 281	104 785	114 886
South Africa	286 387	227 000	235 000	275 000	*275 000
Mexico	619 468	622 477	756 258	842 698	875 450
Argentina	9 075	5 168	5 422	6 189	6 962
Brazil (a)	43 734	47 899	56 346	57 772	66 512
China	*2 200 000	*2 150 000	*2 300 000	2 500 000	2 700 000
India (e)	20 766	13 023	12 393	14 008	5 538
Iran (b)	34 688	55 187	41 094	41 220	*41 000
Korea, Dem. P.R. of	*12 000	*12 000	*12 000	*12 000	*12 500
Kyrgyzstan	1 175	2 656	3 973	*4 000	*4 000
Mongolia	199 105	185 100	198 400	148 200	134 100
Pakistan (c)	1 091	1 288	*1 000	1 026	*1 500
Thailand	3 020	2 270	2 360	2 375	295
Vietnam	*3 000	*3 000	*3 000	*3 000	*3 000
World Total	4 400 000	4 200 000	4 400 000	4 700 000	5 000 000

### Note(s):-

- (1) In addition to the countries listed, Bulgaria is believed to produce fluorspar  
(2) In addition, the USA produced the following amounts of fluorspar equivalent in fluorosilicic acid derived from processing phosphate rock ('000 t): 2001: 104; 2002: 92; 2003: 94; 2004: 90; 2005: 86

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

## Production of germanium metal

tonnes

Country	2001	2002	2003	2004	2005
USA (a)	5	5	5	4	*5
China	21	*20	*20	*20	*20
Japan	2	1	1	1	2

### Note(s):-

- (1) Significant quantities of germanium are also believed to be recovered from imported or domestic material in France, Germany, Russia and to a lesser extent in Italy

- (a) Including production of secondary metal

## Mine production of gold

kilograms (metal content)

Country	2001	2002	2003	2004	2005
Armenia	1 900	3 200	1 800	1 881	1 550
Bulgaria	1 700	2 612	2 270	2 431	*2 400
Finland	1 700	1 300	*1 200	*1 300	*1 300
France	2 512	1 724	1 470	—	—
Georgia	1 880	2 876	2 386	1 377	1 620
Greenland	—	—	—	1 560	1 828
Italy	522	631	*100	—	—
Poland (d)	349	296	356	527	713
Romania	1 600	1 137	1 878	1 430	*500
Russia	152 641	168 393	170 068	169 297	163 148
Serbia and Montenegro (d)	—	858	363	328	*330
Slovakia	157	77	79	107	109
Spain	4 277	5 559	5 212	5 248	2 260
Sweden	4 986	5 757	5 900	6 564	6 564
Turkey	*1 100	*4 500	5 370	3 260	—
Algeria	—	369	365	597	641
Botswana	2	8	9	162	2 709
Burkina Faso	229	209	770	1 125	*1 400
Burundi	415	483	2 855	3 229	3 905
Cameroon	540	630	630	600	600
Eritrea	107	—	9	33	25
Ethiopia (b)	3 862	3 670	3 875	3 490	3 121
Gabon	*70	*70	*70	300	*300
Ghana	70 049	69 575	70 756	63 140	66 530
Guinea	16 256	16 666	16 631	15 236	17 474
Ivory Coast	3 672	3 570	1 313	1 219	*1 500
Kenya (e)	1 545	1 477	1 543	567	616
Madagascar	294	2 802	10	0	—
Mali	41 273	56 019	45 529	37 916	44 156
Morocco (d)	1 191	2 747	1 863	*1 493	*1 500
Namibia	2 852	2 947	2 298	2 205	2 649
Niger	30	28	30	1 531	3 500
Senegal	*550	*600	*600	*600	*600
South Africa	394 757	398 258	372 766	337 223	294 803
Sudan	5 438	5 258	*5 500	*5 000	4 739
Tanzania	30 088	43 320	48 018	48 176	45 405
Uganda (e)	6 090	7 590	4 160	...	...
Zambia (c)	*120	*140	*140	*160	*170
Zimbabwe	18 050	15 669	11 514	21 330	13 453
Canada	160 200	152 059	141 589	130 727	119 225
Costa Rica	*100	*100	*110	*150	424
Cuba	*1 000	*1 000	547	*500	*500
Guatemala	*4 500	*4 500	4 550	—	700
Honduras	3 553	4 026	3 167	3 177	2 535
Jamaica	214	159	146	20	—
Mexico	23 543	21 324	20 406	21 818	26 782
Nicaragua	3 840	3 494	3 096	4 064	3 628
Panama	—	—	—	*200	*200
USA	335 000	298 000	276 897	257 905	261 098
Argentina	30 630	32 530	29 748	28 496	25 377
Bolivia	12 374	11 269	9 361	6 165	8 906
Brazil	42 884	41 662	40 416	47 596	41 154
Chile	42 673	38 688	38 954	39 986	40 447
Colombia	21 813	20 823	46 515	37 739	35 783
Ecuador	3 005	2 750	4 819	5 158	5 416
French Guiana	4 062	3 290	3 296	2 773	1 955
Guyana	14 179	14 104	12 171	11 478	8 325
Peru	138 022	157 298	172 619	173 219	207 822
Suriname	—	—	—	8 513	10 619
Uruguay	2 083	2 079	1 550	1 758	1 800
Venezuela	9 076	9 465	8 190	9 690	*10 000



## Mine production of gold

kilograms (metal content)

Country	2001	2002	2003	2004	2005
China (d)	181 870	202 000	210 100	212 350	224 050
India (a)	2 810	3 153	3 457	3 526	3 050
Indonesia	166 090	142 238	141 019	192 936	142 894
Iran (d)	770	650	*500	*800	*800
Japan	8 162	8 563	8 122	7 936	8 319
Kazakhstan (d)	15 226	10 959	9 906	9 576	9 788
Korea, Republic of	10	188	528	1 371	1 853
Kyrgyzstan	24 670	17 000	22 476	21 395	*16 500
Laos	—	—	5 300	4 392	6 232
Malaysia	3 965	4 289	4 739	4 221	4 249
Mongolia	13 675	12 097	11 119	19 418	24 122
Myanmar (d)	*100	*100	*100	*100	*100
Oman	603	188	4	—	—
Philippines	33 841	36 005	37 844	35 464	37 490
Saudi Arabia	2 500	4 600	8 500	8 268	7 456
Tajikistan	*2 700	*2 700	2 370	2 161	1 927
Thailand	313	4 950	4 269	4 507	4 393
Uzbekistan	85 400	85 636	84 610	88 350	84 210
Vietnam	*3 000	*2 000	*2 000	*2 000	*3 000
Australia	280 080	266 140	282 000	259 000	263 000
Fiji	4 907	3 829	3 517	4 033	2 793
New Zealand	9 850	9 770	9 305	10 151	10 583
Papua New Guinea	67 043	61 379	67 832	73 670	68 483
World Total	2 530 000	2 530 000	2 530 000	2 500 000	2 430 000

### Note(s):-

- (1) In several countries substantial amounts of gold produced in small operations are not recorded in the official statistics used when compiling this table
- (2) In addition to the countries listed, Central African Republic, Liberia, Mozambique, Nigeria, Sierra Leone, Solomon Islands, Taiwan and Ukraine produce less than 100 kg gold per year
- (3) Greece and Norway are believed to produce gold

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

## Production of graphite

tonnes

Country	2001	2002	2003	2004	2005
Austria (a)	116	—	—	—	—
Czech Republic	17 000	16 000	9 000	5 000	3 000
Germany	3 190	3 312	2 840	3 155	2 638
Norway	9 070	8 600	1 000	6 000	9 000
Romania	1 176	1 001	1 014	395	486
Russia	16 563	14 241	12 780	13 550	*14 000
Sweden	1 035	—	—	—	—
Turkey	...	1 393	942	*28	—
Ukraine	6 400	9 400	11 000	10 960	10 000
Madagascar	12 580	7 522	2 170	7 770	*7 700
Zimbabwe	11 837	9 700	6 280	10 267	4 298
Canada	20 984	15 039	12 500	*15 000	*17 000
Mexico	21 442	14 065	8 730	14 769	12 357
Brazil (b)	60 666	60 922	70 739	76 332	75 515
China (d)	1 700 000	1 400 000	*1 400 000	1 450 000	1 650 000
India (a) (c)	105 814	106 060	87 207	108 150	120 322
Korea, Dem. P.R. of	*25 000	*25 000	*25 000	*30 000	32 000
Korea, Republic of	238	94	58	247	39
Sri Lanka	6 585	3 619	3 387	5 374	5 133
Vietnam	...	...	...	...	2 000
World Total	2 000 000	1 700 000	1 700 000	1 800 000	2 000 000

### Note(s):-

- (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) Years ended 31 March following that stated  
(d) Including 350000 tonnes of flake graphite in 2002

# Production of gypsum

tonnes

Country	2001	2002	2003	2004	2005
Armenia	12 811	44 943	57 835	...	...
Austria					
Gypsum	790 478	847 117	889 727	920 809	911 162
Anhydrite	138 745	122 085	113 823	117 318	106 032
Azerbaijan	1 750	1 039	3 848	884	28 242
Bosnia & Herzegovina	59 728	*60 000	143 047	139 520	...
Bulgaria	166 838	156 400	165 500	175 900	187 700
Croatia	130 861	145 000	166 340	193 263	196 133
Cyprus	250 000	295 000	300 000	255 000	215 500
Czech Republic	24 000	108 000	104 000	71 000	25 000
France	*4 500 000	*3 500 000	*3 500 000	*3 500 000	*3 500 000
Georgia	15 408	8 127	8 507	1 707	238
Germany (a)	1 966 000	1 761 000	1 748 000	1 579 000	1 644 000
Greece	808 890	890 148	731 785	856 606	865 216
Hungary (a)	231 000	108 000	62 000	55 000	19 000
Irish Republic	*500 000	*500 000	*600 000	*650 000	*700 000
Italy	1 558 882	1 531 477	1 783 903	1 615 287	...
Latvia	*100 000	(a) 220 000	(a) 160 000	(a) 230 000	(a) *230 000
Macedonia	74 000	129 266	150 618	165 416	190 232
Moldova	55 200	91 300	116 100	491 000	562 700
Poland					
Gypsum	793 684	866 674	1 030 693	970 786	(a) 1 242 875
Anhydrite	300 356	280 031	297 088	301 161	...
Portugal	787 646	579 143	419 799	...	...
Romania	282 985	421 235	409 516	490 372	532 867
Russia	1 189 000	1 389 800	1 766 600	2 076 800	*2 000 000
Serbia and Montenegro	58 045	54 937	42 261	42 471	...
Slovakia (a)	168 800	121 680	93 800	127 100	107 500
Spain	*10 920 000	11 218 410	11 366 375	12 533 972	12 500 000
Switzerland	*300 000	*300 000	*300 000	*300 000	*300 000
Turkey	328 656	264 038	196 668	250 099	24 421
Ukraine	337 000	288 000	461 000	601 000	656 000
United Kingdom	*1 700 000	*1 700 000	*1 700 000	1 686 000	*1 700 000
Algeria	646 000	741 000	*800 000	467 352	857 502
Egypt	126 615	119 453	...	...	...
Eritrea	2 077	1 062	2 705	1 054	212
Ethiopia (d)	50 500	22 500	48 058	51 200	34 729
Kenya	8 200	*9 000	*10 000	*11 000	*11 000
Libya	*175 000	*150 000	*150 000	*175 000	*175 000
Mauritania	*100 000	*100 000	*100 000	*100 000	*100 000
Morocco	*550 000	*600 000	*600 000	*600 000	*600 000
Niger	3 205	17 652	17 851	34 944	*35 000
Somalia	*1 500	*1 500	*1 500	*1 500	*1 500
South Africa	382 830	415 387	394 069	452 271	547 581
Sudan	2 422	*5 000	*5 000	*5 000	*5 000
Tanzania	72 000	78 650	33 232	59 231	23 119
Tunisia	*100 000	*100 000	*100 000	109 000	113 000
Canada					
Gypsum	8 331 000	9 006 000	(a) 8 925 000	(a) 9 205 000	(a) 8 272 000
Anhydrite	75 753	93 239	...	...	...
Cuba	*110 000	*110 000	*110 000	*110 000	*110 000
Dominican Republic	175 553	178 941	219 311	435 723	...
El Salvador	*6 000	*6 000	*6 000	*6 000	*6 000
Guatemala	96 817	94 411	66 981	106 140	...
Honduras	59 500	*60 000	*60 000	*60 000	*60 000
Jamaica	320 323	164 880	248 558	283 352	302 066
Mexico	6 237 057	6 703 109	6 986 491	9 221 458	6 251 969
Nicaragua	34 369	28 153	30 642	36 466	...
USA	16 300 000	15 700 000	16 700 000	(a) 17 200 000	(a) *17 500 000

## Production of gypsum

tonnes

Country	2001	2002	2003	2004	2005
Argentina	371 527	362 556	387 936	674 935	1 050 193
Brazil	1 506 619	1 633 311	1 529 015	1 474 911	1 582 248
Chile	516 876	609 550	662 259	630 444	660 753
Colombia	*560 000	*560 000	*560 000	*560 000	*560 000
Ecuador	834	4 730	5 203	232	244
Paraguay	4 300	*4 300	*4 300	*4 300	*4 300
Peru	20 966	75 306	71 114	149 735	316 091
Venezuela	5 000	*10 000	*10 000	*10 000	*10 000
Afghanistan	*3 000	*3 000	*3 000	*3 000	*3 000
Bhutan	100 907	105 658	122 829	131 236	150 585
China	*6 800 000	*6 850 000	*6 850 000	*7 000 000	*7 000 000
India (e) (f)	2 879 344	2 672 244	2 793 553	3 689 927	3 137 095
Indonesia	6 000	6 000	6 000	6 000	*6 000
Iran (c)	8 347 471	8 338 725	11 979 513	14 394 537	*14 000 000
Israel	133 000	123 119	141 000	124 678	106 798
Jordan	187 154	11 252	63 895	56 554	45 921
Kazakhstan	...	...	...	396 200	516 600
Laos	121 220	119 514	101 727	*102 000	131 508
Mongolia	*25 000	*25 000	*25 000	30 050	81 223
Myanmar (f)	64 609	90 002	66 069	71 155	*71 100
Oman	44 323	55 722	*50 000	*60 000	*60 000
Pakistan (b)	391 728	402 600	424 107	467 065	552 496
Saudi Arabia	467 177	497 155	491 132	*450 000	*450 000
Syria	474 004	350 088	376 715	431 561	467 000
Taiwan	1 006	—	—	—	—
Tajikistan	...	...	50 100	57 000	8 500
Thailand					
Gypsum	6 190 815	6 325 591	7 291 167	7 619 205	7 113 073
Anhydrite	310 720	290 885	448 071	531 660	537 781
Turkmenistan	2 500	...	...	...	...
Uzbekistan	*80 000	*80 000	*80 000	*80 000	*80 000
Yemen, Republic of	44 000	41 000	42 000	*44 000	...
Australia (b)	3 225 500	4 087 500	3 937 700	4 170 873	*3 809 000
World Total	95 800 000	96 700 000	103 600 000	113 200 000	108 900 000

Note(s):-

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

- (a) Including anhydrite
- (b) Years ended 30 June of that stated
- (c) Years ended 20 March following that stated
- (d) Years ended 7 July of that stated
- (e) Including selenite
- (f) Years ended 31 March following that stated

## Production of iodine

kilograms

Country	2001	2002	2003	2004	2005
Russia	46 000	58 000	58 000	105 000	*105 000
USA	1 290 000	1 420 000	1 090 000	1 130 000	1 240 000
Chile	11 355 000	11 648 000	13 916 000	14 931 000	15 346 000
China	*500 000	*500 000	*500 000	*550 000	*550 000
Indonesia	*75 000	*75 000	*75 000	*75 000	*75 000
Japan	6 643 000	6 548 000	6 524 000	*6 500 000	*7 200 000
Turkmenistan	*200 000	*200 000	*200 000	*250 000	*300 000
Uzbekistan	*2 000	*2 000	*2 000	*2 000	*2 000
World Total	20 100 000	20 500 000	22 400 000	23 500 000	24 800 000

## Production of iron ore

tonnes

Country	2001	2002	2003	2004	2005
Austria (a)	1 843 275	1 941 759	2 124 787	1 889 419	2 047 950
Azerbaijan	...	4 000	3 100	19 100	7 300
Bosnia & Herzegovina	264 000	212 000	126 929	280 596	...
Bulgaria	324 800	373 000	466 100	82 700	—
France	36 587	21 367	—	—	—
Germany (b) (f)	407 002	419 371	429 170	412 238	362 106
Norway	395 000	490 000	410 000	586 100	713 000
Romania	221 000	248 000	244 000	231 417	220 788
Russia	82 800 000	85 964 300	92 604 600	94 894 600	96 800 000
Slovakia	435 492	326 300	287 000	305 072	258 500
Spain	55 058	24 489	571	10 879	—
Sweden	19 486 000	20 281 000	21 498 000	22 272 000	23 255 000
Turkey	4 434 621	3 432 775	3 429 070	3 856 536	3 889 934
Ukraine	54 700 000	59 300 000	62 500 000	66 000 000	69 456 000
United Kingdom	510	464	*500	*500	*500
Algeria	1 291 000	1 162 000	1 426 200	1 754 300	1 878 800
Egypt (d)	1 843 027	2 618 065	*2 900 000	2 237 475	*2 500 000
Mauritania	10 300 000	9 600 000	10 100 000	10 700 000	*10 700 000
Morocco	7 976	8 736	4 019	...	...
Nigeria	...	7 850	8 635	8 479	*8 000
South Africa (c)	34 757 159	36 484 015	38 085 855	39 322 048	39 542 072
Tunisia	206 500	179 200	160 300	256 000	206 400
Zimbabwe	360 862	271 812	411 044	228 731	224 229
Canada (g)	29 152 000	28 704 000	33 013 000	28 596 000	28 343 000
Mexico	8 660 000	9 966 000	12 398 000	13 369 000	14 468 000
USA	46 192 000	51 570 000	48 554 000	54 724 000	*55 000 000
Brazil	201 400 000	214 560 000	230 707 428	261 674 548	280 861 534
Chile	8 834 152	7 268 803	8 011 023	8 003 491	7 862 100
Colombia	636 837	688 650	625 002	642 546	498 623
Peru	4 563 551	4 566 000	5 228 804	5 228 800	5 619 500
Venezuela	16 902 437	16 595 634	17 954 495	19 196 231	*20 000 000
Bhutan	—	—	—	—	5 679
China	217 014 700	232 619 000	261 084 600	310 104 800	420 492 700
India (h)	86 226 000	99 072 000	122 838 000	145 942 000	154 436 000
Indonesia	469 376	378 587	245 409	89 664	32 203
Iran (e)	14 835 692	16 906 035	18 287 228	18 204 658	*18 200 000
Kazakhstan	15 886 300	17 675 100	19 364 600	20 302 500	19 471 100
Korea, Dem. P.R. of	*1 000 000	*1 000 000	*1 100 000	*1 100 000	*1 200 000
Korea, Republic of	22 693	156 774	174 009	226 287	212 971
Malaysia (g)	376 476	404 350	596 612	663 732	949 605
Pakistan	25 085	6 562	11 773	84 946	104 278
Thailand	50	570 110	9 675	135 580	230 946
Australia	181 435 000	188 760 000	212 881 000	234 002 000	261 796 000
New Zealand	1 636 400	1 739 950	1 946 913	2 329 417	2 207 244
<b>World Total</b>	<b>1 049 000 000</b>	<b>1 117 000 000</b>	<b>1 232 000 000</b>	<b>1 370 000 000</b>	<b>1 544 000 000</b>

Note(s):-

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

# Production of pig iron

tonnes

Country	2001	2002	2003	2004	2005
Austria	4 392 878	4 607 000	4 676 742	4 846 740	5 400 000
Belgium	7 732 111	7 988 396	7 812 593	8 224 000	7 254 000
Bosnia & Herzegovina	*100 000	*100 000	*100 000	*100 000	*100 000
Bulgaria	1 211 000	1 072 000	1 386 000	1 200 000	1 200 000
Czech Republic	4 670 700	4 839 880	5 207 000	5 385 000	4 627 000
Finland	2 851 821	2 828 275	3 092 051	3 036 566	3 056 165
France	11 884 224	13 093 042	12 615 893	13 087 705	12 595 584
Germany	29 394 000	29 967 000	30 071 000	30 628 000	29 300 000
Hungary	1 225 714	1 334 000	1 332 000	1 350 000	1 329 000
Italy	10 581 000	9 746 000	10 123 000	10 566 000	11 392 000
Netherlands	5 305 000	5 367 000	5 846 000	6 011 000	6 000 000
Norway	70 000	108 000	*110 000	*100 000	*100 000
Poland	5 440 047	5 296 410	5 585 094	6 292 341	4 458 161
Portugal	82 000	—	—	—	—
Romania	3 242 994	3 979 346	4 101 409	4 243 956	4 097 921
Russia	47 457 000	49 161 000	51 235 000	53 461 000	50 300 000
Serbia and Montenegro	460 884	485 391	635 182	959 019	...
Slovakia	3 254 600	3 533 150	3 892 000	3 765 000	3 681 000
Spain	4 094 000	3 973 000	3 645 000	4 036 000	4 200 000
Sweden	3 725 000	3 815 000	3 819 000	3 992 000	3 800 000
Switzerland	*80 000	*80 000	*80 000	*80 000	*80 000
Turkey	5 289 000	5 003 000	5 693 764	5 835 889	6 371 084
Ukraine	26 364 000	27 634 000	29 574 000	31 000 000	31 700 000
United Kingdom	9 870 400	8 560 600	10 277 800	10 179 600	10 200 000
Algeria	794 715	959 000	1 026 200	692 800	791 400
Egypt	3 530 000	3 630 000	3 950 000	*4 000 000	4 000 000
Libya	1 060 000	1 161 000	1 336 000	1 586 000	1 700 000
Morocco	*15 000	*15 000	*15 000	*15 000	*15 000
South Africa	7 376 000	7 525 000	7 776 000	7 644 000	7 900 000
Tunisia	191 600	151 900	35 800	—	—
Zimbabwe	156 000	122 000	182 000	145 000	*145 000
Canada	8 302 141	8 849 000	9 058 000	9 919 000	8 900 000
Mexico	8 037 183	8 570 500	9 656 000	10 623 000	10 020 000
Trinidad & Tobago	2 187 400	2 316 300	2 275 000	2 336 500	2 055 300
USA	42 250 000	40 700 000	40 854 000	42 300 000	*33 100 000
Argentina	3 192 800	3 649 700	4 138 600	4 147 500	4 466 500
Brazil	27 731 000	30 055 000	32 449 000	34 558 000	33 884 000
Chile	897 000	963 900	987 800	1 137 000	1 100 000
Colombia	318 953	309 300	283 300	312 000	...
Paraguay	71 763	87 400	98 000	119 000	...
Peru	383 285	267 200	310 400	353 000	*350 000
Venezuela	5 903 298	6 844 370	6 645 700	7 825 000	8 900 000
China	155 542 500	170 850 000	213 666 800	251 850 500	330 900 000
India	27 595 000	30 046 000	33 601 000	34 238 000	36 700 000
Indonesia	1 487 000	1 446 000	1 171 000	1 436 000	1 700 000
Iran (a)	7 142 340	7 182 000	8 328 619	8 545 732	9 200 000
Japan	78 835 836	80 979 161	82 090 744	82 974 493	83 058 130
Kazakhstan	3 906 500	4 008 947	4 136 820	4 283 142	3 582 198
Korea, Dem. P.R. of	*250 000	*250 000	*250 000	*250 000	*250 000
Korea, Republic of	25 898 000	26 570 000	27 314 000	27 555 998	27 308 532
Malaysia	1 020 000	1 060 000	1 600 000	1 710 000	1 400 000
Myanmar	*40 000	*40 000	*40 000	*40 000	*40 000
Pakistan	1 384 000	*1 000 000	*1 000 000	*1 500 000	*1 500 000
Qatar	733 549	752 000	776 000	830 000	800 000
Saudi Arabia	2 877 000	3 280 000	3 285 000	3 406 000	3 600 000
Taiwan	10 001 000	10 169 000	10 260 000	10 354 000	...
Vietnam	48 000	146 000	200 000	187 000	...

## Production of pig iron

tonnes

Country	2001	2002	2003	2004	2005
Australia	7 252 000	7 790 000	8 557 000	7 239 000	6 200 000
New Zealand	646 000	617 000	700 000	719 000	700 000
World Total	625 800 000	654 900 000	719 000 000	773 200 000	837 500 000

Note(s):-

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

(a) Years ended 20 March following that stated



## Production of crude steel

tonnes

Country	2001	2002	2003	2004	2005
Albania	71 952	80 924	86 117	115 000	140 000
Austria	5 870 000	6 189 000	6 261 000	6 530 000	7 031 000
Azerbaijan	1 605	524	1 531	21 570	58 912
Belarus	1 611 000	1 607 000	1 572 868	1 920 019	2 075 523
Belgium	10 741 493	11 322 008	11 114 775	11 697 000	10 422 000
Bosnia & Herzegovina	84 000	70 000	80 000	120 000	150 000
Bulgaria	1 972 000	1 860 000	1 950 000	2 106 000	1 940 000
Croatia	57 993	33 851	43 380	85 947	73 640
Czech Republic	6 315 900	6 511 970	6 783 000	7 033 000	6 189 000
Denmark	746 000	392 000	—	—	—
Finland	3 938 122	4 002 914	4 766 203	4 832 427	4 738 446
France	19 190 552	20 258 473	19 757 864	20 770 252	19 480 777
Germany	44 803 000	45 015 000	44 809 000	46 377 000	44 524 000
Greece	1 281 000	1 835 000	1 701 000	1 967 000	2 266 000
Hungary	2 064 507	2 138 146	2 044 526	1 944 017	2 004 250
Irish Republic	150 000	—	—	—	—
Italy	26 544 000	26 302 000	27 058 000	28 477 000	29 319 000
Latvia	515 000	507 000	546 000	550 000	550 000
Luxembourg	2 724 679	2 736 000	2 675 000	2 684 000	2 194 000
Macedonia	291 098	261 398	306 635	319 873	321 170
Moldova	967 000	514 000	850 000	1 011 000	1 016 000
Netherlands	5 902 000	6 117 000	6 561 000	6 848 000	6 919 000
Norway	635 000	698 000	703 000	725 000	705 000
Poland	8 809 211	8 367 434	9 107 384	10 578 482	8 335 898
Portugal	727 000	894 000	1 000 000	1 400 000	1 400 000
Romania	4 935 623	5 490 434	5 692 496	6 076 600	5 631 566
Russia	58 970 000	59 882 574	62 839 334	65 582 851	66 146 000
Serbia and Montenegro	510 675	595 547	722 376	1 167 000	1 292 000
Slovakia	3 988 600	4 275 470	4 588 000	4 454 000	4 485 000
Slovenia	462 000	481 000	541 000	566 000	583 000
Spain	16 504 000	16 408 000	16 407 000	17 700 000	17 826 000
Sweden	5 518 100	5 753 300	5 707 300	5 978 100	5 725 700
Switzerland	*1 000 000	*1 000 000	*1 000 000	*1 000 000	1 160 000
Turkey	14 382 257	16 045 522	17 644 020	19 868 118	20 961 240
Ukraine	33 108 000	34 050 000	36 922 000	38 738 000	38 641 000
United Kingdom	13 542 700	11 667 100	13 268 000	13 765 700	13 226 000
Algeria	947 040	1 091 000	1 051 000	1 014 000	1 007 000
Egypt	3 799 000	4 316 000	4 398 000	4 810 000	5 603 000
Libya	846 000	886 000	1 007 000	1 026 000	1 255 000
Morocco	...	...	...	...	205 000
Nigeria	...	...	...	40 000	100 000
South Africa	8 821 000	9 095 000	9 481 000	9 500 000	9 494 000
Tunisia	238 400	200 500	86 000	70 000	65 800
Zimbabwe	149 000	105 000	152 000	135 000	107 000
Canada	15 178 896	15 906 747	15 831 473	16 428 000	15 327 000
Cuba	269 600	264 100	210 000	190 000	...
Dominican Republic	32 521	60 956	*61 000	*61 000	*61 000
El Salvador	38 502	48 832	56 900	60 000	*60 000
Guatemala	202 000	216 000	226 000	245 000	*250 000
Mexico	13 300 007	14 010 000	15 178 000	17 100 000	16 195 000
Trinidad & Tobago	668 300	816 900	896 000	789 800	712 000
USA	90 103 000	91 588 000	93 677 000	99 681 000	93 285 000
Argentina	4 112 501	4 363 367	5 033 200	5 125 200	5 382 000
Brazil	26 717 000	29 604 000	31 147 000	32 909 000	31 610 000
Chile	1 246 863	1 279 549	1 377 400	1 620 000	1 537 000
Colombia	638 259	662 859	668 400	730 000	842 000
Ecuador	59 732	67 233	79 800	72 000	84 000
Paraguay	70 664	79 984	91 000	107 000	101 000
Peru	689 790	611 363	668 400	...	790 000
Uruguay	30 890	34 400	40 500	55 000	64 000
Venezuela	3 812 664	4 163 855	3 930 300	4 561 000	4 910 000

## Production of crude steel

tonnes

Country	2001	2002	2003	2004	2005
China	151 634 400	182 370 000	222 336 000	272 797 900	349 361 500
Hong Kong	*100 000	*100 000	*100 000	*100 000	*100 000
India	27 291 000	28 814 000	31 779 000	32 626 000	38 083 000
Indonesia	2 780 607	2 459 928	2 042 233	2 412 000	2 800 000
Iran (a)	6 927 108	7 477 086	7 990 971	8 989 640	9 404 000
Israel	*280 000	*150 000	*150 000	*280 000	*300 000
Japan	102 865 950	107 745 000	110 510 520	112 717 664	112 471 374
Jordan	164 376	134 000	*135 000	*140 000	150 000
Kazakhstan	4 691 000	4 866 000	5 069 400	5 371 698	4 476 642
Korea, Dem. P.R. of	*300 000	*300 000	*300 000	*300 000	*300 000
Korea, Republic of	43 852 192	45 389 834	46 309 629	47 520 871	47 820 037
Malaysia	4 100 000	4 721 800	3 960 000	5 698 000	6 300 000
Pakistan	*500 000	*500 000	*500 000	*500 000	*500 000
Philippines	500 000	550 000	500 000	400 000	400 000
Qatar	891 000	1 027 000	1 055 000	1 089 000	1 057 000
Saudi Arabia	3 413 000	3 570 000	3 944 000	3 902 000	4 186 000
Singapore	456 000	545 000	561 000	610 000	572 000
Syria	*70 000	*70 000	*70 000	*70 000	*70 000
Taiwan	17 261 119	18 226 044	18 828 323	19 592 755	18 563 247
Thailand	2 127 000	2 538 000	3 551 000	4 533 000	5 161 000
United Arab Emirates	*90 000	*90 000	*90 000	*90 000	*90 000
Uzbekistan	433 000	450 000	499 000	602 000	595 000
Vietnam	318 780	408 196	543 006	658 467	656 734
Australia	7 076 000	7 550 000	7 714 000	7 659 000	7 765 000
New Zealand	826 000	765 000	853 000	885 000	853 000
<b>World Total</b>	<b>850 000 000</b>	<b>904 000 000</b>	<b>970 000 000</b>	<b>1 059 000 000</b>	<b>1 129 000 000</b>

Note(s):-

(1) Unless otherwise indicated, these figures include production from scrap

(2) Small amounts of steel are believed to be produced in D R Congo, Estonia, Ghana, Kenya, Mauritania, Myanmar, Sri Lanka and Uganda

(a) Years ended 20 March following that stated

## Production of ferro-alloys

tonnes

Country	2001	2002	2003	2004	2005
Albania					
Ferro-chrome	19 500	22 800	37 800	47 700	35 780
Austria					
Ferro-molybdenum	4 900	4 930	4 400	4 700	5 000
Ferro-nickel	2 600	2 150	2 000	1 900	2 500
Ferro-vanadium	5 800	5 500	5 300	5 800	6 250
Belgium					
Ferro-vanadium	926	1 492	...	...	...
Bulgaria					
Ferro-silicon	*8 000	*8 000	*8 000	*8 000	*8 000
Croatia					
Ferro-chrome	361	—	—	—	—
Czech Republic					
Ferro-vanadium	*2 500	*3 000	*3 000	*3 500	*3 500
Finland					
Ferro-chrome	236 000	248 000	250 000	264 492	234 881
France					
Ferro-manganese & spiegeleisen	414 200	416 569	*300 000	*106 000	...
Ferro-silico-manganese	65 248	66 215	*107 000	*64 000	...
Ferro-silicon	*100 000	*100 000	*100 000	*100 000	*100 000
Silicon metal	89 896	84 768	*85 000	*85 000	*85 000
Georgia					
Ferro-manganese	7 820	4 211	12 425	12 821	13 945
Ferro-silico-manganese	32 779	30 432	50 932	93 830	109 414
Germany					
Ferro-chrome	19 308	20 018	18 318	24 857	22 672
Other ferro-alloys	*30 000	*30 000	*30 000	*30 000	*30 000
Silicon metal	27 739	25 257	27 870	28 773	29 349
Greece					
Ferro-nickel	88 755	96 000	90 000	91 000	96 000
Iceland					
Ferro-silicon	112 935	118 810	117 171	119 389	114 844
Italy					
Ferro-manganese	*40 000	*40 000	*40 000	*40 000	*40 000
Ferro-silico-manganese	*100 000	*100 000	*100 000	*100 000	*100 000
Macedonia					
Ferro-nickel	—	5 135	5 629	5 313	8 141
Ferro-silicon	27 287	—	49 905	66 769	71 249
Norway					
Ferro-chrome	82 600	61 100	—	—	—
Ferro-manganese	111 823	126 960	*130 000	*130 000	*130 000
Ferro-silico-manganese	277 938	252 723	*250 000	*260 000	*290 000
Ferro-silicon	427 590	359 944	...	389 599	...
Other ferro-alloys	47 600	48 500	*50 000	*60 000	*60 000
Silicon metal	134 958	152 981	...	193 566	178 572
Poland					
Ferro-chrome	—	106	188	—	—
Ferro-manganese	497	602	979	46 898	7 782
Ferro-silico-manganese	20 007	7 338	*7 000	—	10 242
Ferro-silicon	48 608	41 759	92 687	83 552	65 118
Other ferro-alloys	4 039	4 200	—	1 419	3 663
Romania					
Ferro-manganese	384	—	—	191	18 625
Ferro-silico-manganese	71 921	84 720	141 899	194 754	100 957
Ferro-silicon	5 823	—	—	—	—
Russia					
Spiegeleisen	*7 000	*7 000	*7 000	*7 000	*7 000
Ferro-chrome	211 000	231 790	351 729	453 639	*511 600
Ferro-silico-chrome	79 115	55 134	63 558	83 372	*74 150
Ferro-manganese	*55 000	*105 000	*101 000	*108 000	*108 000
Ferro-nickel	*30 000	*45 000	*51 000	*53 000	*55 000
Ferro-silicon	707 000	707 000	702 000	720 000	...
Other ferro-alloys	*35 000	*30 000	*30 000	*32 000	*32 000
Silicon metal	*40 000	*40 000	*45 000	*45 000	*45 000

## Production of ferro-alloys

tonnes

Country	2001	2002	2003	2004	2005
<b>Slovakia</b>					
Ferro-chrome	5 968	5 695	1 924	1 784	867
Ferro-silico-manganese	46 288	62 084	52 733	64 862	47 843
Ferro-silicon	55 577	35 920	41 539	34 684	16 512
Other ferro-alloys	46 357	24 657	44 589	68 096	48 161
<b>Slovenia</b>					
Ferro-silicon	*9 000	*9 000	*12 000	*18 000	*11 000
<b>Spain</b>					
Ferro-manganese	24 804	33 218	*35 000	*35 000	*35 000
Ferro-silico-manganese	102 110	103 494	*100 000	*100 000	*100 000
Ferro-silicon	53 427	56 994	*60 000	*60 000	*60 000
Silicon metal	29 114	26 071	*25 000	*25 000	*25 000
<b>Sweden</b>					
Ferro-chrome	107 036	118 800	106 100	127 300	127 500
Ferro-silicon	21 197	21 500	17 100	18 500	9 800
<b>Turkey</b>					
Ferro-chrome	50 735	11 200	35 393	28 701	26 043
Ferro-silico-chrome	5 895	7 245	6 805	5 526	—
<b>Ukraine</b>					
Spiegeleisen	*5 000	*5 000	*5 000	*5 000	*5 000
Ferro-manganese	*335 000	*350 000	383 200	498 800	359 000
Ferro-silico-manganese	702 389	732 592	991 600	1 088 600	1 045 900
Ferro-nickel	41 000	31 000	52 000	78 000	...
Ferro-silicon	231 000	250 617	286 200	324 700	227 500
<b>Egypt</b>					
Ferro-silicon (d)	*55 000	*55 000	*55 000	*55 000	*55 000
Other ferro-alloys (d)	7 912	16 679	*20 000	*20 000	*20 000
<b>South Africa</b>					
Ferro-chrome	2 141 008	2 351 122	2 813 000	3 031 515	2 811 836
Ferro-manganese	523 844	618 954	607 362	*640 000	*640 000
Ferro-silico-manganese	259 176	315 802	313 152	*320 000	*320 000
Ferro-silicon	107 557	141 700	135 300	*150 000	*150 000
Ferro-vanadium	*11 000	*11 000	*18 000	*23 000	*23 000
Silicon metal	39 440	42 500	*48 900	*49 000	*49 000
<b>Zimbabwe</b>					
Ferro-chrome	249 841	258 164	261 095	218 065	218 143
Ferro-silico-chrome	16 848	—	—	987	4 882
<b>Canada</b>					
Ferro-niobium	4 600	5 100	5 000	*5 300	*5 000
Ferro-silicon	*70 000	*70 000	*70 000	*70 000	*70 000
Silicon metal	*30 000	*30 000	*30 000	*30 000	*30 000
<b>Dominican Republic</b>					
Ferro-nickel	54 784	59 629	69 545	75 764	73 962
<b>Mexico</b>					
Ferro-manganese	60 014	38 532	55 903	72 471	89 642
Ferro-silico-manganese	74 290	73 263	81 223	103 206	104 780
<b>USA</b>					
Ferro-silicon	190 827	181 832	147 964	170 592	209 000
Silicon metal	131 047	108 494	133 680	144 489	148 000
<b>Argentina</b>					
Ferro-silico-manganese	5 150	*5 000	*5 000	*5 000	*5 000
Ferro-silicon	2 740	2 700	2 700	2 700	*2 700
Other ferro-alloys	9 925	17 289	*15 000	15 000	*15 000
Silicon metal	*8 000	*8 000	*8 000	*8 000	*8 000

# Production of ferro-alloys

tonnes

Country	2001	2002	2003	2004	2005
<b>Brazil</b>					
Ferro-chrome	84 428	123 175	171 257	177 276	185 533
Ferro-silico-chrome	5 899	10 522	8 151	11 560	16 683
Ferro-silico-magnesium	11 032	14 552	14 040	37 031	...
Ferro-manganese	96 016	156 435	176 735	179 971	*180 000
Ferro-silico-manganese	180 235	182 731	261 658	285 629	*285 000
Ferro-nickel	17 966	19 874	19 378	20 338	21 200
Ferro-niobium	37 411	36 450	37 303	35 863	38 819
Ferro-silicon	159 345	145 910	156 824	177 245	...
Other ferro-alloys	16 623	25 300	38 559	45 868	...
Silicon metal	112 123	133 390	180 937	219 813	*220 000
<b>Chile</b>					
Ferro-manganese	1 975	—	—	—	...
Ferro-silico-manganese	153	—	—	—	...
Ferro-molybdenum	1 784	1 784	4 423	5 762	...
Ferro-silicon	*1 100	*1 100	...	...	...
<b>Colombia</b>					
Ferro-nickel	89 400	102 300	111 300	113 500	122 700
<b>Venezuela</b>					
Ferro-manganese	12 715	*12 000	*12 000	*15 000	*15 000
Ferro-silico-manganese	56 640	36 974	30 632	*35 000	*35 000
Ferro-nickel	27 033	*57 200	75 278	67 796	*56 000
Ferro-silicon	85 708	87 528	90 534	*92 000	*92 000
<b>Bhutan</b>					
Ferro-silicon	*16 000	*21 000	*21 000	21 147	*21 000
<b>China</b>					
Ferro-chrome	340 637	332 011	534 842	635 000	850 000
Ferro-silico-chrome	59 859	43 492	97 552	105 000	70 000
Ferro-manganese	947 300	(c) ...	(c) ...	(c) ...	(c) ...
Ferro-silicon	1 384 900	(c) ...	(c) ...	(c) ...	(c) ...
Other ferro-alloys	1 799 000	4 465 000	5 708 000	7 973 000	*9 300 000
Silicon metal	*400 000	*500 000	*600 000	*660 000	*650 000
<b>India</b>					
Ferro-aluminium (b)	1 743	2 000	5 169	5 917	7 214
Ferro-chrome (b)	302 109	380 528	525 824	594 994	662 297
Ferro-silico-magnesium (b)	2 385	6 369	6 289	7 092	11 171
Ferro-manganese (b)	206 624	236 676	248 388	270 234	273 057
Ferro-silico-manganese (b)	235 730	304 212	380 316	498 047	596 372
Ferro-molybdenum (b)	2 152	3 114	2 949	2 864	2 827
Ferro-silicon (b)	76 209	81 955	68 844	99 296	90 652
Ferro-vanadium (b)	644	914	769	826	877
Other ferro-alloys (b)	265	366	418	723	960
<b>Indonesia</b>					
Ferro-manganese	*12 000	*12 000	*12 000	*12 000	*12 000
Ferro-silico-manganese	*7 000	*7 000	*7 000	*7 000	*7 000
Ferro-nickel	47 769	42 306	43 894	39 538	20 036
<b>Iran</b>					
Ferro-chrome (a)	9 400	2 300	8 000	7 750	*8 000
Ferro-silicon (a)	37 000	41 663	40 297	50 140	*50 000
<b>Japan</b>					
Ferro-chrome	111 167	91 937	19 427	13 472	12 367
Ferro-manganese	368 293	356 717	371 831	437 389	448 616
Ferro-silico-manganese	66 257	74 171	61 618	73 041	94 725
Ferro-molybdenum	3 485	2 375	2 691	3 323	4 019
Ferro-nickel	367 739	370 973	369 099	374 213	391 074
Ferro-tungsten	109	9	12	—	—
Ferro-vanadium	3 613	3 592	3 491	2 178	2 360
Other ferro-alloys	5 733	6 376	3 813	7 321	10 057

## Production of ferro-alloys

tonnes

Country	2001	2002	2003	2004	2005
Kazakhstan					
Ferro-chrome	761 901	835 743	993 007	1 080 993	1 156 167
Ferro-silico-chrome	79 746	108 028	98 134	104 800	97 870
Ferro-silico-manganese	141 776	163 725	178 924	155 324	170 001
Ferro-silicon	145 780	126 968	127 161	103 580	104 186
Other ferro-alloys	1 730	986	...	—	—
Korea, Dem. P.R. of					
Ferro-alloys	*10 000	*10 000	*10 000	*10 000	*10 000
Korea, Republic of					
Ferro-manganese	143 525	137 000	141 000	165 525	124 000
Ferro-silico-manganese	101 877	94 000	90 942	82 917	74 000
Other ferro-alloys	4 452	—	—	—	—
Taiwan					
Ferro-silicon	1 181	—	—	—	—
Australia					
Ferro-manganese (d)	124 586	73 523	104 022	133 985	166 513
Ferro-silico-manganese (d)	120 758	138 938	130 568	116 630	96 575
Silicon metal	*30 000	*30 000	*30 000	*30 000	*30 000
New Caledonia					
Ferro-nickel	153 012	162 973	167 208	151 296	172 067

### Note(s):-

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

## Production of kaolin

tonnes

Country	2001	2002	2003	2004	2005
Albania	...	...	...	300 000	310 000
Austria	20 047	21 212	15 034	16 345	55 508
Belgium	*300 000	*300 000	*300 000	*300 000	*300 000
Bosnia & Herzegovina	13 000	6 500	—	—	—
Bulgaria	*140 000	*150 000	*120 000	*190 000	*200 000
Czech Republic (h)	561 600	562 300	582 100	639 100	639 300
France	377 000	339 000	335 000	316 000	293 000
Germany (g)	696 832	740 821	738 123	*740 000	*750 000
Greece	60 075	57 885	59 680	53 438	49 912
Hungary	...	...	...	3 300	1 300
Italy	295 263	174 990	224 755	246 608	...
Poland (k)	103 220	89 372	106 761	130 596	159 207
Portugal	148 706	147 448	169 669	*170 000	...
Romania	21 867	22 517	25 741	22 338	26 772
Russia	*45 000	*45 000	*45 000	*45 000	*45 000
Serbia and Montenegro	60 900	95 622	99 460	14 122	...
Slovakia	34 730	24 600	24 800	89 424	34 830
Spain (k)	*400 000	419 483	427 193	437 990	450 000
Turkey	505 773	372 344	370 455	536 008	615 271
Ukraine (h)	*170 000	*170 000	169 900	202 300	216 600
United Kingdom (a) (l)	2 204 156	2 162 815	2 097 137	1 944 955	1 908 000
Algeria	13 356	9 505	19 258	27 700	34 386
Egypt	260 000	260 000	*260 000	249 761	*250 000
Ethiopia (b)	1 790	3 534	3 088	4 251	3 726
Kenya	700	*700	*700	*700	*700
Nigeria	32 090	52 352	57 587	...	...
South Africa	83 500	91 456	86 365	81 901	60 072
Mexico	681 709	745 498	798 407	654 711	877 147
USA (e)	8 110 000	8 010 000	7 680 000	7 760 000	*7 720 000
Argentina	13 584	13 865	19 219	39 072	54 705
Brazil (h)	1 817 419	1 757 488	2 081 000	2 381 000	2 410 000
Chile	5 300	6 164	9 000	7 133	15 183
Ecuador	8 818	8 483	11 884	5 646	5 928
Paraguay	*66 500	*66 700	...	...	...
Peru	5 478	1 934	2 653	2 720	2 567
Venezuela	*10 000	*10 000	*10 000	*10 000	*10 000
Bangladesh (d)	*8 000	*8 000	9 630	13 113	13 738
China	*1 500 000	*1 500 000	*1 600 000	*1 800 000	*1 800 000
India (c) (i)	187 232	204 694	209 920	220 262	238 759
Indonesia	*15 000	*15 000	*15 000	*15 000	*15 000
Iran (j)	760 615	592 803	556 003	596 886	*600 000
Japan	17 240	11 602	12 223	11 553	*12 000
Jordan	24 124	39 745	36 528	51 836	62 947
Kazakhstan	*20 000	*20 000	*20 000	—	—
Korea, Republic of	850 360	1 054 543	1 042 018	936 537	702 295
Malaysia	364 458	323 916	425 942	326 928	494 511
Pakistan (d)	12 980	55 584	39 575	25 204	37 732
Philippines	5 111	*5 000	1 860	3 240	6 927
Saudi Arabia	7 740	7 920	8 100	*8 000	*8 000
Sri Lanka	9 403	8 613	9 073	16 233	9 914
Taiwan	28 921	18 403	22 448	35 001	9 423
Thailand (h)	181 583	130 282	185 512	200 671	165 884
Uzbekistan (i)	*150 000	*150 000	*150 000	*150 000	*150 000
Vietnam	*600 000	*600 000	*650 000	*650 000	*650 000

## Production of kaolin

tonnes

Country	2001	2002	2003	2004	2005
Australia (d) (f)	232 000	228 000	280 000	285 543	231 611
New Zealand	15 620	17 250	14 770	15 250	15 750
World Total	22 600 000	22 200 000	22 600 000	23 100 000	23 300 000

Note(s):-

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

- (a) Sales
- (b) Years ended 7 July of that stated
- (c) Years ended 31 March following that stated
- (d) Years ended 30 June of that stated
- (e) Sold or used by producers
- (f) Excluding New South Wales
- (g) Washed and dried
- (h) Beneficiated
- (i) Beneficiated; excludes directly used natural kaolin
- (j) Years ended 20 March following that stated
- (k) Washed
- (l) Dry weight



## Mine production of lead

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Bulgaria	18 500	19 800	19 950	18 970	13 000
Greece	26 588	29 300	2 000	—	3 000
Irish Republic	44 500	41 700	50 300	63 800	72 200
Italy	2 700	3 200	2 700	800	*800
Macedonia	9 672	3 528	—	—	—
Poland	52 600	56 600	54 700	52 700	50 900
Romania	19 676	17 500	15 747	18 297	11 610
Russia	14 000	19 000	24 000	23 200	36 400
Serbia and Montenegro	4 291	4 355	4 567	*5 300	1 000
Spain	35 573	6 171	1 765	—	—
Sweden	85 975	42 954	50 962	54 347	60 445
Turkey	17 884	17 277	17 483	18 792	11 341
United Kingdom	*800	*700	*700	*500	*500
Algeria	560	690	—	—	—
Morocco	76 748	62 417	39 387	44 200	53 000
Namibia	12 827	12 088	16 112	14 338	14 320
South Africa	50 771	49 444	39 941	37 485	42 159
Tunisia	6 942	5 081	*5 000	5 332	8 407
Canada	153 932	97 178	81 264	76 730	79 252
Honduras	6 750	8 128	9 014	8 877	10 488
Mexico	118 247	138 707	139 348	118 484	134 388
USA	466 400	450 600	460 200	445 000	436 500
Argentina	12 334	12 011	12 079	9 551	9 663
Bolivia	9 090	9 268	9 353	10 252	11 093
Brazil	10 725	9 253	10 652	14 737	16 063
Chile	1 193	2 895	1 697	2 286	878
Peru	289 546	298 487	308 874	306 211	319 345
China	676 000	640 700	954 600	997 200	1 023 000
India (a)	32 600	37 800	46 700	52 200	62 300
Iran	18 000	17 000	16 000	16 000	15 000
Japan	5 516	5 758	5 700	5 500	3 400
Kazakhstan	37 500	45 500	38 200	44 135	45 370
Korea, Dem. P.R. of	*17 000	*15 000	*20 000	*20 000	*20 000
Korea, Republic of	1 000	28	—	40	50
Myanmar	900	2 000	2 000	2 000	2 000
Tajikistan	*2 000	—	—	—	407
Thailand	300	2 600	—	—	—
Vietnam	*900	*1 100	*1 100	*1 100	*1 200
Australia	759 000	694 000	688 000	674 000	767 000
World Total	3 100 000	2 900 000	3 200 000	3 200 000	3 300 000

Note(s):-

(a) Years ended 31 March following that stated

## Production of refined lead

tonnes

Country	2001	2002	2003	2004	2005
Austria	23 666	*23 000	*20 000	*26 000	*24 000
Belgium	100 000	88 000	65 000	62 000	97 200
Bulgaria	83 000	67 500	74 000	69 000	80 800
Czech Republic	30 500	*30 500	*30 000	*30 000	26 000
Estonia	—	—	—	3 000	*7 000
France	231 400	203 400	91 000	89 000	*90 000
Germany	373 600	379 905	356 900	359 200	341 700
Greece	*6 000	*6 000	*6 000	*6 000	*6 000
Irish Republic	9 800	6 600	7 800	19 600	22 500
Italy	226 500	196 000	214 100	201 600	211 000
Macedonia	19 737	11 934	6 357	3 591	—
Netherlands	20 000	18 000	17 000	17 000	17 000
Poland	66 000	65 800	74 300	73 900	87 800
Portugal	*6 000	*6 000	*6 000	*6 000	*6 000
Romania	22 000	23 000	28 000	32 590	32 903
Russia	60 000	63 000	66 000	66 000	65 700
Serbia and Montenegro	—	200	493	800	...
Slovenia	15 400	15 400	15 000	*15 000	15 000
Spain	121 600	115 552	99 100	105 600	110 000
Sweden	75 608	63 451	73 340	73 548	72 600
Switzerland	10 250	8 700	9 600	9 300	9 600
Turkey	*9 000	*9 000	*9 000	*9 000	*9 000
Ukraine	12 800	12 000	13 000	*15 000	15 000
United Kingdom	366 305	374 646	364 574	245 938	305 350
Algeria	6 100	6 000	*6 000	*6 000	*6 000
Kenya	*1 000	*1 000	*1 000	*1 000	*1 000
Morocco	58 178	71 840	61 473	25 000	*53 000
Nigeria	*5 000	*5 000	*5 000	*5 000	*5 000
South Africa	55 000	61 000	65 000	64 000	65 300
Zimbabwe	*1 000	—	—	—	—
Canada	230 928	251 560	223 434	241 169	229 407
Mexico	253 300	238 200	247 500	217 400	213 700
Trinidad & Tobago	*1 000	*1 000	*1 000	*1 000	*1 000
USA (b)	1 376 000	1 364 000	1 392 000	1 262 000	1 259 000
Argentina	35 433	43 600	41 311	49 111	*66 000
Brazil (a)	47 000	50 000	128 610	137 121	104 904
Colombia	*9 000	*9 000	*9 000	*9 000	*10 000
Peru	121 181	119 588	112 289	118 970	122 079
Venezuela	*28 000	*28 000	*32 000	*35 000	*35 000
China	1 195 400	1 324 700	1 564 100	1 934 500	2 334 000
India	74 400	74 200	77 500	51 000	54 000
Indonesia	18 000	17 000	18 000	20 000	20 000
Iran	44 000	39 000	54 000	54 000	59 000
Israel	20 000	22 000	*25 000	27 000	*28 000
Japan	302 387	280 341	295 148	282 900	274 600
Kazakhstan	158 800	160 800	140 700	157 000	135 600
Korea, Dem. P.R. of	7 000	6 000	7 000	9 000	9 000
Korea, Republic of	211 010	243 000	220 000	229 000	257 000
Malaysia	38 000	40 000	57 000	54 000	55 000
Myanmar	1 100	400	900	300	500
Pakistan	*3 000	*2 000	*2 000	*2 000	*2 000
Philippines	26 000	*26 000	*27 000	*29 000	*30 000
Saudi Arabia	16 000	17 000	25 000	32 000	36 000
Taiwan	40 000	40 000	40 000	40 000	40 000
Thailand	30 000	43 000	45 300	57 500	61 200
United Arab Emirates	2 000	2 000	2 000	2 000	*2 000

## Production of refined lead

tonnes

Country	2001	2002	2003	2004	2005
Australia	270 000	302 000	309 000	273 000	268 000
New Zealand	10 000	10 000	10 000	10 000	10 000
<b>World Total</b>	<b>6 600 000</b>	<b>6 700 000</b>	<b>6 900 000</b>	<b>7 000 000</b>	<b>7 500 000</b>

Note(s):-

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

(a) Including scrap for direct use

(b) Excluding Pb content of primary antimonial lead

## Production of lithium minerals

tonnes

Country	2001	2002	2003	2004	2005
Portugal					
Lepidolite	11 571	16 325	24 606	28 696	...
Zimbabwe	36 103	29 320	12 131	13 710	37 499
Canada	*22 500	*22 500	*22 500	*22 500	*22 500
USA (a)	*1 500	*1 500	*1 500	*1 500	*1 500
Argentina (c) (d)	4 512	5 635	7 550	11 273	11 300
Brazil					
Petalite	187	—	—	—	—
Spodumene	8 897	12 046	9 755	9 064	8 924
Chile (c)	31 320	35 242	41 667	43 971	43 595
China	34 276	*34 000	*35 000	*36 000	*37 000
Australia					
Spodumene (b)	56 370	101 212	102 573	114 568	108 784
<b>World Total (Li content)</b>	<b>*11 200</b>	<b>*12 800</b>	<b>*14 100</b>	<b>*15 400</b>	<b>*15 700</b>

Note(s):-

(1) In addition to the countries listed, Russia also produces lithium minerals

(a) Li content

(b) Years ended 30 June of that stated

(c) Carbonate

(d) Chloride

## Production of magnesite

tonnes

Country	2001	2002	2003	2004	2005
Austria	680 534	728 235	766 525	715 459	693 754
Greece	442 800	553 700	542 800	552 300	471 000
Netherlands (c)	250 000	226 000	261 194	245 495	285 336
Poland	22 200	22 100	27 200	57 900	*58 000
Russia	2 600 000	2 600 000	2 600 000	*2 600 000	*2 600 000
Serbia and Montenegro	36 173	25 247	17 488	—	...
Slovakia	961 212	929 630	1 640 900	965 900	920 100
Spain	598 000	637 024	517 030	567 504	485 800
Turkey	2 738 086	3 044 440	3 224 278	3 732 952	2 372 206
South Africa	36 500	87 200	86 100	*85 000	*85 000
Zimbabwe	2 439	2 546	822	749	864
Canada (b)	*165 000	*165 000	*180 000	*180 000	*180 000
Argentina	35 242	29 956	—	—	—
Brazil	308 809	302 230	306 444	366 174	386 759
Colombia	*10 500	*10 500	*10 500	*10 500	*10 500
China	*10 000 000	*10 000 000	*10 000 000	13 310 000	15 440 000
India (e)	282 943	278 267	323 977	383 953	351 495
Iran (a)	113 434	69 683	87 795	88 194	88 000
Korea, Dem. P.R. of	*1 000 000	*1 000 000	*1 000 000	*1 200 000	*1 200 000
Pakistan (d)	5 795	5 936	3 435	6 074	3 029
Philippines	4 094	3 604	3 799	3 201	2 413
Australia	599 994	483 838	472 668	586 393	*627 000
World Total	20 900 000	21 200 000	22 100 000	25 700 000	26 300 000

Note(s):-

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

- (a) Years ended 20 March following that stated
- (b) Officially described as magnesitic dolomite and brucite
- (c) Chloride produced from solution mining
- (d) Years ended 30 June of that stated
- (e) Years ended 31 March following that stated

## Production of primary magnesium metal

tonnes

Country	2001	2002	2003	2004	2005
France	4 800	2 000	—	—	—
Norway	40 700	3 100	—	—	—
Russia	*35 000	*35 000	*30 000	*35 000	*38 000
Serbia and Montenegro	203	—	*500	*500	*500
Ukraine	—	—	—	—	2 000
Canada	*65 000	*70 000	*50 000	*40 000	*45 000
USA	50 000	20 000	10 000	*30 000	*40 000
Brazil	5 500	4 500	4 000	3 000	3 000
China	199 700	235 000	341 800	442 400	467 600
India	*500	*500	*200	*200	*200
Israel	31 000	30 000	26 000	28 000	27 853
Kazakhstan (a)	16 455	17 858	14 164	—	—

Note(s):-

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

## Production of manganese ore

tonnes

Country	2001	2002	2003	2004	2005
Bulgaria	1 515	4	4 200	27 800	38 500
Georgia (b)	98 300	103 400	173 500	218 500	251 800
Hungary	43 000	43 000	48 000	49 000	50 000
Italy	803	867	763	714	...
Romania	73 276	59 148	72 931	79 130	72 000
Russia	...	...	44 400	44 400	*44 400
Turkey	20 000	20 000	18 000	13 751	4 751
Ukraine (b)	2 710 000	2 740 000	2 533 000	2 273 100	*2 000 000
Gabon	1 791 000	1 856 000	2 000 000	2 459 766	2 900 000
Ghana	1 076 666	1 135 828	1 509 432	1 597 085	1 719 589
Morocco	13 757	17 484	18 064	*16 500	*16 000
Namibia	...	...	...	—	7 320
South Africa					
Metallurgical	3 239 903	3 302 129	3 484 801	4 264 762	4 599 289
Chemical	26 241	19 516	15 837	17 194	12 810
Mexico	261 284	233 025	*290 000	*360 000	*360 000
Brazil	1 970 000	2 529 000	2 544 000	3 143 000	3 200 000
Chile	31 320	12 195	19 641	25 801	39 786
China	4 306 800	*4 500 000	*4 600 000	*4 500 000	*4 500 000
India (c)	1 587 305	1 678 372	1 776 153	2 386 396	2 003 474
Iran (a)	140 418	123 148	115 680	128 924	*130 000
Kazakhstan	1 386 500	1 834 500	2 361 000	2 318 100	2 207 700
Thailand	45	—	—	4 550	88 500
Australia	1 977 000	2 190 000	2 555 000	3 401 000	3 687 000
World Total	20 800 000	22 400 000	24 200 000	27 300 000	28 400 000

Note(s):-

(1) In addition to the countries listed, Colombia, Cuba and Vietnam are believed to produce manganese ore

(a) Years ended 20 March following that stated

(b) Marketable

(c) Years ended 31 March following that stated

## Production of mercury

kilograms

Country	2001	2002	2003	2004	2005
Finland	71 200	50 600	25 000	23 500	34 200
Russia	*50 000	*50 000	*50 000	*50 000	*50 000
Spain	524 000	726 139	745 260	—	—
Algeria	320 091	307 119	175 570	67 200	300
Morocco	*10 000	*10 000	*10 000	*10 000	*10 000
Mexico	*15 000	*15 000	*15 000	*15 000	*15 000
USA	*15 000	*15 000	*15 000	*15 000	*15 000
Chile (a)	*37 400	*50 000	*50 000	*50 000	*50 000
China	193 000	495 000	612 000	1 140 000	1 150 000
Kyrgyzstan	574 400	478 000	370 000	488 100	*500 000
Tajikistan	*40 000	*20 000	*30 000	*30 000	*30 000
World Total	1 900 000	2 200 000	2 100 000	1 900 000	1 900 000

Note(s):-

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

(a) From copper solvent extraction and electrowinning processes

## Production of mica

tonnes

Country	2001	2002	2003	2004	2005
Finland	8 983	7 170	9 337	9 250	9 500
France (e)	15 000	17 000	18 000	19 000	...
Russia	*10 000	9 159	10 063	8 474	*8 000
Serbia and Montenegro	303	426	185	140	...
Spain (e)	9 874	11 783	11 800	7 825	6 500
Madagascar	123	102	*70	*70	*70
South Africa	937	821	980	285	924
Canada	*17 500	*17 500	*17 500	*17 500	*17 500
Mexico	648	456	506	424	135
USA (d) (e)	97 800	81 100	78 600	*99 000	78 000
Argentina	2 110	1 770	1 894	2 518	4 101
Brazil	*4 000	*4 000	*4 000	*4 000	*4 000
China (c)	*52 200	*54 000	*66 200	*84 000	*89 000
India (b)	6 095	3 575	4 002	3 773	4 643
Iran (f)	4 615	2 406	5 500	7 032	7 000
Korea, Republic of (a)	109 339	29 870	33 645	59 238	36 623
Malaysia (g)	4 107	3 669	3 609	3 544	4 544
Sri Lanka	1 161	1 161	1 674	1 365	1 800
Taiwan	9 733	6 595	3 237	2 979	8 608
Australia	959	605	636	383	737
World Total	360 000	250 000	270 000	330 000	300 000

### Note(s):-

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

- (a) Mainly sericite
- (b) Years ended 31 March following that stated
- (c) Conservative BGS estimates, based on exports
- (d) Sold or used by producers
- (e) Including mica recovered from mica schists and/or kaolin beneficiation
- (f) Years ended 20 March following that stated
- (g) Sericite

## Mine production of molybdenum

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Armenia	2 943	2 883	2 763	2 950	3 030
Russia	4 800	4 800	4 800	4 800	*4 800
Canada	8 233	8 043	9 092	9 519	7 910
Mexico	5 518	3 428	3 524	3 731	4 245
USA	37 600	32 300	33 500	41 500	*56 900
Chile	33 492	29 467	33 375	41 883	47 748
Peru	9 499	8 613	9 561	14 246	17 325
China	28 201	30 330	32 220	38 430	*40 000
Iran (a)	2 600	2 370	2 290	1 890	*2 000
Kazakhstan	94	46	53	...	...
Kyrgyzstan	*250	*250	*250	*250	*250
Mongolia	1 423	1 590	1 803	1 103	1 160
Uzbekistan	580	*500	*500	*500	*500
World Total	135 000	125 000	134 000	161 000	186 000

Note(s):-

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

(a) Years ended 20 March following that stated

## Production of nepheline syenite

tonnes

Country	2001	2002	2003	2004	2005
Norway	330 362	330 461	332 000	329 000	320 000
Russia (a)	960 000	1 021 576	1 014 279	1 023 257	*1 000 000
Canada	708 000	715 000	705 000	699 000	769 000

Note(s):-

(a) Nepheline concentrates

## Mine production of nickel

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Finland	3 700	3 500	3 400	3 400	3 400
Greece	20 742	22 700	19 100	19 000	20 400
Norway	2 800	2 052	—	382	342
Russia	272 800	267 300	291 000	290 000	*300 000
Spain	—	—	—	—	5 380
Turkey	—	—	640	—	700
Ukraine	1 500	2 000	2 000	2 000	*2 000
Botswana	22 454	23 896	27 400	22 292	28 212
South Africa (a)	36 443	38 546	40 842	39 851	42 497
Zimbabwe	8 009	7 835	6 678	9 776	7 799
Canada	194 058	189 297	163 244	186 694	198 369
Cuba	72 600	71 300	74 000	71 900	*72 000
Dominican Republic	33 419	37 521	45 253	46 000	*46 000
Brazil	45 456	44 928	45 456	44 928	74 198
Colombia	53 000	58 500	70 800	75 000	89 000
Venezuela	10 600	17 000	18 800	19 000	18 500
China	51 000	53 700	61 100	75 600	*72 000
Indonesia	102 100	121 600	143 900	142 700	147 700
Philippines	27 176	24 234	19 537	16 973	22 560
Australia	205 000	207 800	191 000	187 000	186 000
New Caledonia	117 734	99 841	112 013	119 199	111 939
<b>World Total</b>	<b>1 281 000</b>	<b>1 294 000</b>	<b>1 336 000</b>	<b>1 372 000</b>	<b>1 449 000</b>

Note(s):-

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



## Smelter/refinery production of nickel

tonnes

Country	2001	2002	2003	2004	2005
Austria	1 300	*1 000	1 000	300	400
Finland	54 600	55 348	50 989	49 580	39 159
France	13 036	11 444	11 370	12 103	12 684
Greece	17 675	19 230	18 000	18 116	19 235
Norway	68 200	68 500	77 183	71 410	84 886
Russia	248 000	243 000	260 000	260 400	267 000
Ukraine	2 500	*3 000	*4 000	4 800	13 000
United Kingdom	33 800	33 800	24 200	38 600	37 100
South Africa	36 500	38 500	40 800	39 900	42 500
Zimbabwe	19 500	18 900	16 300	16 200	15 900
Canada	140 591	144 476	124 418	151 518	139 683
Cuba	40 700	39 500	42 300	38 800	38 200
Dominican Republic	21 662	23 303	27 227	29 477	28 668
Brazil	22 431	23 687	24 166	26 151	30 310
Colombia	38 446	43 987	47 870	48 831	52 700
Venezuela	10 600	17 000	18 800	19 000	18 500
China	49 700	52 400	64 700	75 800	95 400
Indonesia	10 300	8 800	8 900	7 900	7 300
Japan	153 600	157 900	165 100	169 500	163 243
Australia	129 000	132 200	129 000	122 000	122 000
New Caledonia	45 912	48 650	50 666	43 016	46 738
World Total	1 158 000	1 185 000	1 207 000	1 243 000	1 275 000

Note(s):-

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

## Production of perlite

tonnes

Country	2001	2002	2003	2004	2005
Armenia	16 618	96 264	106 623	29 996	49 963
Bulgaria	12 300	10 500	16 800	8 500	15 300
Georgia	*5 000	*5 000	*5 000	*5 000	*5 000
Greece	840 660	838 997	1 079 036	1 053 388	*1 100 000
Hungary	89 900	72 196	95 100	65 000	69 900
Italy	*60 000	*60 000	*60 000	*60 000	*60 000
Russia	*45 000	*45 000	*45 000	*45 000	*45 000
Slovakia	14 910	18 635	15 000	23 840	12 700
Turkey	154 515	151 902	136 683	133 829	156 935
Ukraine	*23 000	*26 000	*24 000	*26 000	38 000
South Africa	*1 200	*1 200	*1 200	*1 200	*1 200
Mexico	80 297	85 703	194 463	188 027	91 724
USA	588 000	521 000	493 000	508 000	*506 000
Argentina	17 916	17 152	21 480	21 193	21 991
China	*550 000	*600 000	*650 000	*700 000	*700 000
India (a)	176	283	279	355	122
Iran (b)	18 130	20 000	26 495	31 259	20 000
Japan	*250 000	*250 000	*240 000	*240 000	*240 000
Philippines	61 300	8 500	15 200	12 100	9 700
Thailand	9 915	7 600	5 700	26 400	14 500
Australia (c)	6 214	8 300	9 440	9 952	10 634
New Zealand	*3 000	*3 000	*5 000	5 600	7 310

### Note(s):-

(1) In addition to the countries listed, Algeria, Canada, Iceland, Mozambique and former Yugoslavia are believed to produce perlite

(a) Years ended 31 March following that stated

(b) Years ended 20 March following that stated

(c) Years ended 30 June of that stated

## Production of crude petroleum

tonnes

Country	2001	2002	2003	2004	2005
Albania	308 000	355 817	359 253	399 740	448 041
Austria	1 050 355	1 032 204	1 014 716	981 588	933 040
Azerbaijan	14 909 100	15 333 500	15 251 300	15 348 800	21 993 600
Belarus	1 852 000	1 846 000	1 820 400	1 804 040	1 785 020
Bulgaria	33 888	33 000	27 900	33 100	30 000
Croatia	1 120 797	1 108 434	1 052 121	1 037 787	980 486
Czech Republic	178 000	253 000	310 000	299 000	306 000
Denmark	17 378 000	18 494 000	18 341 000	19 446 000	18 822 000
France	1 382 646	1 316 890	1 219 000	1 138 000	1 079 000
Georgia	98 800	73 900	139 700	97 600	66 600
Germany	3 569 290	3 768 054	3 799 864	3 515 537	3 572 764
Greece	293 000	207 000	162 000	132 890	100 678
Hungary	1 058 060	1 049 770	1 134 245	1 076 844	947 542
Italy	4 097 000	5 531 000	5 570 000	5 445 000	6 100 000
Lithuania	470 000	433 700	382 400	301 874	216 634
Netherlands	2 263 590	3 073 924	3 076 398	2 890 979	2 268 746
Norway	162 099 000	157 847 000	153 508 000	150 974 000	139 802 000
Poland	767 004	727 973	764 806	886 188	847 844
Romania	6 011 000	5 810 000	5 651 000	5 462 000	5 212 000
Russia	348 000 000	380 000 000	421 000 000	459 000 000	470 000 000
Serbia and Montenegro	746 056	681 544	670 745	652 270	*662 000
Slovakia	54 115	51 921	47 953	42 410	33 150
Spain	344 074	326 197	329 171	262 707	173 253
Turkey	2 551 647	2 440 202	2 375 082	2 275 529	2 280 764
Ukraine	3 700 000	3 700 000	3 966 900	4 314 200	4 413 800
United Kingdom	109 491 000	108 023 000	99 055 000	88 830 000	78 840 000
Algeria	57 147 000	61 487 000	*68 450 000	*71 870 000	*74 600 000
Angola	36 469 000	44 600 000	43 600 000	49 000 000	61 000 000
Cameroon	4 100 000	3 700 000	3 500 000	3 200 000	2 900 000
Chad	—	—	1 300 000	8 800 000	9 300 000
Congo	12 108 033	*11 500 000	*10 800 000	*10 690 000	*11 280 000
Congo, Democratic Republic	13 180 000	12 550 000	11 670 000	*11 100 000	*11 000 000
Egypt	32 552 000	34 925 000	*35 000 000	*33 250 000	*31 950 000
Equatorial Guinea	9 000 000	11 700 000	12 300 000	17 400 000	17 800 000
Gabon	15 000 000	14 700 000	12 000 000	11 800 000	11 690 000
Ghana	450 000	350 000	410 000	370 000	*370 000
Ivory Coast	288 126	754 289	928 895	1 020 452	*1 000 000
Libya	63 777 000	*61 550 000	69 000 000	75 800 000	82 060 000
Morocco	10 100	12 800	*12 500	*12 500	*12 500
Nigeria	99 523 000	88 874 000	106 859 000	123 600 000	127 260 000
South Africa	1 025 000	1 025 000	*780 000	1 042 000	1 113 500
Sudan	10 400 000	11 500 000	12 600 000	14 900 000	18 560 000
Tunisia	3 343 900	3 475 600	3 100 000	3 343 100	3 400 900
Barbados	63 642	53 612	50 899	51 696	*50 000
Canada	112 500 000	120 100 000	121 700 000	122 500 000	127 400 000
Cuba	2 773 400	3 533 400	3 664 000	4 014 000	...
Guatemala	1 067 317	1 248 953	1 252 104	1 024 000	...
Mexico	184 050 000	185 340 000	195 890 000	197 750 000	194 390 000
Trinidad & Tobago	5 840 504	6 731 294	6 914 300	6 332 472	7 445 000
USA	354 900 000	352 600 000	343 700 000	333 800 000	315 500 000
Argentina	41 445 316	40 242 083	39 307 638	38 700 000	34 117 773
Bolivia	1 449 570	1 438 604	1 551 000	1 891 000	1 957 000
Brazil	68 950 000	77 600 000	80 300 000	79 820 000	88 600 000
Chile	351 688	306 839	191 271	176 125	164 706
Colombia	31 158 988	29 806 000	27 907 653	27 200 000	27 100 000
Ecuador	20 570 265	20 053 000	21 414 000	26 826 000	27 085 000
Peru	4 784 726	4 773 299	4 501 500	4 637 000	6 564 000
Suriname	764 000	733 000	690 000	661 000	707 000
Venezuela	159 941 000	158 609 000	*128 000 000	*147 000 000	*148 000 000

## Production of crude petroleum

tonnes

Country	2001	2002	2003	2004	2005
Bahrain	1 860 000	1 870 000	1 870 000	1 867 000	1 822 000
Brunei	10 100 000	10 096 000	10 306 000	10 300 000	10 100 000
China (a)	164 931 400	166 900 000	169 600 000	174 502 900	180 838 900
India (d)	32 032 000	33 044 000	33 373 000	34 015 000	32 204 000
Indonesia	68 000 000	63 277 000	57 839 000	54 495 000	55 000 000
Iran	184 400 000	168 600 000	197 900 000	202 600 000	200 400 000
Iraq	116 700 000	99 900 000	66 100 000	99 200 000	89 500 000
Israel	4 100	4 560	3 736	3 155	3 114
Japan	678 000	653 000	757 000	783 000	834 000
Jordan	1 600	1 500	1 400	1 182	*1 000
Kazakhstan	40 090 600	47 270 700	45 376 300	59 484 800	61 486 000
Kuwait (c)	101 900 000	98 200 000	114 800 000	122 500 000	130 100 000
Kyrgyzstan	75 500	75 500	69 500	73 800	100 000
Malaysia	31 800 000	33 300 000	35 200 000	36 400 000	33 600 000
Mongolia	10 000	19 000	25 000	29 700	28 000
Myanmar	734 000	858 000	1 051 000	1 044 000	1 100 000
Oman	47 600 000	44 700 000	40 800 000	38 900 000	38 600 000
Pakistan (b)	2 811 000	3 093 000	3 128 000	3 017 000	3 216 000
Philippines	65 000	277 000	690 000	624 000	721 000
Qatar	38 400 000	35 100 000	41 200 000	44 900 000	48 800 000
Saudi Arabia (c)	442 900 000	427 300 000	487 900 000	506 100 000	526 200 000
Syria	29 000 000	27 100 000	28 000 000	26 400 000	23 300 000
Taiwan	44 380	51 106	45 760	44 563	32 389
Tajikistan	20 000	20 000	17 700	18 900	21 300
Thailand	6 100 000	6 900 000	8 600 000	8 300 000	9 900 000
Turkmenistan	8 000 000	9 000 000	10 000 000	9 600 000	9 500 000
United Arab Emirates	118 300 000	108 500 000	122 200 000	124 700 000	129 000 000
Uzbekistan	7 256 000	7 200 000	7 100 000	6 600 000	5 500 000
Vietnam	16 700 000	16 900 000	*17 600 000	20 800 000	19 100 000
Yemen, Republic of	20 974 000	20 958 000	20 609 000	19 900 000	20 100 000
Australia	34 000 000	33 000 000	27 000 000	20 748 000	20 887 000
New Zealand	1 508 800	1 363 600	1 052 400	913 600	837 200
Papua New Guinea	2 693 749	2 120 985	2 282 000	2 680 000	2 200 000
<b>World Total</b>	<b>3 563 000 000</b>	<b>3 547 000 000</b>	<b>3 663 000 000</b>	<b>3 828 000 000</b>	<b>3 866 000 000</b>

Note(s):-

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

(a) Including oil from shale and coal

(b) Years ended 30 June of that stated

(c) Including shares of production from the Neutral Zone

(d) Years ended 31 March following that stated

# Production of natural gas

million m<sup>3</sup>

Country	2001	2002	2003	2004	2005
Albania	11	10	12	12	11
Austria	1 954	2 015	2 029	2 011	1 654
Azerbaijan	5 535	5 144	5 128	4 995	5 732
Belarus	255	246	254	245	228
Bulgaria	21	11	11	333	573
Croatia	2 009	2 122	2 190	2 198	2 283
Czech Republic	101	91	131	175	356
Denmark	7 930	7 947	7 555	8 946	9 908
France	1 809	1 751	1 523	1 325	1 013
Georgia	40	17	18	11	15
Germany	21 698	21 556	22 228	20 411	19 171
Greece	32	36	27	23	16
Hungary	3 286	3 130	3 145	3 112	3 041
Irish Republic	816	839	673	848	570
Italy	15 242	14 623	13 885	12 961	11 977
Netherlands	74 323	71 786	69 114	81 499	74 460
Norway	53 895	65 501	72 905	78 351	84 702
Poland	5 179	5 263	5 315	5 630	5 742
Romania	14 090	13 647	13 174	13 246	12 472
Russia	551 000	561 000	581 000	632 000	636 000
Serbia and Montenegro	506	400	364	318	*300
Slovakia	212	212	201	178	151
Slovenia	6 100	5 704	4 926	5 500	5 500
Spain	557	553	268	370	174
Turkey	266	242	276	344	484
Ukraine	18 300	18 700	19 333	20 192	20 787
United Kingdom	112 563	109 694	107 919	100 847	92 503
Algeria	78 240	80 367	82 829	82 009	87 800
Angola	530	620	900	722	*700
Egypt	18 304	19 605	17 680	14 090	34 700
Equatorial Guinea	790	1 050	1 220	1 390	...
Gabon	100	100	125	102	*100
Ivory Coast	1 062	1 610	1 457	*1 500	*1 500
Libya	6 180	6 210	6 400	7 000	11 700
Morocco	50	49	*49	*49	*49
Nigeria	15 680	15 120	19 200	22 388	21 800
South Africa	*2 000	*1 000	...	...	...
Tunisia	2 530	2 386	2 700	2 529	2 585
Canada	204 571	208 000	200 475	203 068	169 873
Cuba	595	585	658	*660	...
Mexico	35 310	35 310	36 400	37 400	39 500
Trinidad & Tobago	14 023	17 127	25 774	29 628	33 270
USA (c)	555 500	537 000	541 000	531 000	517 000
Argentina	40 813	40 311	45 048	*49 300	51 567
Bolivia	5 275	6 421	7 398	10 257	12 536
Brazil	8 400	10 000	10 900	11 900	12 200
Chile	2 684	2 543	2 181	2 106	2 294
Colombia	6 100	6 200	6 100	6 400	6 800
Ecuador	...	...	249	240	...
Peru	629	687	759	*830	*1 500
Venezuela	29 593	28 415	25 200	28 100	28 900
Afghanistan	*3 000	*3 000	*3 000	*3 000	*3 000
Bahrain	9 263	9 405	11 799	11 595	12 692
Bangladesh (d)	10 573	11 087	11 926	12 827	13 605
Brunei	11 300	11 200	12 400	12 200	12 000
China	30 344	32 700	35 015	41 493	49 950
India (b)	28 037	29 964	30 908	30 820	31 223
Indonesia	66 300	68 795	69 341	66 998	*68 000
Iran	69 145	75 000	79 000	84 900	87 000
Iraq	2 760	2 360	1 560	2 900	*2 900
Israel	10	9	8	1 192	1 656
Japan	2 436	2 495	2 836	2 794	3 263
Jordan	257	256	288	294	242

## Production of natural gas

million m<sup>3</sup>

Country	2001	2002	2003	2004	2005
Kazakhstan	4 950	6 018	7 557	11 598	14 023
Kuwait (a)	9 500	8 000	8 900	9 700	9 700
Kyrgyzstan	33	30	27	29	20
Malaysia	46 945	48 308	50 810	53 670	59 880
Myanmar	7 200	8 400	9 600	10 200	13 000
Oman	14 600	16 000	17 800	18 000	19 600
Pakistan (d)	24 786	26 158	28 107	34 058	38 089
Qatar	27 000	29 500	28 000	33 300	43 500
Saudi Arabia (a)	53 690	57 320	60 060	65 700	69 500
Syria	7 186	6 821	9 260	8 200	6 300
Taiwan	849	887	831	796	548
Tajikistan	50	30	32	34	27
Thailand	19 611	20 450	21 299	22 317	23 676
Turkmenistan	51 270	53 500	59 100	*58 600	*63 200
United Arab Emirates	39 360	43 390	44 400	46 600	46 600
Uzbekistan	57 400	*57 400	*57 300	*59 600	59 600
Vietnam	1 724	2 260	2 400	4 200	5 200
Australia	32 482	32 606	33 180	35 257	37 112
New Zealand	6 253	5 942	4 493	4 115	3 842
Papua New Guinea	142	105	139	156	154
<b>World Total</b>	<b>2 565 000</b>	<b>2 603 000</b>	<b>2 670 000</b>	<b>2 787 000</b>	<b>2 829 000</b>

Note(s):-

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

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

(b) Years ended 31 March following that stated

(c) Dry gas

(d) Years ended 30 June of that stated

## Production of phosphate rock

tonnes

Country	2001	2002	2003	2004	2005
Finland	767 020	799 814	799 339	838 000	823 000
Russia	10 488 000	10 763 000	11 072 600	11 345 300	11 286 400
Algeria	939 000	741 000	905 000	804 900	902 300
Burkina Faso	1 010	2 350	2 400	2 400	*2 400
Egypt	779 445	1 218 561	2 183 200	2 218 900	2 620 900
Morocco	21 766 000	23 028 000	23 338 000	26 675 000	28 788 000
Senegal					
Phosphate rock	1 876 400	1 549 100	1 499 600	1 576 000	1 541 700
Aluminium phosphate (a)	20 610	1 557	3 516	1 600	1 800
South Africa	2 419 941	2 803 265	2 642 970	2 735 150	2 577 097
Tanzania	4 000	*7 650	3 738	6 570	1 975
Togo	1 061 600	1 280 600	1 471 200	1 115 200	1 020 900
Tunisia	8 105 900	7 735 100	7 889 900	8 050 800	8 203 600
Zimbabwe	87 880	84 926	80 034	83 391	45 705
Canada	780 000	1 003 000	980 500	1 064 000	888 000
Mexico	787 283	4 764	5 500	350	350
USA	31 900 000	36 100 000	35 000 000	35 800 000	*38 300 000
Brazil	4 684 546	5 083 703	5 583 778	5 690 000	5 488 000
Chile	18 977	19 541	21 300	21 465	20 363
Colombia	*43 000	*43 000	*43 000	*43 000	*43 000
Peru	15 800	16 400	31 600	37 760	37 800
Venezuela	398 955	390 342	260 008	300 057	*300 000
China	24 371 100	*26 000 000	*27 500 000	*29 000 000	30 450 000
Christmas Island (b) (c) (e)	568 000	517 000	585 737	655 474	757 013
India (d)	1 251 553	1 212 834	1 435 959	1 184 351	1 408 764
Iran	213 338	303 000	224 000	229 575	*250 000
Iraq	*100 000	*100 000	—	—	—
Israel	3 230 000	4 091 000	3 707 000	3 290 000	3 236 000
Jordan	5 764 307	7 123 887	6 762 279	6 222 775	6 380 867
Kazakhstan	971 700	1 197 800	1 260 300	1 706 500	1 534 100
Korea, Dem. P.R. of	*100 000	*100 000	*100 000	*100 000	*100 000
Pakistan (e)	—	1 362	2 562	4 614	2 687
Sri Lanka	35 770	38 775	40 171	43 520	41 811
Syria	2 043 176	2 482 916	2 400 757	2 882 420	3 500 000
Thailand	2 359	3 680	13 870	2 580	3 020
Uzbekistan	225 000	426 000	433 400	482 000	468 000
Vietnam	683 000	787 800	823 400	901 800	910 000
Australia	1 894 495	2 026 971	2 286 247	2 015 597	1 935 630
Nauru (b) (e)	449 190	161 950	112 900	*29 000	*18 000
<b>World Total</b>	<b>129 000 000</b>	<b>139 000 000</b>	<b>142 000 000</b>	<b>147 000 000</b>	<b>154 000 000</b>

Note(s):-

(1) In addition to the countries listed, Indonesia is believed to produce phosphate rock

(a) Including lime phosphates

(b) Exports

(c) Including phosphate dust

(d) Years ended 31 March following that stated

(e) Years ended 30 June of that stated

## Mine production of platinum group metals

kilograms (metal content)

Country	2001	2002	2003	2004	2005
<b>Russia</b>					
Platinum (a)	40 400	30 500	32 700	26 400	27 700
Palladium (a)	135 000	60 000	92 000	118 200	143 701
Other platinum metals	*14 500	*14 500	*14 600	*14 600	*14 600
<b>South Africa</b>					
Platinum	129 746	133 796	148 348	153 239	168 749
Palladium	62 142	64 244	70 946	76 403	84 908
Other platinum metals	36 859	41 545	46 856	46 759	58 218
<b>Zimbabwe</b>					
Platinum	519	2 053	2 330	4 438	4 833
Palladium	371	1 728	1 770	3 564	3 879
Other platinum metals	42	416	441	810	862
<b>Canada</b>					
Platinum	8 100	9 500	7 200	*9 100	*7 500
Palladium	12 800	15 100	11 500	*16 000	*13 100
Other platinum metals	900	1 000	800	*1 000	*900
<b>USA</b>					
Platinum	3 760	4 385	4 168	4 043	3 919
Palladium	12 600	14 805	13 996	13 654	13 312
<b>Colombia</b>					
	673	661	828	1 209	1 082
<b>Australia</b>					
Platinum	174	122	133	196	58
Palladium	828	811	477	846	603
<b>World Total</b>	<b>459 000</b>	<b>395 000</b>	<b>449 000</b>	<b>490 000</b>	<b>548 000</b>

### Note(s):-

- (1) Wherever possible, figures relate to quantities of platinum group metals thought to be recovered from ores originating in the country stated
  - (2) Figures for metal production are only given for countries where recovery is thought to be based predominantly on domestic materials or on imported materials which have not been recorded as mine production elsewhere in the table
  - (3) In addition to the countries listed, Bulgaria, China, Ethiopia, Indonesia and Philippines are believed to produce platinum group metals
- (a) Sales from mine production and stocks



## Production of potash

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

Country	2001	2002	2003	2004	2005
Belarus	4 495 000	3 791 000	4 229 000	4 612 000	4 928 000
France					
Potassic salts	244 000	128 000	—	—	—
Germany					
Potassic salts	3 548 665	3 471 763	3 563 332	3 626 510	3 663 829
Russia	4 257 600	4 431 600	4 653 300	5 599 100	6 265 600
Spain					
Chloride	470 933	406 571	505 527	553 210	494 592
Ukraine	74 300	*60 000	*60 000	*50 000	*65 000
United Kingdom					
Chloride	531 900	540 100	621 400	539 500	439 200
Canada					
Chloride	8 181 000	8 515 000	9 093 000	10 332 000	10 497 000
USA					
Potassic salts	1 200 000	1 200 000	1 100 000	1 300 000	*1 200 000
Brazil					
Chloride	318 585	337 266	415 549	403 080	404 871
Chile					
Chloride	*420 000	*420 000	*440 000	*430 000	*430 000
Nitrate	*57 000	...	...	...	...
China	395 000	*430 000	450 000	450 000	450 000
Israel					
Chloride	1 774 200	1 918 200	1 958 400	2 138 400	2 224 200
Jordan	1 177 521	1 173 614	1 176 690	1 157 360	1 097 487
World Total	27 100 000	26 900 000	28 300 000	31 200 000	32 200 000

## Production of rare earth minerals

tonnes

Country	2001	2002	2003	2004	2005
USA					
Bastnaesite (a)	*5 000	*5 000	—	—	—
Brazil					
Monazite	—	—	—	731	730
China (a)	80 600	88 000	92 000	98 300	*98 000
India					
Monazite (b)	2 651	2 856	2 891	149	*150
Malaysia					
Monazite	643	441	795	1 683	320

Note(s):-

(1) With the exception of the data for USA and China, figures in this table refer to gross tonnage of concentrates

(2) In addition to the countries listed, rare earth minerals are believed to be produced in Indonesia, Kazakhstan, Democratic P.R. of Korea, Republic of Korea, Kyrgyzstan, Mozambique, Nigeria, Russia and Vietnam

(a) REO content. Assumed to be 60% of concentrates produced

(b) Years ended 31 March following that stated

## Production of salt

tonnes

Country	2001	2002	2003	2004	2005
Albania					
Sea salt	25 783	22 746	21 448	24 783	47 219
Armenia	28 766	30 330	31 854	31 625	34 682
Austria					
Rock salt	1 384	1 491	1 610	1 228	1 497
Salt in brine	646 000	641 634	723 286	745 670	*745 000
Azerbaijan	3 734	5 380	7 645	9 234	11 202
Belarus	1 052 000	1 369 000	1 543 136	1 883 138	1 839 300
Bosnia & Herzegovina	439 106	*400 000	179 299	260 456	...
Bulgaria	1 931 000	1 800 000	1 882 000	1 900 000	1 900 000
Croatia	32 585	30 483	32 533	32 723	36 970
Denmark	587 000	*590 000	*600 000	*600 000	*600 000
France					
Rock salt	596 000	434 000	320 000	406 000	494 000
Brine salt	1 452 000	1 456 000	1 409 000	1 433 000	1 468 000
Salt in brine	4 023 000	4 056 000	4 351 000	4 408 000	4 750 780
Sea salt	1 536 000	848 000	1 302 000	1 365 000	1 026 000
Germany					
Rock salt	5 326 000	6 134 000	6 178 000	7 268 000	8 258 000
Brine salt	1 211 000	1 249 000	1 123 000	974 000	1 006 000
Salt in brine	6 196 000	6 310 000	6 668 000	7 212 000	7 449 000
Greece	208 776	126 118	192 161	187 522	198 024
Italy					
Rock salt & brine salt	3 301 173	3 342 992	2 922 251	2 876 469	...
Netherlands	5 717 000	5 773 000	5 980 000	5 896 000	6 155 000
Poland					
Rock salt	786 609	838 858	847 880	1 099 072	1 123 219
Brine salt	2 688 929	2 719 131	2 790 996	2 940 169	2 889 941
Portugal					
Rock salt	625 785	604 969	602 035	661 704	...
Sea salt	76 653	40 139	86 603	75 400	92 495
Romania	2 225 052	2 257 886	2 416 970	2 399 956	2 442 640
Russia	*2 800 000	*2 800 000	*2 800 000	*2 800 000	*2 800 000
Serbia and Montenegro					
Rock salt	8 624	13 334	15 413	10 344	...
Sea salt	26 383	3 787	36 469	22 239	...
Slovakia	123 000	97 400	133 100	121 600	105 047
Slovenia	2 000	5 200	3 632	2 852	803
Spain					
Rock salt	2 319 800	2 559 760	2 562 832	2 656 904	2 500 000
Sea salt	1 420 000	1 234 679	1 327 108	1 227 625	1 250 000
Other salt	100 000	97 945	97 730	108 733	100 000
Switzerland	384 000	400 000	461 000	486 000	539 000
Turkey					
Rock salt	46 362	55 305	10 205	6 100	512
Sea salt	522 364	411 646	556 652	582 440	529 235
Other salt	1 202 025	1 729 686	1 675 915	1 569 178	1 196 486
Ukraine	*2 300 000	*2 300 000	2 906 400	4 393 000	4 811 000
United Kingdom					
Rock salt	*1 900 000	*1 500 000	*1 700 000	*2 000 000	*2 000 000
Brine salt	*1 100 000	*1 000 000	*1 000 000	*1 000 000	*1 000 000
Salt in brine (a)	*3 000 000	*3 200 000	*3 200 000	*2 800 000	*2 800 000
Algeria					
Brine salt & sea salt	195 000	238 000	241 000	241 800	302 700
Angola	*30 000	*30 000	*30 000	*30 000	*30 000
Benin (c)	*15 000	*15 000	*15 000	*15 000	*15 000
Botswana	178 646	315 259	229 432	208 319	243 945
Burkina Faso	*6 000	*6 000	*6 000	*6 000	*6 000
Cape Verde	*2 000	*2 000	*2 000	*2 000	*2 000
Djibouti	173 099	162 266	128 000	30 000	*30 000
Egypt (j)	1 434 000	1 341 000	...	1 532 362	...
Eritrea	77 835	116 268	52 414	30 754	63 000
Ethiopia (d)	61 000	61 000	61 000	21 000	24 000
Ghana	68 076	99 593	*250 000	*265 000	*265 000
Guinea	*15 000	*15 000	*15 000	*15 000	*15 000

# Production of salt

tonnes

Country	2001	2002	2003	2004	2005
Kenya (h)	5 664	18 848	21 199	31 139	26 595
Libya	*40 000	*40 000	*40 000	*40 000	*40 000
Madagascar	26 000	17 000	*23 000	*23 000	*23 000
Mali	*6 000	*6 000	*6 000	*6 000	*6 000
Mauritania	*6 000	*6 000	*6 000	*6 000	*6 000
Mauritius (c)	6 800	7 000	7 200	7 000	7 900
Morocco	233 816	266 903	236 443	240 000	*240 000
Mozambique	*10 000	*80 000	*80 000	*80 000	*80 000
Namibia	564 841	455 912	651 431	750 821	573 248
Niger	*2 000	*2 000	*2 000	*2 000	*2 000
Senegal	109 800	171 500	235 000	167 800	*168 000
Sierra Leone	2 889	1 821	1 004	—	—
Somalia	*1 000	*1 000	*1 000	*1 000	*1 000
South Africa	356 582	428 887	437 896	332 673	387 887
Sudan	77 783	83 000	*84 000	*84 000	*84 000
Tanzania	65 000	71 200	58 978	57 062	51 166
Tunisia (c)	712 400	615 800	819 000	1 117 000	1 120 300
Uganda	*5 000	*5 000	*5 000	*5 000	*5 000
Bahamas	987 703	1 074 355	1 245 447	1 284 294	*100 000
Canada					
Rock salt	11 503 494	10 158 045	11 957 298	12 071 303	11 761 885
Other salt (e)	2 189 514	2 114 417	1 994 490	2 052 333	2 045 096
Costa Rica	*37 000	*37 000	*37 000	*37 000	*37 000
Cuba	*180 000	*180 000	*180 000	*185 000	*185 000
Dominican Republic					
Rock salt	*12 000	29 560	...	...	...
Sea salt	*50 000	*50 000	*50 000	*50 000	*50 000
El Salvador (c)	31 609	31 552	31 366	*31 000	*31 000
Guatemala (c)	*50 000	*50 000	*50 000	*50 000	*50 000
Honduras	*25 000	*25 000	*25 000	*25 000	*25 000
Mexico	8 501 137	7 801 948	7 546 987	8 565 520	9 507 623
Netherlands Antilles	395 195	380 805	*400 000	*400 000	...
Nicaragua (c)	28 100	29 710	31 320	*31 000	...
Panama (c)	24 422	15 553	13 182	18 608	...
USA					
Rock salt (f)	14 600 000	13 500 000	16 300 000	18 300 000	*17 900 000
Salt in brine (f)	20 400 000	19 300 000	20 000 000	20 500 000	*21 100 000
Evaporated salt (f)	7 210 000	7 490 000	7 400 000	7 620 000	*6 900 000
Argentina	1 269 814	1 080 328	1 667 829	1 371 792	1 699 285
Brazil					
Rock salt	1 208 000	1 274 000	1 420 000	1 442 000	1 559 000
Sea salt	4 370 000	4 835 000	5 144 000	5 205 968	5 738 483
Chile	5 989 416	3 502 613	6 213 473	4 938 928	6 067 583
Colombia					
Rock salt	168 139	180 714	207 486	232 460	215 905
Sea salt	383 529	351 324	244 053	302 101	445 562
Ecuador	*90 000	*90 000	*90 000	*90 000	*90 000
Peru	418 954	281 098	187 416	248 898	438 375
Venezuela (c)	*350 000	*350 000	*350 000	*350 000	*350 000
Afghanistan	*13 000	*13 000	*13 000	*13 000	*13 000
Bangladesh (j)	39 839	40 575	41 787	46 047	...
Cambodia	11 000	72 500	36 000	*40 000	*40 000
China	34 547 500	36 024 000	34 377 000	37 100 700	*37 000 000
India					
Rock salt	2 500	1 900	1 000	3 800	1 800
Sea salt	10 295 000	14 366 400	11 787 300	11 949 500	15 484 600
Other salt	3 986 500	3 510 900	3 094 100	2 807 900	4 437 500
Indonesia	*680 000	*680 000	*680 000	*680 000	*680 000
Iran (g)	1 537 527	1 509 367	1 553 526	1 791 000	*1 800 000
Iraq	*300 000	203 000	50 000	*50 000	*50 000
Israel	590 000	570 000	540 000	570 000	570 000
Japan (i)	1 358 000	1 282 000	1 263 000	1 225 000	1 227 000
Jordan (b)	321 000	406 652	...	...	...

## Production of salt

tonnes

Country	2001	2002	2003	2004	2005
Kazakhstan	274 497	173 564	282 389	347 850	178 167
Korea, Dem. P.R. of	*500 000	*500 000	*500 000	*500 000	*500 000
Korea, Republic of	...	204 512	154 641	340 828	378 887
Kuwait	*40 000	*40 000	*40 000	*40 000	*40 000
Laos	2 635	5 410	16 130	*15 000	*15 000
Lebanon	15 000	15 000	15 000	15 000	*15 000
Mongolia	*100 000	*100 000	*100 000	*100 000	*100 000
Myanmar (b) (c)	*35 000	*35 000	*35 000	*35 000	*35 000
Oman	13 983	14 410	12 300	12 400	*12 400
Pakistan					
Rock salt (j)	1 261 141	1 423 478	1 426 067	1 639 516	1 648 223
Sea salt (j)	12 750	16 185	16 652	11 555	14 375
Philippines (c)	236 987	460 983	429 160	427 615	420 950
Saudi Arabia					
Rock salt & brine salt	547 800	547 000	547 000	*547 000	*547 000
Sri Lanka	130 272	73 784	81 791	78 135	67 029
Syria	182 073	145 018	128 265	141 445	110 000
Taiwan	252 555	247 895	178 826	159 091	114 389
Tajikistan	*40 000	*40 000	59 739	59 495	65 992
Thailand					
Rock salt	852 565	908 968	892 243	1 031 200	1 074 214
Other salt	*100 000	*100 000	*100 000	*100 000	*100 000
Turkmenistan	218 000	*215 000	*215 000	*215 000	*215 000
Uzbekistan	*60 000	*60 000	*60 000	*60 000	*60 000
Vietnam	575 000	1 089 000	*1 275 000	*1 300 000	1 375 000
Yemen, Republic of	113 000	125 000	116 000	*120 000	*120 000
Australia (k)	9 254 000	9 961 000	10 560 000	11 221 000	12 379 000
New Zealand	31 315	130 985	108 460	94 010	*90 000
World Total	211 700 000	212 700 000	220 000 000	230 500 000	239 600 000

### Note(s):-

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

- (a) Used for purposes other than salt-making
- (b) Brine salt
- (c) Sea salt
- (d) Years ended 7 July of that stated
- (e) Including salt in brine
- (f) Sold or used by producers
- (g) Years ended 20 March following that stated
- (h) Lake salt
- (i) Years ended 31 March following that stated
- (j) Years ended 30 June of that stated
- (k) Excluding Victoria and the Northern Territory

## Production of selenium metal

tonnes

Country	2001	2002	2003	2004	2005
Belgium	*200	*200	*200	*200	*200
Finland	42	37	52	65	66
Germany	*100	*100	*100	*100	*14
Poland	65	68	78	83	82
Russia	48	60	81	85	*100
Serbia and Montenegro	14	17	7	—	...
Sweden	88	118	107	131	...
Zambia	13	*11	*10	*10	*10
Canada	238	175	253	277	216
Chile (a)	84	...	...	...	...
Peru	16	21	24	21	17
China	*65	*65	*65	*65	280
India (b)	10	6	2	—	8
Japan	735	752	734	599	625
Kazakhstan	*40	*40	*40	*40	*40
Philippines	43	*40	*40	*40	*40
Uzbekistan	*20	*20	*20	*20	*20

Note(s):-

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

(a) Exports

(b) Years ended 31 March following that stated

## Production of sillimanite minerals

tonnes

Country	2001	2002	2003	2004	2005
France					
Andalusite	61 000	59 000	62 000	68 000	*65 000
Spain					
Andalusite	*250	*250	*200	*200	*200
South Africa					
Andalusite	193 225	165 087	164 921	*165 000	*165 000
Zimbabwe					
Kyanite	9 682	6 138	5 707	491	—
USA					
Kyanite (b)	90 000	90 000	90 000	90 000	*90 000
Brazil					
Kyanite (c)	*200	*200	*200	*200	*200
China					
Andalusite	20 000	...	...	...	...
Kyanite	27 700	...	...	...	...
Sillimanite	163 100	...	...	...	...
India					
Kyanite (a)	4 225	5 327	9 057	8 208	7 341
Sillimanite (a)	14 720	13 290	19 729	30 711	32 278
Australia					
Sillimanite	70	233	206	71	38

### Note(s):-

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

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

## Mine production of silver

kilograms (metal content)

Country	2001	2002	2003	2004	2005
Armenia	—	5 500	*4 000	*4 000	*4 000
Bulgaria	56 806	60 000	*60 000	*60 000	*60 000
Finland	*11 000	*12 000	*12 000	*13 000	*13 000
France	929	709	495	682	*700
Greece	62 400	74 800	7 000	—	6 000
Irish Republic	8 700	7 500	8 500	5 200	10 500
Italy	*1 000	*1 000	200	100	100
Macedonia	22 216	36 832	22 195	—	—
Poland	1 230 700	1 343 000	1 332 200	1 372 700	1 262 400
Portugal	23 100	19 500	21 100	24 400	23 700
Romania	*18 000	*18 000	*18 000	*18 000	*18 000
Russia (a)	*400 000	*400 000	*700 000	*1 062 000	*1 100 000
Serbia and Montenegro (a)	5 745	6 838	2 028	2 275	*2 400
Spain	55 000	12 792	2 173	3 583	5 227
Sweden	306 029	320 823	340 701	319 563	309 933
Turkey	188 000	124 000	158 000	122 000	219 000
Algeria	1 700	1 400	500	—	800
Congo, Democratic Republic	500	2 100	35 700	69 700	53 600
Ethiopia (b)	3 545	900	999	1 133	886
Ghana	1 900	2 129	3 080	3 035	*3 300
Morocco	280 700	276 800	200 430	196 000	*240 000
Namibia (a)	20 396	43 632	29 367	27 153	34 102
South Africa	109 600	113 108	87 325	73 124	89 023
Sudan	1 600	3 300	2 800	2 900	*2 900
Tanzania	6 861	6 690	7 986	13 216	12 891
Tunisia	3 650	*3 000	*3 000	*2 000	*4 000
Zimbabwe	3 344	3 219	2 483	3 216	3 400
Canada	1 320 030	1 407 558	1 310 153	1 337 465	1 121 500
Honduras	46 760	52 796	50 884	48 217	53 617
Mexico	2 759 985	2 746 989	2 568 877	2 569 478	2 894 161
Nicaragua	2 532	2 198	2 040	2 950	2 936
USA	1 740 000	1 354 000	1 239 400	1 246 100	1 225 800
Argentina	152 802	125 878	133 907	155 368	148 119
Bolivia	409 720	460 900	466 300	412 550	420 270
Brazil	10 000	10 000	6 496	6 192	6 672
Chile	1 348 667	1 210 473	1 312 789	1 360 140	1 399 539
Colombia	7 242	6 986	9 511	8 542	7 142
Peru	2 673 834	2 761 486	2 910 922	3 059 829	3 193 146
China	2 013 250	*2 200 000	2 400 000	2 450 000	2 500 000
India (c)	57 675	59 502	37 870	10 955	27 950
Indonesia	348 455	293 520	285 206	262 935	326 993
Iran	*20 000	*23 000	*23 000	*25 000	*25 000
Japan	82 452	103 203	99 162	85 999	54 100
Kazakhstan (a)	943 027	855 612	804 874	707 443	812 095
Korea, Dem. P.R. of	*50 000	*50 000	*50 000	*50 000	*50 000
Korea, Republic of	58	6 802	15 417	50 866	41 489
Laos	—	—	4 400	2 735	3 100
Malaysia	3	—	—	364	402
Mongolia	*21 000	*21 000	*21 000	*21 000	*21 000
Myanmar (a) (c)	*700	*800	*800	*1 100	*1 000
Philippines	29 590	8 810	9 533	9 315	19 150
Saudi Arabia	10 000	10 000	11 000	14 600	13 500
Uzbekistan	*60 000	*60 000	*60 000	*60 000	*60 000

## Mine production of silver

kilograms (metal content)

Country	2001	2002	2003	2004	2005
Australia	1 970 000	2 077 000	1 868 000	2 209 000	2 407 000
Fiji	2 109	1 901	1 247	1 523	1 418
New Zealand	27 118	28 725	29 932	*30 100	43 003
Papua New Guinea	69 368	63 349	61 900	55 600	51 125
<b>World Total</b>	<b>19 000 000</b>	<b>18 902 000</b>	<b>18 857 000</b>	<b>19 654 000</b>	<b>20 411 000</b>

Note(s):-

(1) Countries producing less than 1000 kg per year include Jamaica, Oman and Thailand

(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

Country	2001	2002	2003	2004	2005
Botswana	251 231	283 197	234 520	263 358	279 085
Ethiopia (a)	7 543	3 843	4 377	6 550	2 748
Kenya	297 780	304 110	352 560	353 835	360 161
USA	10 300 000	10 500 000	10 600 000	11 000 000	11 100 000
Pakistan	3 513	3 669	—	—	—

Note(s):-

(a) Years ended 7 July of that stated

## Production of strontium minerals

tonnes

Country	2001	2002	2003	2004	2005
Spain	164 030	171 293	152 383	206 001	190 000
Turkey	63 635	*70 000	*70 000	*60 000	*60 000
Morocco	1 879	3 780	*2 700	*2 700	*2 700
Mexico	145 789	94 015	130 329	87 610	110 833
Argentina (a)	3 655	2 595	4 300	6 727	7 233
China	...	...	...	500 000	700 000
Iran	—	—	2 100	7 500	7 500
Pakistan (b)	—	416	27	570	1 855

Note(s):-

(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	2001	2002	2003	2004	2005
Austria					
Recovered (d)	50 135	54 925	50 568	55 322	54 377
Belarus					
Recovered (d)	21 653	28 162	22 292	32 288	48 663
Belgium					
Recovered (c) (d)	368 000	359 000	383 000	371 000	376 000
Bulgaria					
Recovered (c)	203 000	245 000	260 000	301 000	312 000
Recovered (d)	30 000	30 000	30 000	25 000	30 000
Croatia					
Recovered (d)	7 000	7 069	7 471	9 000	9 000
Czech Republic					
Recovered (d)	40 000	40 000	45 000	60 000	65 000
Denmark					
Recovered (d)	3 981	4 386	4 751	4 660	4 223
Finland					
Pyrites	260 000	235 000	276 200	283 700	189 000
Recovered (c)	329 555	328 441	328 779	325 523	305 013
Recovered (d)	46 000	55 000	61 000	65 000	70 000
France					
Recovered (d)	840 000	795 600	710 400	698 400	622 345
Recovered (e)	*260 000	229 000	196 000	196 000	180 000
Germany					
Recovered (c)	80 000	46 000	—	—	—
Recovered (d)	1 640 000	1 657 200	1 619 900	1 526 700	1 627 900
Recovered (e)	40 000	41 900	43 900	40 000	42 900
Greece					
Recovered (d)	153 000	157 000	162 000	160 000	162 000
Hungary					
Recovered (d)	43 000	52 000	51 000	35 000	65 000
Italy					
Recovered (c)	203 000	142 000	127 000	113 000	92 000
Recovered (d)	540 000	560 000	565 000	575 000	650 000
Lithuania					
Recovered (d)	47 000	49 824	48 515	67 094	74 268
Macedonia					
Recovered (c)	26 000	26 000	7 000	—	—
Netherlands					
Recovered (c)	126 000	124 000	131 000	137 000	141 000
Recovered (d)	384 000	373 000	408 000	410 000	440 000
Norway					
Recovered (c)	*95 000	95 000	100 000	*100 000	*100 000
Recovered (d)	18 000	19 000	20 000	18 000	19 000
Poland					
Frasch	942 252	760 320	762 689	821 489	801 799
Recovered (c)	*280 000	*275 000	293 700	289 100	*290 000
Recovered (d)	27 602	22 777	23 384	23 767	22 193
Portugal					
Recovered	35 000	28 000	27 000	25 000	30 000
Romania					
Pyrites	1 835	—	—	—	—
Recovered	41 000	29 000	49 000	53 000	79 000
Russia					
Pyrites	324 000	261 000	357 000	289 000	143 000
Recovered (d)	5 239 515	5 589 969	5 804 740	5 909 958	6 301 000
Recovered (e)	458 000	458 000	523 000	572 000	654 000
Sulphur ore	13 216	...	...	...	...
Serbia and Montenegro					
Recovered (c)	75 000	82 000	83 000	82 000	88 000
Slovakia					
Recovered (c)	5 000	5 000	5 000	5 000	5 000
Recovered (d)	57 000	61 000	60 000	65 000	65 000
Spain					
Pyrites	89 796	—	—	—	—
Recovered (c)	461 000	544 000	560 000	488 000	—
Recovered (d)	135 000	140 000	145 000	145 000	*150 000

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2001	2002	2003	2004	2005
Sweden					
Recovered (c)	160 100	177 600	180 200	185 800	180 000
Recovered (d)	54 530	51 065	62 454	62 238	59 839
Turkey					
Pyrites	26 000	34 000	28 000	20 000	55 000
Recovered (d) (e)	126 000	123 000	94 000	68 000	76 000
Ukraine					
Sulphur ore	126 000	124 000	142 000	136 000	139 000
United Kingdom					
Recovered (c)	62 400	66 400	4 800	—	—
Recovered (d)	111 000	125 000	115 000	120 000	124 000
Algeria					
Recovered (d)	7 000	19 000	19 000	20 000	20 000
Egypt					
Recovered (d)	78 000	78 000	78 000	78 000	78 000
Libya					
Recovered (d)	*15 000	*15 000	*15 000	*15 000	*15 000
Namibia					
Pyrites	34 491	1 817	15 893	1 829	518
South Africa					
Pyrites	150 184	183 004	175 621	165 207	133 245
Recovered (a) (c) (d)	238 128	316 219	438 271	424 000	409 000
Zambia					
Pyrites	25 000	—	—	—	—
Recovered (c)	52 000	52 000	52 000	52 000	52 000
Zimbabwe					
Pyrites	21 700	19 000	19 000	42 400	20 041
Canada					
Recovered (c)	1 124 000	1 109 000	992 000	1 089 000	1 057 000
Recovered (d)	8 320 000	7 816 000	8 036 000	8 421 000	7 916 000
Cuba					
Recovered (d)	*5 000	*5 000	*5 000	*5 000	*5 000
Mexico					
Recovered (c)	572 000	588 000	539 000	703 000	703 000
Recovered (d)	878 000	887 000	1 051 968	1 121 546	1 016 000
Netherlands Antilles					
Recovered (d)	36 000	25 000	23 000	28 000	...
Trinidad & Tobago					
Recovered (d)	24 400	14 000	29 000	17 000	16 000
USA					
Recovered (c)	982 000	772 000	683 000	739 000	*750 000
Recovered (d)	8 490 000	8 500 000	8 920 000	9 380 000	*8 840 000
Argentina					
Recovered (c)	23 000	23 000	23 000	23 000	23 000
Brazil					
Pyrites	24 468	22 620	19 246	24 174	19 618
Recovered (c)	280 079	284 184	285 824	279 631	266 817
Recovered (d)	80 125	77 185	90 332	91 804	112 093
Chile					
Recovered (c)	1 160 000	1 231 000	1 426 000	1 507 000	1 788 000
Colombia					
Recovered (d)	15 465	23 880	23 660	*24 000	*24 000
Sulphur ore	69 344	60 162	73 024	97 586	64 660
Ecuador					
Recovered (d)	*20 700	*20 700	*20 700	*20 700	*20 700
Sulphur ore	*4 000	*4 000	*4 000	*4 000	*4 000
Peru					
Recovered (c)	*60 000	*60 000	*60 000	*60 000	*60 000
Venezuela					
Recovered (d)	340 000	570 000	560 000	730 000	950 000

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2001	2002	2003	2004	2005
Abu Dhabi					
Recovered (d)	1 488 000	1 900 000	1 925 000	1 926 000	2 060 000
Bahrain					
Recovered (d)	70 884	71 000	63 507	74 850	71 518
China					
Pyrites	3 065 000	2 766 000	3 974 000	4 029 000	4 011 000
Recovered	2 391 000	2 400 000	2 637 000	3 070 000	3 195 000
Sulphur ore	260 000	450 000	700 000	827 000	950 000
India					
Recovered (c)	458 000	458 000	539 000	539 000	523 000
Recovered (d) (e)	526 000	326 000	451 000	501 000	576 000
Indonesia					
Recovered (c)	212 000	196 000	212 000	172 000	212 000
Recovered (d)	70 000	95 000	95 000	100 000	105 000
Iran					
Recovered (d)	880 000	1 200 000	1 310 000	1 400 000	1 500 000
Iraq					
Recovered (d)	300 000	300 000	150 000	100 000	100 000
Israel					
Recovered (d)	35 000	36 000	45 000	42 000	44 000
Japan					
Recovered (c) (f)	1 519 000	1 592 000	1 528 000	1 545 000	1 583 000
Recovered (d)	2 424 389	1 865 424	1 952 000	1 894 000	1 972 000
Kazakhstan					
Recovered (c)	310 000	261 000	327 000	351 000	351 000
Recovered (d)	1 469 400	1 600 000	1 585 000	1 625 000	1 625 000
Korea, Dem. P.R. of					
Pyrites	18 000	18 000	18 000	18 000	18 000
Recovered (c)	16 000	16 000	16 000	16 000	16 000
Korea, Republic of					
Recovered (c)	665 000	753 000	747 000	796 000	861 000
Recovered (d)	650 000	660 000	660 000	660 000	660 000
Kuwait					
Recovered (d)	524 000	634 000	714 000	682 000	836 000
Oman					
Recovered (d)	*30 000	*30 000	*30 000	*30 000	*30 000
Pakistan					
Recovered (b)	17 428	22 580	19 402	23 873	24 158
Philippines					
Recovered (c)	145 000	154 000	162 000	163 000	163 000
Recovered (d)	25 000	30 000	30 000	40 000	45 000
Qatar					
Recovered (d)	220 624	250 000	272 274	307 187	450 000
Saudi Arabia					
Recovered (d)	2 345 000	2 364 000	2 179 000	2 249 000	2 750 000
Singapore					
Recovered (d)	230 000	180 000	180 000	215 000	250 000
Syria					
Recovered (d)	11 781	11 740	13 516	14 996	...
Taiwan					
Recovered	223 659	212 343	225 006	222 670	267 790
Thailand					
Recovered (c)	46 000	46 000	46 000	90 000	114 000
Recovered (d)	195 000	170 000	170 000	200 000	230 000
Turkmenistan					
Sulphur ore	5 628	...	...	...	...
Uzbekistan					
Recovered (c)	163 000	163 000	163 000	163 000	163 000
Recovered (d)	310 000	360 000	360 000	360 000	360 000

## Production of sulphur and pyrites

tonnes (sulphur content)

Country	2001	2002	2003	2004	2005
Australia					
Recovered (c)	817 000	899 000	863 000	850 000	915 000
Recovered (d)	45 000	60 000	60 000	60 000	60 000
World Total					
Pyrites	4 000 000	3 500 000	4 900 000	4 900 000	4 600 000
Frasch	900 000	800 000	800 000	800 000	800 000
Recovered	54 500 000	55 100 000	56 500 000	58 700 000	59 800 000
Sulphur ore	500 000	700 000	900 000	1 100 000	1 200 000

### Note(s):-

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

## Production of talc

tonnes

Country	2001	2002	2003	2004	2005
Austria	137 776	138 195	137 596	136 305	166 569
Finland	476 620	477 229	501 658	528 943	508 169
France	417 000	359 000	394 000	402 000	416 000
Germany	*9 000	*8 000	3 859	...	...
Greece	2 073	670	500	200	250
Italy	126 868	125 040	122 849	138 367	*140 000
Macedonia	9 279	4 662	3 271	4 350	1 955
Norway	24 626	23 564	*24 000	23 725	*24 000
Portugal	8 362	8 279	5 460	6 231	...
Romania	7 270	7 310	10 082	9 725	6 760
Russia	111 645	93 841	129 888	154 138	*150 000
Slovakia	2 600	2 290	4 200	7 100	200
Spain					
Talc	119 000	108 312	101 739	107 829	97 000
Pyrophyllite	...	...	900	700	—
Sweden	14 000	20 000	7 000	8 000	7 000
United Kingdom	4 947	6 194	6 494	3 881	6 000
Egypt (d)	36 827	45 529	*40 000	50 210	*50 000
Morocco					
Talc	5 844	6 708	1 959	*2 000	*2 000
Pyrophyllite	21 042	33 686	28 338	...	...
South Africa					
Talc	3 030	2 511	6 719	8 141	8 469
Pyrophyllite	14 047	15 587	14 350	28 987	55 278
Zimbabwe	1 272	1 024	196	—	—
Canada	45 000	93 000	87 000	81 000	66 000
Guatemala	1 960	...	1 585	2 863	...
Mexico	77 650	111 622	114 870	101 896	64 827
USA	863 000	828 000	840 000	857 000	*842 000
Argentina					
Talc	1 665	1 643	1 700	7 620	11 492
Pyrophyllite	2 155	2 341	4 525	12 594	...
Brazil (b)	397 000	348 000	369 000	417 716	401 124
Chile	792	563	840	722	886
Colombia	*15 000	*15 000	*15 000	*15 000	*15 000
Peru					
Talc	10 737	10 685	10 791	9 548	9 500
Pyrophyllite	8 069	9 514	12 291	14 282	14 300
Uruguay	1 695	816	1 095	1 042	1 131
Bhutan	13 528	23 118	23 101	39 797	42 791
China	2 555 500	*2 600 000	*2 600 000	2 700 000	2 700 000
India					
Pyrophyllite (e)	150 345	147 233	176 240	271 225	181 328
Steatite (e)	578 857	688 135	726 398	684 440	627 216
Iran (a)	65 779	60 872	65 833	108 541	*110 000
Japan					
Talc	18 478	22 142	24 328	18 253	*21 000
Pyrophyllite	403 137	416 188	408 435	401 688	*410 000
Korea, Dem. P.R. of	*60 000	*50 000	*50 000	*50 000	*50 000
Korea, Republic of					
Talc	47 712	37 863	47 911	79 313	83 471
Pyrophyllite	1 101 825	889 961	912 285	827 895	885 559
Nepal (c)	3 923	2 621	6 905	3 435	5 832
Pakistan (d)	50 733	53 572	65 813	52 483	20 564
Taiwan	130	27	466	410	—
Thailand					
Talc	6 838	1 702	8 501	12 592	10 270
Pyrophyllite	59 602	103 496	73 556	108 691	177 684
Vietnam					
Pyrophyllite	...	...	...	...	5 000

## Production of talc

tonnes

Country	2001	2002	2003	2004	2005
Australia					
Talc (d)	173 446	160 741	165 980	123 080	151 582
Pyrophyllite (d)	—	868	*1 000	*1 000	*1 200
World Total	8 300 000	8 200 000	8 400 000	8 700 000	8 600 000

Note(s):-

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

## Production of tantalum and niobium minerals

tonnes

Country	2001	2002	2003	2004	2005
Burundi					
Columbite-tantalite	123	72	24	23	46
Ethiopia					
Tantalite (a)	47	55	58	71	93
Madagascar					
Columbite	...	—	...	40	...
Mozambique					
Tantalite	27	47	189	712	281
Nigeria					
Tantalite	*25	*25	*25	*25	*25
Rwanda					
Columbite-tantalite	241	96	128	63	63
Uganda					
Columbite-tantalite	11	6	16	0	0
Zimbabwe					
Columbite-tantalite	30	26	231	27	—
Canada					
Pyrochlore	7 800	*7 800	*7 600	*8 000	*8 000
Tantalite	277	215	203	209	233
Brazil					
Pyrochlore	*70 000	*60 000	*66 000	*79 000	*124 000
Columbite-tantalite	7 300	5 800	6 200	6 500	6 600
China					
Columbite-tantalite	357	*350	*350	*350	*350
Malaysia					
Struverite	8 430	2 298	2 619	121	552
Australia					
Tantalite	*1 700	*2 300	*2 300	*2 400	*2 500
World Total concentrates	96 400	79 100	85 900	97 500	142 700
Nb content	*32 700	*31 000	*29 700	*31 300	*47 100
Ta content	*2 100	*1 600	*1 700	*1 500	*1 600

Note(s):-

- (1) Niobium and tantalum minerals are believed to be produced in D R Congo, French Guiana, Ivory Coast, Russia and Zambia. Minor quantities are produced in Bolivia.
- (2) The figures in this table refer to gross tonnage of tantalum and niobium concentrates
- (3) Niobium and tantalum are also recovered from tin slags. This source is particularly important in the case of tantalum and in recent years is believed to have accounted for over 60% of all tantalum recovered
- (4) No detailed information on the production of tantalum bearing tin slags is available but the major producer is Thailand and small amounts from Australia, Brazil, Nigeria, Portugal, and D R Congo

(a) Years ended 7 July of that stated

## Production of tellurium metal

tonnes

Country	2001	2002	2003	2004	2005
Canada	51	39	40	69	28
USA	50	50	50	50	50
Peru	19	22	26	22	33
Japan	39	29	33	33	23

Note(s):-

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

## Mine production of tin

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Portugal	1 201	345	203	200	200
Russia	5 500	5 200	5 400	5 300	5 100
Congo, Democratic Republic	1 650	1 450	2 600	6 800	*7 000
Nigeria	2 890	789	891	1 374	*1 500
Rwanda	169	197	300	547	500
Bolivia	12 039	13 210	16 386	18 115	18 694
Brazil	13 016	12 023	12 217	12 202	11 739
Peru (a)	38 182	38 815	40 202	41 613	42 145
China	93 000	*81 000	101 800	118 200	*120 000
Indonesia	56 286	67 455	66 284	78 000	120 000
Kazakhstan	23	24	13	14	5
Laos	570	430	420	*400	*600
Malaysia	4 972	4 215	3 358	2 745	2 857
Myanmar	700	500	600	500	500
Thailand	2 384	1 384	980	724	188
Vietnam	1 700	1 700	2 100	*3 500	*3 500
Australia	9 983	7 078	3 819	1 306	2 819
World Total	244 000	236 000	258 000	292 000	337 000

Note(s):-

(a) Recoverable

## Smelter production of tin

tonnes

Country	2001	2002	2003	2004	2005
Belgium	8 500	8 900	7 700	8 900	7 700
Russia	5 069	5 115	3 700	3 000	*3 000
Nigeria	2 870	728	801	—	—
Mexico	1 789	1 756	1 769	*1 800	*1 800
Bolivia (a)	11 292	10 976	9 823	13 627	13 941
Brazil	12 109	11 538	10 761	11 512	8 986
Peru	25 070	35 828	39 181	40 624	36 733
China	104 900	81 800	98 100	115 300	119 400
Indonesia	53 470	58 800	62 500	86 900	78 000
Malaysia	30 417	30 887	18 211	33 900	36 900
Thailand	22 387	17 500	15 200	20 800	29 400
Vietnam	1 700	1 700	2 100	3 500	3 500
Australia	1 094	791	597	467	594
World Total	281 000	266 000	270 000	340 000	340 000

Note(s):-

(1) Figures relate to both primary and secondary metal

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

(a) Refined, including alloys



## Production of titanium minerals

tonnes

Country	2001	2002	2003	2004	2005
Norway					
Ilmenite	777 000	837 000	859 000	866 700	806 800
Ukraine					
Ilmenite	*600 000	*550 000	*610 000	*600 000	*550 000
Rutile	*150 000	*100 000	*100 000	*100 000	*90 000
Egypt					
Ilmenite	66 000	69 000	...	...	...
Sierra Leone					
Rutile	—	—	—	—	150
South Africa					
Ilmenite (b)	*1 751 000	*1 649 000	*1 581 000	*1 732 000	*2 000 000
Rutile	*122 000	*140 000	*100 000	*100 000	*130 000
Canada					
Ilmenite (a) (b)	*2 300 000	*2 100 000	*1 900 000	*2 100 000	*2 100 000
USA	500 000	400 000	500 000	*500 000	*500 000
Brazil					
Ilmenite	*162 000	174 382	120 160	133 000	127 142
Rutile	*2 500	2 645	*2 500	*3 000	2 782
China					
Ilmenite	*750 000	*840 000	*840 000	*840 000	*1 015 000
India					
Ilmenite (c)	450 678	478 717	589 829	632 025	*569 000
Rutile (c)	17 817	14 531	19 646	19 648	*20 000
Korea, Republic of					
Ilmenite	161 988	142 726	114 660	150 744	157 433
Malaysia					
Ilmenite	129 750	106 198	95 148	61 471	38 196
Rutile	...	7 059	18 472	27 308	5 509
Sri Lanka					
Ilmenite	—	—	—	1 335	36 303
Rutile	—	—	—	2 798	8 162
Vietnam					
Ilmenite	*170 000	*170 000	*220 000	*325 000	*360 000
Australia					
Ilmenite	2 019 000	2 092 000	2 006 000	1 934 000	2 034 000
Rutile	207 000	219 000	173 000	162 000	177 000
Leucoxene	30 000	38 000	57 000	44 000	55 000
World Total					
Ilmenite (wt of concs)	9 800 000	9 600 000	9 500 000	9 900 000	10 400 000
Rutile (wt of concs)	499 000	483 000	414 000	415 000	434 000
All Forms (TiO <sub>2</sub> content)	*5 100 000	*5 000 000	*4 900 000	*5 100 000	*5 300 000

### Note(s):-

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

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

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

(b) Processed into slag. In 2005 South Africa produced an estimated 1 200 000 tonnes (85% TiO<sub>2</sub>) and Canada produced an estimated 900 000 tonnes (80-95% TiO<sub>2</sub>)

(c) Years ended 31 March following that stated

## Mine production of tungsten

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Austria	1 429	1 377	1 381	1 335	1 280
Portugal (c)	700	693	715	746	850
Russia (c)	*3 500	*3 400	*3 900	*3 000	*3 000
Rwanda	142	153	78	120	*120
Uganda	14	52	2	63	36
Canada	—	2 295	3 654	—	700
Bolivia	532	376	441	403	522
Brazil (a)	22	24	30	262	458
China	27 473	35 927	36 185	59 947	46 900
Korea, Dem. P.R. of	*500	*600	*600	*600	*600
Kyrgyzstan	*100	*100	*100	*100	*100
Malaysia	268	—	...	...	...
Mongolia	63	35	12	48	54
Myanmar (b)	48	83	93	100	*100
Thailand (c)	92	53	390	337	622
Uzbekistan	260	250	300	300	*300
World Total	35 100	45 400	47 900	67 400	55 600

Note(s):-

- (a) Mainly scheelite
- (b) Including tungsten content of tin-wolframite concentrates
- (c) Wolframite and scheelite

## Mine production of uranium

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Czech Republic	490	477	458	435	420
France	194	12	—	—	—
Germany	27	221	104	77	80
Portugal	4	2	—	—	—
Romania	85	90	90	90	*90
Russia	*2 500	*2 900	*3 150	*3 280	*3 431
Spain	0	0	—	—	—
Ukraine	*750	*800	*800	*800	*800
Namibia	2 237	3 369	2 663	3 483	3 080
Niger	2 919	3 076	3 143	3 273	3 093
South Africa	903	846	758	752	674
Canada	12 487	11 607	10 456	11 599	11 627
USA	1 015	901	*770	878	1 034
Brazil	58	270	310	300	—
China	*665	*730	*750	*750	*750
India	*230	*230	*230	*230	*230
Kazakhstan	2 050	2 800	3 300	3 719	4 357
Pakistan	*46	*38	*45	*45	*45
Uzbekistan	1 962	1 860	1 770	2 035	2 629
Australia	7 652	7 146	7 633	9 010	9 516
World Total	36 300	37 400	36 400	40 800	41 900
World Total (U <sub>3</sub> O <sub>8</sub> equivalent)	42 800	44 100	43 000	48 100	49 400

Note(s):-

(1) Excluding uranium production from decommissioning operations in France, Germany and Spain

## Mine production of vanadium

tonnes (metal content)

Country	2001	2002	2003	2004	2005
Russia	...	30 306	18 099	24 277	...
South Africa	18 184	25 227	27 172	23 303	22 604
China	*12 000	*13 200	*14 000	*16 000	*16 000
Kazakhstan	*1 000	*1 000	*1 000	*1 000	*1 000
Australia	2 494	3 146	694	220	—
World Total	64 000	73 000	61 000	65 000	64 000

Note(s):-

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

## Production of vermiculite

tonnes

Country	2001	2002	2003	2004	2005
Russia	*25 000	*25 000	*40 000	*30 000	*30 000
Egypt (c)	270	380	*400	*400	*400
South Africa	160 265	210 297	182 802	196 893	209 801
Uganda	100	664	1 724	2 688	2 574
Zimbabwe	11 632	21 494	13 260	27 150	23 045
USA (a)	*110 000	*100 000	*110 000	*100 000	*105 000
Argentina	1 110	1 050	1 124	1 293	1 403
Brazil	21 000	23 000	26 000	26 000	28 000
China	*70 000	*80 000	*90 000	*100 000	*100 000
India (b)	5 097	5 499	4 493	3 273	5 057
Iran	3 255	2 845	...	...	...
Japan	*6 400	*6 200	*6 200	*6 000	*6 000
Australia (c)	12 038	6 696	13 436	9 676	8 769

Note(s):-

(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

Country	2001	2002	2003	2004	2005
Finland	18 399	17 400	17 300	16 763	15 950
Namibia	284	742	585	406	253
Mexico	39 830	42 756	31 234	28 224	27 132
USA	*130 000	*150 000	*120 000	*120 000	*120 000
China	*400 000	*400 000	*400 000	345 000	350 000
India (a)	136 420	178 298	150 814	170 292	128 582

Note(s):-

(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	2001	2002	2003	2004	2005
Armenia	745	782	2 065	1 927	3 196
Bulgaria	10 600	12 900	13 000	15 548	12 700
Finland	20 100	34 100	38 800	37 200	40 500
Georgia	*1 000	—	—	—	—
Greece	31 737	35 000	3 000	—	4 000
Irish Republic	298 100	276 700	419 000	438 300	445 400
Macedonia	23 078	9 282	614	—	—
Poland	152 700	152 100	154 277	140 381	135 600
Romania	29 786	21 512	22 081	23 599	13 784
Russia	164 000	162 000	159 000	161 700	186 000
Serbia and Montenegro	5 988	6 273	5 618	1 500	2 000
Spain	165 568	69 926	15 140	—	—
Sweden	156 334	148 620	185 884	197 034	215 691
Turkey	36 000	43 000	40 000	39 000	48 000
Algeria	5 700	4 500	1 450	116	2 206
Congo, Democratic Republic	*700	—	—	—	—
Morocco	89 631	90 513	85 200	87 000	128 000
Namibia	37 622	41 042	108 000	202 000	246 000
South Africa	61 221	64 173	41 239	32 001	32 112
Tunisia	40 098	35 692	38 000	29 011	15 713
Canada	1 064 744	916 220	788 063	791 373	666 654
Honduras	48 485	46 339	43 766	41 413	42 698
Mexico	428 828	446 104	413 991	426 360	476 307
USA	842 100	780 000	767 600	738 900	747 900
Argentina	39 703	37 325	29 839	27 220	26 583
Bolivia	141 983	141 708	145 490	147 430	157 019
Brazil	111 432	136 339	152 822	158 962	171 434
Chile	32 762	36 161	33 051	27 635	28 841
Peru	1 056 629	1 221 616	1 372 790	1 209 006	1 201 671
China	1 693 200	1 624 100	2 029 100	2 391 200	2 525 000
India (a)	214 600	262 100	318 300	359 400	481 800
Iran	105 000	121 000	111 000	135 000	118 000
Japan	47 892	41 581	47 800	47 800	41 500
Kazakhstan	344 700	392 400	393 200	361 400	364 300
Korea, Dem. P.R. of	*28 000	*32 000	*52 000	*62 000	*60 000
Korea, Republic of	5 100	99	—	14	77
Laos	11 500	540	1 200	1 000	1 500
Mongolia	—	—	—	—	3 000
Myanmar	500	100	100	200	1 600
Saudi Arabia	*3 000	1 200	900	1 000	1 000
Thailand	8 866	15 188	14 830	19 948	20 381
Vietnam	43 000	44 000	50 000	40 000	48 000
Australia	1 517 000	1 469 000	1 479 000	1 334 000	1 367 000
World Total	9 100 000	9 000 000	9 600 000	9 700 000	10 100 000

Note(s):-

(a) Years ended 31 March following that stated

## Production of slab zinc

tonnes

Country	2001	2002	2003	2004	2005
Belgium	256 400	238 700	244 400	272 500	222 000
Bulgaria	88 000	83 000	86 800	101 500	95 100
Finland	248 800	235 300	265 900	284 525	281 904
France	328 900	333 300	257 000	260 000	209 000
Germany	361 348	378 561	388 131	382 020	334 900
Italy	178 600	175 800	123 100	118 400	121 200
Macedonia	59 744	48 599	23 746	—	—
Netherlands	204 794	203 460	224 000	224 000	227 500
Norway	144 694	144 538	143 627	140 901	148 000
Poland	174 700	158 900	154 200	155 500	137 300
Romania	48 000	38 000	51 000	52 746	49 447
Russia	249 000	257 000	253 000	239 000	211 000
Serbia and Montenegro	13 467	1 478	62	5 000	20 000
Spain	437 000	503 000	519 000	525 000	501 400
United Kingdom	99 600	99 600	16 600	—	—
Algeria	26 000	33 900	34 928	33 414	36 699
Namibia	—	—	47 436	120 533	132 818
South Africa	109 000	111 000	112 000	105 000	104 000
Zambia	—	2 000	2 000	2 000	—
Canada	661 172	793 410	761 199	805 438	722 951
Mexico	303 810	302 122	320 364	316 834	327 205
USA	310 700	294 400	302 600	306 000	309 000
Argentina	42 907	41 797	42 360	38 298	44 535
Brazil	204 037	254 700	264 500	273 000	274 000
Peru	204 646	172 688	202 076	195 692	163 603
China	2 037 600	2 155 100	2 318 500	2 719 500	2 772 000
India	234 000	248 000	280 000	272 000	302 360
Iran (a)	73 000	81 000	78 428	109 400	140 000
Japan	644 358	639 925	651 246	634 637	638 352
Kazakhstan	277 073	286 454	294 965	316 700	357 100
Korea, Dem. P.R. of	*31 000	*34 000	*55 000	*65 000	*60 000
Korea, Republic of	503 315	605 990	644 218	669 171	646 817
Thailand	104 300	104 900	113 700	115 500	101 200
Uzbekistan	80 100	78 900	58 100	*58 000	*58 000
Australia	561 000	572 000	560 000	479 000	463 000
World Total	9 300 000	9 700 000	9 900 000	10 400 000	10 200 000

Note(s):-

(a) Years ended 20 March following that stated

## Production of zirconium minerals

tonnes

Country	2001	2002	2003	2004	2005
Russia (a)	*6 500	*6 500	*6 500	*6 500	*6 500
Ukraine	*33 600	*34 300	*35 000	*35 000	*35 000
Gambia	...	...	12 000	*12 000	*12 000
South Africa	*262 000	*420 000	*370 000	*379 000	*390 000
USA	170 000	132 000	144 000	172 000	167 000
Brazil (a)	17 031	20 000	27 198	25 263	25 657
China	25 594	*20 000	*20 000	*20 000	*20 000
India	*19 000	23 219	25 263	25 432	*25 000
Indonesia	*250	*250	*250	*200	*200
Malaysia	3 768	5 293	3 456	6 686	4 954
Sri Lanka	—	—	—	12 826	23 587
Vietnam (b)	*8 000	*10 800	*21 300	*60 000	...
Australia	393 000	413 000	462 000	441 000	426 000
World Total	951 000	1 097 000	1 127 000	1 196 000	1 196 000

### Note(s):-

(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

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