



World Mineral Production

2020–2024



British
Geological
Survey

BRITISH GEOLOGICAL SURVEY

WORLD MINERAL PRODUCTION 2020–24

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Sibanye-Stillwater's East Boulder mine at the US PGM operations in Montana, USA. Copyright © 2026 Sibanye-Stillwater Limited.

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PREFACE

Welcome to the latest edition of World Mineral Production which includes global mineral production data for 2024. This is a continuation of the dataset that began in 1913. A new addition, introduced this year, is the inclusion of a treemap visualisation that shows the global quantity of metals and ores produced in 2024.

This publication is compiled from a comprehensive database, maintained by the British Geological Survey (BGS), through which we aim to provide a reliable and continuous set of data covering most of the minerals that enter international trade. In this volume we set out the production figures by country for more than 70 mineral commodities over the five-year period from 2020 to 2024. The objective of this series remains to present the latest production information obtained from official bodies in individual countries, although other sources are also used to ensure completeness and accuracy. The cooperation afforded to the BGS by numerous organisations is gratefully acknowledged.

In the year 2024 conflict and political and civil unrest in several regions of the world continued, making obtaining mineral production data for some countries challenging. In 2024 China also expanded its export control list of minerals, for example banning the export of antimony, gallium and germanium to the USA in response to US import tariffs on Chinese semiconductors. The export ban only applied to the USA, although during the 18-months that followed China steadily introduced export licensing regimes for the three metals. In late 2024, China introduced new export restrictions on five other metals (tungsten, indium, bismuth, tellurium and molybdenum) used in defence, clean energy and dual-use commodities. This further restricted the global availability of these commodities.

During 2024 several commodities experienced a significant decrease in their production volume. Mercury production has been decreasing for a number of years. Although China is still the largest single producer, output has decreased. Mexico has also reduced its mercury production, by 95 per cent over five years. Tajikistan, which is not a signatory of the Minamata Convention, continues to grow its production, with an increase of 181 per cent over five years, making it the second largest producer globally (32 per cent).

Antimony production has dropped by 16 per cent over the past five years and by almost 11 per cent in 2024 compared to 2023. Globally China produces 43 per cent of the world's antimony, followed by Tajikistan (26 per cent) and Russia (14 per cent). During the past five years these three countries have remained the top producers of antimony; however, they have all reduced the amount they are producing. China has restricted, closed or consolidated many small-scale, antimony mines and smelters, as part of a broader, long-term environmental policy. Many traditional antimony mines have aging infrastructure and face declining ore grades, making it difficult to maintain previous production levels. This could offer new opportunities for Tajikistan to become a leading producer of antimony in coming years. Antimony is classified as a critical raw material by several major global economies (e.g. EU, UK, USA). It's used in flame retardants, lead-acid batteries and alloys.

Global tungsten production has decreased by eight per cent in 2024 and by 12 per cent during the last five years. China is responsible for producing a large share of global supply (78 per cent). The Chinese government carefully oversees domestic supply of tungsten to manage the industry. Mines in China and abroad are facing natural depletion and declining ore grades, meaning more material must be processed to yield the same amount of tungsten concentrate. Vietnam is the world's second-largest producer, producing seven per cent in 2024. Vietnam also reported a 16 per cent decline in production in 2024 due to lower throughput and ore grades.

Global production of minerals that are vital for batteries and energy storage systems, including cobalt, nickel and lithium all increased in 2024. Lithium production has increased by 208 per cent during the last five years. Australia was the largest spodumene producer at 39 per cent, whilst Chile was the largest producer of lithium carbonate. Lithium production in many countries has remained relatively stable during the last five years. However, Zimbabwe lithium production has increased dramatically during the same time period, rising from 0.4 per cent of global production in 2020 to almost eight per cent in 2024, making it the world's fourth largest producer.

Global cobalt mine production increased by 103 per cent during the last five years and by 32 per cent in 2024 compared to 2023. Democratic Republic of Congo (DRC) was the leading producer with 74 per cent of the production share, followed by Indonesia at 11 per cent. This has been driven by massive capacity expansion in the DRC and Indonesia. Cobalt is essential to low carbon economies, industrial growth and national security. It is a key material in advanced defence and military technologies as well as in a wide range of applications across electronics, automotive, aerospace, and healthcare. Cobalt is crucial in the production of lithium-ion batteries, which power devices from smartphones to electric vehicles, making it indispensable to the ongoing shift toward more sustainable technologies.

Global production of mined nickel increased by 53 per cent over the past five years, although 2024 production decreased by three per cent compared to 2023. Indonesia accounts for 61 per cent of global supply, followed by the Philippines (nine per cent) and Russia (seven per cent). More recently, Indonesia has delayed the issuance of quotas for nickel mining, leading to supply shortages, resulting in some companies importing ore from the Philippines to maintain nickel pig iron (NPI) production levels. Nickel is widely used in many areas, including electronics, aerospace, stainless steel, batteries for electric vehicles and energy storage. Despite its growing importance to the clean energy transition, current nickel production is emissions-heavy and associated with significant environmental and social impacts.

Global refined and smelter nickel production has increased by 41.8 per cent over the past five years. Refined nickel production in 2024 saw significant growth, primarily driven by substantial expansion in Indonesian high-pressure acid leaching (HPAL) plants. Indonesia produced about 45 per cent of refined nickel in

2024, compared to about 25 per cent five years ago. China is also a significant producer, accounting for 28 per cent of global production. Indonesia has transformed the global nickel industry. A decade ago, Indonesia accounted for only two per cent of global refined output. Its share has increased by over 60 per cent in five years. The turning point was the government's 2020 ban on raw ore exports, which forced Chinese stainless-steel producers to invest directly in processing capacity within the country. This sparked an extraordinary build-out of smelters, refineries, and processing plants

Chromium production increased globally by 15 per cent in 2024, and over the past five years has increased by 42 per cent. South Africa holds the largest geological resources and reserves of chromium ore and is the world's leading producer at 54 per cent, followed by Kazakhstan that produces over 16 per cent. South Africa has historically dominated chromium production, despite its relatively small size and several infrastructure and social challenges. Chromium is essential in the production of stainless steel.

Uranium production has increased globally by 13 per cent in 2024 and by 29 per cent over the past five years. Kazakhstan accounted for 37 per cent of global supply in 2024 followed by Canada at 26 per cent and Namibia at

12 per cent. The top three global producing countries account for three quarters of global uranium production. Uranium production has responded to more favourable market conditions and increased demand for nuclear energy, with significant restarts in Canada, Namibia, and the United States. Currently about 10 per cent of the world's electricity is generated by nuclear energy, and that number is expected to grow.

International interest in the security of supply of minerals continues to grow. The UK Critical Minerals Intelligence Centre (CMIC) is hosted by the BGS. Notable publications include UK 2024 Criticality Assessment and Demand Foresight studies.

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

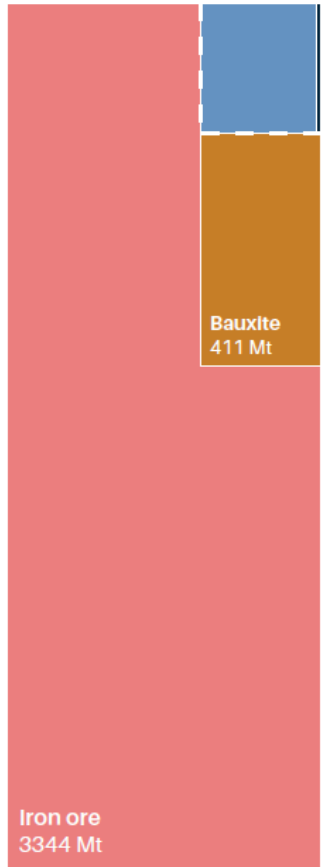
Karen Hanghøj
Director

British Geological Survey
Keyworth
Nottingham

March 2026

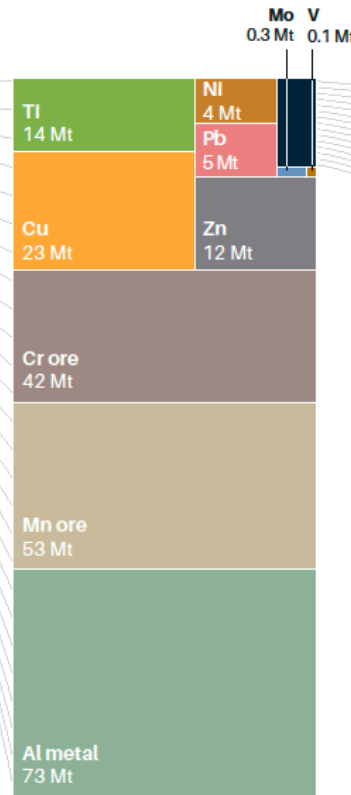
Global metals and ores produced in 2024

All metals and ores



Mt = Million tonnes

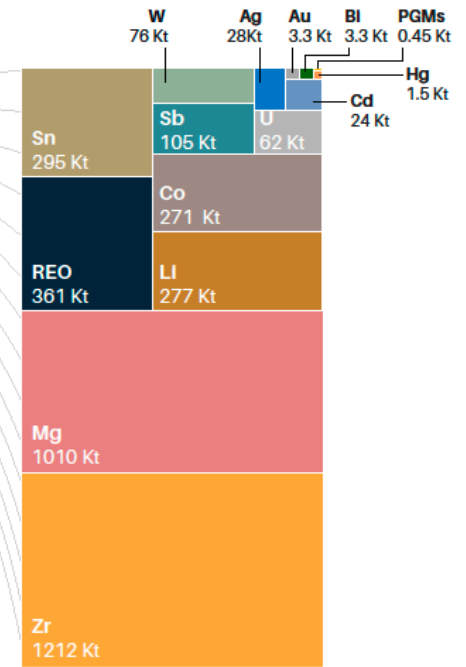
Industrial metals and ores



All other metals and ores including technology and precious metals
231 Mt

Technology and precious metals
3.7 Mt

Technology and precious metals



Kt = Thousand tonnes

Footnote: unless otherwise stated all figures are metal content.

Footnote: PGM is excluding Osmium

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Coverage

World Mineral Production covers the majority of economically important mineral commodities. For each commodity constant efforts are made to ensure that as many producing countries as possible are reported. For some commodities, where statistics on production are not publicly available, estimates are made. Users of this compilation are advised that more statistical information than can be included in a publication of this nature is held in the British Geological Survey files and is available for consultation. Historical data (from 1913 for many commodities) can be obtained from the predecessors to this series entitled *World Mineral Statistics* and the *Statistical Summary of the Mineral Industry*. Copies of these publications are available in the World Archive section of the website: www.mineralsUK.com.

Arrangement of countries

Countries are ordered alphabetically in geographical groupings as follows:

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

Metals

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

World totals

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

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Acknowledgements

Compilation of this volume of mineral statistics has been possible only by obtaining information from a very large number of organisations throughout the world, chiefly home and overseas government departments and specialist national or international authorities concerned with particular sectors of the minerals or metals industries. To all these bodies the British Geological Survey expresses its grateful acknowledgement for the information made available, whether in published form or provided by direct correspondence. Particular acknowledgement is made to the Mines Departments and other government agencies of many countries whose regular statements, yearbooks and other reports are worthy of direct consultations by readers in search of detail.

Specialist commodity organisations which have kindly allowed information to be reproduced include the International Copper Study Group, the International Lead and Zinc Study Group and the International Nickel Study Group. 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

Appendix 2 contains a fuller list of organisations to whom acknowledgement is made.

Units

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

long tons × 1.0161 = tonnes
short tons × 0.9072 = tonnes
pounds × 0.4536 = kilograms
troy ounces × 0.0311 = kilograms
cubic feet × 0.0283 = cubic metres
1 barrel of crude petroleum × 0.1364 = tonne of crude petroleum
1 flask mercury = 34.7 kilograms

Symbols

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

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STATISTICAL INFORMATION

Production of bauxite

tonnes (metric)

Country	2020	2021	2022	2023	2024
Bosnia & Herzegovina	619 748	675 269	699 926	548 160	* 600 000
Croatia	14 080	14 450	17 750	14 700	15 000
France (a)	123 500	142 800	117 988	* 120 000	* 120 000
Greece	1 428 000	1 227 498	1 173 000	974 900	1 061 300
Montenegro	897 057	542 049	442 067	526 523	609 551
Russia	6 420 000	6 529 000	6 630 000	7 031 000	6 324 000
Turkey	2 399 680	2 764 873	3 637 217	2 934 790	3 659 805
Côte d'Ivoire	272 295	—	54 963	200 000	200 000
Ghana	1 162 086	839 465	773 213	959 601	1 694 175
Guinea (b)	87 766 199	87 438 557	103 525 513	123 067 415	* 142 000 000
Mozambique	6 491	7 852	14 583	5 481	4 487
Sierra Leone	1 441 987	1 455 554	973 599	1 004 210	1 500 253
Tanzania	25 995	38 142	40 921	61 353	79 148
Dominican Republic	9 475	71 517	91 813	—	* —
Jamaica	7 616 284	5 937 320	4 364 729	5 988 079	5 988 924
USA (c)(d)	16 438	—	12 581	48 232	57 635
Brazil	32 897 800	35 949 600	34 215 200	34 472 600	31 848 662
Colombia	9 595	49 946	48 016	2 779	45 403
Guyana	608 168	618 452	705 631	523 742	1 722 350
Venezuela	—	22 000	770 000	900 000	* 900 000
China	* 42 000 000	* 40 000 000	74 300 000	65 516 300	* 64 200 000
India (e)	21 825 227	22 494 094	23 844 337	23 925 514	24 705 314
Indonesia	25 859 895	25 781 187	28 808 674	9 889 569	* 7 500 000
Iran (f)	1 115 008	884 000	955 500	1 002 593	* 1 000 000
Kazakhstan	4 057 800	4 370 100	4 177 800	4 559 900	4 782 200
Malaysia	549 714	47 577	129 825	576 500	387 032
Pakistan (g)	101 047	97 495	70 967	60 855	* 108 000
Saudi Arabia	5 227 000	5 488 000	5 930 000	* 5 900 000	* 6 000 000
Vietnam	* 3 120 000	* 3 300 000	* 3 200 000	* 3 360 000	* 3 420 000
Australia	103 626 811	103 266 404	100 718 354	99 298 376	100 462 000
Solomon Islands (h)	* 839 000	* —	* —	* —	* —
World total	352 100 000	350 100 000	400 400 000	393 500 000	411 000 000

Note(s)

- (1) This table includes production of refractory bauxite.
 - (2) In addition to the countries listed, some bauxite continues to be produced in Mexico but it is all used as construction aggregates and figures are not reported.
- (a) For non-metallurgical uses
 - (b) No adjustment has been made for moisture content
 - (c) Data for Alabama only
 - (d) Years ended 30 September of that stated
 - (e) Years ended 31 March following that stated
 - (f) Years ended 20 March following that stated
 - (g) Years ended 30 June of that stated
 - (h) Conservative BGS estimate based on reported exports

Production of alumina

tonnes (Al₂O₃ content)

Country	2020	2021	2022	2023	2024
Bosnia & Herzegovina	122 241	172 974	180 278	137 968	140 915
France	417 000	400 000	—	—	—
Germany	1 050 000	1 065 000	920 000	452 000	1 030 000
Greece	672 500	697 100	689 100	712 580	709 300
Ireland, Republic of	1 822 368	1 878 000	1 629 000	1 380 333	1 740 000
Romania	426 393	498 603	108 408	—	—
Russia	2 873 000	3 054 000	3 080 000	3 022 000	2 841 000
Spain	1 553 000	1 536 000	1 343 000	716 000	800 000
Turkey	* 260 000	* 260 000	* 260 000	* 260 000	* 260 000
Ukraine	1 725 000	1 800 000	300 000	—	* —
Guinea	438 700	409 870	336 100	273 000	* 340 000
Canada	1 518 000	1 471 000	1 478 000	1 501 000	1 464 000
Jamaica	1 620 943	1 158 450	634 103	1 400 828	1 481 234
USA	1 340 000	1 000 000	920 000	850 000	* 810 000
Brazil	10 185 000	10 992 300	10 871 500	10 443 400	* 10 500 000
China	73 131 946	77 480 000	81 862 000	82 441 000	85 522 000
India (a)	6 624 500	7 325 000	7 441 000	8 094 000	8 357 500
Indonesia	1 162 100	1 363 100	* 2 100 000	* 2 200 000	* 2 200 000
Iran (b)	231 612	230 682	225 942	222 138	244 073
Japan	17 700	24 200	* 15 200	* 14 500	* 17 900
Kazakhstan	1 383 000	1 315 066	1 338 095	1 410 000	1 809 399
Saudi Arabia	1 782 041	1 879 000	1 745 000	1 825 000	1 871 000
United Arab Emirates	1 920 000	2 300 000	2 430 000	2 480 000	2 540 000
Vietnam	1 384 706	1 456 068	1 428 503	1 491 300	1 522 200
Australia	20 837 142	20 624 088	19 576 174	18 802 465	17 083 589
World total	134 500 000	140 400 000	140 900 000	140 100 000	143 300 000

Note(s)

- (1) Where possible, figures in this table show the alumina equivalent (Al₂O₃) of total hydrate produced, whether or not calcined.
- (2) The figures in this table represent alumina produced from bauxite. Alumina-rich materials can also be derived from salt slags formed during the production of secondary aluminium.

(a) Years ended 31 March following that stated

(b) Years ended 20 March following that stated

Production of primary aluminium

tonnes (metric)

Country	2020	2021	2022	2023	2024
Azerbaijan	31 492	24 900	33 529	28 230	16 255
Bosnia & Herzegovina	—	90 037	138 969	35 600	31 870
France	417 000	438 900	388 590	356 700	429 200
Germany	529 056	509 193	341 212	189 471	220 000
Greece	189 036	183 770	186 448	182 875	182 000
Iceland	728 104	729 813	756 012	768 389	742 192
Montenegro	37 208	45 214	43 196	21 778	14 887
Netherlands	70 600	46 700	* —	* —	* —
Norway	1 330 000	1 419 000	1 424 600	1 321 200	1 283 000
Romania	271 307	293 399	191 454	196 438	248 059
Russia	3 936 000	3 937 000	4 014 000	4 026 000	4 182 000
Slovakia	151 875	163 995	71 933	56 114	—
Slovenia	50 185	37 867	19 211	1 487	—
Spain	* 200 000	* 190 000	—	—	—
Sweden	117 000	124 000	120 000	119 000	109 000
Turkey	79 900	79 200	82 000	* 82 000	* 82 000
United Kingdom	35 700	37 571	31 337	29 246	29 050
Cameroon	61 700	47 300	62 800	62 200	28 600
Egypt (a)	268 000	* 260 000	* 260 000	310 000	305 000
Ghana (b)	37 566	39 239	55 592	48 314	35 084
Mozambique (a)	569 002	562 633	576 220	541 601	492 936
South Africa	717 000	714 000	718 000	720 000	723 000
Canada	3 154 493	3 157 762	3 026 236	3 301 844	3 338 512
USA	1 026 617	907 846	872 300	* 735 000	* 685 000
Argentina	309 804	338 239	400 038	441 000	447 000
Brazil	685 100	771 700	819 000	1 021 700	1 107 800
Venezuela	* 10 000	38 300	8 400	* 8 000	* 9 200
Bahrain	1 548 000	1 561 222	1 600 111	1 620 665	1 622 000
China	37 080 401	38 502 600	40 144 300	41 594 000	44 005 000
India (c)	3 619 237	4 016 621	* 4 100 000	4 159 000	4 199 000
Indonesia	220 100	243 400	223 774	214 882	274 230
Iran (d)	446 836	562 649	632 166	635 596	604 526
Kazakhstan	264 600	262 361	249 141	260 877	264 500
Malaysia	* 800 000	901 000	928 000	* 1 000 000	* 1 000 000
Oman	397 000	395 000	395 000	398 000	399 000
Qatar	655 000	662 000	638 000	677 000	682 000
Saudi Arabia	796 004	998 000	952 000	895 000	986 000
Tajikistan	84 000	61 000	* 62 000	66 649	82 200
United Arab Emirates	2 520 000	2 540 000	2 650 000	2 660 000	2 690 000
Australia	1 582 947	1 558 529	1 509 646	1 555 474	1 575 895
New Zealand	335 405	333 115	333 689	333 716	289 700
World total	65 400 000	67 800 000	69 100 000	70 700 000	73 400 000

Note(s)

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

(a) Years ended 30 June of that stated

(b) Exports

(c) Years ended 31 March following that stated

(d) Years ended 20 March following that stated

Mine production of antimony

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Russia	17 532	* 9 000	* 11 000	* 30 000	* 15 000
Turkey	2 570	4 210	10 692	3 816	4 548
Canada	2	2	* 2	—	* —
Guatemala	—	—	12	* 25	—
Honduras	* 10	* 40	* 80	* 85	* 80
Mexico	136	413	700	800	800
Bolivia	2 629	3 093	3 453	3 884	4 817
China	60 995	42 622	* 39 000	* 41 000	* 45 000
Iran (a)	2 002	* 2 000	3 890	1 555	* 1 500
Kazakhstan	* —	* 20	* 100	* 100	* 150
Kyrgyzstan	* 30	* —	* 20	* 100	* 100
Laos	—	242	—	—	1 269
Myanmar	* 3 800	* 6 400	* 3 500	* 2 600	* 2 600
Pakistan (b)	17	63	* 60	40	* 380
Tajikistan	30 777	28 531	30 238	31 721	27 500
Vietnam	312	268	517	218	218
Australia	3 903	3 380	2 292	1 860	1 282
World total	125 000	100 000	106 000	118 000	105 000

Note(s)

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

(a) Years ended 31 March following that stated

(b) Years ended 30 June of that stated

Production of white arsenic

tonnes (metric)

Country	2020	2021	2022	2023	2024
Belgium	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Russia	500	* 800	* 500	* 500	* 500
Morocco	7 694	6 883	5 450	7 700	* 6 000
Bolivia (a)	* 130	100	* 35	* —	* —
Peru	19 014	21 872	25 379	31 162	32 028
China	* 24 000	* 25 000	* 25 000	* 24 000	* 24 000
Japan	* 40	* 40	* 40	* 40	* 40

Note(s)

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

(a) Exports

Production of asbestos

tonnes (metric)

Country	2020	2021	2022	2023	2024
Russia	708 000	750 000	630 000	600 000	* 600 000
Brazil	77 057	172 256	182 965	189 340	* 190 000
China	* 130 000	* 160 000	196 000	* 200 000	* 200 000
Kazakhstan	227 400	250 100	250 200	255 300	225 700
World total	1 100 000	1 300 000	1 300 000	1 200 000	1 200 000

Note(s)

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

Production of barytes

tonnes (metric)

Country	2020	2021	2022	2023	2024
Bulgaria	* 41 000	* 72 000	* 75 000	* 59 000	* 60 000
France					
Barium minerals	* 75 000	* 75 000	* 77 000	70 042	61 119
Germany	26 656	27 921	24 128	16 434	23 859
Italy	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
Russia	287 000	* 250 000	* 250 000	* 250 000	* 250 000
Turkey	283 161	256 076	344 322	215 946	260 595
United Kingdom	* 46 000	* 30 000	* 30 000	* 30 000	* 30 000
Algeria	32 940	44 662	49 184	51 173	* 52 000
Egypt (a)	* 4 000	* 4 000	* 4 000	* 4 000	* 3 500
Morocco	501 939	840 486	925 905	931 332	758 060
Nigeria	544	460	1 170	30	* 30
Canada	* 20 000	* 30 000	* 40 000	* 30 000	* 40 000
Mexico	480 954	978 652	498 230	482 302	244 269
USA	125 409	257 450	361 582	* 300 000	* 290 000
Bolivia	9 611	27 110	48 952	54 509	* 55 000
Brazil	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Colombia	2 046	1 164	1 034	1 376	* 1 400
Peru	5 242	10 361	29 293	11 824	9 129
Afghanistan	* 500	* 500	* 500	* 500	* 500
China	* 1 700 000	* 2 100 000	* 1 900 000	* 2 000 000	* 2 100 000
India (b)	* 1 500 000	* 1 500 000	* 1 500 000	* 1 500 000	* 1 500 000
Iran (c)	288 341	420 422	292 181	555 521	* 500 000
Kazakhstan	445 300	* 600 000	* 650 000	* 650 000	* 650 000
Laos	96 278	37 403	302 709	725 207	1 489 508
Myanmar	2 642	2 220	33 789	* 29 300	* 29 300
Pakistan (a)	55 341	51 553	127 553	140 970	145 500
Thailand	22 394	4 988	6 509	30 684	* 30 000
Vietnam	* 43 000	* 43 000	* 43 000	* 43 000	* 43 000
Australia	—	158	2 635	3 754	2 072
World total	6 200 000	7 800 000	7 700 000	8 300 000	8 700 000

Note(s)

(1) This table may include small quantities of witherite.

(a) Years ended 30 June of that stated

(b) Years ended 31 March following that stated

(c) Years ended 20 March following that stated

Production of bentonite and fuller's earth

tonnes (metric)

Country	2020	2021	2022	2023	2024
Armenia					
Bentonite	5 956	15 979	13 198	10 481	* 12 000
Azerbaijan					
Bentonite	155 112	174 242	175 875	125 542	253 146
Bosnia & Herzegovina					
Bentonite	69 183	75 761	28 173	37 878	20 024
Bulgaria					
Bentonite	719 647	713 118	707 785	729 623	(a) 731 003
Cyprus					
Bentonite	92 645	81 655	86 562	102 442	99 330
Czech Republic					
Bentonite	226 000	198 000	167 000	196 000	185 000
Denmark					
Bentonite	40 054	20 281	24 128	18 962	14 067
France					
Bentonite	(a)* 36 000	(a)* 36 000	176 628	* 176 000	* 176 000
Georgia					
Bentonite	12 750	16 315	22 955	48 716	41 744
Germany					
Bentonite	333 000	363 000	331 000	285 000	260 000
Greece					
Bentonite	1 105 000	1 415 000	1 250 000	1 162 561	1 031 451
Attapulгите	28 050	29 300	5 900	* 5 900	* 5 900
Hungary					
Bentonite	14 871	30 462	34 690	28 535	45 698
Italy					
Bentonite	65 989	32 252	102 264	394 391	328 590
North Macedonia					
Bentonite	2 196	—	—	—	—
Norway					
Bentonite (a)	* —	12 803	—	* —	* —
Poland					
Bentonite	920	500	—	1 110	3 880
Romania					
Bentonite	45 495	54 648	61 165	62 026	61 230
Russia					
Bentonite	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Slovakia					
Bentonite	275 570	272 880	302 000	275 000	319 000
Slovenia					
Bentonite	77	75	68	86	75
Spain					
Bentonite	205 773	171 572	186 363	117 550	197 406
Attapulгите	30 653	33 008	38 165	43 429	45 597
Sepiolite	531 660	574 439	580 695	645 633	362 880
Turkey					
Bentonite	1 658 837	2 020 356	2 018 993	2 494 366	2 528 367
Sepiolite	65 427	111 900	55 100	74 483	26 477
Ukraine					
Bentonite	* 180 000	* 180 000	* 90 000	* 90 000	* 90 000
Algeria					
Bentonite	34 200	31 700	33 700	39 800	* 40 000
Angola					
Fuller's earth	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Egypt					
Bentonite	* 34 000	* 55 000	* 43 000	* 30 000	* 40 000
Kenya					
Bentonite	* 110	* 110	* 110	* 110	* 110
Morocco					
Bentonite	92 387	134 340	135 600	89 274	87 901
Fuller's earth	(b) 78 302	(b)* 84 029	(b)* 84 000	89 274	* 90 000
Mozambique					
Bentonite	80 189	118 692	113 985	71 593	23 810
Senegal					
Attapulгите	186 615	170 851	150 704	174 613	161 030

Production of bentonite and fuller's earth

tonnes (metric)

Country	2020	2021	2022	2023	2024
South Africa					
Bentonite	85 558	98 606	97 019	77 869	42 539
Attapulgit	11 957	13 189	9 004	7 918	7 413
Cuba					
Bentonite	486	517	290	269	121
Guatemala					
Bentonite	371	7 378	19 237	* 20 000	2 024
Mexico					
Bentonite	79 219	—	—	—	—
USA					
Bentonite (c)	* 4 250 000	* 4 580 000	* 4 580 000	* 4 360 000	* 4 800 000
Fuller's earth (c)	* 2 120 000	* 2 240 000	* 2 200 000	* 2 260 000	* 2 400 000
Argentina					
Bentonite	46 288	* 46 000	* 46 000	* 46 000	* 46 000
Brazil					
Bentonite	217 055	* 220 000	* 220 000	* 220 000	* 220 000
Chile					
Bentonite	170	170	1 372	463	2 465
Colombia					
Bentonite	* 9 000	* 9 000	* 9 000	* 9 000	* 9 000
Peru					
Bentonite	25 532	56 199	22 931	24 783	42 411
Uruguay					
Bentonite (d)	16 550	19 710	21 570	15 550	17 320
China					
Bentonite	2 085 700	2 100 000	2 100 000	* 2 100 000	* 2 100 000
India					
Bentonite (d)	* 3 500 000	* 3 500 000	* 3 500 000	* 3 500 000	* 3 500 000
Fuller's earth (d)	* 730 000	* 730 000	* 730 000	* 730 000	* 730 000
Indonesia					
Bentonite	* 6 000	* 6 000	* 6 000	* 12 000	* 12 000
Iran					
Bentonite (e)	1 391 973	1 642 781	1 312 418	1 190 606	* 1 200 000
Iraq					
Bentonite	* 6 300	* 6 300	* 6 300	* 6 300	* 6 300
Japan					
Bentonite	* 250 000	* 260 000	* 260 000	* 260 000	* 260 000
Korea (Rep. of)					
Bentonite	5 314	34 243	341 335	8 000	* 8 000
Fuller's earth	71 855	52 192	28 410	3 867	5 864
Myanmar					
Bentonite (f)	* 500	* 500	* 500	* 500	* 500
Pakistan					
Bentonite (g)	107 742	59 744	30 707	2 848	* 11 000
Fuller's earth (g)	2 842	1 840	2 299	1 000	* 2 900
Philippines					
Bentonite	* 650	* 650	* 650	* 650	5 386
Uzbekistan					
Bentonite	48 739	59 053	51 075	65 721	* 65 000
Australia					
Bentonite (g)	42 713	46 658	26 332	45 216	168 523
Fuller's earth	* 10 000	* 12 000	* 12 000	* 12 000	* 12 000
New Zealand					
Bentonite	* 750	* 750	* 750	* 750	* 750
World total					
Bentonite	17 700 000	19 000 000	18 800 000	18 600 000	19 200 000
Fullers earth (h)	3 900 000	4 100 000	3 900 000	4 000 000	3 900 000

See note on the following page

Production of bentonite and fuller's earth

Note(s)

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

- (a) Sales
- (b) Smectite
- (c) Sold or used by producers
- (d) Years ended 31 March following that stated
- (e) Years ended 20 March following that stated
- (f) Years ending 30 September of that stated
- (g) Years ended 30 June of that stated
- (h) Including attapulgite and sepiolite

Production of beryl

tonnes (metric)

Country	2020	2021	2022	2023	2024
Madagascar (a)	* 1	* 1	* 1	* 1	* 1
Mozambique	80	330	1 285	882	1 421
Namibia	...	15	1	* 1	* 1
Nigeria	* 200	* 200	349	978	* 1 000
Rwanda	* 18	* 20	* 20	* 20	* 20
Uganda	186	473	—	—	* —
Zambia	1	5	5	4	6
USA (b)	4 330	4 380	4 330	4 590	5 750
Brazil	10	2 000	* 1 000	2 000	370
China	* 1 750	* 1 750	* 1 750	* 1 850	* 1 900

Note(s)

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

Mine production of bismuth

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Armenia	* 4	* 4	* 4	* 4	* 4
Bulgaria	* 50	* 50	* 50	* 50	* 50
Russia	* 45	* 45	* 45	* 45	* 45
Canada	4	—	—	—	* —
Bolivia	—	27	—	58	12
Peru (a)	74	248	251	304	265
China	* 1 804	* 1 804	* 1 800	* 1 800	* 1 800
Japan (a)	574	478	* 480	* 430	* 470
Kazakhstan	* 450	* 200	* 190	* 160	* 180
Vietnam	993	2 067	1 938	1 148	492
World total	4 000	4 900	4 800	4 000	3 300

Note(s)

- (1) The figures in this table are in some instances derived from reported bismuth content of refined and impure metal plus recoverable in ores and concentrates exported.
- (2) Production for some countries may include bismuth produced from imported ores but it is thought that any resulting duplication is insignificant in the countries shown.
- (3) In addition to the countries listed, Australia, Laos and Republic of Korea may produce bismuth but data are confidential.

(a) Metal production

Production of borates

tonnes (metric)

Country	2020	2021	2022	2023	2024
Russia	* 80 000	* 80 000	* 80 000	* 80 000	* 80 000
Turkey	2 819 111	4 057 299	2 452 485	1 793 746	2 560 100
USA (a)	* 1 300 000	* 1 300 000	* 1 300 000	* 1 300 000	* 1 300 000
Argentina	134 604	* 130 000	* 130 000	* 130 000	* 130 000
Bolivia	258 143	312 906	295 515	327 253	* 330 000
Chile	288 103	363 032	421 935	450 239	252 317
Peru	43 645	246 362	292 986	179 938	386 070
China (b)	* 130 000	* 205 000	300 000	* 300 000	* 340 000
Iran (c)	1 300	2 000	2 735	2 720	* 2 700
Kazakhstan	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000

Note(s)

- (a) Sold or used by producers
- (b) B₂O₃ equivalent
- (c) Years ended 20 March following that stated

Production of bromine

kilograms

Country	2020	2021	2022	2023	2024
Russia	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000
Ukraine	* 11 000 000	10 800 000	* 11 000 000	* 11 000 000	* 11 000 000
USA (a)	* 225 000 000	* 225 000 000	* 225 000 000	* 225 000 000	* 225 000 000
China	* 70 000 000	92 900 000	97 500 000	101 000 000	* 100 000 000
India (b)	* 2 800 000	* 2 800 000	* 2 800 000	* 2 800 000	* 2 800 000
Israel	173 000 000	186 000 000	180 000 000	143 000 000	190 000 000
Japan	* 20 000 000	* 18 000 000	* 20 000 000	* 20 000 000	* 20 000 000
Jordan	112 760 000	115 160 000	* 115 000 000	* 115 000 000	* 115 000 000
Turkmenistan	* 500 000	* 500 000	* 500 000	* 500 000	* 500 000

Note(s)

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

(b) Years ended 31 March following that stated

Production of cadmium

tonnes (metric)

Country	2020	2021	2022	2023	2024
Bulgaria	311	343	315	306	379
Germany	* 450	417	* 320	* 350	* 350
Netherlands	* 351	* 854	* 574	726	* 700
Norway	* 340	* 390	* 400	* 400	* 400
Poland	80	—	—	—	—
Russia	* 1 300	* 1 400	* 1 500	* 1 500	* 1 600
Canada (a)	1 800	* 1 800	* 1 800	* 1 800	* 1 800
Mexico	978	1 051	1 174	1 053	1 187
USA (a)	211	241	212	375	* 300
Argentina	46	50	—	—	—
Brazil	* 25	* 16	* 20	* 20	* 20
Peru	687	279	264	331	317
China	* 10 300	10 349	* 8 700	* 9 300	* 9 300
Japan	1 880	1 900	* 1 900	* 1 900	* 1 800
Kazakhstan	* 1 500	* 1 500	* 1 000	* 1 000	* 1 000
Korea (Rep. of)	* 4 500	* 4 500	* 4 500	* 4 500	* 4 500
Korea, Dem. P.R. of	* 200	* 200	* 150	* 150	* 150
Uzbekistan	450	470	500	* 500	* 500
World total	25 400	25 800	23 300	24 200	24 300

Note(s)

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

(a) Including cadmium sponge and/or secondary metal

Production of chromium ores and concentrates

tonnes (metric)

Country	2020	2021	2022	2023	2024
Albania	626 627	650 200	932 686	909 669	* 700 000
Finland (a)	1 131 336	1 141 184	940 200	891 382	815 793
Greece	1 651	—	—	—	—
Russia	706 000	554 000	809 000	616 000	* 615 000
Turkey	2 128 669	2 779 467	2 562 533	2 575 271	2 981 930
Ethiopia (b)	581	1 707	637	469	795
Madagascar (b)	12 400	13 500	18 300	* 91 300	* 129 000
South Africa	13 196 880	18 435 250	19 061 754	19 683 351	22 919 732
Sudan	9 000	5 575	3 000	* 4 400	* 3 000
Zimbabwe	1 272 139	1 244 300	1 154 158	1 204 755	* 2 454 600
Brazil	583 997	627 735	565 575	522 869	529 947
Colombia	146	—	21	—	—
Afghanistan	* 4 500	* 11 500	43 500	32 898	32 733
China	113 400	140 870	135 510	* 130 000	* 130 000
India (c)	2 830 413	3 785 625	3 557 289	3 147 954	3 026 273
Iran (d)(e)	251 292	281 544	265 415	155 383	* 150 000
Kazakhstan	6 327 000	6 192 000	5 716 900	6 108 000	7 047 000
Oman	456 800	488 900	437 600	389 500	296 000
Pakistan (f)	121 435	140 126	194 964	155 580	259 200
Philippines (f)	35 112	30 721	87 182	101 960	127 613
Papua New Guinea	114 569	119 625	* 120 000	* 150 000	* 178 000
World total	29 900 000	36 600 000	36 600 000	36 900 000	42 400 000

Note(s)

(a) Concentrates

(b) Exports

(c) Years ended 31 March following that stated

(d) Including foundry sand and/or lumpy ore

(e) Years ended 20 March following that stated

(f) Years ended 30 June of that stated

Production of coal

tonnes (metric)

Country	2020	2021	2022	2023	2024
Albania					
Lignite	42 000	24 482	149 312	191 406	* 192 000
Bosnia & Herzegovina					
Brown coal & lignite	13 365 730	12 802 517	13 736 665	12 791 560	11 657 614
Bulgaria					
Lignite	20 900 000	27 160 000	35 513 000	20 971 000	14 991 000
Brown coal	1 100 000	840 000	720 000	840 000	* 800 000
Czech Republic					
Bituminous	1 861 000	2 008 000	1 281 000	1 000 000	1 202 000
Brown coal	29 505 000	29 505 000	33 398 000	28 660 000	23 676 000
Georgia	99 300	147 878	146 300	148 000	177 800
Germany					
Brown coal	107 377 260	126 181 851	130 801 072	102 127 890	91 941 000
Greece					
Lignite	14 000 000	12 081 578	14 289 000	* 10 900 000	* 7 000 000
Hungary					
Bituminous	1 513	252	418	—	—
Lignite	6 069 000	4 928 000	4 877 000	4 023 000	3 857 000
Brown coal	51 591	58 955	51 844	52 723	33 805
Kosovo					
Lignite	8 537 948	8 535 435	8 344 548	7 071 048	8 106 057

Production of coal

tonnes (metric)

Country	2020	2021	2022	2023	2024
Montenegro					
Lignite	1 656 900	1 548 600	1 722 500	1 862 200	1 624 800
Brown coal	8 500	—	—	—	—
North Macedonia					
Lignite	4 532 745	4 758 504	5 520 778	4 091 133	4 294 609
Norway					
Bituminous (a)	74 503	113 292	110 445	82 902	117 000
Poland					
Coking coal	12 274 000	12 581 000	12 364 750	11 924 000	11 347 800
Other bituminous coal	42 467 000	42 779 000	40 780 460	40 095 000	41 025 800
Lignite	47 300 000	54 851 000	57 679 000	42 512 000	43 462 000
Romania					
Anthracite & Bituminous	428 368	240 128	188 901	128 871	—
Lignite	15 161 420	18 151 887	18 713 709	15 173 934	12 590 000
Russia	398 000 000	435 000 000	435 000 000	430 000 000	427 200 000
Serbia					
Bituminous	30 000	26 000	75 000	66 000	77 000
Lignite (b)	39 330 000	36 118 000	34 819 000	31 631 000	30 941 000
Brown coal	306 000	271 000	233 000	237 000	229 000
Slovakia					
Lignite	211 600	205 400	117 000	—	—
Brown coal	745 000	858 000	725 000	756 000	—
Slovenia					
Lignite	3 259 309	2 807 476	2 745 022	3 030 494	2 175 711
Turkey					
Anthracite	1 613 624	1 726 109	1 794 712	1 423 727	1 385 780
Lignite	84 811 522	90 780 036	102 097 457	80 478 995	86 777 354
Ukraine					
Bituminous (c)	24 168 300	23 761 900	20 309 600	19 700 312	17 395 375
United Kingdom					
Anthracite	345 350	266 120	156 500	178 640	105 570
Bituminous	1 328 000	788 000	494 000	327 000	940
Botswana	1 923 992	2 460 868	2 460 868	2 064 373	2 454 559
Congo, Democratic Republic					
Bituminous	* 8 000	* 8 000	* 8 000	* 8 000	* 8 000
Eswatini (Swaziland)					
Anthracite	161 768	162 681	215 581	393 328	480 463
Ethiopia					
Lignite	* 2 700	* 2 700	* 2 700	* 2 700	* 2 700
Malawi	54 876	30 251	62 166	64 251	* 70 538
Mozambique					
Bituminous	8 041 211	11 079 683	14 806 233	14 975 879	16 312 615
Niger	246 880	105 760	235 328	193 632	205 312
Nigeria					
Bituminous	2 351 350	2 506 050	3 043 000	1 322 050	* 1 300 000
South Africa					
Anthracite	4 301 386	3 071 699	3 278 780	2 501 883	2 290 807
Bituminous	243 780 359	225 572 858	226 315 429	229 183 189	233 762 340
Tanzania					
Bituminous	689 989	976 319	2 511 419	3 256 481	3 904 543
Zambia					
Bituminous	446 153	663 345	691 288	706 115	769 532
Zimbabwe					
Bituminous	2 750 883	3 246 010	4 042 970	4 899 000	5 797 530
Canada	40 791 647	41 809 481	46 217 458	48 067 394	42 543 702
Mexico	9 703 000	6 648 000	6 492 000	6 293 000	* 6 000 000
USA					
Anthracite	2 152 257	1 915 066	2 255 213	2 646 221	2 778 685
Bituminous	215 837 532	235 781 810	245 420 914	238 672 664	224 957 437
Sub-bituminous	222 972 706	243 179 825	248 225 848	245 918 739	200 937 076
Lignite	44 783 551	42 968 702	43 115 697	37 082 260	36 303 384
Argentina					
Bituminous	12 875	13 113	13 110	65 560	1 300
Brazil					
Bituminous & lignite	9 158 388	12 070 822	11 528 892	10 279 780	9 631 913

Production of coal

tonnes (metric)

Country	2020	2021	2022	2023	2024
Chile					
Bituminous	25 778	18 541	26 962	24 270	17 486
Lignite	165 784	—	—	—	—
Colombia					
Anthracite (d)	* 120 000	109 798	* 120 000	* 120 000	* 120 000
Coking coal	7 330 000	7 873 559	* 7 500 000	* 7 500 000	* 7 500 000
Other bituminous coal	42 000 500	48 659 153	* 50 000 000	* 50 000 000	* 50 000 000
Peru					
Anthracite & Bituminous	131 516	144 579	192 094	233 364	219 874
Venezuela					
Bituminous	285 000	158 000	197 000	149 000	* 150 000
Afghanistan	56 620	108 200	537 127	425 000	1 039 000
Bangladesh (e)	811 138	976 589	968 989	601 477	1 064 992
Bhutan	72 838	111 545	158 603	113 950	169 489
China	3 902 000 000	4 126 000 000	4 559 000 000	4 710 000 000	4 758 962 000
India					
Bituminous	(f) 716 084 000	(f) 778 190 000	863 441 000	968 434 000	* 970 000 000
Lignite	(f) 36 615 000	(f) 47 490 000	47 395 000	42 257 000	* 43 000 000
Indonesia					
Anthracite & Bituminous	563 728 255	613 990 256	687 432 384	775 181 855	836 120 000
Iran (g)	1 669 515	1 298 163	2 273 241	1 542 015	986 000
Kazakhstan					
Bituminous	104 084 100	107 246 300	112 127 100	111 369 600	108 048 200
Lignite	5 422 100	4 828 700	5 664 100	4 982 500	3 751 600
Korea (Rep. of)					
Anthracite	1 019 298	897 900	820 181	* 647 000	543 470
Korea, Dem. P.R. of	19 000 000	15 600 000	16 300 000	17 100 000	* 17 000 000
Kyrgyzstan	2 677 700	3 062 500	3 775 400	4 177 400	4 396 300
Laos					
Anthracite	320 231	698 521	1 270 812	3 644 064	4 832 842
Lignite	14 366 628	13 618 072	15 358 322	15 255 113	13 794 762
Malaysia	2 978 248	3 110 605	3 405 847	4 068 049	4 114 792
Mongolia					
Brown coal & lignite	43 844 800	33 691 800	37 294 700	85 262 300	103 401 300
Myanmar	1 879 810	1 453 194	1 727 495	* 1 730 000	* 1 730 000
Nepal					
Sub-bituminous (h)	7 250	11 304	6 927	* 7 000	* 7 000
Pakistan (c)(e)	8 599 166	9 229 377	9 678 139	15 069 760	20 086 300
Philippines					
Bituminous	12 951 291	14 047 681	14 457 257	16 509 000	17 661 345
Tajikistan					
Anthracite	60 000	61 300	61 600	65 400	* 65 000
Bituminous	1 891 200	1 931 100	2 192 300	1 888 400	2 487 993
Lignite	77 939	96 300	139 700	130 415	81 080
Thailand					
Lignite	13 250 574	14 221 573	13 641 283	12 713 628	* 12 700 000
Uzbekistan					
Bituminous	263 700	275 100	282 300	390 900	* 507 000
Lignite	3 868 100	4 781 200	5 073 900	6 128 700	* 7 956 800
Vietnam					
Anthracite	44 598 360	48 315 550	49 854 710	47 171 260	45 315 040
Australia					
Bituminous (i)(j)	446 503 000	437 866 000	412 654 000	415 481 000	424 207 000
Brown coal (e)	40 372 215	42 263 209	39 126 368	38 596 216	39 021 590
New Zealand					
Bituminous	1 128 917	1 256 584	1 230 681	1 306 699	1 209 649
Sub-bituminous	1 392 075	1 326 292	1 130 547	1 017 952	1 059 900
Lignite	297 690	284 735	276 248	275 433	239 877
World total	7 733 000 000	8 171 000 000	8 807 000 000	9 083 000 000	9 138 000 000

See notes on the following page

Production of coal

Note(s)

- (1) There is no international agreement as to the separate definition of lignite and brown coal. In some cases they are distinguished. Elsewhere both may be aggregated under one or other term.
 - (2) Data for coking coal is not always distinguished from other types of bituminous coal. The term "bituminous" in this table may include coking coal where the latter is not separately shown.
 - (3) Where no sub-commodity is shown the figures relate to all ranks of coal.
- (a) Spitzbergen: not including production from mines controlled by Russia
 - (b) Excluding production in Kosovo
 - (c) Including lignite
 - (d) May also include other types of coal
 - (e) Years ended 30 June of that stated
 - (f) Years ended 31 March following that stated
 - (g) Years ended 20 March following that stated
 - (h) Years ended 15 July of that shown
 - (i) Including sub-bituminous
 - (j) Saleable

Mine production of cobalt

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Finland	1 559	1 084	1 235	1 057	1 008
Russia	9 700	8 000	9 200	8 200	* 8 200
Turkey	250	320	320	400	425
Congo, Democratic Republic	86 591	93 144	115 371	140 121	200 253
Madagascar	833	2 111	3 428	3 387	2 535
Morocco (a)	2 416	1 796	1 690	1 065	1 286
South Africa (a)	960	355	250	378	611
Zambia	287	240	252	1 507	1 410
Zimbabwe	957	345	211	386	344
Canada	4 069	3 953	3 534	5 099	3 351
Cuba	* 4 800	* 4 900	* 4 100	* 3 300	* 3 500
USA	* 600	* 650	* 500	* 500	* 300
Brazil	27	43	9	165	—
China	* 1 750	* 1 750	* 1 750	1 500	* 1 500
Indonesia	* 1 000	* 2 100	* 9 500	21 600	* 31 570
Philippines	* 3 600	* 3 200	* 3 400	* 3 300	* 3 050
Vietnam	—	288	278	299	195
Australia	5 626	5 232	5 793	5 222	4 776
New Caledonia	2 197	1 345	1 903	2 572	1 608
Papua New Guinea	2 941	2 953	2 987	3 072	2 625
World total	130 000	134 000	166 000	203 000	269 000

Note(s)

- (1) There is frequently a considerable disparity between the cobalt content of ore raised and cobalt actually recovered.
 - (2) In many countries it is not clear whether cobalt that is known to be present in the extracted ore is subsequently recovered, nor whether the reported figure is contained or recovered cobalt.
 - (3) Consequently, the figures in this table may relate either to cobalt recovered or to cobalt contained in ore raised.
 - (4) In addition to the countries listed, cobalt is contained within copper ores in Poland but this is not currently recovered.
- (a) Metal and/or refined

Production of refined cobalt

tonnes (metric)

Country	2020	2021	2022	2023	2024
Belgium (a)	* 1 300	* 1 300	* 1 000	* 1 000	* 1 000
Finland	15 148	14 287	12 781	10 627	12 025
France	—	—	* 150	* 150	* 150
Norway	4 384	3 982	3 124	3 464	3 033
Russia	* 1 800	* 1 800	* 1 800	* 1 800	* 1 800
Madagascar	963	2 111	3 428	3 387	2 535
Morocco	2 416	1 796	1 690	1 065	1 286
South Africa (b)	897	531	* 200	* 200	...
Canada (c)	5 965	* 6 000	5 501	4 923	4 856
China (a)	* 86 000	* 113 000	* 125 000	* 140 000	* 175 000
Indonesia	* —	* —	* —	1 533	* 3 500
Japan	3 467	3 852	* 3 700	* 3 900	* 4 200
Australia	4 424	4 764	4 988	3 657	3 664
New Caledonia (d)	681	—	—	—	—

Note(s)

(1) Refined cobalt can be in the form of metal, oxides, carbonates, sulphates and many other compounds. Efforts are made to avoid double-counting but it is not always possible to be certain.

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

(b) Includes metal and cobalt contained in sulphate

(c) Including oxides

(d) Carbonate

Mine production of copper

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Albania	3 070	5 134	5 899	4 006	* 7 500
Armenia	90 154	85 912	66 132	62 266	72 082
Azerbaijan	2 591	2 649	2 516	2 687	779
Bulgaria	86 343	82 046	82 986	86 554	81 618
Finland	35 494	32 017	27 553	20 132	26 399
Georgia	8 031	8 147	6 364	4 394	8 101
North Macedonia	5 982	6 213	7 093	7 378	6 650
Poland	442 000	443 000	443 000	445 000	400 100
Portugal	32 230	38 145	32 098	40 863	51 990
Romania	8 200	9 000	9 100	9 300	7 100
Russia	924 100	938 800	918 100	896 800	* 1 000 000
Serbia	52 207	121 150	203 998	238 909	292 906
Slovakia	20	76	30	37	47
Spain	182 678	142 381	128 764	114 786	118 901
Sweden	100 065	88 108	88 337	73 780	68 267
Turkey	107 000	108 100	121 000	127 000	127 020
Botswana	—	11 742	44 269	54 808	71 000
Congo	* 10 000	10 800	7 900	8 400	7 560
Congo, Democratic Republic	1 713 000	1 924 400	2 515 800	3 148 567	3 157 579
Eritrea	21 725	20 224	17 098	17 595	19 914
Mauritania	28 491	18 845	13 313	13 014	17 792
Morocco	31 800	* 36 500	* 31 000	31 600	27 500
Namibia	10 853	950	—	872	4 264
South Africa	29 068	28 307	49 194	50 023	53 384
Tanzania	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Zambia	837 996	803 747	763 550	732 583	820 676
Zimbabwe	7 933	8 650	10 168	14 221	12 950
Canada	584 608	550 418	519 691	499 791	514 582
Dominican Republic	2 193	4 774	5 360	9 673	11 077
Mexico	800 316	782 136	828 180	778 839	717 330
Panama	205 548	331 000	350 438	330 863	—
USA	1 200 000	1 230 000	1 230 000	1 130 000	1 060 000
Bolivia	2 822	3 310	3 608	3 881	4 943
Brazil	353 258	335 923	297 653	376 338	379 304
Chile	5 733 100	5 624 900	5 330 500	5 240 400	5 506 000
Colombia	9 356	8 195	6 800	6 564	6 019
Ecuador	49 700	89 200	121 200	126 500	* 112 000
Peru	2 153 952	2 329 886	2 445 271	2 755 244	2 736 150
China	1 723 100	1 818 000	1 899 200	1 815 010	1 842 920
India (a)	25 810	27 375	26 766	29 730	24 930
Indonesia	511 888	758 356	952 668	922 143	1 029 128
Iran	315 000	340 000	344 000	326 000	312 000
Kazakhstan	551 800	511 900	594 100	576 900	567 200
Korea, Dem. P.R. of	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
Kyrgyzstan	6 500	8 100	7 500	7 000	* 6 400
Laos	88 163	32 385	37 162	50 120	* 47 000
Mongolia	290 800	304 100	267 980	313 020	352 260
Myanmar	* 186 000	33 900	—	—	—
Oman	...	...	...	...	5 695
Pakistan	13 200	18 806	16 346	17 042	23 865
Philippines	60 520	53 670	64 680	66 630	64 190
Saudi Arabia	75 400	76 350	75 439	71 810	72 400
Tajikistan	978	1 845	1 206	890	1 149
Uzbekistan	118 600	121 500	122 400	124 700	* 132 500
Vietnam	30 782	33 930	34 709	32 596	35 282
Australia	868 019	801 052	826 271	778 303	765 387
Papua New Guinea	86 988	66 958	75 800	90 500	105 000
World total	20 800 000	21 300 000	22 100 000	22 700 000	22 900 000

Note(s)

(a) Years ended 31 March following that stated

Smelter production of copper

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	75 400	75 400	60 003	60 000	60 000
Bulgaria	286 000	256 600	327 700	276 000	326 800
Finland	* 166 000	* 172 000	* 154 000	* 147 000	* 181 000
Germany	389 700	383 800	364 000	340 100	353 400
Norway	20 535	20 125	18 475	20 086	18 279
Poland	462 868	581 409	560 724	479 694	457 809
Russia	815 200	991 000	984 500	981 900	* 980 000
Serbia	88 000	162 700	* 30 000	* 30 000	* 30 000
Spain	257 700	* 259 000	* 195 000	* 240 000	* 220 000
Sweden	155 000	* 155 000	* 160 000	* 160 000	* 160 000
Turkey	83 900	84 000	84 005	84 010	84 010
Congo, Democratic Republic	107 782	163 219	164 441	197 800	* 200 000
Namibia	46 792	42 010	37 285	35 620	32 880
Tanzania	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Zambia (a)	789 600	769 100	727 200	648 900	683 900
Canada	290 000	290 000	* 260 000	* 280 000	* 280 000
Mexico	286 242	287 406	285 438	263 613	251 137
USA	315 000	* 360 000	354 000	378 000	456 000
Brazil	109 400	57 000	24 400	13 600	12 600
Chile	1 206 300	1 206 600	1 112 400	1 073 900	994 600
Peru	342 738	308 221	324 136	359 951	358 908
China	* 7 700 000	8 000 000	10 390 000	11 833 000	* 12 000 000
India	243 200	360 000	395 000	* 390 000	* 583 000
Indonesia	276 900	280 400	272 464	221 900	* 200 000
Iran	223 300	246 800	* 230 000	* 230 000	* 235 000
Japan	1 277 303	1 174 957	1 269 940	1 174 623	1 247 142
Kazakhstan	319 100	265 500	324 704	* 290 000	* 290 000
Korea (Rep. of)	513 900	* 510 000	* 510 000	* 510 000	* 510 000
Pakistan	13 200	18 806	16 346	17 042	23 865
Philippines	247 000	219 819	185 054	216 900	206 370
Uzbekistan	148 000	148 000	148 900	153 100	* 160 000
Vietnam	* 19 200	* 20 000	* 20 000	* 20 000	* 20 000
Australia	399 292	381 857	390 300	397 150	401 600
World total	17 700 000	18 300 000	20 400 000	21 500 000	22 000 000

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

Production of refined copper

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	129 400	132 600	109 000	100 400	125 230
Belgium	321 400	386 400	377 500	379 100	370 510
Bulgaria	224 880	218 020	229 070	228 831	228 447
Finland	145 847	151 000	135 203	129 092	158 968
Germany	643 000	615 000	609 000	596 000	597 000
Italy	15 000	15 400	9 900	10 200	11 390
North Macedonia	722	700	640	600	620
Norway	20 535	20 125	18 475	20 086	18 279
Poland	560 364	577 575	586 006	592 359	588 749
Russia	1 055 000	1 022 000	985 000	993 600	892 810
Serbia	46 937	58 344	24 665	74 163	122 676
Spain	399 700	360 700	297 900	334 200	324 500
Sweden	225 987	223 038	217 779	96 332	—
Turkey	126 100	127 000	134 600	141 700	141 020
Ukraine	24 335	28 817	* 2 400	* 2 400	* 2 400
Congo	* 10 000	10 800	7 900	8 400	7 560
Congo, Democratic Republic	1 352 000	1 492 000	1 810 000	2 210 000	2 558 030
Egypt	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
Namibia	10 641	950	—	—	3 515
Zambia	371 800	335 900	276 400	202 500	189 400
Canada	276 100	286 600	278 000	314 700	323 740
Mexico	491 926	472 767	486 076	403 300	374 150
USA	915 000	971 000	970 000	881 900	921 000
Argentina	* 14 000	* 14 000	* 14 000	* 14 000	* 14 000
Bolivia	1 700	1 700	1 400	1 600	1 880
Brazil	108 600	61 500	25 300	* 7 600	* 12 600
Chile	2 329 300	2 274 000	2 149 100	2 075 900	1 940 300
Peru	323 580	343 593	394 926	403 302	385 155
China	10 025 059	10 486 700	11 115 300	12 988 000	13 644 000
India	333 500	489 700	542 000	509 000	695 000
Indonesia	278 377	287 800	290 300	226 300	349 100
Iran (a)	280 275	285 011	300 011	288 632	327 849
Japan	1 580 086	1 516 684	1 556 452	1 494 160	1 567 419
Kazakhstan	477 016	401 883	451 992	417 108	465 694
Korea (Rep. of)	657 000	647 400	637 900	604 100	604 200
Laos	39 730	5 964	6 604	6 518	6 014
Mongolia	9 488	9 690	9 736	9 661	6 976
Myanmar	* 185 000	* 33 900	—	—	—
Philippines	220 900	206 200	184 100	208 100	199 390
Uzbekistan	148 443	148 509	148 516	148 500	137 400
Vietnam	* 19 200	* 20 000	* 20 000	* 20 000	* 20 000
Australia	426 997	406 250	428 728	442 428	433 493
World total	24 800 000	25 200 000	25 800 000	27 600 000	28 800 000

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

Production of diamond

Carats

Country	2020	2021	2022	2023	2024
Russia	31 186 551	39 116 970	41 923 910	37 316 754	37 322 794
Angola	7 734 281	8 723 069	8 763 309	9 754 310	14 027 003
Botswana	16 868 000	22 696 000	24 479 000	25 095 000	18 324 000
Cameroon (a)	4 200	4 500	4 200	4 800	13 000
Central African Republic	55 926	92 772	118 044	111 918	111 377
Congo	11 157	4 125	3 534	4 074	1 696
Congo, Democratic Republic	16 560 000	12 179 000	11 683 000	8 306 000	9 241 000
Côte d'Ivoire	4 015	3 942	3 904	2 368	868
Gabon	—	501	—	—	—
Ghana (b)	25 292	54 174	82 252	202 757	332 298
Guinea	128 575	273 321	113 848	104 384	* 105 000
Lesotho	481 243	339 452	727 737	471 745	695 888
Liberia	54 599	63 027	55 391	56 844	48 074
Mali	—	—	92	182	913
Namibia	1 503 625	1 523 120	2 188 075	2 384 975	2 234 201
Sierra Leone	686 020	829 330	680 432	540 720	599 825
South Africa	8 470 840	9 723 811	9 646 300	5 891 865	5 832 019
Tanzania	147 191	62 545	442 016	132 636	373 253
Zimbabwe	2 670 458	4 224 300	4 844 019	4 913 593	5 293 329
Canada	14 208 812	16 865 216	16 217 233	16 160 688	13 321 628
Brazil	124 548	142 661	158 420	78 252	49 906
Guyana	19 240	45 106	83 614	67 444	55 971
Venezuela	794	* 500	* 500	* 500	* 500
China	* 21	—	—	—	—
India (c)	13 917	266	388	347	4 846
Australia	9 980 000	—	—	—	6 658
World total	110 900 000	117 000 000	122 200 000	111 600 000	108 000 000

Note(s)

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

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

Production of diatomite

tonnes (metric)

Country	2020	2021	2022	2023	2024
Armenia	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Czech Republic	46 000	18 000	44 000	38 000	52 000
Denmark					
Moler (a)	115 000	120 625	143 125	101 875	108 125
France	* 90 000	* 90 000	* 80 000	* 80 000	* 80 000
Germany	51 511	57 719	49 821	43 939	48 405
Hungary	321	573	575	893	652
Poland	810	980	1 170	1 620	1 970
Russia	* 51 000	* 51 000	* 51 000	* 50 000	* 50 000
Spain (b)	59 250	55 982	87 095	73 997	58 010
Turkey	100 327	207 732	237 267	154 444	101 085
Algeria	3 040	3 066	3 015	3 101	* 3 100
Ethiopia (c)	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Kenya	928	763	1 401	975	932
Mozambique	80 189	72 914	51 449	29 633	33 098
Uganda	96	433	21	—	* —
Costa Rica	3 763	5 943	5 286	* 5 500	* 5 500
Mexico	144 105	140 928	107 060	102 906	92 147
USA (d)	822 000	998 000	827 000	849 000	* 880 000
Argentina	99 000	* 100 000	* 100 000	* 100 000	* 100 000
Brazil	35 574	10 665	35 844	16 546	17 284
Chile	21 477	27 096	24 279	17 319	18 937
Peru	85 406	94 860	104 660	98 872	83 642
China	274 000	317 000	368 000	* 370 000	* 370 000
Japan	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Korea (Rep. of)	65 240	49 616	11 880	120 941	5 864
Saudi Arabia (e)	25	20	55	30	293
Australia	7	3	5	2	1
New Zealand	* 44 000	* 44 000	* 40 000	* 40 000	* 40 000
World total	2 300 000	2 500 000	2 400 000	2 400 000	2 200 000

Note(s)

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

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

(b) Including the mineral Tripoli

(c) Years ended 7 July of that stated

(d) Sold or used by producers

(e) Exports

Production of feldspar

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	* 35 000	* 35 000	* 35 000	* 35 000	* 35 000
Czech Republic	419 000	504 000	493 000	352 000	389 000
Finland	16 137	52 706	63 034	55 211	22 678
France	* 450 000	* 450 000	* 450 000	* 450 000	* 450 000
Germany	221 527	223 007	205 330	143 137	145 710
Greenland	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Italy	2 200 000	* 2 200 000	* 2 200 000	* 2 200 000	* 2 200 000
North Macedonia	13 115	26 625	37 482	34 591	26 680
Norway	69 220	60 025	* 60 000	* 60 000	* 60 000
Poland	427 200	534 100	540 614	500 000	360 994
Portugal (a)	204 843	156 507	217 766	183 947	148 089
Romania	* 22 000	* 22 000	* 22 000	* 22 000	* 22 000
Russia	* 594 000	* 600 000	* 300 000	* 300 000	* 300 000
Serbia	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Slovakia	29 140	10 300	10 300	6 300	—
Spain	911 095	820 749	716 535	617 009	729 647
Sweden	* 20 000	* 26 000	* 20 000	* 20 000	* 20 000
Turkey	10 050 911	12 936 959	15 781 540	9 478 458	8 983 207
Ukraine (b)	* 50 000	* 60 000	* 30 000	* 30 000	* 30 000
Algeria	* 170 000	* 170 000	* 170 000	* 170 000	* 170 000
Egypt	* 200 000	* 200 000	* 200 000	* 200 000	* 200 000
Ethiopia (c)	* 600	* 600	* 600	* 1 080	* 1 080
Morocco	185 772	427 387	587 289	773 761	1 116 046
Nigeria	19 453	31 256	37 250	76 575	* 35 000
South Africa	48 427	65 726	75 382	142 820	98 487
Sudan	25 000	6 400	* 6 000	* 5 000	* 5 000
Uganda	—	95	1 388	555	* 500
Cuba	14 100	17 800	5 900	17 300	5 000
Guatemala	25 578	34 232	* 40 000	26 450	22 194
Mexico	318 120	372 102	377 649	491 193	378 264
USA	480 000	420 000	430 000	450 000	* 450 000
Argentina	32 000	* 40 000	* 40 000	* 40 000	* 40 000
Brazil (d)	450 573	491 042	756 364	621 075	773 458
Chile	329	—	—	28	4
Colombia	134 846	99 755	164 783	73 675	147 086
Peru	24 132	27 274	24 358	14 111	8 166
Uruguay (e)	208	24 120	300	800	600
Venezuela	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
China	* 2 500 000	* 2 500 000	* 2 500 000	* 2 500 000	* 2 500 000
India (e)	* 4 300 000	* 4 300 000	* 4 300 000	* 4 300 000	* 5 000 000
Indonesia	287 368	313 240	325 710	445 778	* 450 000
Iran (f)	3 113 579	3 237 502	2 880 736	5 232 664	* 5 200 000
Japan (g)	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Korea (Rep. of)	415 426	987 309	530 743	990 814	1 081 013
Malaysia	144 487	168 570	216 394	242 757	* 240 000
Pakistan (h)	343 075	451 985	402 529	339 963	* 264 000
Philippines	* 46 000	* 46 000	* 46 000	* 46 000	* 46 000
Saudi Arabia	523 000	621 000	652 000	* 650 000	* 650 000
Sri Lanka	* 26 000	* 26 000	* 26 000	* 26 000	* 26 000
Thailand	1 105 344	1 346 997	1 953 918	1 884 301	* 1 800 000
Uzbekistan	63 596	106 145	80 928	91 510	* 91 500
Vietnam	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Australia (h)	* 6 700	* 6 500	* 5 000	* 5 000	* 5 000
World total	31 000 000	35 500 000	38 300 000	34 600 000	35 000 000

See notes on the following page

Production of feldspar

Note(s)

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

Production of fluorspar

tonnes (metric)

Country	2020	2021	2022	2023	2024
France	* 80 000	* 80 000	84 112	72 754	62 725
Germany	64 933	56 632	61 563	35 508	25 447
Russia	32 000	75 300	76 000	56 100	* 56 000
Spain	185 958	187 225	203 768	146 975	147 650
Turkey	19 896	10 348	17 252	32 407	38 701
United Kingdom	* 15 000	* 15 000	* 13 000	* 7 000	* 100
Egypt (a)	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Morocco	83 833	189 012	77 035	101 369	205
Mozambique	* —	* 1	8	5	* 5
South Africa	320 000	403 000	406 000	345 000	380 000
Mexico	914 597	1 007 118	990 079	988 972	1 505 071
Argentina	4 800	4 800	* 4 800	* 4 800	* 4 800
Brazil	24 730	28 158	28 969	28 365	* 20 000
Afghanistan	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
China	5 400 000	5 700 000	5 700 000	* 6 000 000	* 5 900 000
India (b)	1 052	1 237	1 155	6 043	1 119
Iran (c)	116 159	120 727	62 005	66 700	* 67 000
Kazakhstan	74 500	* 67 000	* 12 100	* 12 400	* 12 400
Korea, Dem. P.R. of	* 6 000	* 7 000	* 7 000	* 7 000	* 7 000
Kyrgyzstan	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
Laos	—	—	315	2 716	6 244
Mongolia	127 300	118 300	122 900	222 400	431 700
Pakistan (a)	5 981	7 841	11 288	17 090	* 29 000
Thailand	9 807	9 766	59 243	187 566	185 000
Vietnam	219 920	215 027	217 975	146 007	144 019
World total	7 700 000	8 300 000	8 200 000	8 500 000	9 000 000

Note(s)

(1) In addition, the USA produced the following amounts of fluorspar equivalent in fluorosilicic acid derived from processing phosphate rock ('000 t): 2020: 22; 2021: 40; 2022:43; 2023: 43; 2024: 40.

- (a) Years ended 30 June of that stated
- (b) Years ended 31 March following that stated
- (c) Years ended 20 March following that stated

Production of primary gallium

tonnes (metric)

Country	2020	2021	2022	2023	2024
Russia	* 13	* 13	* 14	* 15	* 14
Ukraine	* 4	* 4	* 2	* 2	* 2
China	336	423	600	* 621	* 750
Japan	3	3	* 3	* 3	* 3
Korea (Rep. of)	* 2	* 2	* 2	* 2	—

Note(s)

- (1) Accurate data for gallium is difficult to obtain because it is produced only as a by-product of bauxite or zinc processing using proprietary techniques. As a consequence, this table may not be complete.
- (2) Lower grade production is often subsequently refined to higher grade material which complicates the collection of data as double counting is a significant risk.
- (3) In addition to the above primary production, there is also believed to be significant production of refined gallium from scrap recycling.

Production of germanium metal

tonnes (metric)

Country	2020	2021	2022	2023	2024
Russia	* 5	* 5	* 5	* 5	* 5
USA (a)	* 4	* 6	* 7	* 6	* 7
China	* 95	* 155	180	* 200	* 200

Note(s)

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

(a) Including production of secondary metal

Mine production of gold

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

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

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

Benin – artisanal gold mining is known to take place, but no reliable estimates are available.

Burkina Faso – official figures include 7 270 kg for artisanal and semi-mechanized mining in 2024; 491 kg in 2023; 484 kg in 2022; 270 kg in 2021 and 332 kg in 2020. It is believed the actual artisanal production is likely to be higher.

Cameroun – all gold mining is currently small scale or artisanal. Available estimates vary widely, from as low as 100 kg per year to something in the order of 1 500 kg per year. Extractive Industry Transparency Initiative (EITI) reported that artisanal mining in 2023 was 305 kg.

Central African Republic – artisanal gold mining is known to take place. No reliable estimates are available, but it could be in the region of 50-80 kg per year. The figures shown are reported and it is assumed these are artisanal, but they may not be fully inclusive in every year.

Colombia – Artisanal and small-scale mining, both legal and illegal, is extensive within Colombia. Although the government is taking steps to improve the licencing of legal artisanal mining and to crack down on illegal activities, during the last decade it is believed that illegal mining has grown to the extent that it has become more widespread than legal mining. Some illegal mining and trade are thought to be coordinated by organised crime groups. It is possible that illegally mined material is brought into or out of the country without being recorded. It can therefore be assumed that the total mine production of gold significantly exceeds the reported figure, however it has not been possible to make a reliable estimate for this additional material.

Congo – all gold mining is believed to be small scale or artisanal and it is believed there are more than 200 locations where this occurs. A nominal estimate of 150 kg per year is shown in the table.

Costa Rica – all gold mining is currently artisanal. The figures in the table are reported by an official source.

Côte d'Ivoire – efforts are being made within Côte d'Ivoire to rationalise artisanal mining as part of the EITI process. The EITI reported figures do include an amount for reported artisanal and semi-industrial mining between 200 to 400 kg. However, reports suggest that it varies considerably from year to year and may range between 1 000 kg and 10 000 kg per year.

Democratic Republic of Congo – artisanal mining is quite extensive, the figures shown include estimates for artisanal mining ranging from 4000 to 11000 kg per year.

Equatorial Guinea – artisanal gold mining is very likely to be taking place, but no accurate information is available. A nominal estimate of 200 kg per year is included in the table but it could be more or less than this.

Ethiopia – small scale and artisanal gold mining is significant, but not all of it is illegal because some artisanal miners operate under a formal license. A proportion of the gold mined from artisanal sources is sold to the national bank but illicit sales to non-licensed buyers remains widespread. National bank purchases of gold from artisanal sources, but actual artisanal production could be much higher.

France (French Guiana) – the table includes an estimate of 5 000 kg to 10 000 kg per year for artisanal mining which is not included in the official reported figures.

Gabon – attempts to regulate artisanal gold mining are being undertaken with gold from artisanal miners being purchased by a government agency. The figures in the table are all artisanal.

Ghana – gold produced by artisanal mining is purchased by a state-owned Ghana Gold Board, they are the sole buyer of gold and has enable artisanal and small-scale miners to integrate into the formal economy. They are also reported in publications produced under the EITI. In the table below the following figures are included for artisanal production: 36 556 kg in 2020; 3 048 kg in 2021; 20 393 kg in 2022 and 34 737 kg in 2023. 2024 has been estimated at 40 000 kg.

Guinea – the figures in the table include reported figures for artisanal mining. However, actual artisanal production may be higher than those reported because it is difficult to distinguish the material derived from artisanal mining within Guinea from that moved across the border from Mali or other countries.

Kenya – the reported figures shown include an amount of 5 000 kg for artisanal mining but in reality, it could be much higher.

Liberia – official figures are believed to include both the industrial mine and artisanal production.

Madagascar – estimates of artisanal mining are in the order of 100 kg to 3 000 kg per year, but reliable data is difficult to obtain so are not included in our figures.

Mali – the figures include an estimate for artisanal mining of 6 000 kg per year, but it is likely the real figure varies more than this from year to year.

Mozambique – artisanal mining is widespread in the country and artisanal miners account for a significant percentage of Mozambique's gold. Most is not reported and therefore not included in our figures. The Government as of 2021 is trying to make a concerted effort to account for the artisanal mining.

Myanmar – the figures shown in the table are reported and are believed to include artisanal mining.

Nigeria – Official reporting of artisanal gold production is low. However, imports of gold to other countries from Nigeria are reported to be much larger, which suggests the quantity of production may be higher and the estimates in the table reflect this. The EITI reports the plan for formalising the artisanal mining sector and for the support of 10 000 artisanal miners in five regions of the federation.

Panama – artisanal mining is known to occur, but no reliable estimates are available. A nominal estimate of 100 kg per year has been included.

Papua New Guinea – official estimates of "alluvial and small scale" mining are approximately 3 500 kg to 4 000 kg per year.

Rwanda – it is believed that the reported and estimated figures are actually gold that originated in Nigeria or other countries in the region but is not recorded in those countries.

Senegal – an estimate of between 1 000 kg and 4 000 kg has been added to each year for artisanal mining. In 2024 this was 2 000 kg.

South Africa – illegal artisanal mining is known to occur. No information on reliable estimates.

South Sudan – artisanal mining is known to occur, but reliable estimates are difficult to obtain. It has been estimated as approximately 200 kg per year.

Tanzania – Artisanal mining is known to occur; the reported figures are believed to include artisanal mining.

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

Venezuela – artisanal mining is believed to be quite extensive and increasing. Estimates of quantities vary widely from less than 1 000 kg up to 9 000 kg per year. The Central Bank aims to purchase all the artisanally mined gold, however, actual output is believed to be larger than the reported figures.

Vietnam – artisanal mining is believed to be taking place at the site of a former industrial mine. No information is available to indicate likely scale.

Zimbabwe – It is believed that artisanal and small-scale mining makes up a large proportion of Zimbabwe's total production and is included in this table.

Mine production of gold

kilograms

Country	2020	2021	2022	2023	2024
Armenia	5 900	3 400	4 230	924	700
Azerbaijan	3 637	3 428	3 271	2 761	5 328
Bosnia & Herzegovina	—	—	—	—	100
Bulgaria	9 349	9 695	8 529	9 276	8 178
Cyprus	61	—	—	—	—
Finland	8 668	9 082	8 390	8 804	8 401
Georgia	5 401	3 513	4 908	5 035	5 090
Germany	* 10	12	14	14	13
Greece	3 440	3 313	3 561	2 088	2 163
North Macedonia	448	* 500	* 600	* 600	* 600
Poland	878	768	769	442	296
Romania	* 500	* 500	* 500	* 500	* 500
Russia	308 600	313 830	302 000	305 200	* 330 000
Serbia (a)	1 550	4 796	7 290	6 944	7 949
Slovakia	336	392	399	500	323
Spain	1 602	1 400	1 359	1 354	1 130
Sweden	8 249	8 805	8 054	7 358	7 494
Turkey	42 100	39 290	31 020	36 250	31 680
United Kingdom	28	79	* 270	* 130	* —
Algeria	58	71	138	147	400
Angola	59	32	83	41	90
Benin	* 5	* 5	* 5	* 5	* 5
Botswana	851	650	426	331	20
Burkina Faso	62 405	67 126	58 159	57 338	60 771
Burundi	863	893	440	50	27
Cameroon (b)	350	450	950	* 530	* 400
Central African Republic	401	858	1 507	1 549	770
Congo	* 150	* 150	* 150	* 150	* 150
Congo, Democratic Republic	* 40 000	* 42 000	* 38 000	* 44 500	* 38 000
Côte d'Ivoire	38 523	41 857	48 317	51 314	52 000
Egypt	14 069	12 919	13 716	13 998	12 331
Equatorial Guinea	* 200	* 200	* 200	* 200	* 200
Eritrea	3 019	* 2 200	* 3 200	* 2 550	* 2 450
Eswatini (Swaziland)	1	—	0	0	0
Ethiopia (c)(d)	3 320	9 190	8 680	3 460	4 220
Gabon	371	967	700	634	1 300
Ghana	125 884	87 677	113 252	125 567	149 784
Guinea	91 802	100 958	84 713	73 992	* 73 000
Kenya	* 5 200	* 5 300	* 5 600	* 5 410	* 5 400
Liberia	4 396	7 860	11 718	13 638	13 753
Madagascar (d)	1 500	* 2 500	* 2 000	* 2 100	* 2 000
Mali	71 238	69 460	72 227	72 593	66 713
Mauritania	14 125	6 498	17 711	20 129	20 338
Morocco (a)	143	147	167	104	24
Mozambique	488	764	1 264	1 666	1 626
Namibia	6 717	7 647	7 437	9 800	10 064
Niger	2 361	4 010	4 605	2 534	418
Nigeria	845	309	3 048	2 631	2 645
Rwanda (d)	11 532	6 341	9 470	13 934	14 900
Senegal (b)	14 600	18 800	16 200	16 900	13 000
Sierra Leone	14	117	150	156	397
South Africa	95 786	105 019	89 598	96 629	90 208
South Sudan	* 200	* 200	* 200	* 200	* 200
Sudan	35 700	49 700	41 800	* 30 000	* 65 000

Mine production of gold

kilograms

Country	2020	2021	2022	2023	2024
Tanzania	55 508	59 638	56 943	54 760	61 681
Togo (d)	3 565	* 3 600	* 3 600	* 3 600	* 3 600
Uganda	10	13	8	4	* 5
Zambia (e)	3 994	3 987	3 409	2 145	3 269
Zimbabwe	20 873	31 477	37 225	32 132	38 455
Canada	182 352	196 730	195 226	198 335	200 069
Costa Rica	599	647	864	900	* 900
Dominican Republic	28 154	25 437	22 282	17 646	18 564
Guatemala	—	100	—	—	—
Honduras	1 963	2 824	1 911	2 051	2 438
Mexico	142 787	133 340	147 674	131 842	* 115 000
Nicaragua	8 040	10 840	11 460	13 315	12 492
Panama	2 733	4 505	4 447	4 139	* 100
USA	193 000	187 000	173 000	170 000	* 159 000
Argentina	34 936	37 280	41 370	39 132	* 40 000
Bolivia	23 207	45 662	53 374	46 615	21 477
Brazil	82 427	80 022	61 927	54 931	65 207
Chile	33 895	34 248	30 966	35 790	37 693
Colombia	49 320	57 997	54 269	61 322	56 728
Ecuador	9 086	15 026	17 272	17 533	* 17 800
France (French Guiana)	* 7 000	* 7 000	* 11 000	* 8 000	* 7 000
Guyana	18 209	15 522	15 129	13 440	13 501
Peru	85 173	97 190	96 966	100 986	107 970
Suriname	21 959	19 439	20 373	17 588	15 982
Venezuela	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Cambodia	—	1 465	3 312	3 524	3 630
China (a)	365 340	329 000	372 048	375 155	377 242
India (f)	1 127	1 407	1 433	1 586	1 627
Indonesia	65 890	78 996	85 203	82 972	101 430
Iran (g)	6 307	6 252	8 278	8 674	* 8 500
Japan	7 590	6 225	4 886	4 139	4 489
Kazakhstan	116 964	114 843	129 794	131 204	130 338
Korea (Rep. of)	189	162	76	49	61
Korea, Dem. P.R. of	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Kyrgyzstan	22 400	20 100	22 300	18 700	17 200
Laos	3 484	3 940	4 023	3 495	3 810
Malaysia	1 716	1 782	1 828	1 666	2 244
Mongolia	20 225	19 054	19 383	14 855	12 594
Myanmar	871	772	467	* 510	* 500
Oman	—	—	—	—	50
Philippines	21 030	25 297	29 036	31 046	28 870
Saudi Arabia	12 969	11 338	11 386	13 477	16 292
Taiwan	3	1	1	3	1
Tajikistan	8 764	9 330	9 300	9 220	* 8 000
Thailand	—	—	—	857	1 646
Uzbekistan	* 100 000	100 360	105 540	108 365	* 120 000
Vietnam	559	1 005	1 114	962	806
Australia	327 952	307 577	302 787	296 053	284 007
Fiji	1 090	1 107	584	545	454
New Zealand	5 860	5 815	6 674	6 844	6 550
Papua New Guinea	52 265	35 584	42 310	42 540	47 365
Solomon Islands	—	79	121	1 788	2 087
World total	3 200 000	3 200 000	3 300 000	3 300 000	3 300 000

See notes on following page

Mine production of gold

Note(s)

- (1) In several countries substantial amounts of gold produced in small and/or artisanal operations are not recorded in the official statistics. Estimates have been added where possible but these have varying degrees of uncertainty.
- (2) In addition to the countries listed, El Salvador, Haiti, Malawi, Pakistan, Paraguay and Portugal may produce gold.

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

Production of graphite

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria (a)(b)	16 500	* 17 000	* 17 000	* 17 000	* 17 000
Bosnia & Herzegovina	3	4	6	5	5
France	* 40 000	* 40 000	48 385	39 264	39 282
Germany	108	181	185	136	163
Norway	5 549	6 293	10 380	6 483	5 339
Russia	12 900	16 200	18 800	24 100	* 24 000
Turkey	15 205	28 336	27 715	27 974	26 369
Ukraine	16 000	10 000	1 000	1 670	* 1 200
Madagascar (c)	48 500	91 100	116 700	* 60 000	* 128 900
Mozambique	18 159	77 116	165 932	97 346	34 899
Canada	16 239	9 290	2 530	5 800	* 8 000
Mexico	2 033	1 509	3 420	3 124	* 1 800
Brazil (d)	67 020	78 555	79 371	66 346	64 588
China (e)	1 090 000	1 189 000	1 212 000	1 210 000	* 1 270 000
India (a)(f)	35 386	62 888	94 789	169 080	85 329
Korea (Rep. of)	—	—	—	—	1 000
Korea, Dem. P.R. of	* 8 100	* 8 100	* 8 100	* 8 100	* 8 100
Sri Lanka	* 2 200	3 388	3 096	2 998	3 122
World total	1 400 000	1 600 000	1 800 000	1 700 000	1 700 000

Note(s)

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

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

Production of gypsum

tonnes (metric)

Country	2020	2021	2022	2023	2024
Albania	111 880	116 295	78 239	95 262	* 95 000
Armenia	29 000	28 000	38 000	35 000	26 939
Austria (a)	900 619	900 374	876 075	702 581	698 277
Azerbaijan	297 594	416 892	369 908	599 141	570 518
Bosnia & Herzegovina (a)	140 994	297 225	135 408	104 125	105 966
Bulgaria	* 88 000	* 88 000	* 50 000	* 50 000	* 50 000
Croatia	308 214	376 510	382 840	392 397	419 995
Cyprus	646 340	661 175	688 270	690 909	549 422
Czech Republic	17 000	17 000	20 000	11 000	13 000
France (a)	1 869 312	3 370 757	2 393 826	3 052 903	3 097 307
Georgia	87 740	80 014	22 028	57 596	21 900
Germany (a)	5 200 000	6 260 000	5 820 000	4 730 000	4 420 000
Greece (a)	780 000	850 000	800 000	* 800 000	* 800 000
Hungary	—	1 043	1 086	1 161	1 351
Ireland, Republic of	150 000	110 000	115 000	125 000	135 000
Italy (a)	163 749	* 165 000	847 447	783 697	560 047
Latvia	483 279	516 638	* 500 000	468 302	455 218
Moldova (b)	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
North Macedonia (a)	229 322	273 497	190 902	274 403	228 851
Norway (a)(c)	93 602	92 794	86 317	* 80 000	* 75 000
Poland (a)	1 132 368	1 123 000	1 034 000	892 000	1 071 000
Portugal	210 231	254 913	167 673	146 833	* 150 000
Romania (a)	925 782	952 617	897 176	841 964	940 533
Russia	* 4 063 000	* 4 100 000	* 4 100 000	* 4 100 000	* 4 100 000
Slovakia (a)	65 560	66 760	54 000	49 000	70 000
Spain	13 376 353	14 629 150	14 380 727	14 461 507	14 146 250
Switzerland	* 190 000	* 180 000	* 180 000	* 180 000	* 170 000
Turkey	9 280 864	10 620 061	10 679 212	10 336 796	11 589 988
Ukraine (a)	1 529 000	1 783 300	499 448	* 500 000	* 500 000
United Kingdom	* 1 300 000	* 1 800 000	* 2 000 000	* 2 200 000	* 1 600 000
Algeria	* 2 500 000	* 2 500 000	* 2 500 000	* 2 500 000	* 2 500 000
Angola	* 166 000	* 80 000	* 266 000	* 270 000	* 270 000
Djibouti	...	* 35 000	* 50 000	* 50 000	* 50 000
Egypt (a)(d)	92 875	94 541	59 813	* 60 000	* 65 000
Eritrea	* 24 000	* 26 000	* 26 000	* 26 000	* 26 000
Ethiopia (e)	* 56 000	* 56 000	* 56 000	* 56 000	* 56 000
Kenya (a)	* 5 800	* 5 800	* 5 800	* 5 800	* 5 800
Libya	* 200 000	* 260 000	* 300 000	* 320 000	* 320 000
Mauritania	* 200 000	* 200 000	* 200 000	* 200 000	* 200 000
Morocco	* 600 000	* 600 000	* 600 000	116 470	283 418
Niger	9 083	27 003	* 28 000	* 3 000	* —
Nigeria	30 706	21 345	* 30 000	45 235	* 50 000
South Africa	205 542	273 241	243 052	228 129	179 603
Sudan	173 000	136 000	140 000	* 140 000	* 140 000
Tanzania	443 926	598 053	604 408	549 836	821 221
Tunisia	890 000	* 910 000	* 900 000	* 900 000	* 900 000
Canada	3 049 824	3 135 484	3 284 929	3 549 648	3 453 877
Cuba	62 300	53 200	32 600	37 400	33 500
Dominican Republic	132 575	143 318	180 788	144 650	137 112
Guatemala	423 282	138 552	206 143	240 109	* 200 000
Honduras	45 000	75 000	75 000	75 000	* 75 000
Jamaica	65 847	65 553	84 000	71 000	* 75 000
Mexico	7 977 953	9 157 381	8 283 113	9 786 105	* 9 800 000
Nicaragua	64 573	19 999	39 864	53 110	62 401
USA	21 300 000	20 800 000	22 300 000	21 500 000	19 900 000
Argentina	499 092	177 276	190 349	179 604	130 726
Bolivia	* 1 100	* 1 100	* 2 900	* 1 000	* 4 600
Brazil	2 851 643	3 260 209	5 155 340	5 754 563	5 724 608
Chile	910 310	1 007 206	978 846	832 770	1 021 560
Colombia	323 157	408 681	480 748	389 107	638 051
Paraguay	* 4 500	* 4 500	* 4 500	* 4 500	* 4 500
Peru	171 093	435 009	315 292	338 598	340 489

Production of gypsum

tonnes (metric)

Country	2020	2021	2022	2023	2024
Afghanistan	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
Bhutan	331 050	403 753	400 183	* 450 000	513 477
China	11 839 000	* 12 000 000	* 11 800 000	* 12 000 000	* 12 000 000
India (f)(g)	* 3 000 000	* 3 000 000	* 3 000 000	* 3 000 000	* 3 000 000
Iran (h)	18 588 699	18 336 261	17 967 795	17 516 410	* 17 500 000
Iraq	* 1 000 000	* 1 000 000	* 1 100 000	* 1 100 000	* 1 100 000
Israel	—	35 740	49 062	88 124	107 840
Japan	* 4 300 000	* 4 300 000	* 4 300 000	* 4 300 000	* 4 300 000
Jordan	184 917	399 968	* 400 000	* 400 000	* 400 000
Kazakhstan	94 500	184 700	233 100	149 600	* 150 000
Laos	737 749	1 221 959	1 589 771	1 252 577	1 045 352
Mongolia	* 56 000	* 56 000	* 56 000	* 56 000	* 56 000
Myanmar	258 620	51 240	96 246	* 362 000	* 300 000
Oman	11 120 200	13 538 800	10 591 600	13 882 800	14 041 000
Pakistan (d)	2 149 872	2 527 215	2 325 416	1 639 725	2 135 900
Saudi Arabia	3 803 000	3 993 000	3 822 000	* 3 822 000	* 3 800 000
Sri Lanka	* 2 200	* 2 200	* 2 200	* 2 200	* 2 200
Syria	* 70 000	* 200 000	* 225 000	* 250 000	* 250 000
Tajikistan	8 183	12 500	15 100	15 424	17 667
Thailand					
Gypsum	8 012 293	8 788 841	8 022 925	7 004 569	* 7 000 000
Anhydrite	1 266 826	1 614 157	1 824 637	1 731 516	* 1 700 000
Uzbekistan	288 658	303 938	1 272 562	1 505 666	* 1 500 000
Yemen, Republic of	* 11 000	* 10 600	* 10 000	* 6 100	* 6 500
Australia (d)	3 763 409	4 328 726	845 168	4 768 759	5 007 047
World total	158 300 000	171 400 000	165 300 000	170 800 000	170 400 000

Note(s)

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

(2) In addition to the countries listed Indonesia and Vietnam may also produce gypsum.

(a) Including anhydrite

(b) Excluding output from the region east of the River Nistru and the Municipality of Bender

(c) Sales

(d) Years ended 30 June of that stated

(e) Years ended 7 July of that stated

(f) Years ended 31 March following that stated

(g) Including selenite

(h) Years ended 20 March following that stated

Production of helium

million cubic metres

Country	2020	2021	2022	2023	2024
Poland	4	4	4	3	3
Russia	5	4	4	6	13
Algeria	* 14	* 10	* 8	* 9	* 10
USA	82	76	78	82	* 81
Qatar	* 45	* 51	* 61	* 66	* 64
Australia	* 4	* 4	* 4	* 3	* —

Refinery production of indium

tonnes (metric)

Country	2020	2021	2022	2023	2024
Belgium	* 20	* 20	* 20	* 20	* 20
France	* 38	* 38	* 19	* 20	* 20
Italy	* 5	* 5	* 5	* 5	* 5
Russia	* 7	* 7	* 7	* 7	* 7
Canada	61	44	* 39	* 40	* 40
Brazil	* 5	* 5	* 5	* 5	* 5
Peru	* 12	* 12	* —	* —	* —
China	590	600	667	756	* 760
Japan	70	70	* 70	* 70	* 65
Korea (Rep. of)	* 100	* 100	* 100	* 100	* 100
Uzbekistan	1	1	1	1	* 1

Note(s)

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

Production of iodine

kilograms

Country	2020	2021	2022	2023	2024
Azerbaijan	182 800	167 500	194 700	208 100	208 000
Russia	* 4 000	* 3 000	* 3 000	* 3 000	* 3 000
USA	* 1 600 000	* 1 900 000	* 1 400 000	* 1 600 000	* 1 500 000
Chile	21 941 000	19 194 000	20 616 000	22 437 000	22 711 000
China	* 600 000	* 600 000	* 600 000	* 600 000	* 600 000
Indonesia	37 000	36 000	29 000	* 30 000	* 30 000
Iran (a)	386 300	* 620 000	* 420 000	422 000	* 400 000
Japan	8 876 000	9 221 000	9 857 000	9 273 000	8 800 000
Turkmenistan	* 700 000	746 000	639 000	* 770 000	* 770 000
World total	34 300 000	32 500 000	33 800 000	35 300 000	35 000 000

Note(s)

(a) Years ended 20 March following that stated

Production of iron ore

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria (a)	3 043 237	3 311 102	3 236 767	3 200 661	3 218 040
Bosnia & Herzegovina	1 427 410	1 553 961	1 286 283	1 238 609	1 020 137
Germany (b)(c)	529 400	546 712	537 379	533 452	498 706
Norway	* 1 800 000	* 1 700 000	* 1 800 000	* 1 900 000	* 1 900 000
Russia	100 200 000	100 600 000	95 100 000	90 800 000	* 91 000 000
Spain	20 000	71 728	—	99 460	95 408
Sweden	39 228 000	41 313 000	36 757 000	36 130 000	31 481 000
Turkey	21 454 649	16 051 308	17 703 929	16 765 922	20 282 301
Ukraine	78 837 700	83 888 800	32 934 197	* 30 000 000	* 35 000 000
Algeria	1 881 800	1 744 500	1 634 300	1 742 600	* 1 800 000
Egypt (d)	4 200	12 900	5 400	* 5 000	* 5 000

Production of iron ore

tonnes (metric)

Country	2020	2021	2022	2023	2024
Guinea	644 245	1 755 079	304 390	—	—
Liberia	4 874 409	5 000 000	5 000 000	5 050 000	5 205 000
Malawi	5 018	4 980	982	639	* 1 031
Mauritania	12 635 000	13 059 000	13 234 000	14 418 000	14 307 526
Morocco	39 151	24 632	13 387	14 487	46 294
Namibia	40 544	75 718	—	7 944	—
Nigeria	5 636	3 078	* 2 800	8 896	* 8 800
Sierra Leone	—	1 584 115	4 370 072	7 207 740	12 822 491
South Africa (e)	55 635 421	73 090 918	63 711 254	63 187 576	62 829 392
Tunisia	172 919	266 400	* 260 000	* 260 000	* 260 000
Uganda	—	57 169	102 600	361 194	* 300 000
Canada (f)	60 647 580	58 267 104	65 032 476	59 421 934	70 002 419
Guatemala	62	* 60	* 60	* 60	...
Mexico	27 208 553	33 915 683	27 685 197	35 817 000	* 30 000 000
USA (f)(g)	38 100 000	47 500 000	37 300 000	44 700 000	44 200 000
Bolivia	26 576	29 322	372 305	223 358	504 333
Brazil	388 639 076	423 185 073	403 024 748	436 842 189	450 062 140
Chile	15 553 000	17 685 000	17 638 000	18 212 000	15 657 000
Colombia	787 121	750 381	497 595	652 728	514 142
Peru	8 893 972	12 149 274	12 936 826	12 986 023	13 309 265
Uruguay (h)	3 100	8 270	5 550	2 280	5 140
Venezuela	1 500 000	3 500 000	2 400 000	1 200 000	* 1 000 000
Bhutan	14 734	25 917	3 492	14 018	8 452
China	866 717 000	980 528 000	967 873 000	990 555 000	1 041 935 000
India (h)	205 042 000	254 099 000	258 312 000	277 339 000	289 395 000
Indonesia	3 620 000	2 980 000	3 480 000	* 3 500 000	* 3 500 000
Iran (i)	96 806 146	75 039 588	70 974 267	79 705 135	86 582 567
Kazakhstan	62 865 000	64 089 700	53 623 800	47 582 800	36 959 700
Korea (Rep. of)	575 232	538 563	234 783	503 647	386 806
Korea, Dem. P.R. of	2 584 000	2 652 000	2 728 000	2 730 000	* 2 700 000
Laos	1 013 042	3 522 598	1 794 798	3 381 964	3 070 769
Malaysia (f)	5 371 411	4 874 485	4 911 625	4 817 048	5 282 836
Mongolia	9 224 400	9 171 900	7 659 900	5 334 800	3 470 000
Nepal (j)	1 705	—	—	* —	* —
Pakistan (d)	573 691	805 696	717 281	376 970	* 770 000
Philippines	42 795	77 536	75 771	141 220	130 161
Thailand	113 239	324 914	190 000	347 288	* 350 000
Vietnam	3 560 300	3 083 900	1 843 000	1 407 200	1 351 700
Australia	918 063 223	922 158 512	940 886 398	947 110 097	954 223 810
New Zealand	* 6 260 000	2 200 000	2 280 000	1 480 000	2 000 000
World total	3 046 000 000	3 269 000 000	3 162 000 000	3 249 000 000	3 339 000 000

Note(s)

- (a) Including micaceous iron oxide
- (b) Including manganiferous iron ore
- (c) Used as aggregate in the construction industry
- (d) Years ended 30 June of that stated
- (e) Including by-product magnetite
- (f) Including by-product iron ore
- (g) Including beneficiated and direct shipping ore
- (h) Years ended 31 March following that stated
- (i) Years ended 20 March following that stated
- (j) Years ended 15 July of that shown

Production of pig iron

tonnes (metric)

Country	2020	2021	2022	2023	2024
Albania	—	773 668	508 485	474 444	343 925
Austria	5 300 000	6 100 000	5 800 000	5 500 000	5 500 000
Azerbaijan	362	1	—	481	606
Belgium	3 600 000	4 200 000	4 400 000	3 800 000	4 500 000
Bosnia & Herzegovina	739 058	1 066 238	756 736	569 589	514 846
Czech Republic	3 500 000	3 900 000	3 400 000	2 700 000	2 000 000
Finland	1 900 000	2 500 000	1 900 000	2 200 000	* 2 200 000
France	7 695 671	9 469 617	8 207 165	6 169 608	6 545 625
Germany	25 500 000	25 500 000	23 700 000	23 600 000	24 400 000
Hungary	1 000 000	600 000	500 000	200 000	—
Italy	3 405 000	3 926 000	3 500 000	3 100 000	* 2 200 000
Netherlands	5 400 000	5 900 000	5 500 000	4 100 000	5 600 000
Norway	* 70 000	* 70 000	* 70 000	* 70 000	* 70 000
Poland	3 502 468	3 594 504	3 089 147	2 791 017	3 462 018
Romania	1 800 000	2 100 000	1 500 000	600 000	400 000
Russia	59 703 000	61 600 000	59 300 000	62 400 000	59 200 000
Serbia	* 1 500 000	* 1 500 000	2 687 211	2 603 165	* 2 500 000
Slovakia	2 753 000	4 014 000	3 153 000	* 3 157 600	* 3 900 000
Spain	2 900 000	4 000 000	3 400 000	3 000 000	3 400 000
Sweden	2 854 000	3 100 000	2 900 000	3 000 000	2 500 000
Turkey	10 000 000	10 400 000	9 100 000	8 700 000	10 200 000
Ukraine	20 238 000	21 200 000	5 809 533	6 000 000	7 100 000
United Kingdom	5 235 500	5 749 600	4 779 400	4 509 500	2 963 000
Algeria	2 200 000	3 100 000	3 900 000	4 200 000	* 4 200 000
Egypt	4 800 000	5 400 000	6 000 000	7 200 000	7 100 000
Libya	834 550	900 000	1 100 000	1 600 000	1 700 000
South Africa	2 300 000	3 100 000	* 2 600 000	* 3 100 000	* 2 900 000
Zimbabwe	—	—	—	—	* 300 000
Canada	6 400 000	7 800 000	7 300 000	7 400 000	7 400 000
Mexico	7 606 000	8 496 000	8 428 000	6 900 000	5 300 000
Trinidad & Tobago	1 300 000	1 600 000	1 700 000	1 300 000	* 1 400 000
USA	21 650 000	27 210 000	25 240 000	27 980 000	* 25 600 000
Argentina	2 455 000	3 550 000	3 494 000	3 446 000	2 845 000
Brazil	24 628 000	28 530 000	26 813 000	25 719 000	26 599 000
Chile	663 000	695 000	581 000	598 000	409 000
Colombia	164 000	211 000	213 000	219 000	* 224 000
Paraguay (a)	35 000	44 000	40 000	33 000	34 000
Venezuela	285 000	290 000	277 000	300 000	300 000
Bahrain	1 400 000	1 500 000	1 400 000	1 600 000	* 1 700 000
China	888 976 100	868 567 800	863 827 800	871 013 000	851 737 000
India	101 400 000	116 600 000	122 200 000	135 900 000	144 800 000
Indonesia	* 3 100 000	* 3 000 000	* 3 000 000	* 3 000 000	* 3 000 000
Iran	33 300 000	34 300 000	36 400 000	36 900 000	37 700 000
Japan	61 600 469	70 344 478	64 146 549	63 041 584	61 000 000
Kazakhstan	3 212 375	3 623 764	2 900 000	2 865 731	* 2 900 000
Korea (Rep. of)	45 359 000	46 440 000	43 400 300	45 200 000	44 200 000
Korea, Dem. P.R. of	* 100 000	* 150 000	* 150 000	* 150 000	* 150 000
Malaysia	700 000	400 000	800 000	800 000	* 800 000
Oman	1 800 000	1 700 000	1 800 000	1 600 000	1 600 000
Qatar	752 569	770 444	1 410 254	1 275 583	* 2 000 000
Saudi Arabia	5 200 000	6 100 000	6 700 000	6 800 000	6 900 000
Taiwan	13 400 000	15 200 000	13 400 000	12 200 000	14 900 000
United Arab Emirates	3 000 000	3 700 000	3 400 000	3 600 000	3 500 000
Vietnam	* 10 000 000	* 10 000 000	* 10 000 000	* 10 000 000	* 10 000 000
Australia	3 700 000	3 800 000	3 700 000	3 500 000	2 800 000
New Zealand	600 000	700 000	600 000	600 000	600 000
World total	1 422 000 000	1 459 000 000	1 421 000 000	1 439 000 000	1 426 000 000

Note(s)

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

(a) Including sponge iron

Production of crude steel

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	6 765 100	7 884 000	7 512 200	7 133 100	7 129 900
Azerbaijan	264 506	308 402	391 865	323 611	352 406
Belarus	2 559 577	2 473 681	2 070 000	2 284 000	2 330 000
Belgium	6 120 000	6 910 000	7 030 400	5 863 600	7 135 800
Bosnia & Herzegovina	740 194	774 832	653 246	582 054	524 194
Bulgaria	483 800	547 500	481 500	489 100	448 700
Croatia	45 273	185 143	169 135	212 433	153 250
Czech Republic	2 900 000	4 700 000	4 200 000	3 400 000	2 400 000
Finland	3 482 000	4 322 000	3 462 000	3 506 000	3 663 800
France	11 595 698	13 946 700	12 118 600	9 996 200	10 754 987
Germany	35 658 000	40 241 200	36 860 400	35 438 300	37 234 100
Greece	1 408 000	1 498 000	1 543 000	1 181 000	1 336 000
Hungary	1 513 000	1 099 800	857 200	477 300	240 000
Italy	20 379 100	24 412 700	21 598 100	21 055 800	20 002 000
Luxembourg	1 886 000	2 073 000	1 875 000	1 900 000	1 825 000
Moldova (a)	465 000	570 000	560 000	500 000	* 400 000
Montenegro	19 364	3 042	—	—	5 000
Netherlands	6 053 700	6 620 400	6 143 000	4 676 300	6 395 500
North Macedonia	236 520	271 811	303 409	301 768	305 000
Norway	623 800	622 500	703 900	689 900	610 100
Poland	7 855 900	8 552 506	7 521 057	6 522 172	7 166 777
Portugal	2 202 800	1 953 000	1 854 900	2 039 700	1 948 300
Romania	2 818 866	3 390 661	2 626 284	1 646 634	1 364 300
Russia	73 600 000	77 560 000	71 930 000	74 706 000	71 006 900
Serbia	1 455 700	1 667 400	1 674 100	1 454 000	1 393 200
Slovakia	3 443 500	4 862 800	3 872 200	4 376 900	3 865 800
Slovenia	585 200	661 900	601 256	526 100	594 600
Spain	10 998 400	14 204 900	11 573 100	11 435 400	11 872 500
Sweden	4 408 700	4 678 300	4 404 200	4 258 400	4 024 800
Switzerland	1 175 000	1 291 100	1 205 900	1 200 000	1 200 000
Turkey	35 810 300	40 360 000	35 133 800	33 713 700	36 893 400
Ukraine	20 616 400	21 365 600	6 263 200	6 227 700	7 575 200
United Kingdom	7 085 700	7 221 600	5 962 800	5 616 500	4 011 900
Algeria	3 000 000	3 491 300	4 300 000	4 421 000	4 520 000
Angola	250 000	275 000	270 000	190 000	285 000
Congo, Democratic Republic	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Egypt	8 228 700	10 293 500	9 818 500	10 353 600	10 730 900
Ghana	* 400 000	* 400 000	* 400 000	* 400 000	245 000
Kenya	385 000	485 000	450 000	1 365 000	1 585 000
Libya	538 176	648 910	687 814	902 300	871 900
Mauritania	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Morocco	1 000 000	1 050 000	1 550 000	1 397 000	1 415 000
Nigeria	* 650 000	* 650 000	* 650 000	* 1 190 000	* 1 200 000
South Africa	3 876 500	5 019 500	4 495 600	4 953 100	4 716 900
Tunisia	77 600	85 100	75 500	69 000	60 000
Uganda	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Zimbabwe	5 196	3 921	* 4 000	* 4 500	* 60 000
Canada	10 986 000	12 976 290	12 097 573	12 168 092	12 349 087
Cuba	185 200	230 800	200 400	175 400	178 700
Dominican Republic	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
El Salvador	81 600	102 800	88 900	83 600	85 100
Guatemala	242 600	306 900	271 100	241 300	249 500
Mexico	16 802 000	18 453 600	18 386 300	16 422 500	13 784 100
USA	72 732 100	85 791 400	80 535 000	81 392 200	79 456 600
Argentina	3 651 100	4 875 300	5 094 000	9 856 400	3 863 000
Brazil	31 415 000	36 071 000	34 089 000	32 030 000	34 172 000
Chile	1 157 000	1 318 000	1 151 000	1 162 000	949 000
Colombia	1 148 900	1 338 200	1 319 800	1 373 900	1 284 400
Ecuador	482 200	611 600	536 300	484 200	492 600
Paraguay	23 300	26 500	23 600	21 200	21 900
Peru	730 700	1 234 100	1 765 200	1 558 900	1 602 600
Uruguay	49 100	62 800	54 900	48 300	50 200
Venezuela	29 200	29 400	27 100	27 400	28 800

Production of crude steel

tonnes (metric)

Country	2020	2021	2022	2023	2024
Bahrain	900 000	1 167 300	1 170 300	1 265 563	1 205 000
China	1 064 766 800	1 032 788 000	1 013 003 000	1 019 081 000	1 005 091 000
India	100 256 500	118 201 400	125 377 200	140 706 000	149 421 000
Indonesia	12 871 400	14 834 800	15 567 900	16 845 700	18 000 000
Iran (b)	22 630 121	21 659 618	23 168 319	22 096 126	28 321 752
Iraq	1 980 000	2 750 000	3 300 000	2 755 000	3 020 000
Israel	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Japan	83 186 485	96 181 132	88 946 808	86 748 669	83 785 917
Jordan	* 350 000	* 350 000	* 350 000	* 300 000	* 300 000
Kazakhstan	4 009 402	4 526 071	3 370 999	3 923 304	4 177 900
Korea (Rep. of)	67 082 000	70 418 000	65 846 000	66 683 000	63 513 000
Korea, Dem. P.R. of	707 000	598 000	289 000	347 000	* 350 000
Kuwait	* 1 300 000	* 1 300 000	* 900 000	* 1 000 000	* 1 014 000
Malaysia	6 618 500	6 739 100	7 206 600	7 529 800	8 800 000
Mongolia	* 18 800	* 39 400	* 28 500	* 41 200	* 39 500
Myanmar	* 350 000	* 400 000	* 400 000	* 500 000	* 500 000
Oman	2 500 000	2 800 000	2 900 000	2 900 000	3 030 000
Pakistan	3 803 000	5 437 700	6 013 000	5 337 000	4 127 000
Philippines	892 300	1 554 800	1 600 000	1 650 000	1 900 000
Qatar	1 218 100	1 001 801	1 081 916	1 146 437	1 176 500
Saudi Arabia	7 775 000	8 735 000	9 860 200	9 940 400	9 605 700
Singapore	419 500	567 900	547 500	465 200	300 000
Sri Lanka	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Syria	* 5 000	* 5 000	* —	* —	* —
Taiwan	20 498 000	22 140 000	19 927 000	19 149 200	19 195 300
Thailand	4 467 200	5 472 900	5 316 400	4 976 300	4 918 400
United Arab Emirates	2 722 000	2 997 500	3 696 400	3 772 500	3 725 000
Uzbekistan	939 200	1 050 000	950 000	1 000 000	1 000 000
Vietnam	23 917 600	24 932 300	21 866 400	18 955 100	19 266 700
Australia	5 489 000	5 779 600	5 622 225	5 256 284	4 657 826
New Zealand	585 700	645 700	569 934	554 500	566 000
World total	1 876 000 000	1 949 000 000	1 871 000 000	1 881 000 000	1 872 000 000

Note(s)

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

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

(b) Years ended 20 March following that stated

Production of ferro-alloys

tonnes (metric)

Country	2020	2021	2022	2023	2024
Albania					
Ferro-chrome	53 543	103 700	80 194	54 563	* 55 000
Armenia					
Ferro-molybdenum	6 718	8 335	9 164	7 738	4 499
Austria					
Ferro-molybdenum	3 000	3 000	3 000	3 000	3 000
Ferro-nickel	2 500	2 500	2 500	2 000	1 000
Ferro-vanadium	7 000	7 000	7 000	7 000	6 000
Bosnia & Herzegovina					
Ferro-alloys	14 641	35 920	24 859	6 404	17 188
Czech Republic					
Ferro-vanadium	* 5 600	* 6 900	* 5 900	* 1 100	* 915
Finland					
Ferro-chrome	498 000	515 000	430 000	390 000	374 000
France					
Ferro-manganese	68 281	108 000	119 000	74 000	* 70 000
Ferro-silico-manganese	62 052	68 000	46 000	41 000	* 40 000
Ferro-silicon	* 41 000	* 44 000	* 38 000	* 40 000	* 40 000
Silicon metal	* 87 000	* 100 000	* 98 000	* 90 000	* 90 000
Georgia					
Ferro-manganese	* 4 500	* 4 500	* 4 500	* 4 500	* 4 500
Ferro-silico-manganese	217 463	356 300	364 800	235 000	249 800
Germany					
Ferro-chrome	16 409	23 252	26 624	21 179	(a) 6 204
Other ferro-alloys	* 8 000	* 10 000	* 10 000	15 131	10 857
Greece					
Ferro-nickel	30 518	19 394	* —	* —	* —
Iceland					
Ferro-silicon	128 187	123 800	121 509	112 601	138 448
Italy					
Ferro-silico-manganese	58 000	75 000	57 000	48 000	43 000
Kosovo					
Ferro-nickel	* 7 000	* 5 000	—	* 3 500	—
North Macedonia					
Ferro-nickel	17 747	17 714	8 410	3 812	—
Norway					
Ferro-manganese	* 328 000	* 328 000	* 328 000	* 328 000	* 328 000
Ferro-silico-manganese	* 260 000	* 310 000	* 320 000	* 280 000	* 320 000
Ferro-silicon	* 260 000	* 250 000	* 260 000	* 220 000	* 210 000
Silicon metal	* 210 000	* 240 000	* 230 000	* 220 000	* 180 000
Poland					
Ferro-silicon	61 709	73 370	51 371	41 047	72 719
Other ferro-alloys	16 104	31 170	28 996	* 30 000	1 100
Russia					
Spiegeleisen	* 7 000	* 7 000	* 7 000	* 7 000	* 7 000
Ferro-chrome	343 000	289 000	309 000	280 000	* 280 000
Ferro-silico-chrome	* 4 200	* 4 200	* 4 200	* 4 200	* 4 200
Ferro-manganese	238 000	209 000	203 000	172 000	* 172 000
Ferro-silico-manganese	—	406 000	* 454 000	* 527 000	* 530 000
Ferro-molybdenum	3 937	3 921	3 517	2 899	* 3 000
Ferro-nickel	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Ferro-silicon	880 401	880 000	842 657	728 423	* 728 000
Ferro-vanadium	9 084	* 9 100	* 8 500	* 8 500	* 8 500
Silicon metal	* 34 500	34 500	44 000	50 900	53 000
Other ferro-alloys	* 34 000	* 34 000	* 34 000	* 34 000	* 34 000
Slovakia					
Ferro-manganese	24 000	30 900	16 000	200	* 200
Ferro-silico-manganese	33 800	48 600	3 800	800	* 800
Ferro-silicon	29 600	34 700	15 600	3 500	* 3 500
Other ferro-alloys	1 200	1 500	1 200	* 1 200	* 1 200
Spain					
Ferro-manganese	28 000	48 000	22 000	26 000	* 26 000
Ferro-silico-manganese	84 000	77 000	52 000	13 000	* 20 000
Ferro-silicon	* 77 000	* 83 000	* 71 000	* 67 000	* 68 000
Silicon metal (b)	* 16 000	* 25 000	* 18 000	* 11 000	* 26 000

Production of ferro-alloys

tonnes (metric)

Country	2020	2021	2022	2023	2024
Sweden					
Ferro-chrome	87 000	114 600	114 600	* 108 000	* 100 000
Turkey					
Ferro-chrome	94 200	100 750	98 813	* 84 000	* 75 000
Ferro-silicon	1 706	* 2 000	* 3 500	* 2 000	* 2 000
Ukraine					
Ferro-manganese	117 215	100 600	20 690	5 400	3 600
Ferro-silico-manganese	* 850 000	* 850 000	* 250 000	230 000	104 150
Ferro-nickel	73 700	* 74 000	42 300	—	* —
Ferro-silicon	* 97 000	* 97 000	* 30 000	* 1 700	120
Other ferro-alloys	* 100 000	* 100 000	1 800	2 900	300
Egypt (c)					
Ferro-manganese	6 000	19 000	23 000	5 000	* 6 000
Ferro-silicon	* 60 000	* 70 000	* 70 000	* 70 000	* 65 000
Gabon					
Ferro-silico-manganese	37 000	43 860	(b) 47 900	*(b) 47 900	*(b) 47 900
South Africa					
Ferro-alloys	2 731 138	3 480 643	3 523 632	3 214 307	* 3 450 000
Zambia					
Ferro-manganese	26 087	25 119	18 175	10 873	* 7 000
Ferro-silico-manganese	—	—	—	80 473	* 52 000
Silico-manganese	20 428	107 122	140 499	72 112	* 50 000
Zimbabwe					
Ferro-chrome (a)(d)	197 296	322 295	370 777	363 348	* 330 000
Canada					
Ferro-niobium	* 9 000	* 11 000	* 10 000	* 10 000	* 10 000
Ferro-silicon	* 34 000	* 30 000	* 40 000	* 35 000	* 35 000
Ferro-vanadium	* 1 400	* 1 100	* 1 600	* 1 500	* 1 500
Silicon metal	* 25 000	* 30 000	* 40 000	* 30 000	* 30 000
Dominican Republic					
Ferro-nickel	59 211	75 887	78 887	48 226	—
Mexico					
Ferro-manganese	57 127	71 637	72 914	54 159	36 339
Ferro-silico-manganese	147 784	170 929	175 396	148 835	148 776
USA					
Ferro-silicon & silicon metal	277 000	265 000	347 940	* 300 000	* 290 000
Argentina					
Ferro-silicon	* 11 200	* 13 000	* 13 000	* 13 000	* 13 000
Brazil					
Ferro-chrome (a)	254 346	213 756	* 213 756	* 210 000	* 210 000
Ferro-silico-magnesium	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Ferro-manganese	73 000	71 000	—	—	—
Ferro-nickel (e)	43 500	41 700	39 800	40 000	* 40 000
Ferro-niobium	* 71 000	* 92 000	* 82 000	* 86 000	* 92 000
Ferro-silicon	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Silicon metal	203 940	198 000	206 000	* 200 000	* 200 000
Other ferro-alloys	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Chile					
Ferro-molybdenum	* 14 500	* 14 500	* 14 500	* 14 500	* 14 500
Colombia					
Ferro-nickel	* 103 000	* 109 000	* 120 000	* 120 000	* 120 000
Venezuela					
Ferro-manganese	* 6 000	* 6 000	* 6 000	* 6 000	* 6 000
Ferro-silico-manganese	* 4 000	* 4 000	* 4 000	* 4 000	* 4 000
Ferro-nickel	* 700	* 1 200	* 2 600	* 1 300	* 1 200
Ferro-silicon	* 40 000	* 40 000	* 40 000	* 40 000	* 40 000
Bhutan					
Ferro-silicon	* 103 500	* 130 400	* 115 700	* 127 200	* 151 300
China					
Ferro-alloys	34 196 000	34 755 000	34 101 000	34 650 000	36 243 000
Silicon metal	2 100 000	2 610 000	* 2 700 000	* 3 630 000	* 3 900 000

Production of ferro-alloys

tonnes (metric)

Country	2020	2021	2022	2023	2024
India					
Ferro-aluminium	(f) 1 119	(f) 1 139	851	827	* 800
Ferro-chrome	(f) 868 000	(f) 1 113 000	1 073 000	1 317 000	* 1 100 000
Ferro-silico-magnesium	(f) 9 700	(f) 15 081	16 789	15 713	* 15 000
Ferro-silico-manganese	(f) 329 295	(f) 349 414	344 000	353 595	* 350 000
Ferro-molybdenum	(f) 428	(f) 436	581	737	700
Ferro-titanium	(f) 249	(f) 416	378	356	* 350
Ferro-vanadium	(f) 634	(f) 850	892	807	* 800
Indonesia					
Ferro-silico-manganese	* 4 000	* 13 000	* 8 000	* 8 000	* 12 000
Ferro-nickel	129 850	129 090	121 670	107 365	100 515
Iran					
Ferro-chrome (g)	* 10 000	* 17 000	* 15 000	* 10 000	* 10 000
Ferro-silicon (g)	* 55 000	* 55 000	* 70 000	* 85 000	* 115 000
Japan					
Ferro-manganese	400 331	440 173	405 899	408 582	* 420 000
Ferro-nickel	234 505	243 275	193 467	93 848	59 757
Other ferro-alloys	49 544	54 275	60 001	52 565	* 55 000
Kazakhstan					
Ferro-chrome	1 841 309	1 704 561	1 658 378	1 583 927	1 856 504
Ferro-silico-chrome	* 110 500	85 299	90 632	96 999	118 634
Ferro-silico-manganese	122 743	132 119	191 947	211 270	143 964
Ferro-silicon	180 645	* 148 000	* 180 000	* 183 000	165 983
Korea (Rep. of)					
Ferro-manganese	* 200 000	* 300 000	* 250 000	* 150 000	* 30 000
Ferro-silico-manganese	* 196 000	* 196 000	* 196 000	* 196 000	* 196 000
Other ferro-alloys	* 4 200	* 4 200	* 4 200	* 4 200	* 4 200
Korea, Dem. P.R. of					
Ferro-alloys	* 15 300	* 37 000	* 37 000	* 48 500	* 32 000
Myanmar					
Ferro-nickel (f)	* 50 000	52 970	36 731	* 17 400	* 620
Vietnam					
Ferro-silico-manganese	157 000	192 000	174 000	142 000	* 190 000
Australia (c)					
Ferro-manganese & ferro-silico-manganese	* 270 000	* 270 000	* 270 000	* 270 000	* 270 000
Silicon metal	* 45 000	* 46 000	* 49 000	* 38 000	* 34 000
New Caledonia					
Ferro-nickel	236 421	205 108	223 015	244 829	168 552

Note(s)

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

- (a) Including ferro-silico-chrome
(b) Exports
(c) Years ended 30 June of that stated
(d) Sales
(e) Nickel content
(f) Years ended 31 March following that stated
(g) Years ended 20 March following that stated

Production of kaolin

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	23 230	* 23 000	* 23 000	* 23 000	* 23 000
Belgium	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Bosnia & Herzegovina	108 174	62 599	24 529	21 541	—
Bulgaria	* 322 000	719 213	730 125	391 900	282 593
Czech Republic (a)	626 000	645 000	558 000	439 000	433 000
France	231 579	289 057	310 251	231 177	* 232 000
Germany (b)	775 000	864 000	862 000	567 000	601 000
Hungary	743	1 952	1 335	270	1 255
Italy	* 130 000	* 130 000	* 130 000	(c) 138 935	* 138 000
Poland (d)	118 000	315 040	317 570	276 120	218 610
Portugal	320 655	387 223	426 848	427 187	445 049
Russia	* 1 550 000	* 1 550 000	* 1 550 000	* 1 550 000	* 1 550 000
Serbia	234 000	249 000	301 000	275 000	216 000
Slovakia	30 960	39 000	42 000	12 000	19 250
Spain (d)	274 137	303 743	277 170	407 087	627 108
Turkey	1 224 746	1 748 014	2 289 367	1 348 023	1 996 713
Ukraine	1 680 891	2 317 723	647 980	* 600 000	* 600 000
United Kingdom	* 635 000	* 735 000	* 709 000	* 514 000	* 474 000
Algeria	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Burkina Faso	* 40	* —	* —	* —	* —
Egypt	* 230 000	* 230 000	* 231 000	* 210 000	* 200 000
Ethiopia (e)	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Kenya	* 1 600	* 1 600	* 1 600	* 1 600	* 1 600
Madagascar	* 200	* 200	* 200	* 200	* 200
Nigeria	7 033	23 530	* 23 000	29 843	* 20 000
South Africa	20 639	29 168	10 553	6 915	14 744
Sudan	19 700	3 700	* 3 700	* 3 000	* 3 000
Tanzania	98 454	100 950	46 973	75 247	86 055
Uganda	12 014	10 264	226	8 809	* 9 000
Cuba	2 000	1 400	500	1 500	600
Guatemala	402	* 500	2 734	4 371	2 817
Mexico	1 003 889	1 260 800	1 167 760	159 570	241 355
USA (c)	* 4 640 000	* 4 360 000	* 4 340 000	* 4 560 000	* 4 500 000
Argentina	20 628	* 21 000	* 21 000	* 21 000	* 21 000
Brazil (a)	2 939 591	1 153 884	1 189 531	828 394	1 039 552
Chile	38 789	49 533	44 232	51 300	53 736
Colombia	29 371	70 032	36 983	* 40 000	* 40 000
Paraguay	* 6 000	* 6 000	* 6 000	* 6 000	* 6 000
Peru	12 536	13 142	14 300	11 876	11 452
Venezuela	* 3 000	* 3 000	* 3 000	* 3 000	* 3 000
China	8 426 800	8 400 000	8 400 000	* 7 800 000	* 7 800 000
India (f)(g)	* 74 000	* 74 000	* 74 000	* 74 000	* 74 000
Indonesia	1 667 505	1 598 196	994 087	1 640 573	* 1 700 000
Iran (h)	2 049 715	1 348 232	2 600 110	3 994 885	* 4 000 000
Japan	* 12 000	* 12 000	* 12 000	* 12 000	* 12 000
Jordan	499 000	268 000	* 300 000	* 300 000	* 300 000
Korea (Rep. of)	393 236	352 003	426 960	332 179	966 182
Malaysia	336 565	228 605	236 840	290 365	266 527
Oman	58 300	35 400	—	—	—
Pakistan (i)	14 919	12 309	16 815	14 130	15 000
Philippines	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Saudi Arabia	213 000	266 000	279 000	* 280 000	* 280 000
Sri Lanka	* 2 000	* 2 000	* 2 000	* 2 000	* 2 000
Taiwan	404	30	65	45	40
Thailand (d)	71 051	101 711	86 076	67 944	* 65 000
Uzbekistan (f)	495 802	565 502	959 279	981 292	* 980 000
Vietnam	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000

Production of kaolin

tonnes (metric)

Country	2020	2021	2022	2023	2024
Australia (i)	170 130	189 104	202 928	197 794	* 190 000
New Zealand	* 51 000	* 51 000	* 51 000	55 000	50 000
World total	32 400 000	31 700 000	31 500 000	29 800 000	31 300 000

Note(s)

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

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

Mine production of lead

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Bosnia & Herzegovina	8 157	8 547	9 060	9 303	11 987
Bulgaria	18 929	10 193	7 825	5 382	17 435
Finland	1 532	1 494	1 535	909	729
Georgia	1 183	1 253	2 192	2 301	2 348
Greece	19 656	16 758	10 624	15 208	13 396
Ireland, Republic of	14 401	13 192	14 181	7 019	861
Kosovo	4 737	5 241	3 358	3 633	2 596
Montenegro	1 008	2 004	1 349	3 714	4 457
North Macedonia	44 928	42 873	41 471	43 926	41 896
Poland	65 660	39 514	31 000	30 800	31 500
Portugal	28 178	30 067	23 347	22 770	6 395
Romania	500	700	300	700	100
Russia	200 700	212 300	229 300	248 400	* 250 000
Serbia	5 400	6 300	6 700	7 200	8 000
Slovakia	102	101	127	155	135
Spain	11 397	10 965	9 272	10 547	7 752
Sweden	65 402	65 404	70 339	65 570	75 334
Turkey	* 81 500	* 93 700	* 81 700	* 71 100	* 65 700
United Kingdom (a)	* 100	* 100	* 100	* —	* —
Congo	* —	* —	20 000	* 2 000	* 1 700
Morocco	38 162	31 318	36 022	37 345	40 006
Namibia	9 181	10 194	13 401	10 332	6 923
Nigeria	* 16 000	10 000	15 000	13 000	11 000
South Africa	28 048	31 224	39 974	40 271	27 499
Tunisia	900	1 500	900	1 000	* 1 000
Canada	3 800	9 339	4 436	2 200	2 900
Cuba	* 30 000	* 30 000	* 33 000	* 35 000	* 30 000
Guatemala	422	—	—	—	—
Honduras	* 12 300	* 12 000	* 12 000	* 10 000	* 8 000
Mexico	260 390	272 231	272 988	254 278	278 177
USA	306 000	294 000	273 000	263 000	296 000
Argentina	13 086	17 055	18 600	32 259	34 359
Bolivia	64 619	93 246	90 115	102 959	112 809
Brazil	5 352	6 307	7 407	16 100	16 300
Chile	1 386	382	457	325	367
Peru	241 548	264 427	255 333	273 335	291 319
China	1 970 000	1 964 400	1 945 900	1 960 000	1 926 000
India (b)	217 786	212 654	217 637	220 023	226 816
Indonesia	7 100	6 700	4 800	6 400	5 100
Iran	* 70 000	* 70 000	* 80 000	* 80 000	* 85 000
Kazakhstan	30 200	29 900	30 100	45 200	64 400
Korea (Rep. of)	1 681	1 528	974	240	1 102
Korea, Dem. P.R. of	* 25 000	* 25 000	* 25 000	* 25 000	* 25 000
Laos	* 100	* 200	* 1 800	* 1 000	* 350
Mongolia	12 000	10 940	9 500	8 500	9 415
Myanmar (c)	22 710	25 355	* 25 000	* 28 000	* 31 100
Nepal	* 1 800	* 5 600	* 2 000	* 2 000	* —
Pakistan	7 094	7 277	8 886	7 838	8 359
Tajikistan	33 282	48 058	47 510	37 809	45 077
Uzbekistan	* 16 600	* 14 700	* 15 000	* 11 000	* 11 900
Vietnam	* 11 700	* 13 800	* 17 500	* 15 600	* 34 400
Australia	494 271	485 487	437 825	457 100	441 130
World total	4 500 000	4 600 000	4 500 000	4 500 000	4 600 000

Note(s)

(a) By-product of Pennine fluorspar operations and of gold mining in Northern Ireland

(b) Years ended 31 March following that stated

(c) Years ending 30 September of that stated

Production of refined lead

tonnes (metric)

Country	2020	2021	2022	2023	2024
Albania	3 000	3 000	3 000	3 000	3 000
Austria	* 27 000	* 27 000	* 27 000	* 27 000	* 27 000
Belgium	122 748	144 502	108 800	131 946	150 444
Bulgaria	72 992	71 822	69 709	44 542	74 367
Croatia	* 4 800	* 5 100	* 4 500	* 5 000	* 8 000
Czech Republic	* 42 000	* 42 000	* 43 000	* 42 000	* 42 000
Estonia	9 925	* 10 000	* 10 000	* 10 000	* 10 000
France	52 467	* 70 000	65 000	66 000	* 66 000
Germany	335 000	310 006	227 200	310 000	300 000
Greece	30 900	* 32 000	* 34 000	* 36 000	* 38 000
Hungary	15 000	* 17 000	* 17 000	* 17 000	* 17 000
Ireland, Republic of	12 000	14 000	15 000	15 000	15 100
Italy	152 700	158 300	133 400	66 000	87 200
Netherlands	34 000	* 36 000	* 36 000	* 36 000	* 36 000
Poland	139 800	144 000	135 300	165 100	130 600
Portugal	* 9 000	* 10 000	* 10 000	* 13 000	* 14 000
Romania	15 319	13 358	13 429	13 161	13 302
Russia	142 000	152 800	118 300	134 900	* 155 000
Serbia	* 14 000	* 15 000	* 16 000	* 16 000	* 16 000
Slovakia	8 000	9 000	* 9 000	* 9 000	* 9 000
Slovenia	11 000	* 12 000	* 12 000	* 12 000	* 12 000
Spain	174 600	* 211 000	* 216 000	* 220 000	* 217 000
Sweden	74 370	73 431	71 163	76 150	65 527
Turkey	* 110 000	* 120 000	* 90 000	109 000	* 115 000
Ukraine	24 968	29 445	10 956	* 12 000	* 12 000
United Kingdom	315 000	327 000	309 900	285 000	276 000
Algeria	8 000	* 9 000	* 9 000	* 9 000	* 9 000
Egypt	* 26 000	* 27 000	* 27 000	* 27 000	* 27 000
Ghana (a)	10 000	13 456	16 273	18 681	20 429
Kenya	1 000	* 1 000	* 1 000	* 1 000	* 1 000
Morocco	7 000	8 000	* 8 000	* 8 000	7 668
Mozambique (a)	4 200	4 594	5 263	4 585	5 858
Nigeria	* 14 000	* 19 000	* 36 000	* 38 000	* 38 000
Senegal (a)	4 223	4 868	5 924	5 717	2 387
South Africa	* 55 000	* 56 000	* 58 000	* 60 000	* 60 000
Uganda	* 800	* 800	* 800	* 800	* 800
Zambia	4 008	5 004	* 5 000	* 5 000	* 5 000
Canada	189 900	197 400	182 400	190 900	164 100
Costa Rica	8 000	10 000	* 9 000	* 10 000	* 10 000
Cuba	* 5 000	* 5 000	* 5 000	* 5 000	* 6 000
Guatemala	* 11 000	* 12 000	—	—	—
Honduras	* 4 000	* 6 000	* 6 000	* 6 000	* 6 000
Mexico	410 000	426 355	419 100	434 800	434 900
USA (b)(c)	1 090 000	1 050 000	1 010 000	1 010 000	1 020 000
Argentina	80 000	82 000	85 000	85 000	85 000
Bolivia	* 3 200	* 4 000	* 4 000	* 4 200	* 4 200
Brazil	257 500	265 248	278 004	286 008	286 008
Chile	12 000	* 14 000	* 14 000	* 14 000	* 16 000
Colombia	* 41 000	* 41 000	* 41 000	* 41 000	* 42 000
Peru	10 200	* 14 000	* 15 000	* 15 000	* 13 000
Venezuela	7 000	6 996	* 8 000	* 8 000	* 8 000
China	6 443 071	7 365 000	7 811 000	7 564 000	7 637 000
India	818 100	923 200	966 010	1 038 000	1 100 000
Indonesia	* 56 000	* 58 000	* 58 000	* 58 000	* 58 000
Iran	* 120 000	* 124 000	* 125 000	* 126 000	* 126 000
Israel	23 946	23 896	16 852	21 745	6 988
Japan	197 602	196 569	192 814	177 590	190 512
Kazakhstan	123 371	111 361	108 785	101 497	131 932
Korea (Rep. of)	770 000	790 000	760 000	776 000	835 000
Korea, Dem. P.R. of	93 000	93 000	98 000	102 000	* 100 000
Lebanon	* 20 000	* 26 000	* 27 000	* 27 000	* 27 000
Malaysia	* 80 000	* 100 000	* 100 000	* 100 000	* 100 000
Myanmar	* 10 500	* 13 600	* 14 400	* 12 900	* 13 100

Production of refined lead

tonnes (metric)

Country	2020	2021	2022	2023	2024
Oman (c)	* 15 400	* 15 400	* 15 400	* 15 400	* 15 400
Pakistan	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Philippines	45 000	45 000	45 000	45 000	37 500
Saudi Arabia	* 73 000	* 76 000	* 76 000	* 78 000	* 78 000
Sri Lanka (a)	5 000	5 100	3 000	4 820	* 4 500
Taiwan	* 65 000	* 70 000	* 85 000	* 85 000	94 000
Thailand	96 000	105 000	* 105 000	* 105 000	* 105 000
United Arab Emirates	24 000	* 25 000	* 25 000	* 30 000	* 32 000
Uzbekistan	* 19 000	* 22 000	* 22 000	* 20 000	* 22 000
Vietnam	* 65 000	* 75 000	* 75 000	* 75 000	* 75 000
Australia	161 897	166 892	166 478	221 958	* 200 000
World total	13 600 000	14 800 000	15 000 000	15 000 000	15 200 000

Note(s)

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

- (a) Years ended 31 March following that stated
- (b) Excluding lead content of primary antimonial lead
- (c) Including secondary metal

Production of lithium minerals

tonnes (metric)

Country	2020	2021	2022	2023	2024
France					
Hydroxide	—	—	—	—	* 34 000
Li content	—	—	—	—	* 5 600
Portugal					
Lepidolite	23 185	* 15 000	* 40 000	* 10 000	* 25 000
Li content	161	* 104	* 278	* 70	* 174
Mozambique					
Lepidolite	* —	* 1	2 387	1 314	* 5 600
Li content	—	—	22	12	52
Spodumene	* —	* —	71	240	* 1 200
Li content	—	—	1	4	* 22
Namibia					
Lepidolite	—	—	325	* 300	* 300
Li content	—	—	* 5	* 4	* 4
Nigeria					
Petalite	* 130	133	* 130	* 130	* 130
Li content	* 2	2	* 2	* 2	* 2
Spodumene	—	—	3 420	15 495	* 16 000
Li content	—	—	95	431	* 445
Zimbabwe					
Lepidolite	...	—	—	3 446	* 4 000
Li content	—	—	—	48	* 56
Petalite	20 859	40 726	86 330	301 004	* 350 000
Li content	397	775	1 642	5 726	* 6 658
Spodumene	—	—	—	465 636	* 500 000
Li content	—	—	—	12 963	* 13 920
Canada					
Spodumene	* —	—	82 426	* 6 000	41 666
Li content	* —	—	2 409	* 179	1 218
USA (a)					
Li content	* 4 000	* 6 000	* 6 000	* 6 000	* 6 000
Argentina					
Carbonate	26 846	47 917	35 046	47 764	* 81 000
Li content	5 047	9 008	6 589	8 980	* 15 228
Chloride	5 685	4 000	5 000	5 000	* 5 000
Li content	927	652	* 815	* 815	* 815
Bolivia					
Carbonate	191	540	617	949	* 1 000
Li content	36	102	116	178	* 188
Brazil					
Spodumene	74 101	102 938	143 720	263 876	944 114
Li content	1 857	2 579	3 601	6 612	23 656
Chile					
Hydroxide	9 030	12 129	15 763	23 071	21 364
Li content	1 490	2 001	2 601	3 807	3 525
Carbonate	114 260	150 348	201 950	220 256	250 605
Li content	21 481	28 265	37 967	41 408	47 114
China					
Li content	13 273	* 14 100	* 22 600	* 35 700	* 41 000
Australia					
Hydroxide	—	—	2 987	4 968	16 929
Li content	—	—	377	820	2 793
Spodumene	1 477 240	1 966 744	2 754 727	3 398 262	3 902 057
Li content	41 126	54 754	76 692	94 608	108 633
World total (Li content)	89 800	118 300	161 400	217 500	268 700

Note(s)

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

(a) Carbonate

Production of magnesite

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	816 370	842 679	687 288	633 049	623 494
Finland	136 167	179 781	324 226	298 025	—
France	* 50 000	* 50 000	51 378	42 640	39 261
Greece	275 100	309 600	322 391	292 698	243 587
Netherlands (a)	243 000	242 000	199 000	178 000	192 000
Poland	65 250	65 820	66 380	28 630	44 730
Russia	* 2 600 000	* 2 600 000	* 2 600 000	* 2 600 000	* 2 600 000
Slovakia	516 900	576 700	512 000	392 000	334 000
Spain	626 055	703 834	676 699	660 108	599 019
Turkey	1 560 818	1 927 280	1 820 068	1 333 728	1 604 181
South Africa	* 6 000	* 5 000	* 4 900	* 5 000	* 7 500
Canada (b)	* 160 000	* 200 000	* 200 000	* 200 000	* 100 000
Guatemala	706	4 700	14 534	11 256	217
Brazil (c)	1 993 600	* 2 000 000	* 2 000 000	* 200 000	* 200 000
Colombia	1 077	3 116	2 694	2 540	153
China	14 044 000	* 14 000 000	* 13 000 000	* 13 000 000	* 13 000 000
India (d)	74 661	113 497	107 525	132 005	110 037
Iran (e)	274 369	204 331	198 392	180 921	* 180 000
Israel (f)	113 903	131 201	94 220	87 004	92 085
Korea, Dem. P.R. of	* 70 000	* 70 000	* 70 000	* 70 000	* 70 000
Pakistan (g)	16 165	15 120	5 886	3 876	* 1 400
Philippines	* 140	* 140	* 140	* 140	* 140
Saudi Arabia	* 244 000	* 271 000	* 289 000	* 300 000	* 300 000
Australia (g)	820 057	2 739 388	2 571 152	3 525 221	3 699 486
World total	24 700 000	27 300 000	25 800 000	24 200 000	24 000 000

Note(s)

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

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

Production of primary magnesium metal

tonnes (metric)

Country	2020	2021	2022	2023	2024
Russia	12 795	15 000	15 736	14 858	15 142
Turkey	* 4 500	* 4 500	* 4 500	* 3 500	* 4 000
USA	* 5 500	* 500	* 500	* 500	* 500
Brazil	20 000	* 20 000	* 20 000	* 20 000	* 20 000
China	858 000	898 000	893 600	805 000	* 950 000
Israel	18 500	18 200	21 500	17 000	20 000

Note(s)

- (1) In addition, substantial quantities of magnesium compounds are produced by, used and recycled within the process of titanium sponge production. It is believed this relates to the mineral carnallite and/or secondary magnesium chloride compounds.
- (2) Magnesium used within the process of titanium sponge production is not marketed as primary magnesium metal and is therefore excluded from this table. Annual quantities are likely to be approximately: China 220 000 t, Japan 55 000 t and Russia 20 000 t.

Production of manganese ore

tonnes (metric)

Country	2020	2021	2022	2023	2024
Georgia (a)	302 200	332 400	352 200	192 954	154 117
Romania	* 40 000	* 31 000	* 28 000	* 15 000	* 50
Russia	188 000	71 000	110 000	145 000	* 145 000
Turkey	101 766	86 654	105 416	102 051	67 434
Ukraine	1 888 000	1 760 000	* 900 000	359 000	* 300 000
Congo, Democratic Republic (b)	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Côte d'Ivoire	1 325 525	961 267	929 705	1 175 301	1 292 830
Egypt (c)	15 000	54 000	62 000	12 000	* 20 000
Gabon	8 147 000	9 241 000	10 116 000	10 289 000	7 100 000
Ghana	2 357 515	3 336 273	3 171 722	3 001 736	5 009 377
Morocco	84 087	82 507	89 258	83 693	83 319
Namibia	37 072	30 832	23 269	* 24 000	* 24 000
Nigeria	1 500	57 392	56 014	3 600	* 3 000
Senegal	15 376	9 236	36 091	24 926	* 20 000
South Africa	16 198 506	19 156 479	18 966 594	19 076 583	19 710 045
Zambia	46 515	132 241	158 675	171 066	134 933
Mexico	565 619	560 742	574 665	568 441	435 286
Bolivia	23 260	25 140	2 080	2 780	—
Brazil	2 469 313	1 435 561	1 344 155	1 697 881	1 623 823
Colombia	* 64	* 800	* 906	* 820	* 19
Peru	* 22 500	* 25 300	* 2 600	* 2 950	24 159
China	* 12 856 000	* 8 000 000	* 6 500 000	* 4 600 000	* 4 700 000
India (d)	2 703 313	2 692 408	2 826 964	3 441 764	3 801 506
Iran (e)	289 927	209 356	238 041	605 100	* 600 000
Kazakhstan	813 500	1 248 700	349 000	930 700	396 900
Malaysia	869 864	668 558	744 576	329 135	* 330 000
Myanmar	* 634 000	* 515 000	* 518 000	* 585 000	* 574 000
Oman	14 500	15 100	15 500	15 000	17 500
Pakistan (c)	502	150	494	299	* 160
Thailand	1 400	—	660	—	* —
Vietnam	121 000	146 000	155 000	* 160 000	* 160 000
Australia	6 425 848	6 188 587	6 322 670	6 390 199	6 607 903
World total	58 600 000	57 000 000	54 700 000	54 000 000	53 300 000

Note(s)

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

(a) Marketable.

(b) Including beneficiated and direct shipping ore

(c) Years ended 30 June of that stated

(d) Years ended 31 March following that stated

(e) Years ended 20 March following that stated

Production of mercury

kilograms

Country	2020	2021	2022	2023	2024
Russia	* 50 000	* 50 000	* 33 000	* 32 000	* 32 000
Morocco	* 1 000	* 2 000	* 2 000	* 2 000	* 2 000
Mexico (a)	* 70 000	* 40 000	* 10 000	* 3 000	* 3 500
USA	* 40	* 40	* 40	* 40	* 40
China	1 993 000	1 280 000	* 1 000 000	* 1 000 000	* 1 000 000
Kyrgyzstan	* 7 000	* 6 000	* 5 000	* 6 000	* 6 000
Tajikistan	177 700	(b)* 300 000	(b)* 310 000	(b)* 470 000	* 500 000
World total	2 300 000	1 700 000	1 400 000	1 500 000	1 500 000

Note(s)

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

(a) BGS estimates, based on net exports

(b) Exports

Production of mica

tonnes (metric)

Country	2020	2021	2022	2023	2024
Finland	7 247	10 138	9 465	7 108	7 834
France (a)	* 19 000	* 19 000	* 19 000	* 19 000	* 19 000
Russia	4 654	* 4 500	* 4 500	* 4 500	* 4 500
Spain (a)	7 126	9 220	9 342	8 100	8 000
Turkey	4 139	1 663	6 066	8 715	9 644
Madagascar (b)	* 68 300	* 57 100	* 52 600	* 62 900	* 123 500
Morocco	39 600	25 685	20 330	19 995	5 109
Mozambique	* —	* —	35	37	* 10
Nigeria	120	2 672	15	145	* 200
South Africa	194	630	392	425	273
Canada	13 254	* 16 000	14 115	* 14 000	15 000
Mexico	219	90	—	590	* 500
USA (a)(c)	* 34 600	* 40 600	* 42 000	* 37 000	* 23 000
Brazil	9 260	4 145	1 354	2 950	6 577
Colombia	322	305	609	612	246
China	80 000	* 84 000	* 80 000	* 80 000	* 80 000
India (d)	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Iran (e)	2 600	* 2 600	* 2 000	2 093	* 2 100
Korea (Rep. of) (f)	20 983	10 985	4 685	19 891	7 833
Malaysia (g)	4 083	3 406	3 779	3 980	* 4 000
Sri Lanka	* 1 500	* 1 500	* 1 500	* 1 500	* 1 500
Taiwan	3 186	10 983	1 795	155	50
World total	321 000	306 000	275 000	295 000	320 000

Note(s)

(1) In addition to the countries listed, Egypt and Romania are believed to produce mica.

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

(b) Exports

(c) Sold or used by producers

(d) Years ended 31 March following that stated

(e) Years ended 20 March following that stated

(f) Mainly sericite

(g) Sericite

Mine production of molybdenum

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Armenia	12 691	11 310	11 390	11 480	11 910
Norway	* 1	* 1	* 1	* —	* —
Russia	1 707	1 691	1 400	1 251	* 1 500
Canada	3 979	1 871	1 146	1 369	1 583
Mexico	20 577	19 894	19 330	28 313	17 064
USA	51 100	41 100	34 600	34 000	67 000
Brazil	* 200	* 200	* 200	* 200	* 200
Chile	59 381	49 427	45 627	44 127	40 570
Peru	32 185	34 148	31 588	33 476	41 942
China	95 970	102 600	107 550	121 500	116 550
Indonesia	—	—	—	—	15 000
Iran (a)	6 762	8 275	* 6 700	12 910	* 10 000
Kazakhstan	400	396	2 005	3 727	4 075
Korea (Rep. of)	411	408	366	339	235
Korea, Dem. P.R. of	* 100	* 100	* 620	* 350	* 780
Kyrgyzstan	* 20	* 15	* 34	* 34	* 34
Mongolia	2 889	2 973	2 780	2 648	2 584
Uzbekistan	1 450	762	780	784	* 760
Australia	—	—	277	1 200	1 750
World total	290 000	275 000	266 000	298 000	334 000

Note(s)

(1) In addition to the countries listed, Georgia, India, Romania and Tajikistan are believed to produce molybdenum.

(a) Years ended 20 March following that stated

Production of nepheline syenite

tonnes (metric)

Country	2020	2021	2022	2023	2024
Norway	* 255 000	* 320 000	* 270 000	* 160 000	* 250 000
Russia					
Nepheline syenite	4 599 000	4 390 000	4 363 000	4 519 000	3 650 000
Nepheline concentrates	1 159 000	1 125 200	1 175 800	1 162 000	1 133 000
Turkey	—	—	36 100	65 500	15 505
Canada	657 774	689 600	771 082	* 800 000	* 800 000

Mine production of nickel

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Albania	3 764	4 178	1 574	600	100
Finland (a)	41 429	42 163	44 921	41 941	41 958
Greece	7 100	4 700	1 700	—	—
Kosovo	3 958	4 735	387	14	3
Norway	300	200	300	300	300
Poland	710	740	830	750	710
Russia	285 210	251 040	267 980	256 320	268 700
Turkey	20 201	11 647	14 535	18 388	9 491
Côte d'Ivoire	18 600	24 300	25 500	26 200	26 900
Madagascar	9 908	29 285	35 737	36 085	27 690
Morocco	100	100	157	130	60
South Africa	34 908	31 846	29 033	29 750	31 562
Zambia	3 226	3 834	4 059	7 704	21 040
Zimbabwe	16 480	15 760	14 260	18 107	15 128
Canada	168 214	159 145	122 115	158 668	125 363
Cuba	46 300	43 400	42 800	* 37 900	* 35 800
Dominican Republic	22 005	27 848	29 223	17 223	—
Guatemala	50 300	61 600	48 200	20 300	8 700
USA	16 718	18 353	17 475	16 429	7 486
Brazil	68 097	75 988	64 084	72 398	67 482
Colombia	40 500	43 800	46 366	43 026	44 730
China	104 674	103 900	109 400	112 600	110 600
Indonesia	768 640	1 048 158	1 571 007	2 204 822	2 328 000
Myanmar (b)	26 721	18 540	12 856	* 12 000	* 7 100
Philippines	328 372	386 359	* 360 000	385 965	354 132
Vietnam	—	—	—	2 100	3 900
Australia	169 344	150 876	155 007	149 344	128 157
New Caledonia	204 151	192 458	207 069	238 807	116 758
Papua New Guinea	33 659	31 594	34 302	33 604	28 669
Solomon Islands	—	—	—	1 050	8 100
World total	2 500 000	2 800 000	3 300 000	3 900 000	3 800 000

(a) In addition some nickel is produced as a by-product of a talc operation, the amount is negligible

(b) Years ending 30 September of that stated

Smelter/refinery production of nickel

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	* 700	* 700	* 700	* 800	* 800
Cyprus					
Sulfate	—	227	953	638	76
Finland (a)	90 837	68 006	91 466	90 852	99 865
France	6 700	8 900	6 842	7 125	7 705
Greece	6 012	4 080	1 444	—	—
Kosovo	* 6 900	* 5 900	—	* 500	—
North Macedonia	17 700	17 700	8 350	3 800	—
Norway	91 120	91 246	81 898	95 013	98 379
Russia	172 400	145 800	163 900	156 500	153 500
Ukraine	14 719	16 200	7 400	—	* —
United Kingdom	35 177	30 654	33 384	31 300	34 200
Madagascar	9 908	29 285	35 737	36 085	27 690
Morocco					
Sulfate	—	100	* 100	* —	—
South Africa	29 100	* 40 000	* 40 000	39 600	* 44 300
Canada	124 043	119 000	143 266	113 000	110 500
Cuba	14 800	13 800	13 700	13 700	10 200
Dominican Republic	20 724	28 078	29 188	17 844	—
Guatemala	22 894	19 900	* 18 000	—	—
Brazil	59 600	60 800	63 400	57 000	* 53 400
Colombia	36 094	38 300	41 816	38 708	40 185
China	* 745 000	669 000	* 850 000	* 970 000	* 1 029 000
India	—	—	681	2 000	* 2 800
Indonesia (a)	632 000	* 876 000	* 1 165 000	* 1 410 000	* 1 608 600
Japan	144 300	155 200	117 800	111 800	110 500
Korea (Rep. of)	45 600	44 000	* 43 500	* 46 500	* 47 000
Myanmar (b)	22 200	18 000	10 000	* 8 000	* 7 100
Australia	115 800	98 970	96 500	86 000	74 900
New Caledonia	72 455	56 603	66 220	71 912	37 522
World total	2 500 000	2 700 000	3 100 000	3 400 000	3 600 000

Note(s)

(1) Data relate to refined nickel plus the nickel content of ferro-nickel, nickel oxide, nickel salts, nickel matte and nickel pig iron. It does not include nickel content of nickel hydroxide cake.

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

(a) This figure may include nickel content of matte and/or nickel content of nickel pig iron

(b) Years ending 31 March following that stated.

Production of perlite

tonnes (metric)

Country	2020	2021	2022	2023	2024
Armenia	173 504	26 205	28 900	* 29 000	* 30 000
Bulgaria	* 5 200	* 5 200	* 5 200	* 5 200	* 5 200
Georgia	31 736	31 383	51 829	64 050	39 353
Greece	718 000	975 000	850 000	* 850 000	* 850 000
Hungary	42 112	83 628	85 505	77 596	79 065
Italy	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Russia	* 45 000	* 45 000	* 45 000	* 45 000	* 45 000
Slovakia	37 310	35 320	38 000	39 000	41 000
Turkey	1 146 341	1 428 695	1 319 432	1 174 125	1 358 577
Ukraine	* 17 000	* 17 000	* 8 000	* 8 000	* 8 000
South Africa	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Mexico	—	28 800	—	—	—
USA	501 000	491 000	442 000	* 410 000	* 452 000
Argentina	13 176	18 016	32 450	* 32 000	* 32 000
Chile	—	—	—	1 997	4 213
China	1 422 200	* 1 500 000	* 1 500 000	* 1 500 000	* 1 500 000
Iran (a)	52 750	77 024	* 67 000	69 670	* 70 000
Philippines	* —	4 631	24 878	18 384	15 217
Thailand	3 500	3 500	2 500	2 500	* 2 500
Australia (b)	2 185	3 821	2 638	2 879	2 973
New Zealand	—	—	—	* 18 000	* 20 000

Note(s)

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

(a) Years ended 20 March following that stated

(b) Years ended 30 June of that stated

Production of crude petroleum

tonnes (metric)

Country	2020	2021	2022	2023	2024
Albania	757 393	712 532	657 402	572 628	716 435
Austria (a)(b)	594 789	559 947	521 211	468 583	465 442
Azerbaijan (b)	34 531 900	34 580 300	32 646 400	30 147 400	29 063 000
Belarus	1 710 000	1 737 000	1 590 000	1 494 000	1 938 000
Bulgaria	21 000	20 300	19 700	* 21 000	* 20 000
Croatia	585 567	559 204	542 644	517 076	493 562
Czech Republic	91 000	83 000	75 000	67 000	68 000
Denmark	3 522 230	3 247 085	3 183 250	2 901 645	3 114 230
Estonia (c)	1 066 585	1 068 221	1 242 070	1 178 676	* 1 000 000
France	5 634 302	5 376 432	5 276 869	5 326 650	* 5 300 000
Georgia	31 293	35 477	36 600	38 900	35 800
Germany	1 895 942	1 805 932	1 699 014	1 635 331	1 624 338
Greece	287 000	271 000	271 000	271 000	271 000
Hungary	848 800	891 413	903 501	932 615	1 056 200
Italy	5 380 000	4 830 000	4 450 000	4 230 000	4 367 000
Lithuania	31 631	28 916	27 040	24 775	23 026
Netherlands	737 000	749 000	391 000	320 000	329 000
Norway	98 686 000	99 625 000	93 467 000	90 808 000	98 643 000
Poland	937 462	888 082	854 050	793 880	766 250
Romania	3 334 019	3 195 648	3 019 473	2 882 158	2 867 000
Russia	512 000 000	523 000 000	535 000 000	541 600 000	526 400 000
Serbia	831 000	811 000	801 000	810 000	798 000
Slovakia	3 000	5 000	3 000	1 000	1 000
Slovenia	247	142	—	—	—
Spain	26 819	5 785	910	606	597
Turkey	3 202 924	3 441 659	3 583 040	4 094 898	* 4 095 000
Ukraine	2 430 800	2 432 200	2 147 600	* 2 000 000	* 2 000 000
United Kingdom	48 985 374	40 866 003	38 165 596	33 361 405	30 387 611
Algeria	50 226 000	50 359 000	53 657 000	54 380 000	59 300 000
Angola	64 600 000	57 100 000	57 800 000	55 800 000	57 400 000
Cameroon	3 622 200	2 631 600	3 403 200	3 257 100	2 971 700
Chad	6 600 000	6 100 000	6 500 000	7 000 000	7 000 000
Congo	14 050 000	13 178 000	13 032 000	13 200 000	13 700 000
Congo, Democratic Republic	1 199 249	1 177 446	1 027 490	1 157 230	944 236
Côte d'Ivoire	1 893 641	1 708 962	1 573 733	1 530 194	1 870 208
Egypt	31 100 000	29 600 000	30 000 000	30 000 000	31 000 000
Equatorial Guinea	7 400 000	6 100 000	5 600 000	4 000 000	4 000 000
Gabon	10 766 000	9 085 000	10 400 000	11 200 000	11 200 000
Ghana	9 186 933	7 556 677	7 104 527	6 622 791	* 6 500 000
Libya	19 600 000	58 800 000	51 900 000	58 000 000	56 000 000
Morocco	4 098	3 246	2 394	2 102	2 000
Niger	472 967	398 288	398 300	298 700	1 543 400
Nigeria	91 400 000	80 700 000	69 300 000	74 000 000	79 000 000
Senegal	3 300	* 3 000	* 3 000	* 3 000	* 3 000
South Sudan	8 100 000	7 500 000	6 900 000	7 000 000	4 000 000
Sudan	3 100 000	3 200 000	3 100 000	2 800 000	2 000 000
Tunisia	1 557 600	* 1 930 000	1 664 700	1 561 800	* 1 300 000
Barbados	23 736	20 899	19 254	* 20 000	* 20 000
Canada	222 500 000	235 300 000	241 400 000	244 900 000	255 300 000
Cuba	2 320 200	2 433 300	2 374 000	2 311 100	1 500 000
Guatemala	395 591	319 291	313 237	252 694	176 882
Mexico	98 850 000	99 521 955	100 504 249	105 467 422	103 968 130
Trinidad & Tobago	2 909 695	3 083 745	3 010 889	2 768 209	2 620 230
USA	749 014 892	755 104 756	807 163 174	874 105 820	857 900 000
Argentina	25 603 785	26 521 000	30 079 000	32 812 000	36 293 000
Bolivia	1 494 000	1 451 000	1 293 000	1 091 000	962 000
Brazil	157 682 321	154 975 843	161 042 769	180 097 838	178 098 323
Chile	101 658	108 933	127 282	120 625	128 950
Colombia	41 300 000	38 800 000	39 700 000	41 000 000	41 000 000
Ecuador	25 800 000	25 300 000	25 800 000	25 500 000	25 500 000
Peru	6 159 700	5 889 000	5 775 500	5 672 209	5 854 192
Suriname	967 898	959 832	990 482	1 011 453	1 034 038
Venezuela	34 400 000	33 900 000	37 100 000	43 300 000	49 500 000

Production of crude petroleum

tonnes (metric)

Country	2020	2021	2022	2023	2024
Afghanistan	* 900	* 900	* 900	* 900	* 900
Bahrain	3 210 000	2 993 000	2 884 000	* 2 800 000	* 2 800 000
Bangladesh	* 600 000	—	—	—	—
Brunei	5 435 513	5 254 692	4 500 000	4 000 000	5 000 000
China (a)	194 768 600	198 881 100	204 722 400	208 915 000	212 823 000
East Timor (b)	826 007	828 750	544 198	267 308	100 206
India	(d) 30 491 000	(d) 29 691 000	29 392 000	29 114 000	* 29 000 000
Indonesia	35 513 000	32 927 021	30 620 822	30 286 164	29 086 575
Iran	147 400 000	169 300 000	178 300 000	211 000 000	234 000 000
Iraq	202 000 000	200 800 000	221 300 000	213 000 000	216 000 000
Israel	132 820	167 786	134 250	467 852	721 159
Japan	468 000	447 000	384 000	360 000	352 000
Jordan	1 300	14 700	12 900	6 000	3 600
Kazakhstan	85 656 100	85 879 400	84 236 900	89 976 700	87 746 000
Kuwait (e)	131 200 000	130 000 000	145 500 000	139 500 000	130 800 000
Kyrgyzstan	239 200	275 700	295 100	303 200	299 000
Malaysia	27 287 000	25 572 600	25 793 000	24 708 800	23 766 500
Mongolia	564 773	641 967	352 875	672 476	576 107
Myanmar	580 000	312 000	296 000	* 299 000	* 300 000
Oman	47 340 450	48 361 255	52 992 224	52 220 396	49 427 000
Pakistan (f)	3 831 787	3 760 982	3 009 141	3 459 800	3 521 400
Philippines	572 350	489 873	448 097	334 658	311 571
Qatar	71 600 000	70 400 000	72 000 000	74 300 000	75 500 000
Saudi Arabia (e)	519 600 000	515 000 000	573 100 000	528 900 000	510 200 000
Syria	2 000 000	2 000 000	2 000 000	2 000 000	2 000 000
Taiwan	2 169	2 462	1 868	1 628	1 554
Tajikistan	24 466	24 600	24 900	18 009	16 137
Thailand	15 100 000	13 900 000	11 500 000	11 000 000	12 000 000
Turkmenistan	10 400 000	9 800 000	9 600 000	9 000 000	9 000 000
United Arab Emirates	165 900 000	166 000 000	186 000 000	180 000 000	180 000 000
Uzbekistan	2 000 000	2 100 000	2 100 000	2 000 000	1 900 000
Vietnam (b)	11 470 000	10 970 000	10 840 000	10 412 300	9 890 390
Yemen, Republic of	3 800 000	3 500 000	3 100 000	1 900 000	2 000 000
Australia	20 441 000	19 430 000	18 047 000	16 269 000	15 735 000
New Zealand (b)	964 420	840 780	736 140	811 520	694 830
Papua New Guinea	* 390 000	* 370 000	* 340 000	* 320 000	* 300 000
World total	4 164 000 000	4 203 000 000	4 386 000 000	4 467 000 000	4 461 000 000

Note(s)

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

(a) Including oil from shale and coal

(b) Including natural gas liquids

(c) From oil shale

(d) Years ended 31 March following that stated

(e) Including shares of production from the Neutral Zone

(f) Years ended 30 June of that stated

Production of natural gas

million cubic metres

Country	2020	2021	2022	2023	2024
Albania	57	57	51	49	* 49
Austria	743	654	607	545	537
Azerbaijan	26 487	32 578	34 956	36 416	38 669
Belarus	219	229	* 200	* 200	* 200
Bulgaria	55	31	17	9	12
Croatia	888	782	745	691	787
Czech Republic	138	153	165	119	139
Denmark	1 351	1 283	1 275	1 264	1 477
Georgia	9	16	15	16	15
Germany	5 692	5 731	5 281	4 620	4 447
Greece	6	5	5	—	—
Hungary	1 888	1 663	1 858	1 939	1 891
Ireland, Republic of	2 023	1 551	1 436	1 131	1 058
Italy	4 420	3 500	3 400	3 040	2 882
Netherlands	22 855	20 499	17 040	11 206	9 174
Norway	112 300	115 230	123 870	106 173	126 136
Poland	5 302	4 871	4 759	4 601	4 518
Romania	9 357	9 381	9 500	9 648	9 365
Russia	694 000	767 700	679 600	642 000	629 900
Serbia	448	401	373	353	347
Slovakia	65	66	54	50	40
Slovenia	5	5	4	5	0
Spain	47	38	33	26	32
Turkey	458	415	408	852	* 850
Ukraine	20 183	19 759	18 211	17 698	18 095
United Kingdom	39 433	32 570	37 738	34 056	30 830
Algeria	123 369	132 140	132 660	136 101	* 137 000
Angola	7 503	5 860	5 519	* 5 800	* 5 800
Cameroon	2 130	1 578	2 195	2 278	2 119
Congo	1 332	913	730	294	423
Côte d'Ivoire	2 339	2 495	2 673	2 474	* 2 500
Egypt	58 500	67 800	64 500	57 100	47 500
Equatorial Guinea (a)	5 340	6 247	7 185	6 298	* 7 000
Gabon (a)	510	453	453	453	340
Ghana	6 738	7 255	5 165	5 225	* 5 200
Libya	12 700	15 300	14 600	14 800	14 300
Morocco	105	119	82	52	40
Mozambique	4 857	4 712	4 906	10 209	9 706
Nigeria	49 400	52 400	47 100	44 400	46 800
Senegal	14	6	4	4	* 3
South Africa	563	44	5	5	6
Tanzania	1 245	1 477	1 894	2 111	* 2 250
Tunisia	1 864	2 212	2 029	1 843	1 395
Barbados	11	11	9	* 9	* 9
Canada	158 733	164 673	177 025	183 077	187 651
Cuba	895	864	844	955	970
Mexico	50 000	49 000	49 000	51 000	* 47 000
Trinidad & Tobago	31 462	26 656	27 782	26 738	26 242
USA (a)	957 420	977 760	1 026 015	1 069 832	1 068 795
Argentina	44 219	44 129	47 159	46 853	49 342
Bolivia	16 254	16 969	15 401	13 390	11 896
Brazil	25 403	25 382	24 098	24 502	24 033
Chile	1 316	1 275	1 355	1 380	1 329
Colombia	12 500	12 600	12 400	12 100	11 100
Ecuador	283	312	510	* 400	* 400
Peru	11 993	11 368	13 697	14 627	14 420
Venezuela	21 600	28 100	29 100	29 700	31 700
Afghanistan	80	132	153	195	35
Bahrain	25 114	26 088	25 675	26 643	26 922
Bangladesh (b)	24 978	25 235	23 888	22 632	21 061
Brunei	11 795	10 765	10 600	10 000	10 400
China	188 850	205 260	217 790	229 710	246 370
East Timor	6 770	6 449	2 911	1 083	488

Production of natural gas

million cubic metres

Country	2020	2021	2022	2023	2024
India	(c) 28 670	(c) 34 024	33 363	35 070	* 36 000
Indonesia	59 206	58 651	57 374	68 528	70 496
Iran	235 800	242 800	247 700	259 700	262 900
Iraq	7 000	9 100	9 300	10 400	11 900
Israel	15 000	19 000	22 000	24 715	27 100
Japan	2 295	2 304	2 148	2 019	1 903
Jordan	151	185	153	174	173
Kazakhstan	55 379	54 179	53 645	59 458	59 369
Kuwait (d)	12 200	12 100	13 200	14 800	14 900
Kyrgyzstan	22	22	30	27	28
Malaysia	71 500	76 555	80 593	81 043	83 501
Myanmar	18 260	17 670	17 135	15 200	14 800
Oman	35 146	37 425	39 502	40 751	44 498
Pakistan (b)	37 283	36 223	29 061	33 680	32 300
Philippines	4 000	3 430	3 178	2 285	1 992
Qatar	174 900	177 000	178 500	181 000	179 500
Saudi Arabia (d)	113 100	114 500	116 700	117 400	121 500
Syria	2 900	3 100	2 500	2 600	2 700
Taiwan	105	110	96	91	93
Tajikistan	1	1	1	0	* —
Thailand	32 700	31 500	25 300	25 700	28 500
Turkmenistan	66 000	79 300	78 300	76 300	73 500
United Arab Emirates	53 700	53 100	54 200	55 300	61 400
Uzbekistan	47 100	50 900	48 900	44 200	42 200
Vietnam	9 160	7 460	8 080	7 468	6 350
Yemen, Republic of	100	100	100	* —	* —
Australia	154 107	156 463	163 112	160 873	160 895
New Zealand	4 508	3 945	3 694	3 804	3 114
Papua New Guinea	* 11 000	11 400	10 840	* 10 400	* 14 400
World total	4 068 000	4 246 000	4 237 000	4 264 000	4 300 000

Note(s)

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

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

Production of phosphate rock

tonnes (metric)

Country	2020	2021	2022	2023	2024
Finland	995 066	990 261	923 245	906 068	920 158
Russia	13 800 000	14 100 000	14 400 000	14 300 000	* 14 300 000
Turkey	872 894	957 045	963 323	1 271 355	1 218 190
Algeria	1 205 500	1 811 800	1 804 800	1 907 900	* 2 000 000
Burkina Faso	2 803	2 444	463	—	* —
Egypt (a)	3 052 000	3 098 000	3 741 000	* 4 000 000	* 4 000 000
Mali	57 600	65 000	100 000	100 000	* 100 000
Morocco	40 700 000	38 122 000	30 456 000	28 675 000	35 290 000
Senegal					
Phosphate rock	2 445 076	2 402 469	2 605 960	2 848 813	* 2 300 000
Aluminium phosphate	44 056	101 239	69 079	* 80 000	* 120 000
South Africa	581 392	2 132 135	1 985 458	1 719 718	2 214 890
Tanzania	28 376	24 493	26 597	31 745	29 834
Togo	1 321 345	1 456 368	1 541 772	1 517 478	1 446 612
Tunisia	3 194 100	3 726 400	3 563 000	3 093 100	3 274 900
Zimbabwe	9 192	15 850	21 910	9 106	* 10 000
Cuba	1 600	1 400	1 100	—	700
Mexico	577 152	456 335	402 503	438 679	325 006
USA	23 500 000	21 600 000	* 19 800 000	* 19 600 000	* 19 400 000
Brazil (b)	5 150 451	5 029 390	5 307 266	* 4 200 000	* 4 200 000
Chile					
Phosphate rock	—	—	—	7 415	4 947
Guano	2 091	2 229	3 346	2 365	459
Colombia	58 833	68 457	76 422	47 023	52 676
Peru	8 594 180	10 776 136	10 954 831	11 920 187	13 396 651
Venezuela	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
China	90 000 000	104 107 000	104 745 000	105 309 000	113 528 000
Christmas Island (a)(c)(d)	387 000	525 000	523 000	558 000	616 942
India (e)	1 455 829	1 394 959	1 978 450	1 557 783	1 805 914
Iran (f)	96 160	83 900	95 430	157 346	* 160 000
Iraq	* 300 000	—	* —	* —	* —
Israel	2 505 200	1 957 200	1 795 072	5 770 253	5 806 608
Jordan	8 937 752	10 015 243	11 257 794	11 453 898	11 517 000
Kazakhstan	1 495 100	1 398 100	1 403 400	1 675 800	* 1 700 000
Laos					
Guano	230	—	—	—	50 252
Pakistan (a)	87 724	120 216	192 257	198 141	* 261 000
Philippines					
Phosphate rock	* 1 500	...	...	...	4 442
Guano	* 1 500	* 1 500	* 1 500	* 1 500	* 1 500
Saudi Arabia	8 000 000	8 400 000	* 8 700 000	* 9 900 000	* 9 500 000
Sri Lanka	52 103	68 217	35 309	46 664	54 793
Syria	* 420 000	* 1 100 000	* 800 000	* 800 000	* 1 000 000
Uzbekistan	646 000	681 000	767 600	533 800	* 540 000
Vietnam	2 022 160	2 713 200	2 513 800	2 621 100	2 600 200
Australia (a)	936 043	* 900 741	1 567 236	2 262 984	2 167 034
Nauru	119 498	274 423	260 276	* 260 000	* 250 000
World total	224 000 000	241 000 000	235 000 000	240 000 000	256 000 000

Note(s)

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

(a) Years ended 30 June of that stated

(b) Including beneficiated and directly shipped material

(c) Exports

(d) Including phosphate dust

(e) Years ended 31 March following that stated

(f) Years ended 20 March following that stated

Mine production of platinum group metals

kilograms (metal content)

Country	2020	2021	2022	2023	2024
Finland					
Platinum	1 276	1 447	1 243	933	958
Palladium	858	1 036	960	762	723
Poland					
Platinum	* 8	* 8	* 5	* 5	* 5
Palladium	* 7	* 4	* 4	* 2	* 2
Russia					
Platinum	21 615	19 935	20 246	20 650	20 744
Palladium	87 889	81 358	86 769	83 721	85 898
Iridium	* 200	* 200	* 200	* 200	* 200
Rhodium	2 500	2 300	2 300	2 300	2 300
Ruthenium	* 300	* 300	* 300	* 300	* 300
Serbia					
Platinum	* 20	* 20	* 10	* 10	* 10
Palladium	* 100	* 100	106	* 100	* 100
Ethiopia					
Platinum (a)	* 2	* 4	* 30	* 8	* 8
South Africa					
Platinum	111 993	141 626	124 401	124 870	125 634
Palladium	66 264	84 336	73 104	74 917	75 357
Iridium	6 186	7 006	6 160	6 222	6 433
Rhodium	16 972	22 256	18 800	18 549	18 907
Ruthenium	25 058	31 463	27 900	28 478	30 204
Zimbabwe					
Platinum	15 004	14 732	16 460	19 180	18 911
Palladium	12 890	12 619	13 935	15 820	15 603
Iridium	837	612	601	956	806
Rhodium	1 368	1 333	1 461	1 672	1 704
Ruthenium	1 026	1 239	1 341	1 330	1 612
Canada					
Platinum	4 037	4 888	5 301	6 120	5 692
Palladium	12 616	15 275	16 565	17 267	16 983
Iridium	—	—	—	91	* 100
Rhodium	168	204	221	334	* 340
Ruthenium	...	—	—	157	* 160
USA					
Platinum	4 314	4 080	3 013	3 057	3 046
Palladium	14 442	13 660	10 086	10 233	10 199
Rhodium	* 100	* 100	—	—	—
Colombia					
Platinum	453	618	592	893	871
China					
Platinum	2 800	4 200	4 100	* 4 000	* 4 000
Palladium	2 800	* 2 800	* 2 800	* 2 800	* 2 800
Uzbekistan					
Palladium	91	160	93	* 90	* 118
Australia					
Platinum	107	90	100	* 100	* 105
Palladium	414	380	392	* 455	* 415
World total	415 000	470 000	440 000	447 000	451 000

Note(s)

- (1) Wherever possible, figures relate to quantities of platinum group metals thought to be recovered from ones originating in the country stated.
- (2) South Africa thought to be the only country to produce osmium, however data is unavailable.
- (3) 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.
- (4) In addition to the production listed, concentrates produced in Spain, and possibly other countries, are believed to be processed in China to recover platinum group metals.

(a) Years ending 7 July of that stated

Production of potash

tonnes (K2O content)

Country	2020	2021	2022	2023	2024
Belarus	7 562 153	* 8 000 000	* 3 200 000	* 4 500 000	* 7 000 000
Germany					
Potassic salts	2 874 026	2 793 326	2 708 650	2 536 308	2 619 939
Russia					
Chloride	8 832 000	9 746 000	4 828 000	7 102 000	* 10 330 000
Spain					
Chloride	351 918	375 779	429 896	360 279	217 560
United Kingdom					
Polyhalite	709 000	789 000	953 000	1 009 000	721 000
Canada					
Chloride	13 783 530	14 275 819	14 593 478	14 043 046	14 394 026
USA					
Potassic salts	460 000	480 000	430 000	390 000	410 000
Brazil					
Chloride	254 837	213 028	299 636	363 275	398 537
Chile					
Chloride	951 125	878 507	672 000	741 932	669 803
China	* 5 600 000	* 5 200 000	* 5 900 000	* 6 300 000	* 6 300 000
Israel					
Chloride	2 375 450	2 406 300	2 474 787	2 356 323	2 282 902
Jordan	1 598 200	1 563 400	1 637 240	1 695 800	1 732 400
Laos	713 718	818 654	1 483 905	3 307 777	2 820 576
Australia	—	—	—	5 954	1 967
World total	46 000 000	47 500 000	39 600 000	44 700 000	49 900 000

Production of rare earth oxides

tonnes (metric)

Country	2020	2021	2022	2023	2024
Russia	2 663	2 276	2 038	1 964	1 771
Burundi	250	150	—	—	—
Madagascar	* 2 800	* 2 000	* 960	* 2 100	* 2 000
USA	* 22 800	* 25 440	* 25 500	* 24 960	* 27 000
China (a)	* 180 000	* 180 000	* 210 000	* 255 000	* 270 000
India (b)	* 4 200	* 4 200	* 4 200	* 4 200	* 4 200
Malaysia	14	29	52	134	* 135
Myanmar	* 35 000	* 35 000	* 24 000	* 72 000	* 44 400
Vietnam	* 690	* 440	* 1 200	* 300	* 300
Australia (c)	14 562	15 761	15 970	16 780	10 908

Note(s)

- (1) All the figures in this table are either reported as rare earth oxides or are calculated to rare earth oxide equivalent.
 - (2) Prior to the 2005-2009 edition of this book, a table for the production of 'rare earth minerals' was included rather than the current 'rare earth oxides'. Users should exercise caution when comparing statistics over longer time periods.
 - (3) Although rare earth minerals are believed to be extracted in other countries, there is insufficient evidence to estimate the quantities of contained oxides.
 - (4) Where possible, data are shown against the country where the mineral is mined.
- (a) Includes production from iron ore extraction, bastnasite concentrates and ion absorption clays
 (b) Years ending 31 March following that stated
 (c) Years ending 30 June of that stated

Production of rhenium

tonnes (metric)

Country	2020	2021	2022	2023	2024
Poland	10	9	6	9	10
Russia	* 2	* 2	* 2	* 2	* 2
USA	* 9	* 9	* 9	* 9	* 10
Chile	* 30	* 30	* 29	* 30	* 29
China	* 3	5	* 5	* 5	* 5
Kazakhstan	* 1	* 1	* 1	* 1	* 1
Uzbekistan (a)	* 2	* 2	* 4	* 5	* 9

Note(s)

(a) Ammonium perrhenate

Production of salt

tonnes (metric)

Country	2020	2021	2022	2023	2024
Albania					
Sea salt	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Armenia	28 168	32 667	22 534	20 388	21 364
Austria					
Rock salt	28	35	48	* 50	* 50
Salt in brine	1 178 489	1 065 786	1 119 350	* 1 120 000	* 1 000 000
Azerbaijan	4 045	4 296	4 181	3 636	944
Belarus	1 198 290	2 265 000	* 2 300 000	* 2 100 000	* 2 300 000
Bosnia & Herzegovina	947 838	966 358	1 109 253	1 165 909	1 057 650
Bulgaria	* 3 400 000	* 3 400 000	* 3 400 000	* 3 400 000	* 3 400 000
Croatia	54 381	55 128	52 851	47 614	45 849
Denmark	* 600 000	* 600 000	(a) 803 000	(a) 832 000	(a) 884 000
France	5 200 596	5 543 448	5 621 754	4 349 379	4 291 651
Germany					
Rock salt	5 202 641	8 405 272	6 944 485	6 124 187	6 333 359
Salt in brine	8 585 169	8 291 984	7 133 049	5 905 463	6 386 309
Evaporated salt	2 316 705	786 734	952 034	1 002 263	1 043 093
Greece (b)	201 000	210 000	* 210 000	* 210 000	* 210 000
Italy					
Rock salt & brine salt	1 192 956	1 500 458	1 460 833	1 044 156	2 445 926
Montenegro					
Sea salt	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Netherlands	5 701 000	6 121 000	5 893 000	4 883 000	5 768 000
Norway (a)	5 300	13 000	—	* —	* —
Poland					
Rock salt	505 000	1 004 000	1 005 000	955 000	611 000
Brine salt	2 711 000	2 722 646	2 879 000	2 320 000	2 075 000
Other salt	342 000	327 000	49 288	26 839	51 729
Portugal					
Rock salt	4 217	4 471	8 158	4 963	—
Sea salt	92 887	90 307	117 695	134 227	134 553
Romania	1 151 740	1 297 666	1 397 771	1 172 764	1 071 529
Russia	5 529 600	5 594 000	6 071 000	5 569 000	* 5 600 000
Serbia	12 853	13 459	15 269	7 824	* 8 000
Slovenia	805	1 671	2 342	738	1 441
Spain					
Rock salt	2 499 402	3 034 268	2 812 154	2 672 146	2 270 360
Sea salt	1 057 339	1 168 671	1 175 536	1 232 411	1 132 868
Other salt	119 298	126 151	132 783	158 813	149 566
Switzerland	324 500	512 700	422 700	373 000	* 399 000
Turkey					
Rock salt	3 495 750	3 636 789	3 871 300	3 625 878	3 648 284
Sea salt	673 869	735 787	750 740	775 550	785 300
Other salt	3 528 399	3 470 926	4 463 671	4 185 904	4 205 331

Production of salt

tonnes (metric)

Country	2020	2021	2022	2023	2024
Ukraine	* 2 000 000	* 2 000 000	* 2 000 000	* 10 000	* 10 000
United Kingdom	2 327 965	2 687 483	2 645 573	2 673 240	2 324 185
Algeria					
Brine salt & sea salt	95 100	107 800	103 200	110 400	* 110 000
Angola	* 164 400	* 200 000	* 210 000	* 252 000	* 250 000
Botswana	418 379	484 628	323 303	387 956	370 021
Djibouti	* 30 000	* 30 000	* 20 000	* 20 000	* 20 000
Egypt (c)	357 000	218 000	162 000	* 170 000	* 180 000
Eritrea (b)	* 220 000	* 240 000	* 240 000	* 230 000	* 230 000
Ethiopia (d)	* 800	* 900	* 800	* 800	* 800
Ghana	* 350 000	* 300 000	* 300 000	* 250 000	* 250 000
Guinea	* 20 000	* 20 000	* 25 000	* 25 000	* 25 000
Kenya (e)	4 703	7 099	23 215	17 023	922
Libya	* 50 000	* 50 000	* 40 000	* 40 000	* 40 000
Madagascar	* 110 000	* 120 000	* 120 000	* 110 000	* 110 000
Mauritania	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Mauritius (b)	* 802	793	674	* 249	* 802
Morocco	490 896	295 741	652 578	559 149	291 872
Mozambique (b)	* 95 000	* 100 000	* 100 000	* 90 000	* 92 000
Namibia	795 896	926 677	1 157 299	1 154 116	1 159 219
Senegal	290 873	306 347	320 627	296 348	291 253
Somalia	* 100	* 100	100	* 300	* 500
South Africa	538 355	543 955	571 774	614 028	614 895
Sudan	237 000	121 000	* 120 000	* 100 000	* 100 000
Tanzania	83 974	112 995	181 818	159 020	82 953
Tunisia	1 666 075	1 889 614	* 1 900 000	* 1 900 000	* 1 900 000
Bahamas (f)	708 642	418 980	623 368	701 158	856 855
Bonaire (b)	* 400 000	* 400 000	* 400 000	* 400 000	* 400 000
Canada					
Rock salt	11 416 072	10 543 760	11 673 544	10 737 568	9 594 845
Other salt (g)	970 009	1 974 511	862 320	982 617	954 285
Cuba	226 000	204 600	195 600	87 900	114 900
Dominican Republic (f)	21 550	19 972	24 957	* 25 000	* 25 000
El Salvador (b)	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Guatemala (b)	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Honduras	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Jamaica	* 14 000	* 14 000	* 14 000	* 14 000	* 14 000
Mexico	9 084 859	7 001 505	7 914 780	8 542 344	6 990 904
Nicaragua (b)	* 30 000	* 30 000	* 30 000	* 30 000	* 30 000
Panama (b)	25 259	24 149	23 017	30 367	21 657
USA					
Rock salt	18 200 000	17 500 000	15 700 000	14 600 000	* 16 000 000
Salt in brine	16 400 000	14 500 000	16 700 000	17 400 000	* 16 800 000
Evaporated salt	16 100 000	14 500 000	6 880 000	7 810 000	* 7 200 000
Argentina	1 256 963	* 1 300 000	* 1 300 000	* 1 300 000	* 1 300 000
Bolivia	* 5 000	* 22 000	* 20 000	* 22 000	* 33 000
Brazil	464 330	534 278	609 801	621 278	629 159
Chile	9 574 159	8 565 307	10 501 352	10 721 181	8 938 398
Colombia					
Rock salt	409 976	370 318	379 081	374 873	421 958
Ecuador	* 75 000	* 75 000	* 75 000	* 75 000	* 75 000
Peru	1 030 598	1 175 828	1 093 559	1 008 624	1 051 498
Venezuela (b)	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Afghanistan	10 627	3 300	21 663	80 448	120 810
Bangladesh (c)	1 582 623	1 640 703	1 832 000	2 233 000	2 438 000
Cambodia (b)(h)	* 104 000	* 75 000	32 900	81 154	130 000
China	58 526 800	57 065 100	53 598 800	52 568 000	55 627 000
India					
Rock salt (i)	486	286	—	—	—
Sea salt (i)	21 352 200	* 21 000 000	* 21 330 000	* 21 000 000	* 21 000 000
Other salt (i)	5 211 700	* 5 200 000	* 4 600 000	* 4 600 000	* 4 600 000
Indonesia	* 1 400 000	* 1 100 000	900 000	2 500 000	2 040 000
Iran (j)	3 677 501	3 291 063	3 809 619	4 269 652	* 4 300 000
Iraq	* 300 000	* 57 600	* 60 000	* 200 000	* 200 000

Production of salt

tonnes (metric)

Country	2020	2021	2022	2023	2024
Israel (b)	275 160	262 347	297 861	264 691	253 358
Japan (i)	874 000	855 000	897 000	792 000	813 000
Jordan	39 088	42 359	* 42 000	* 42 000	* 42 000
Kazakhstan	1 237 455	1 231 996	1 678 469	1 859 206	1 847 787
Korea (Rep. of)	323 470	280 876	260 616	242 050	208 197
Korea, Dem. P.R. of	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Kuwait	* 58 000	* 58 000	* 58 000	* 58 000	* 58 000
Laos	3 951	6 846	188	3 538	5 278
Lebanon (b)	* 15 000	* 15 000	* 15 000	* 15 000	* 15 000
Mongolia	2 624	1 349	394	1 780	1 285
Myanmar	229 755	161 774	138 413	215 185	* 215 000
Oman	11 700	10 700	11 500	7 300	13 200
Pakistan					
Rock salt (c)	3 368 978	3 365 665	2 716 177	2 907 398	3 200 300
Sea salt (c)(d)	114 754	226 540	198 462	241 722	* 210 000
Philippines (b)	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Saudi Arabia					
Rock salt & brine salt	2 220 000	2 331 000	2 342 000	* 2 342 000	* 2 342 000
Sri Lanka	60 076	63 254	111 000	94 613	40 573
Syria	* 100 000	113 000	* 150 000	* 150 000	* 150 000
Taiwan	77 854	77 297	78 415	111 662	75 391
Tajikistan	37 023	26 898	31 111	44 171	39 316
Thailand					
Rock salt	1 439 877	1 563 970	1 737 090	1 392 649	* 1 400 000
Turkmenistan	96 480	* 96 200	96 480	* 96 500	97 600
Uzbekistan	292 721	409 766	270 228	333 347	* 330 000
Vietnam (b)	1 134 590	1 208 100	987 000	641 700	733 900
Yemen, Republic of	* 75 000	* 75 000	* 80 000	* 80 000	* 100 000
Australia (c)	11 960 778	13 002 595	12 170 827	12 218 589	12 672 801
New Zealand	60 000	76 000	18 000	—	(h) 105 000
World total	271 600 000	268 700 000	259 700 000	252 500 000	253 400 000

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) Sales
(b) Sea salt
(c) Years ended 30 June of that stated
(d) Years ended 7 July of that stated
(e) Lake salt
(f) Exports
(g) Including salt in brine
(h) Seasons beginning in November and ending in May of the year stated
(i) Years ended 31 March following that stated
(j) Years ended 20 March following that stated

Production of refined selenium

tonnes (metric)

Country	2020	2021	2022	2023	2024
Armenia	* 20	* 20	* 20	* 20	* 20
Belgium	* 200	* 200	* 200	* 200	* 200
Finland	84	100	130	122	38
Germany (a)	* 300	* 200	* 200	* 300	* 200
Poland	74	66	82	74	68
Russia	190	* 194	* 190	* 190	* 190
Serbia	* 20	* 4	* 10	* 10	* 10
Sweden	10	10	10	4	* —
Canada	102	* 100	* 110	* 120	105
Mexico	106	135	141	131	78
USA	66	112	116	85	151
Chile	* 100	* 100	* 100	* 100	* 100
Peru	53	48	57	50	53
China	1 680	1 700	1 750	1 775	* 1 800
Japan	740	750	* 750	* 750	* 750
Kazakhstan	* —	* 12	* 24	* 24	* 24
Philippines	* 70	* 70	* 70	* 70	* 70

Note(s)

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

(a) Includes selenium produced from imported material

Production of sillimanite minerals

tonnes (metric)

Country	2020	2021	2022	2023	2024
France					
Andalusite (a)	* 65 000	139 789	162 434	141 816	140 424
South Africa					
Andalusite	* 180 000	* 170 000	* 170 000	* 148 000	* 150 000
USA					
Kyanite (b)	67 100	105 000	85 900	82 400	* 80 000
India					
Kyanite (c)	4 925	9 320	2 765	3 324	2 055
Sillimanite (c)	11 110	3 432	1 437	771	326
Nepal					
Kyanite (d)	0	—	—	* 1	* 1

Note(s)

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

(2) In addition to the countries listed above as producing sillimanite minerals, synthetic mullite is believed to be produced in Brazil, Germany and Hungary.

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

(a) Andalusite, kyanite and sillimanite

(b) Including related minerals

(c) Years ended 31 March following that stated

(d) Years ending 15 July of that stated

Mine production of silver

kilograms (metal content)

Country	2020	2021	2022	2023	2024
Armenia	18 280	18 983	18 417	15 300	* 16 000
Azerbaijan	7 595	8 988	12 600	5 212	3 185
Bosnia & Herzegovina	—	—	—	—	15
Bulgaria	39 128	* 40 700	* 26 300	* 23 400	* 43 400
Cyprus	(a) 486	—	—	—	—
Finland	54 833	42 736	36 359	43 915	36 660
Georgia	11 172	12 674	22 420	24 423	25 761
Germany	4 000	600	7 000	7 000	5 000
Greece	50 300	44 100	32 870	43 000	38 100
Ireland, Republic of	918	1 342	2 750	998	60
North Macedonia	11 488	* 15 000	15 300	16 100	* 15 300
Poland	1 423 000	1 522 000	1 533 000	1 532 000	1 531 000
Portugal	96 000	97 900	78 400	88 700	58 350
Romania	* 18 000	* 18 000	* 18 000	* 18 000	* 18 000
Russia (b)	1 457 000	1 517 000	1 524 000	1 479 000	1 275 100
Serbia (b)	* 15 900	* 11 600	* 10 900	* 12 000	27 069
Slovakia	269	328	354	400	470
Spain	92 751	80 848	58 235	88 796	87 358
Sweden	400 939	428 585	422 086	404 055	432 265
Turkey	98 270	162 670	143 260	96 130	65 850
United Kingdom	* 100	* 410	* 1 340	* 630	* —
Botswana	—	10 383	31 174	42 955	35 438
Burkina Faso	8 897	10 012	7 326	7 890	9 291
Congo, Democratic Republic	* 3 400	* 3 400	* 3 400	* 3 400	* 3 400
Côte d'Ivoire	956	11 477	* 11 000	* 11 000	* 10 000
Eritrea	65 284	68 624	49 855	48 532	64 986
Ethiopia (c)	* 400	* 400	* 400	* 400	* 400
Ghana	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Mali	* 2 800	* 3 000	* 3 000	* 3 000	* 3 000
Morocco	189 200	194 400	203 200	163 280	146 160
Namibia	6 982	5 330	5 200	* 6 200	* 7 100
Niger	12	87	* 29	* 30	* 100
Nigeria	—	—	* 200	277	700
Senegal	1 100	1 300	1 325	982	* 650
South Africa	38 118	37 147	45 704	41 929	36 660
Sudan	* 1 000	* 1 000	* 1 000	* 1 000	* 1 000
Tanzania	13 187	9 324	13 602	14 481	3 129
Zambia	* 9 000	* 9 000	* 8 000	* 7 000	* 7 000
Zimbabwe	* 1 522	2 677	1 545	1 880	1 560
Canada	306 913	300 272	289 645	306 263	365 921
Dominican Republic	87 889	79 687	73 413	52 042	56 064
Honduras	34 260	36 700	* 34 000	* 32 000	* 25 000
Mexico	7 424 554	6 492 180	7 067 580	7 277 840	* 8 000 000
Nicaragua	21 830	23 078	21 576	37 012	39 487
Panama	49 627	78 419	87 498	84 737	—
USA	1 080 000	1 020 000	1 010 000	1 020 000	* 1 050 000
Argentina	748 000	870 000	961 000	808 000	775 000
Bolivia	930 390	1 292 190	1 219 040	1 344 630	1 486 250
Brazil	* 68 400	* 68 400	* 65 300	* 96 400	* 102 600
Chile	1 575 794	1 383 041	1 274 363	1 262 287	1 354 564
Colombia	20 704	27 265	37 135	51 717	56 988
Ecuador	15 000	34 900	44 300	47 900	43 030
Peru	2 768 240	3 375 645	3 084 039	3 041 394	3 510 150
China	3 405 800	3 511 554	3 471 200	3 399 600	3 424 500
India (d)	705 796	647 156	713 768	745 980	691 384
Indonesia	338 100	295 900	298 600	281 060	304 000
Iran	84 000	84 000	* 87 100	* 96 400	* 96 400
Japan	4 192	3 339	2 923	2 604	2 691
Kazakhstan	1 035 181	1 004 789	1 013 069	894 807	706 645
Korea (Rep. of)	5 739	10 001	4 434	2 670	4 378
Korea, Dem. P.R. of	* 50 000	* 50 000	* 50 000	* 50 000	* 50 000
Kyrgyzstan	16 100	16 500	17 400	15 400	15 400
Laos	28 672	25 797	21 345	18 322	27 650

Mine production of silver

kilograms (metal content)

Country	2020	2021	2022	2023	2024
Malaysia	422	672	481	625	770
Mongolia	* 70 200	* 72 900	* 65 400	* 76 700	* 85 900
Philippines	24 024	30 856	56 227	46 160	54 073
Saudi Arabia	6 493	8 604	* 9 464	* 9 500	* 9 500
Tajikistan	3 300	* 11 000	* 11 000	* 12 000	* 18 000
Thailand	—	—	—	10 417	16 642
Uzbekistan	195 900	211 500	217 700	220 800	242 600
Australia	1 337 344	1 329 718	1 169 252	1 011 686	1 045 360
Fiji	479	622	475	607	469
New Zealand	1 393	3 055	3 922	5 554	* 5 000
Papua New Guinea	128 886	102 115	111 700	136 500	138 000
Solomon Islands	—	—	—	220	200
World total	26 717 000	26 895 000	26 945 000	26 754 000	27 815 000

Note(s)

- (a) Production thought to be from stockpiles
- (b) Smelter and/or refinery production
- (c) Years ended 7 July of that stated
- (d) Years ended 31 March following that stated

Production of natural sodium carbonate

tonnes (metric)

Country	2020	2021	2022	2023	2024
Turkey	* 4 000 000	* 4 500 000	* 4 500 000	* 4 700 000	* 4 800 000
Botswana	238 476	261 838	285 215	262 052	298 417
Ethiopia (a)	* 1 500	* 1 500	* 1 500	* 1 500	* 1 500
Kenya	254 579	283 621	321 779	240 784	264 921
USA	9 990 000	11 300 000	11 300 000	10 900 000	11 700 000
China	28 123 700	29 132 500	29 202 100	32 624 000	38 186 000

Note(s)

- (a) Years ended 7 July of that stated

Production of strontium minerals

tonnes (metric)

Country	2020	2021	2022	2023	2024
Spain	121 920	281 535	246 706	72 585	78 550
Turkey	4 869	—	2 046	49 541	6 050
Mexico	59 079	30 283	50 100	66 532	* 50 000
Argentina (a)	* 700	* 700	* 700	* 700	* 700
China	83 500	* 80 000	* 80 000	* 80 000	* 80 000
Iran (b)	198 779	* 200 000	* 200 000	293 120	* 300 000

Note(s)

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

- (a) May contain unbeneficiated material
- (b) Years ended 20 March following that stated

Production of sulfur and pyrites

tonnes (sulfur content)

Country	2020	2021	2022	2023	2024
Austria					
Recovered (a)	* 30 000	* 28 000	* 26 000	* 24 000	* 24 000
Belarus					
Recovered (a)	64 336	* 66 800	* 62 000	* 58 000	* 75 574
Belgium					
Recovered (a)(b)	* 400 000	* 400 000	* 400 000	* 400 000	* 400 000
Bosnia & Herzegovina					
Recovered	* 3 700	* 3 700	* 3 700	* 3 700	* 3 700
Bulgaria					
Recovered (b)	486 381	425 188	504 467	422 494	433 920
Recovered (a)	* 45 000	* 35 000	* 65 000	* 55 000	* 55 000
Croatia					
Recovered (a)	8 618	8 659	7 274	7 729	7 457
Czech Republic					
Recovered (a)	* 23 000	* 21 000	* 19 000	* 17 000	* 17 500
Denmark					
Recovered (a)	4 140	4 090	3 727	2 700	2 832
Finland					
Pyrites	194 000	182 000	143 000	* 139 000	* 141 000
Recovered (b)	358 700	338 400	341 100	314 600	407 810
Recovered (a)	* 120 000	* 120 000	* 120 000	* 120 000	* 120 000
France					
Recovered (a)	* 320 000	* 300 000	* 300 000	* 300 000	* 300 000
Recovered (c)	* 55 000	* 55 000	* 55 000	* 55 000	* 55 000
Germany					
Recovered (a)	353 293	382 049	370 664	276 876	280 315
Recovered (c)	213 398	235 769	227 281	167 783	171 259
Greece					
Recovered (a)	627 800	500 000	390 000	* 390 000	* 390 000
Hungary					
Recovered (a)	* 70 000	* 74 000	* 75 000	* 77 000	* 87 000
Italy					
Recovered (d)	* 610 000	* 550 000	* 500 000	* 480 000	* 490 000
Lithuania					
Recovered (a)	71 247	72 988	64 498	54 538	56 814
Netherlands					
Recovered (b)	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Recovered (a)	* 380 000	* 390 000	* 400 000	* 430 000	* 430 000
Norway					
Recovered (b)	73 187	70 948	69 013	69 982	74 038
Recovered (a)	* 21 000	* 21 000	* 20 000	* 19 000	* 21 000
Poland					
Frasch	422 380	449 100	476 900	472 020	334 070
Recovered (b)	* 280 000	* 280 000	* 280 000	* 280 000	* 280 000
Recovered (a)	24 740	24 240	22 670	22 730	21 670
Portugal					
Recovered	* 21 000	* 21 000	* 21 000	* 21 000	* 21 000
Romania					
Recovered	* 47 000	* 45 000	* 42 000	* 40 000	* 40 000
Russia					
Pyrites	* 71 000	* 71 000	* 71 000	* 71 000	* 71 000
Recovered (a)	* 6 238 000	* 6 372 000	* 6 518 000	* 6 598 000	* 6 413 000
Recovered (c)	* 954 000	* 954 000	* 954 000	* 954 000	* 954 000
Sulfur ore	* 28 000	* 28 000	* 28 000	* 28 000	* 28 000
Serbia					
Recovered (b)	* 29 400	110 916	30 840	136 311	246 771
Slovakia					
Recovered (b)	* 4 900	* 4 900	* 4 900	* 4 900	* 4 900
Recovered (a)	* 15 000	* 25 000	* 15 000	* 5 000	* 5 000
Sweden					
Recovered (b)	165 500	172 700	179 900	185 100	183 100
Recovered (a)	39 085	38 248	28 170	* 28 000	* 28 000
Turkey					
Pyrites	46 408	39 681	41 788	39 929	78 747
Recovered (a)(c)	* 92 000	* 98 000	* 102 000	* 117 000	* 117 000
United Kingdom					
Recovered (a)	106 000	107 000	120 000	112 000	114 000

Production of sulfur and pyrites

tonnes (sulphur content)

Country	2020	2021	2022	2023	2024
Algeria					
Recovered (a)	* 10 600	* 10 700	* 11 400	* 11 500	* 12 600
Egypt					
Recovered (a)	* 68 000	* 64 000	* 65 000	* 65 000	* 67 000
Libya					
Recovered (a)	133 300	139 000	139 500	138 200	128 500
Morocco					
Recovered	* 60 000	* 60 000	* 60 000	* 60 000	* 60 000
Namibia					
Recovered	81 500	65 500	* 64 700	63 900	* 64 000
South Africa					
Recovered (a)(b)	575 491	32 044	70 640	63 695	* 50 000
Zambia					
Recovered (b)	917 300	691 900	640 800	576 200	* 550 000
Canada					
Recovered (b)	554 746	* 550 000	* 550 000	* 550 000	* 550 000
Recovered (a)	4 349 262	4 193 003	4 348 607	4 575 804	4 684 104
Cuba					
Recovered	3 176	2 846	2 951	2 653	2 943
Recovered (a)	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Mexico					
Recovered (b)	* 556 000	* 556 000	* 556 000	* 556 000	* 556 000
Recovered (a)	315 935	182 871	290 121	255 452	151 798
Trinidad & Tobago					
Recovered (a)	* 11 000	* 11 000	* 11 000	* 10 000	* 9 000
USA					
Recovered (b)	579 000	600 000	636 000	640 000	* 660 000
Recovered (a)	7 306 000	7 469 000	8 006 000	8 017 000	* 7 500 000
Argentina					
Recovered (b)	* 20 000	* 20 000	* 20 000	* 20 000	* 20 000
Brazil					
Pyrites	* 20 000	* 20 000	* 20 000	* 20 000	21 815
Recovered (b)	* 292 000	* 292 000	* 292 000	* 292 000	* 292 000
Recovered (a)	* 239 000	* 239 000	* 239 000	* 239 000	* 239 000
Chile					
Recovered (b)	1 476 154	1 400 388	1 334 713	1 258 888	1 109 296
Colombia					
Recovered (a)	* 5 900	* 5 600	* 5 700	* 5 800	* 5 800
Ecuador					
Recovered (a)(e)	* 5 500	* 5 400	* 5 500	* 5 400	* 5 500
Peru					
Recovered (d)	* 556 000	* 556 000	* 556 000	* 556 000	* 556 000
Venezuela					
Recovered (a)	* 110 000	* 110 000	* 116 000	* 135 000	* 155 000
Bahrain					
Recovered (a)	* 120 000	* 110 000	* 110 000	* 110 000	* 110 000
China					
Pyrites	5 240 000	* 5 200 000	* 5 200 000	* 5 200 000	* 5 000 000
Recovered	18 850 000	* 19 390 000	* 19 400 000	* 19 400 000	* 19 000 000
India					
Recovered (b)(f)	* 1 200 000	* 1 200 000	* 1 200 000	* 1 200 000	* 1 200 000
Recovered (a)	(f) 737 337	(f) 880 858	926 270	981 260	* 900 000
Indonesia					
Recovered (b)	* 350 000	* 350 000	* 400 000	* 400 000	* 400 000
Recovered (a)	* 95 000	* 85 000	* 80 000	* 80 000	* 75 000
Iran					
Recovered (d)	* 1 700 000	* 1 900 000	* 2 000 000	* 2 400 000	* 2 600 000
Iraq					
Recovered (a)	* 202 000	* 200 800	* 221 300	* 213 000	* 216 000
Israel					
Recovered (a)	45 184	43 664	* 40 000	* 40 000	* 40 000
Japan					
Recovered (b)	1 728 654	1 575 032	1 655 704	1 535 117	1 684 300
Recovered (a)	1 411 860	1 420 094	1 542 244	1 367 438	1 251 292

Production of sulfur and pyrites

tonnes (sulphur content)

Country	2020	2021	2022	2023	2024
Jordan					
Recovered (a)	* 490 000	* 490 000	* 490 000	* 490 000	* 490 000
Kazakhstan					
Recovered (b)	* 604 000	* 604 000	* 604 000	* 604 000	* 604 000
Recovered (a)	* 2 486 000	* 2 491 000	* 2 443 000	* 2 609 000	* 2 545 000
Korea (Rep. of)					
Recovered (b)	* 1 078 000	* 1 078 000	* 1 078 000	* 1 078 000	* 1 078 000
Recovered (a)	2 000 000	2 000 000	2 000 000	* 2 000 000	* 2 000 000
Kuwait					
Recovered (a)	* 787 000	* 780 000	* 873 000	* 837 000	* 785 000
Oman					
Recovered (a)	* 47 300	* 48 400	* 53 000	* 52 200	* 49 400
Pakistan					
Sulfur ore (g)	19 948	19 398	16 288	11 692	7 200
Philippines					
Recovered (b)	* 169 000	* 169 000	* 169 000	* 169 000	* 169 000
Recovered (a)	* 26 400	* 22 600	* 20 700	* 15 250	* 13 900
Qatar					
Recovered (a)	* 1 360 400	* 1 337 600	* 1 368 000	* 1 411 700	* 1 434 500
Saudi Arabia					
Recovered (a)	* 3 617 000	* 3 585 000	* 3 989 000	* 3 681 000	* 3 551 000
Singapore					
Recovered (a)	* 300 000	* 300 000	* 300 000	* 300 000	* 300 000
Syria					
Recovered (a)	* 5 000	* 5 000	* 5 000	* 5 000	* 5 000
Taiwan					
Recovered	167 336	192 227	162 571	122 238	130 253
Thailand					
Recovered (a)	* 37 300	* 49 200	* 41 000	* 39 700	* 42 500
Turkmenistan					
Recovered (a)	* 216 000	* 252 000	* 244 000	* 193 000	* 190 000
United Arab Emirates					
Recovered (a)	* 2 318 000	* 2 300 000	* 2 500 000	* 2 500 000	* 2 500 000
Uzbekistan					
Recovered (b)	* 131 000	* 131 000	* 131 000	* 131 000	* 131 000
Recovered (a)	* 216 000	* 227 000	* 227 000	* 216 000	* 206 000
Australia					
Recovered (b)	* 810 000	* 810 000	* 810 000	* 810 000	* 810 000
Recovered (a)	* 60 000	* 60 000	* 55 000	* 50 000	* 50 000
New Zealand					
Recovered (a)	* 16 000	* 14 000	* 12 000	* 14 000	* 11 581
World total					
Pyrites	5 600 000	5 500 000	5 500 000	5 500 000	5 300 000
Frasch	400 000	400 000	500 000	500 000	300 000
Recovered	74 100 000	73 800 000	75 600 000	75 500 000	74 400 000
Sulfur	48 000	47 000	44 000	40 000	35 000

Note(s)

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

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

Production of talc

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	123 000	157 493	157 047	138 621	137 735
Finland	278 331	296 833	241 538	197 116	211 536
France	* 320 000	* 320 000	* 320 000	* 320 000	* 320 000
Italy	* 165 000	* 170 000	* 170 000	* 170 000	* 170 000
Portugal	9 751	8 277	4 273	5 673	8 149
Russia	104 000	* 50 000	* 50 000	* 50 000	* 50 000
Slovakia	91 670	99 920	121 000	118 000	108 000
Spain	2 920	651	—	—	* —
Turkey					
Talc	14 178	33 118	43 196	12 571	19 746
Pyrophyllite	129 290	187 232	—	220 357	284 309
United Kingdom	1 386	1 397	2 795	3 824	3 305
Egypt (a)	* 10 000	* 12 000	* 14 000	* 11 000	* 11 000
Morocco	* 400	* 400	* 400	453	482
Nigeria	9 751	65 061	* 65 000	64 400	* 64 000
South Africa					
Pyrophyllite	92 318	270 944	438 698	319 775	390 145
Sudan	* 2 000	4 500	* 4 500	* 2 000	* 2 000
Canada (b)	153 293	* 160 000	* 150 000	* 150 000	* 150 000
Guatemala	3 151	2 111	1	—	160
Mexico	29 122	36 465	34 630	20 534	* 20 500
USA	491 000	577 000	511 000	508 000	* 530 000
Argentina	* 11 000	* 11 000	* 11 000	* 11 000	* 11 000
Brazil (c)	* 650 000	* 650 000	* 650 000	* 650 000	* 650 000
Colombia (c)	1 830	3 170	5 222	1 690	3 481
Peru					
Talc	17 418	23 039	23 298	16 019	8 182
Pyrophyllite	20 519	27 316	26 571	37 875	38 423
Uruguay (d)	520	570	1 160	150	750
Afghanistan					
Steatite	* 90 000	* 100 000	* 100 000	107 303	304 104
Bhutan	972	678	740	358	* 730
China	1 099 800	* 1 100 000	* 1 100 000	* 1 400 000	* 1 400 000
India					
Pyrophyllite (d)	* 39 000	* 39 000	* 39 000	* 39 000	* 39 000
Steatite (d)	* 1 600 000	* 1 600 000	* 1 600 000	* 1 600 000	* 1 600 000
Iran (e)	59 155	74 537	93 535	122 484	* 130 000
Japan					
Talc	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Pyrophyllite	* 116 000	* 135 000	* 136 000	* 130 000	* 130 000
Korea (Rep. of)					
Talc	1 600	2 091	913	2 900	1 782
Pyrophyllite	474 164	353 013	196 864	304 856	287 262
Laos					
Pyrophyllite	—	—	1 115	800	9 734
Nepal (f)	4 931	4 450	2 113	* 5 000	* 5 000
Pakistan (a)	150 009	289 423	301 369	164 158	* 232 000
Saudi Arabia					
Pyrophyllite	61 000	167 000	175 000	* 175 000	* 175 000
Taiwan	—	43	—	—	—
Thailand					
Talc	6 624	5 920	—	—	—
Pyrophyllite	31 522	26 030	30 369	32 484	* 32 500
Australia	* 131 000	* 105 000	* 131 000	* 141 000	* 91 000
World total	6 600 000	7 200 000	7 000 000	7 300 000	7 600 000

See notes on following page

Production of talc

Note(s)

(1) In addition to the countries listed, pyrophyllite may be produced in Vietnam.

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

Production of tantalum and niobium minerals

tonnes (metric)

Country	2020	2021	2022	2023	2024
Russia					
Nb content	431	454	373	362	297
Ta content	49	34	17	29	29
Spain					
Ta content	11	12	16	24	—
Burundi					
Columbite-tantalite	21	42	10	6	3
Nb content	8	16	4	2	1
Ta content	3	7	2	1	—
Congo, Democratic Republic					
Columbite-tantalite	1 712	2 422	2 435	1 795	2 849
Nb content	503	711	715	527	836
Ta content	491	694	698	514	817
Ethiopia					
Nb content (a)	* 7	* 12	* 15	* 15	* 15
Ta content (a)	* 10	* 19	* 19	* 19	* 19
Mozambique					
Tantalite	209	178	211	205	139
Ta content	103	88	104	101	68
Namibia					
Tantalite	...	...	—	7	51
Ta content	...	...	...	(b) 2	(b) 13
Nigeria					
Tantalite	* 1	44	4	5	* 5
Ta content	* 1	22	2	2	* 2
Columbite	409	1 378	5 899	1 860	* 1 900
Nb content	159	537	2 297	724	* 740
Ta content	63	213	913	288	* 294
Rwanda					
Columbite-tantalite (c)(d)	1 201	1 118	1 116	1 682	2 206
Nb content	468	435	435	655	859
Ta content	186	173	173	260	341
Sierra Leone					
Columbite	* 400	* 400	* 400	* 400	* 300
Nb content	* 21	* 21	* 21	* 21	* 16
Ta content	* 16	* 16	* 16	* 16	* 12
Uganda					
Columbite-tantalite	173	404	* 400	* 400	* 400
Nb content	69	161	* 159	* 159	* 159
Ta content	21	50	* 49	* 49	* 49
Zimbabwe					
Columbite-tantalite	4	—	—	—	* —
Nb content	2	—	—	—	* —
Ta content	1	—	—	—	* —
Canada					
Pyrochlore	* 11 900	* 13 900	* 12 000	* 8 500	* 8 500
Nb content	* 4 500	* 5 200	* 4 500	* 3 200	* 3 200

Production of tantalum and niobium minerals

tonnes (metric)

Country	2020	2021	2022	2023	2024
Bolivia					
Tantalite	* 40	* 2	* 9	* 4	* 4
Ta content	* 20	* 1	* 4	* 2	* 2
Brazil					
Pyrochlore	154 049	198 777	200 940	207 208	* 207 000
Nb content	59 819	75 036	76 896	76 896	* 77 000
Tantalite	59	65	514	198	115
Ta content	9	10	—	—	—
Columbite	10 070	11 199	* 11 000	* 11 000	* 11 000
Nb content	3 614	3 915	* 3 845	* 3 845	* 3 845
China					
Columbite-tantalite	* 296	* 304	* 300	* 312	* 304
Nb content	* 115	* 118	* 117	* 121	* 118
Ta content	* 46	* 47	* 46	* 49	76
Malaysia					
Struverite	9	—	35	49	* 50
Ta content	1	—	3	5	* 5
Australia					
Tantalite	153	213	184	159	201
Ta content	75	105	90	78	99
World total					
Nb content	69 200	90 000	89 000	86 200	86 700
Ta content	1 100	1 500	2 100	1 400	1 800

Note(s)

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

- (a) Years ended 7 July of that stated
- (b) Content of Nb, Ta: -, 25%
- (c) Years ended 30th June of that stated
- (d) Exports

Production of refined tellurium

tonnes (metric)

Country	2020	2021	2022	2023	2024
Bulgaria	4	3	3	1	2
Russia	55	* 56	* 70	* 73	* 70
Sweden	42	41	33	36	46
Canada	23	24	24	27	* 28
USA	...	...	* 11	* 20	* 20
China	575	650	675	725	* 750
Japan	70	75	* 75	* 75	* 75
Uzbekistan	* 25	13	13	* 13	* 13

Note(s)

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

Mine production of tin

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Portugal	104	60	60	49	62
Russia	2 539	2 908	2 901	3 003	2 466
Spain	115	220	314	348	—
Burundi	121	124	99	88	126
Congo, Democratic Republic	14 673	15 963	19 161	18 955	23 624
Namibia	284	449	513	881	914
Nigeria	5 848	6 900	8 121	6 863	* 10 000
Rwanda (a)(b)	1 728	2 158	2 290	2 799	2 991
Tanzania	35	158	404	316	254
Uganda	—	2	—	—	—
Bolivia	14 709	19 669	17 613	18 693	21 163
Brazil	16 634	8 203	9 799	25 121	27 662
Colombia	233	—	—	—	206
Peru (c)	20 647	26 995	28 231	26 230	32 317
China	94 463	83 144	67 365	* 66 500	* 74 000
India (d)	17	20	34	17	9
Indonesia	65 127	52 467	57 735	67 625	49 905
Korea (Rep. of)	1	1	—	—	—
Laos	601	891	1 130	785	838
Malaysia	2 963	3 193	3 697	3 953	5 460
Mongolia (e)	* 11	* 18	* 46	* 11	* 69
Myanmar	37 864	38 417	48 838	47 081	* 21 300
Thailand	194	216	84	48	* 30
Vietnam	7 260	7 666	8 139	9 079	* 10 000
Australia	8 118	8 772	9 001	9 852	11 326
World total	294 000	279 000	286 000	308 000	295 000

Note(s)

(1) The figures in this table include artisanal mining, where data are available.

- (a) Years ended 30 June of that stated
- (b) Exports
- (c) Recoverable
- (d) Years ended 31 March following that stated
- (e) Estimates based on reported exports

Smelter production of tin

tonnes (metric)

Country	2020	2021	2022	2023	2024
Belgium	8 980	9 998	8 200	9 310	8 217
Poland	3 915	4 617	4 275	3 988	4 829
Russia	1 650	2 600	2 400	2 800	* 2 800
Congo, Democratic Republic	—	—	—	880	* 1 000
Rwanda	547	395	643	782	1 001
USA	—	—	—	* 10 300	* 10 300
Bolivia (a)	10 414	16 258	14 834	14 899	17 000
Brazil	* 16 000	* 16 389	17 189	15 394	* 15 000
Peru	19 592	25 947	26 706	25 374	30 926
China	202 910	200 488	* 200 000	* 198 000	* 200 000
Indonesia	41 511	69 086	50 318	40 427	* 40 000
Japan	1 558	1 878	1 540	1 765	1 790
Malaysia	22 325	16 619	19 385	20 722	16 291
Myanmar	* —	* 21	* 870	* 1 040	* 260
Singapore	...	...	...	20 722	16 291
Taiwan	* 3 700	* 4 000	* 4 200	* 4 200	* 4 200
Thailand	11 307	12 069	9 526	* 9 180	* 9 500
Vietnam	* 5 500	* 5 500	* 5 500	* 6 000	* 6 000
Australia	112	73	106	114	219
World total	350 000	386 000	366 000	386 000	386 000

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 (metric)

Country	2020	2021	2022	2023	2024
Norway					
Ilmenite	517 000	545 000	492 000	401 000	535 000
Russia					
Ilmenite	—	1 961	1 532	1 603	1 199
Turkey					
Rutile	6 795	7 451	7 226	—	—
Ukraine					
Ilmenite	773 093	702 249	458 160	* 130 000	* 120 000
Rutile	* 110 500	* 100 300	* 58 600	* 18 600	* 10 000
Gambia					
Ilmenite	* 6 000	* 14 000	* 12 000	* 35 000	* 9 000
Kenya					
Ilmenite	334 900	345 000	188 000	192 000	139 100
Rutile	72 836	69 844	163 242	67 604	42 834
Madagascar					
Ilmenite (a)	424 000	582 000	545 000	* 613 000	* 486 000
Rutile	* 6 000	* 6 000	* 6 000	* 6 000	* 6 000
Mozambique					
Ilmenite	1 608 011	2 071 046	2 553 269	3 373 214	3 506 512
Rutile	5 957	8 914	8 869	8 382	9 825
Nigeria					
Ilmenite	* —	30	3 062	25 637	* 25 000
Senegal					
Ilmenite	511 999	543 061	498 000	421 000	570 000
Leucoxene (b)	9 500	11 395	10 487	8 005	* 7 000

Production of titanium minerals

tonnes (metric)

Country	2020	2021	2022	2023	2024
Sierra Leone					
Ilmenite	50 963	53 802	58 610	41 040	98 622
Rutile	116 569	131 311	135 818	100 970	81 245
South Africa					
Ilmenite (c)	1 020 000	1 000 000	900 000	1 260 000	* 1 300 000
Rutile	86 000	95 000	100 000	100 000	* 100 000
Canada					
Ilmenite (d)(c)	* 1 900 000	* 1 700 000	* 2 100 000	* 1 900 000	* 1 700 000
USA	* 100 000	* 200 000	* 300 000	* 300 000	* 300 000
Brazil					
Ilmenite (e)	61 848	132 998	17 369	21 298	20 203
China					
Ilmenite	5 442 000	5 714 000	* 6 300 000	* 3 250 000	* 3 300 000
India					
Ilmenite (f)	* 265 000	* 265 000	* 265 000	* 265 000	* 265 000
Rutile (f)	* 11 000	* 11 000	* 11 000	* 11 000	* 11 000
Kazakhstan	* 8 000	* 10 000	* 15 000	* 14 000	* 14 000
Korea (Rep. of)					
Ilmenite	287 895	322 581	137 976	645 949	216 917
Malaysia					
Ilmenite	2 548	4 598	24 083	14 096	11 919
Rutile	5 136	11 513	8 359	3 708	* 3 700
Saudi Arabia					
Ilmenite	* 2 800	* 3 700	* 9 700	* 11 000	* 15 000
Sri Lanka					
Ilmenite	18 016	49 068	29 741	53 856	* 50 000
Rutile	1 311	1 881	740	2 150	* 2 100
Thailand					
Ilmenite	153	66	2	—	* —
Vietnam					
Ilmenite	268 800	300 000	331 500	213 600	157 220
Australia					
Ilmenite (g)	634 165	519 875	496 805	502 360	583 732
Rutile (g)	156 389	138 906	99 995	177 961	228 499
Leucoxene (g)	79 058	31 754	38 453	38 617	30 278
World total					
Ilmenite (wt of concs)	14 200 000	15 000 000	15 700 000	13 700 000	13 400 000
Rutile (wt of concs)	600 000	500 000	600 000	500 000	500 000
All forms (TiO ₂ content)	7 500 000	7 800 000	8 200 000	7 100 000	7 000 000

Note(s)

- (1) The figures in this table refer to gross tonnage of titanium concentrates.
(2) Some ilmenite is converted to synthetic rutile in Australia, India, Japan and USA.

- (a) Exports
(b) Including natural rutile
(c) It is believed that the majority of this is processed into slag
(d) Canada produces some ilmenite which is sold as such and not processed into slag, but tonnages are small
(e) Including synthetic rutile
(f) Years ended 31 March following that stated
(g) Years ended 30 June of that stated

Mine production of tungsten

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Austria	896	919	910	835	838
Portugal (a)	535	502	448	427	469
Russia	2 274	2 143	1 846	1 511	* 1 400
Spain	238	643	588	711	840
Burundi	167	120	77	69	43
Congo, Democratic Republic	117	108	149	236	174
Nigeria	* 13	21	20	50	82
Rwanda (b)(c)	956	1 281	1 808	1 786	1 587
Uganda	9	32	48	41	* 17
Mexico	32	* 40	50	* 50	* 50
Bolivia	1 699	1 971	1 713	1 898	2 127
Brazil	257	301	302	284	283
China	71 450	68 660	65 620	* 66 000	* 59 000
Korea (Rep. of)	—	—	—	—	17
Korea, Dem. P.R. of	* 400	* 50	* 1 500	* 1 600	* 1 800
Kyrgyzstan	* 100	* 100	* 100	* 100	* 100
Malaysia	...	4	24	97	* 50
Mongolia	* 20	* 120	* 210	* 320	190
Myanmar (d)	130	76	69	* 30	* 30
Thailand (e)	70	72	74	40	* 20
Uzbekistan	2	2	1	16	* 16
Vietnam	6 443	6 223	6 318	5 817	5 394
Australia (b)	* 100	160	285	420	1 016
World total	85 900	83 500	82 100	82 300	75 500

Note(s)

- (1) In addition to the countries listed, the USA is known to produce tungsten.
(2) The figures in this table include artisanal mining, where data are available.

- (a) Wolframite and scheelite
(b) Years ended 30 June of that stated
(c) Exports
(d) Including tungsten content of tin-tungsten concentrates
(e) Scheelite

Mine production of uranium

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Czech Republic	29	27	21	13	17
Germany	8	—	—	—	—
Ukraine	744	455	* 100	* 340	* 288
Namibia	5 413	5 754	5 612	6 987	7 334
Niger	2 991	2 281	2 020	1 130	1 080
South Africa	124	153	188	275	250
Canada	3 613	4 768	7 368	11 373	15 952
USA	6	8	75	19	260
Brazil	—	29	43	* 40	* 40
China	* 1 885	* 1 600	* 1 700	* 1 600	* 1 600
India	400	600	600	485	500
Iran	* 71	* 21	* 20	* 20	* 20
Kazakhstan	19 477	21 819	21 227	21 109	23 270
Pakistan	* 45	* 45	* 45	* 45	* 45
Uzbekistan	3 512	3 526	3 561	* 3 600	* 3 600
Australia	7 273	4 474	5 377	5 512	5 469
World total	48 500	48 200	50 500	55 300	62 500
World total (U ₃ O ₈ equivalent)	57 200	56 900	59 600	65 200	73 700

Note(s)

(1) Excluding uranium production from decommissioning operations.

Mine production of vanadium

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Russia	19 533	20 058	* 20 000	* 20 000	* 20 000
South Africa	14 421	15 424	15 400	14 000	14 000
USA	17	—	—	—	—
Brazil	6 622	5 779	5 844	5 421	5 188
China	70 200	70 300	66 900	* 68 000	* 70 000
India (a)	400	400	* 400	* 400	* 400
World total	111 000	112 000	109 000	108 000	110 000

Note(s)

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

(a) Years ending 31 March following that stated

Production of vermiculite

tonnes (metric)

Country	2020	2021	2022	2023	2024
Bulgaria	* 10 000	* 10 000	* 10 000	* 10 000	* 10 000
Russia	29 900	28 510	* 29 000	* 29 000	* 30 000
Turkey	19 230	3 300	21 230	10 500	12 900
Kenya	* 400	* 400	* 400	* 400	* 400
South Africa	118 223	217 109	171 898	169 797	163 241
Uganda	14 170	21 754	22 947	23 837	* 24 000
Zimbabwe	26 388	27 713	26 380	28 276	54 266
Mexico	104	—	—	76	* 80
USA (a)	* 100 000	* 100 000	* 100 000	* 100 000	* 100 000
Brazil (b)	58 821	70 500	70 913	52 638	55 019
China	* 35 000	* 39 000	* 39 000	* 33 000	* 30 000
India (c)	1 260	3 060	2 303	1 129	2 736
Uzbekistan	* 2 000	* 2 000	* 3 000	* 3 000	* 3 000

Note(s)

(a) Sold or used by producers

(b) May include some perlite

(c) Years ended 31 March following that stated

Production of wollastonite

tonnes (metric)

Country	2020	2021	2022	2023	2024
Finland	* 11 000	* 11 000	* 11 000	* 11 000	* 10 000
Spain	17 412	17 246	18 741	23 456	20 452
Mexico	131 518	200 588	162 410	154 934	119 953
USA	* 40 000	* 50 000	* 50 000	* 50 000	* 50 000
China	* 890 000	* 890 000	* 900 000	* 770 000	* 800 000
India (a)	103 902	108 335	110 793	110 637	124 052
Australia (b)	2 426	4 495	2 000	2 000	500

Note(s)

(1) In addition to the countries listed, Canada also produces wollastonite (since 2014).

(a) Years ended 31 March following that stated

(b) Years ended 30 June of that stated

Mine production of zinc

tonnes (metal content)

Country	2020	2021	2022	2023	2024
Armenia	7 758	7 074	5 967	5 305	6 826
Bosnia & Herzegovina	6 600	7 200	7 700	8 000	10 700
Bulgaria	15 689	14 556	13 762	14 195	14 502
Finland	61 216	57 726	62 433	58 387	53 834
Georgia	2 243	2 059	4 412	4 602	6 076
Greece	28 037	22 598	12 339	16 596	14 353
Ireland, Republic of	127 008	112 249	103 264	53 327	6 348
Kosovo	3 909	4 513	2 776	2 730	1 646
Montenegro	10 133	9 357	9 038	7 638	7 439
North Macedonia	31 748	30 074	29 625	27 884	25 331
Poland	39 500	40 388	6 300	5 000	5 500
Portugal	176 849	187 703	182 262	183 916	109 571
Romania	* 100	* 2 500	1 033	878	* 4 700
Russia	260 700	287 900	300 900	307 400	* 310 000
Serbia	6 500	6 400	* 6 500	* 10 000	* 10 000
Slovakia	96	25	95	90	68
Spain	90 368	90 481	82 963	89 219	84 804
Sweden	234 811	236 416	233 958	217 596	239 181
Turkey	136 300	180 600	* 186 000	187 900	173 800
Algeria	1 600	500	900	200	500
Burkina Faso	73 543	74 295	23 200	—	—
Congo	1 100	12 700	16 100	24 100	15 700
Congo, Democratic Republic	15 305	16 079	13 578	11 287	43 590
Eritrea	121 930	129 641	120 529	116 829	121 401
Morocco	35 800	40 233	34 388	71 634	51 913
Namibia	47 972	43 348	41 426	38 795	40 890
Nigeria	* 19 600	* 12 000	* 10 000	* 6 000	* 7 000
South Africa	160 816	193 785	224 356	197 630	132 839
Tunisia	—	—	—	1 600	* 2 000
Zambia	245	500	400	400	400
Canada	371 491	230 187	180 256	99 789	79 561
Cuba	* 57 700	* 45 000	* 52 000	* 60 000	* 49 600
Dominican Republic	2 361	4 896	5 485	10 837	11 600
Honduras	* 27 000	* 32 000	28 200	* 30 000	* 20 000
Mexico	1 008 252	742 926	877 000	744 285	773 200
USA	723 000	704 000	763 000	767 000	759 000
Argentina	8 569	6 189	3 897	8 733	5 652
Bolivia	359 695	499 536	518 480	491 768	518 266
Brazil	173 167	157 778	150 897	190 928	185 462
Chile	28 662	27 915	24 092	22 059	31 959
Peru	1 334 570	1 533 135	1 369 649	1 469 127	1 270 646
China	4 058 000	4 136 000	4 041 000	4 060 000	3 954 000
India	(a) 756 998	(a) 797 044	832 194	853 507	857 001
Indonesia	* 17 420	* 15 151	11 400	10 400	2 400
Iran	* 215 200	* 195 100	* 228 700	* 235 000	* 250 000
Kazakhstan	341 368	318 399	315 100	352 900	273 400
Korea (Rep. of)	4 252	4 371	3 959	807	3 009
Korea, Dem. P.R. of	* 28 000	* 28 000	* 28 000	* 28 000	* 28 000
Laos	* 250	* 6 300	* 8 500	* 6 000	* 5 000
Mongolia	38 150	37 600	61 900	60 300	* 61 300
Myanmar (b)	6 755	9 800	10 200	8 800	6 700
Pakistan	35 054	35 391	42 349	41 295	40 941
Saudi Arabia	* 28 000	* 29 300	* 28 100	* 30 300	* 40 000
Tajikistan	48 416	70 573	59 056	45 071	47 501
Uzbekistan	41 000	42 000	42 900	44 100	* 42 000
Vietnam	* 12 000	* 12 000	* 14 000	* 20 000	* 37 500
Australia	1 314 910	1 318 696	1 237 373	1 101 155	1 104 550
World total	12 800 000	12 900 000	12 700 000	12 500 000	12 000 000

Note(s)

(a) Years ended 31 March following that stated

(b) Years ending 30 September of that stated

Production of slab zinc

tonnes (metric)

Country	2020	2021	2022	2023	2024
Belgium	278 004	285 000	230 013	250 104	480 184
Bulgaria	74 520	72 418	72 527	72 324	69 695
Finland	297 257	292 648	294 122	293 960	302 246
France	166 000	165 000	109 300	123 100	149 800
Germany	161 000	165 100	134 900	300	55 200
Italy	126 100	179 800	108 100	120 000	127 000
Netherlands	* 260 000	* 281 700	* 209 100	* 238 900	* 155 200
Norway	191 576	180 323	181 139	164 142	151 497
Poland	160 300	164 700	161 900	152 300	132 800
Romania	317	451	* 500	878	2 065
Russia	211 800	197 000	194 700	203 900	* 170 000
Spain	504 100	508 800	* 505 000	519 600	515 000
Algeria	849	401	846	964	1 000
Namibia	16 206	—	—	—	—
Canada	678 558	640 718	587 000	504 200	509 200
Mexico	363 383	357 038	337 020	352 767	339 979
USA	180 000	220 000	220 000	* 220 000	* 220 000
Brazil	247 002	237 603	233 703	230 751	225 903
Peru	318 619	340 179	349 500	346 075	341 007
China	6 424 876	6 561 000	6 802 000	7 152 000	6 837 000
India	709 982	779 367	838 009	836 004	856 998
Iran	170 000	185 000	195 000	* 195 000	* 190 000
Japan	501 146	517 221	516 638	484 687	473 458
Kazakhstan	311 322	300 886	266 198	279 906	287 740
Korea (Rep. of)	994 047	960 000	* 980 000	* 980 000	* 940 000
Korea, Dem. P.R. of	305 000	375 000	395 000	395 000	* 400 000
Uzbekistan	80 613	90 020	90 050	75 440	66 955
Vietnam	* 12 000	12 500	12 500	11 700	9 200
Australia	447 250	432 903	377 737	430 483	423 693
World total	14 200 000	14 500 000	14 400 000	14 600 000	14 400 000

Production of zirconium minerals

tonnes (metric)

Country	2020	2021	2022	2023	2024
Russia (a)	6 000	6 650	5 600	5 000	* 5 000
Ukraine	* 22 000	* 22 000	* 10 000	* 5 000	* 5 000
Gambia	* —	* —	* 4 000	* 4 000	* 29 000
Kenya	32 224	25 928	90 698	21 094	16 536
Madagascar (b)	25 300	23 100	26 800	* 34 400	* 28 700
Mozambique	104 076	100 158	134 082	143 505	123 660
Nigeria (b)	701	1 323	* 4 700	* 5 000	* 12 000
Senegal	59 000	64 000	57 000	48 398	66 000
Sierra Leone	6 600	4 100	6 800	5 200	2 400
South Africa	280 000	320 000	320 000	289 000	300 000
USA	* 40 000	* 35 000	* 40 000	* 40 000	* 45 000
Brazil (c)	10 994	43	6 513	8 397	1 704
China	* 40 000	* 35 000	* 50 000	* 50 000	* 40 000
India (d)	* 10 000	* 10 000	* 10 000	* 15 500	* 15 500
Indonesia (e)	* 64 000	* 54 000	* 97 000	* 95 000	* 81 000
Malaysia	157	1 518	768	704	* 700
Sri Lanka	419	400	267	556	* 500
Vietnam	* 11 000	* 30 000	* 17 000	* 18 000	* 25 000
Australia (f)	434 339	427 565	493 992	462 126	414 599
World total	1 100 000	1 200 000	1 400 000	1 300 000	1 200 000

Note(s)

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

(a) Baddeleyite concentrate

(b) Exports

(c) Including caldasite rock containing zircon and baddeleyite

(d) Years ending 31 March following that stated

(e) Conservative BGS estimates, based on exports

(f) Years ended 30 June of that stated

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APPENDIX 1

Additional tables relating to Europe only

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

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria					
Sand and gravel	29 439 450	32 016 216	30 955 410	27 475 272	25 795 802
Crushed rock (a)	27 471 201	* 28 728 000	* 28 256 000	26 213 744	* 25 323 000
Belgium					
Sand and gravel	* 13 500 000	* 14 700 000	* 13 200 000	* 12 200 000	* 13 000 000
Crushed rock	* 40 000 000	* 39 700 000	* 38 400 000	* 35 300 000	* 39 000 000
Bulgaria					
Sand and gravel	9 509 000	14 578 000	10 307 000	10 906 000	12 016 363
Crushed rock	21 771 000	37 443 000	22 693 000	41 409 000	* 35 000 000
Croatia					
Sand and gravel	4 585 010	5 268 779	4 811 109	4 694 510	4 493 563
Cyprus					
Crushed rock	7 905 100	9 401 246	9 445 246	10 035 309	10 995 144
Czech Republic					
Sand and gravel	20 335 000	21 370 000	21 213 000	18 578 000	17 802 000
Crushed rock	42 915 000	44 464 000	45 058 000	41 593 000	41 874 000
Denmark					
Sand and gravel	51 558 000	53 128 000	51 652 000	45 700 000	43 653 000
Crushed rock	175 000	465 000	522 000	205 000	566 000
Estonia					
Sand and gravel	9 544 800	7 877 690	4 275 500	(a) 5 326 118	(a) 5 056 219
Crushed rock	7 013 440	8 326 500	7 575 300	(a) 6 783 826	(a) 6 221 984
Finland					
Sand and gravel	23 000 000	22 000 000	23 500 000	27 260 000	* 27 000 000
Crushed rock	45 000 000	47 000 000	49 000 000	40 000 000	* 40 000 000
France					
Sand and gravel	117 851 000	* 120 000 000	121 633 000	109 581 000	102 318 000
Crushed rock	183 627 000	* 196 000 000	191 174 000	175 797 000	172 656 000
Germany					
Sand and gravel	288 000 000	277 000 000	253 000 000	232 000 000	211 000 000
Crushed rock	223 000 000	219 000 000	210 000 000	203 000 000	167 000 000
Greece	* 40 000 000	* 43 000 000	* 48 500 000	* 53 300 000	* 53 000 000
Hungary					
Sand and gravel	36 217 375	43 363 062	40 018 515	34 735 354	32 761 795
Crushed rock	8 072 859	6 691 343	8 250 910	8 553 872	8 968 369
Iceland					
Sand and gravel	* 291 000	* 291 000	* 291 000	170 000	* 170 000
Ireland, Republic of					
Sand and gravel	7 500 000	8 000 000	7 000 000	22 949 000	* 23 000 000
Crushed rock	28 000 000	30 000 000	30 000 000	24 023 000	* 25 000 000
Italy					
Sand and gravel	54 606 351	64 702 438	76 820 507	61 875 745	29 706 336
Crushed rock	43 995 003	36 924 610	17 720 894	16 944 736	12 633 422
Latvia					
Sand and gravel	10 743 532	10 521 791	13 613 620	9 451 983	10 312 636
Crushed rock	3 000 000	2 800 000	2 800 000	6 100 000	* 7 000 000
Lithuania					
Sand and gravel	12 539 223	12 640 698	11 311 682	11 693 136	13 252 053
Crushed rock	8 281 359	8 089 675	7 832 850	8 441 904	9 729 976
Malta					
Crushed rock	1 917 978	1 670 854	1 541 878	1 755 376	* 1 700 000
Montenegro					
Sand and gravel	380 976	210 876	135 000	199 000	244 132
Crushed rock	163 573	136 293	225 946	231 016	733 260
Netherlands					
Sand and gravel	69 400 000	70 300 000	66 800 000	75 200 000	* 75 000 000
Norway					
Sand and gravel	14 053 691	13 146 511	12 331 997	10 665 176	9 675 000
Crushed rock	79 020 476	77 470 569	75 513 649	70 676 736	71 601 000
Poland					
Sand and gravel	180 243 000	185 076 000	170 776 000	167 078 000	180 100 000
Crushed rock	76 286 654	77 774 012	79 158 123	79 602 550	84 788 070
Portugal					
Sand and gravel	10 784 029	7 377 376	10 584 119	6 926 574	* 7 000 000
Crushed rock	35 063 333	43 017 417	34 560 066	29 482 269	* 30 000 000
Romania					
Sand and gravel	79 500 000	81 500 000	85 500 000	88 000 000	* 90 000 000
Crushed rock	26 500 000	34 000 000	40 500 000	40 000 000	* 40 000 000

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

tonnes (metric)

Country	2020	2021	2022	2023	2024
Serbia					
Crushed rock (a)	11 618 000	* 13 095 000	* 12 760 000	* 11 327 000	* 10 952 000
Slovakia					
Sand and gravel	1 785 727	1 748 620	1 715 560	1 720 448	1 346 400
Crushed rock	10 823 895	11 506 270	11 945 216	12 210 717	12 622 500
Slovenia					
Sand and gravel	1 869 851	2 225 198	2 577 923	1 804 643	1 101 637
Crushed rock	8 983 918	11 351 196	11 514 122	11 877 908	10 833 121
Spain					
Sand and gravel	45 000 000	43 000 000	44 900 000	48 300 000	51 900 000
Crushed rock	* 145 000 000	* 140 000 000	* 140 000 000	147 300 000	152 900 000
Sweden					
Sand and gravel	9 290 761	8 961 969	7 474 346	6 453 710	4 732 975
Crushed rock	91 730 897	92 450 569	88 727 346	80 908 832	84 899 279
Switzerland					
Sand and gravel	34 830 600	35 547 050	34 624 000	31 511 000	* 32 130 000
Crushed rock	2 390 000	2 450 000	2 250 000	2 230 000	* 2 190 000
United Kingdom					
Sand and gravel	57 647 000	64 323 000	59 596 000	61 517 000	55 772 000
Crushed rock (b)	118 146 000	130 371 000	120 494 000	119 846 000	118 752 000
European total	2 532 000 000	2 614 000 000	2 517 000 000	2 439 000 000	2 357 000 000

Note(s)

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

(a) Sales

(b) Includes small quantities for other purposes in Northern Ireland

Production of cement clinker

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria	19 630	39 019	* 30 000	25 519	91 606
Belgium	2 394 779	* 230 000	* 230 000	* 230 000	* 230 000
Bulgaria	1 999 877	1 989 255	1 951 982	1 986 477	2 034 748
Croatia	2 353 571	2 403 438	2 262 669	2 300 928	2 076 559
Cyprus	2 001 957	1 706 031	2 480 346	1 906 463	1 599 752
Czech Republic	3 556 702	3 673 000	3 497 014	2 814 289	2 796 871
Estonia	52 000	—	—	—	—
France	11 759 000	12 222 000	12 074 000	10 505 000	10 211 000
Germany	23 464 980	24 000 116	21 910 970	18 569 916	17 729 182
Greece	5 958 786	6 098 307	6 523 328	4 368 323	3 034 522
Hungary	* 400 000	* 400 000	* 400 000	* 400 000	* 400 000
Italy	12 928 011	14 079 222	12 084 914	8 113 461	7 760 542
Latvia	* 1 500 000	* 1 500 000	* 1 500 000	* 1 500 000	* 1 500 000
Luxembourg	* 700 000	* 700 000	* 700 000	* 700 000	* 700 000
Norway	1 389 000	1 361 000	1 391 000	1 181 000	* 1 200 000
Poland	14 361 461	13 996 134	14 602 804	12 655 200	12 530 946
Portugal	4 568 932	* 4 600 000	* 4 600 000	* 4 600 000	* 4 600 000
Romania	7 541 962	7 765 023	7 045 637	6 962 125	7 416 894
Serbia	* 1 300 000	* 1 300 000	* 1 300 000	1 877 108	* 1 900 000
Slovakia	* 2 000 000	* 2 100 000	* 1 700 000	* 1 500 000	* 1 500 000
Spain	15 731 000	17 300 000	15 400 000	15 100 000	15 000 000
Sweden	2 397 000	2 402 000	2 251 000	2 166 000	* 2 100 000
Turkey	71 767 003	80 127 408	72 171 959	73 030 103	77 532 417
Ukraine	7 419 000	7 904 100	4 382 431	* 5 600 000	* 6 000 000
United Kingdom	6 941 000	7 367 000	7 160 000	6 357 000	6 878 000
European total	205 000 000	215 000 000	198 000 000	184 000 000	187 000 000

Production of finished cement

tonnes (metric)

Country	2020	2021	2022	2023	2024
Austria (a)	4 508 448	4 949 683	4 711 481	3 957 228	3 939 864
Belgium	6 717 000	6 935 000	* 6 900 000	* 6 900 000	* 6 900 000
Bulgaria (a)(b)	2 175 279	2 147 439	2 112 048	2 257 600	2 421 999
Croatia	3 101 874	3 244 819	3 116 469	3 212 625	3 203 852
Cyprus	1 496 494	1 439 679	1 858 334	1 726 098	1 239 168
Czech Republic	4 513 409	4 721 036	4 476 038	3 647 491	3 871 418
Denmark	2 497 680	2 509 227	2 519 076	2 019 102	2 002 561
Estonia (a)	253 600	365 900	256 600	191 600	184 530
Finland (a)	1 435 646	1 533 734	1 512 060	1 058 006	876 272
France	16 422 000	17 496 000	16 791 000	15 378 000	13 996 000
Germany	35 478 000	34 966 000	32 901 000	28 185 000	26 809 000
Greece	5 797 058	7 022 337	7 098 036	(a) 8 316 454	(a) 7 021 876
Hungary (a)	1 025 392	* 1 000 000	886 030	627 424	* 600 000
Ireland, Republic of	* 1 800 000	* 1 800 000	* 1 700 000	* 1 500 000	* 1 700 000
Italy	19 818 320	21 444 788	21 382 498	18 744 265	19 937 305
Latvia	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000
Lithuania	1 220 837	1 354 192	1 463 001	1 087 609	1 214 101
Luxembourg	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000	* 1 000 000
Netherlands (a)	* 2 239 000	5 100 000	4 845 000	4 100 000	3 750 000
North Macedonia	927 566	934 987	864 552	810 980	806 297
Norway	1 737 000	1 780 000	1 756 000	1 558 000	* 1 500 000
Poland	19 048 709	19 624 709	19 502 584	16 785 063	18 012 590
Portugal (a)	4 498 364	* 4 500 000	* 4 500 000	5 200 399	* 5 000 000
Romania	10 539 046	10 676 280	10 203 567	10 093 242	* 11 000 000
Serbia	2 364 000	2 610 000	2 625 000	2 667 000	2 752 000
Slovakia	4 071 834	4 164 903	3 414 000	3 516 646	4 140 147
Slovenia	* 762 000	* 732 000	* 754 000	* 754 000	* 775 000
Spain	16 177 000	18 600 000	18 500 000	18 000 000	18 000 000
Sweden	2 515 000	2 691 000	2 543 000	2 335 000	* 2 300 000
Switzerland (c)	4 150 000	4 180 000	4 146 000	3 729 872	3 559 870
Turkey	72 299 054	78 945 029	73 708 026	81 451 065	84 814 947
Ukraine	9 567 600	11 009 900	5 399 869	7 400 000	7 900 000
United Kingdom	8 046 000	9 008 000	8 393 000	7 689 000	7 283 000
European total	269 000 000	289 000 000	273 000 000	267 000 000	270 000 000

Note(s)

(a) Sales

(b) Portland cement only

(c) Includes production in Liechtenstein

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APPENDIX 2

Further acknowledgments

Further Acknowledgments

In addition to the acknowledgments section on page iv, supplementary information is also obtained from publications dealing with a wide range of commodities such as the African Development Bank Group, African Statistical Yearbook; BP PLC and Energy Institute, Statistical Review of World Energy; Austrian Federal Ministry of Finance, World Mining Data; Extractive Industries Transparency Initiative (EITI); London Stock Exchange Group, World Bureau of Metal Statistics, Monthly Bulletins; United States Geological Survey, Mineral Commodity Summaries.

Information has been obtained from the websites of the following international organisations:

AfricaFertilizer Org; The Cobalt Institute; European Aggregates Association (UEPG) credit for Jim O'Brien; Eurostat; The European Steel Association (EUROFER); Federacciai; International Energy Agency; International Manganese Institute; La Banque des Etats de l'Afrique Centrale (BEAC); Kimberley Process; The Nautilus Institute; Oxford Business Group; SFA (Oxford); The Silver Institute; United Nations agencies; United States Energy Information Administration; World Nuclear Association; World Steel Association.

In addition, information has been obtained from the websites of the following companies:

Alcoa; Alumina Ltd; Ambatovy; Anglo America; Anglo Asian Mining Plc; AngloGold Ashanti; Arab Potash Company; ARMZ Uranium Holding Co; Aura Minerals Inc; Avesoro Resources Inc; Aya Gold & Silver Inc; B2Gold; Barrick Gold Corporation; BEB Erdgas und Erdöl GmbH & Co; BHP Billiton; Bikita Minerals; Boliden Group; Calibre Mining; Camimex; Centamin Plc; Central Asia Metals PLC; Cerrado Gold; Chaarat Gold Holding; China Railway Company Limited; CI Resources Ltd; Compagnie Minière de Touissit (CMT); Dominion Salt; Dundee Precious Metals Inc; Eldorado Gold; Elem Group; Emerald Resources NL; Endeavour Mining; Eramet Group; EVRAZ Plc; Fenix Metals Ltd; First Quantum Mineral Ltd; Fortuna Silver Mines Inc; Freeport McMoran; Galaxy Resources; Gazprom; Gemfields Plc; Glencore International AG; Grafitbergbau Kaisersberg GmbH; Gravita India Ltd; Grecian Magnesite SA; Heidelberg Materials AG; Hindalco Industries Ltd; Hudson Resources Inc; IAMGold Corporation; Iluka Resources Ltd; Inception Mining Inc; (ICL) Israel Chemicals Company; IRC Company Limited; Jordan Phosphate Mines Company; KAZ Minerals Plc; Kenmare Resources Plc; Kingsgate Consolidated Ltd; LARCO; Largo Resources Ltd; Liberty and Alvalde; Libyan Iron and Steel company; LuNa Smelter Ltd; Lundin Mining Corporation; Lynas Corporation Ltd; Ma'aden Saudi Arabian Mining Company; Malaysia Smelting Corporation; Managem Group; Mandalay Resources Ltd; Masan Resources Corporation; MedcoEnergi; Metallurgical Corporation of China Ltd (MCC); Minera Autlan; National Aluminium Company; Nedmag B V; Nevsun Resource Ltd; Newmont; Nexa Resources S.A; Nordgold; Nornickel; Norsk Hydro ASA; Northern Minerals; OCP Group; OM Holdings Ltd; Orvana Minerals Corp; Outokumpu; Pacific Nickel Mines Ltd; PanAust Ltd; PEMEX Petróleos Mexicanos; Peñoles; PhosAgro; Polymetal International PLC; PT Antam Tbk; PT Indonesia Asahan Aluminium; PT Merdeka Copper Gold; PT Vale;

QAMCO; Qatar Steel; Rainbow Rare Earths Limited; Resolute Mining; Rio Tinto Ltd; Ronphos Corporation; Roxgold; RUSAL; RW Silicium GmbH; Salinen Austria AG; Sandisons Unst; Seligdar; Sherritt International Corporation; Solway Investment Group Ltd; Sotkamo Silver Oy; South32; Southern Copper Corporation; Talum Group; Tasmania Mines Ltd; Teranga Gold Corporation; Terrafame Ltd; Thor Explorations Ltd; Tibet Everest Resource Co. Ltd; TiZir Ltd; Trafigura; Treibacher Industrie AG; Trevali Mining Corporation; Uralkali; Vargon Alloys AB; Vedanta Resources Ltd; Verband der Kali - und Salzindustrie EV; Vimetco; Wanguo International Mining Group Ltd; Wolfram Bergbau und Hütten AG; Wvmetalle; Zijin Mining Company.

Information has also been obtained from the following organisations either by direct correspondence or by website consultation:

National Statistic and Information Authority, Afghanistan; Geological Survey, Albania; Institute of Statistics, Albania; Office National des Statistiques, Algeria; Acero Argentino, Instituto Argentino del Petróleo y del Gas, Argentina; The National Institute and Statistics and Censuses (INDEC), Argentina; GeoProMining, Armenia; National Statistical Service Armenia; Department of Natural Resources and Mines (Queensland), Australia; Primary Industries and Resources SA, Australia; Department of Primary Industries (Victoria), Australia; Department of Mines and Energy (Northern Territories), Australia; Department of Regional NSW, Australia; Dept of Energy and Mining (South Australia), Australia; Mineral Resources Tasmania, Australia; Department of Mines Industry Regulation and Safety (Western Australia); NSW Department of Primary Industries, Australia; Office of Chief Economist, Australia; AzerGold CISC, Azerbaijan; The State Statistical Committee of the Republic of Azerbaijan; Depart of Statistics, Bahamas; Aluminium Bahrain; Ministry of Finance, Bahrain; Ministry of Oil, Bahrain; Bangladesh Bureau of Statistics; National Statistical Committee Belarus; Federation de l'Industrie Cimentiere Belge, Belgium; National Statistics Bureau, Bhutan; Instituto Nacional de Estadística Boliva, Bolivia; Ministerio de minería y metalurgia, Bolivia; Agency for Statistics of Bosnia and Herzegovina; Statistics Botswana; Agência Nacional de Mineração (ANM), Brazil; Gov.br Portal, Brazil; Ministry of Mines and Energy, Brazil; National Agency of Petroleum, natural Gas and Biofuels, Brazil; Department of Energy, Prime Minister's Office, Brunei; Bulgarian Association of Metal Industries (BAMI), Bulgaria; National Statistics Institute, Bulgaria; Chambre des Mines du Burkina, Burkina Faso; Ministry of mines, quarries and energy (MMCE), Burkina Faso; West African Resources, Burkina Faso; Central Statistical Office, Burma; Institut de Statistiques et d'Etudes Economiques du Burundi; Phnom Penh Post, Cambodia; Société Nationale des Hydrocarbures, Cameroon; Natural Resources Canada; Canadian Association of Petroleum Producers, Canada; Statistics Canada; Chilean Copper Commission (Cochilco), Chile; Servicio Nacional de Geología y Minería, Chile; China Gold Association; China Mining Association; National Bureau of Statistics of China; China Non-Ferrous Metals Industry Association; Agencia Nacional de Minería, Columbia; Ministry of Mines and Energy, Columbia; Banque Centrale du Congo, Democratic Republic Congo; Direccion de Geología y Minas, Costa Rica; Ministère des

Mines, du Pétrole et de l'Energie, Cote D'Ivoire; Croatian Bureau of Statistics, Croatia; Ministry of Economy and Sustainable Development, Croatia; Ministry of Agriculture Natural Resources and Environment, Cyprus; Czech Cement Association, Czech Republic; Czech Geological Survey, Czech Republic; Steel Union, Czech Republic; Danish Energy Agency, Denmark; Statistics Denmark; Direccion General de Minería, Dominican Republic; National Petroleum and Minerals Authority (ANPM), East Timor; Central Agency for Public Mobilisation and Statistics (CAPMAS), Egypt; Statistics Estonia; Central Bank of Eswatini; Geological Survey of Ethiopia; National Bank of Ethiopia; Ministry of Finance and Economic Cooperation (MoFEC), Ethiopia; National Bank, Ethiopia; The Ministry of Mines and Petroleum (MoMP), Ethiopia; Fiji Bureau of Statistics; Reserve bank of Fiji; Finnish Safety and Chemicals Agency (Tukes), Finland; Geological Survey of Finland (GTK); Bureau de Recherches Géologiques et Minières, France; Federation Francaise de l'Acier, France; Infociments, France; National Statistics Office of Georgia; National Agency for Mines, Georgia; Federal Institute for Geosciences and Natural Resources, Germany; Chamber of Mines, Ghana; Bank of Ghana; Greek Institute of Geology and Mineral Exploration, Greece; Greek Statistical Authority, Greece; Greek Mining Enterprises Association, Greece; Ministerio de Energia y Minas, Guatemala; Republic of Guinea Ministry of Mines and Geology, Republic of Guinea; Central Bank of Guyana; Mining and Geological Survey of Hungary; Supervisory Authority for Regulatory Affairs Hungary;

Statistics Iceland; Indian Bureau of Mines, India; Ministry of Mines, India; Ministry of Energy and Mineral Resources of Indonesia; Statistics Indonesia; Ministry of Maritime Affairs and fisheries, Indonesia; Statistics Indonesia (BPS), Indonesia; Statistical Centre of Iran; Iranian Mines & Mining Industries Development & Renovation Organization (IMIDRO), Iran; Iran Chamber of Commerce, Industries, Mines and Agriculture, Iran; Central Statistics Office, Ireland; Sustainable Energy Authority of Ireland; Geoscience Regulation Office of the Department of Climate, Energy and the Environment, Ireland; Ministry of Energy and Infrastructure, Israel; Italian National Institute of Statistics, Italy; Ministry of Economic Development, Ireland; Jamaica Bauxite Institute, Jamaica; Geological Survey of Japan (GSJ); Japan Mining Industry Association; Japan Oil Gas and Metals National Corporation, Japan; Ministry of Economy Trade and Industry, Japan; Metal Economics Research Institute, Japan; Ministry of Finance, Japan; Sulfuric Acid Association of Japan; Ministry of Energy and Mineral Resources, Jordan; Kazakhstan Statistics Agency, Kazakhstan; Kenya National Bureau of Statistics; Korea Institute of Geoscience & Mineral Resources, Korea (Rep. of); Korean Statistical Information Service (KOSIS); Independent Commission for Mines and Minerals, Kosovo; Statistics Office, Kyrgyzstan; Kumtor Gold Company, Kyrgyzstan; Lao Statistics Bureau, Ministry of Planning and Investment, Lao PDR; Central Statistical Bureau of Latvia; Central Bank of Liberia; Central Bank of Libya; Statistics Lithuania; Statistical Portal Grand Duchy of Luxembourg; Madagascar Chamber of Mines; Banque Centrale de Madagascar; Ministry of Finance, Malawi; Mineral and Geoscience Department, Malaysia; Bank Negara Malaysia; National Statistics Office, Malta; National agency for statistics, Mauritania; Central Statistics Office, Mauritius; Instituto Nacional de

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