



Critical Minerals

Critical minerals play a fundamental strategic role in the development of key technologies for the energy transition. Elements such as cobalt, lithium, nickel, manganese, and graphite are indispensable in battery production, while rare earths play a key role in wind energy, and silicon forms the foundation of photovoltaic technology.

However, the extraction of these resources is highly concentrated in just a few countries, generating supply security risks and limiting competition. Given also the growing demand linked to the energy transition process, recent years have seen a sharp increase in the prices of critical raw materials.

The significant geographical concentration of **production** is particularly evident for silicon and graphite, with approximately 80% coming from China; for cobalt, 73% of which is mined in the Democratic Republic of Congo; as well as for rare earths and nickel, produced at 69% in China and 67% in Indonesia, respectively. In 2025, the overall production of critical minerals increased compared to 2024, with lithium (+29%) and graphite (+13%) showing the most notable growth.

Regarding **reserves**, the highest concentrations are found in cobalt and rare earths, minerals of which over 50% are located in the Democratic Republic of the Congo and China, respectively.

Critical Minerals

COBALT

RESERVES

Countries
The World's Top 10
World Cobalt Reserves

PRODUCTION

Countries
The World's Top 10
World Cobalt Production

LITHIUM

RESERVES

Countries
The World's Top 10
World Lithium Reserves

PRODUCTION

Countries
The World's Top 9
World Lithium Production

COPPER

RESERVES

Countries
The World's Top 10
World Copper Reserves

PRODUCTION

Countries
The World's Top 10
World Copper Production

MANGANESE

RESERVES

Countries
The World's Top 7
World Manganese Reserves

PRODUCTION

Countries
The World's Top 8
World Manganese Production

RARE EARTHS

RESERVES

Countries
The World's Top 10
World Rare Earths Reserves

PRODUCTION

Countries
The World's Top 10
World Rare Earths Production

GRAPHITE

RESERVES

Countries
The World's Top 10
World Graphite Reserves

PRODUCTION

Countries
The World's Top 10
World Graphite Production

NICKEL

RESERVES

Countries
The World's Top 9
World Nickel Reserves

PRODUCTION

Countries
The World's Top 9
World Nickel Production

SILICON

PRODUCTION

Countries
The World's Top 10
World Silicon Production

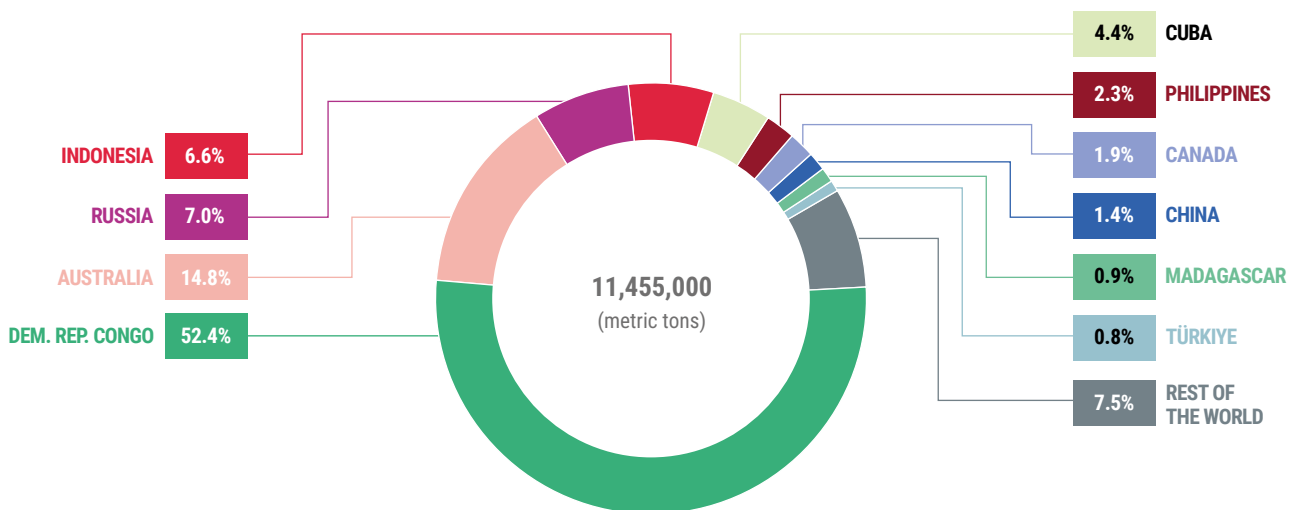
Cobalt - Reserves

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	1,100,000	1,200,000	1,400,000	1,400,000	1,500,000	1,700,000	1,700,000	1,700,000
Brazil	78,000							
Canada	240,000	230,000	220,000	220,000	220,000	230,000	220,000	220,000
China	80,000	80,000	80,000	80,000	140,000			160,000
Cuba	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Dem. Rep. Congo	3,400,000	3,600,000	3,600,000	3,500,000	4,000,000	6,000,000	6,000,000	6,000,000
Indonesia				600,000	600,000	500,000	640,000	760,000
Madagascar	130,000	120,000	100,000	100,000	100,000	100,000	100,000	100,000
Morocco		18,000	14,000	13,000	13,000			
New Caledonia	200,000							
Papua New Guinea		56,000	51,000	47,000	47,000	49,000	62,000	84,000
Philippines	250,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000
Russia	250,000	250,000	250,000	250,000	250,000	250,000	250,000	800,000
South Africa	31,000	50,000	40,000					
Türkiye					36,000	91,000	91,000	91,000
United States	23,000	55,000	53,000	69,000	69,000	69,000	70,000	
Zambia	270,000							
Others	610,000	570,000	560,000	610,000	610,000	780,000	800,000	780,000
World	7,162,000	6,989,000	7,128,000	7,649,000	8,345,000	10,529,000	10,693,000	11,455,000

The World's Top 10 (2025)

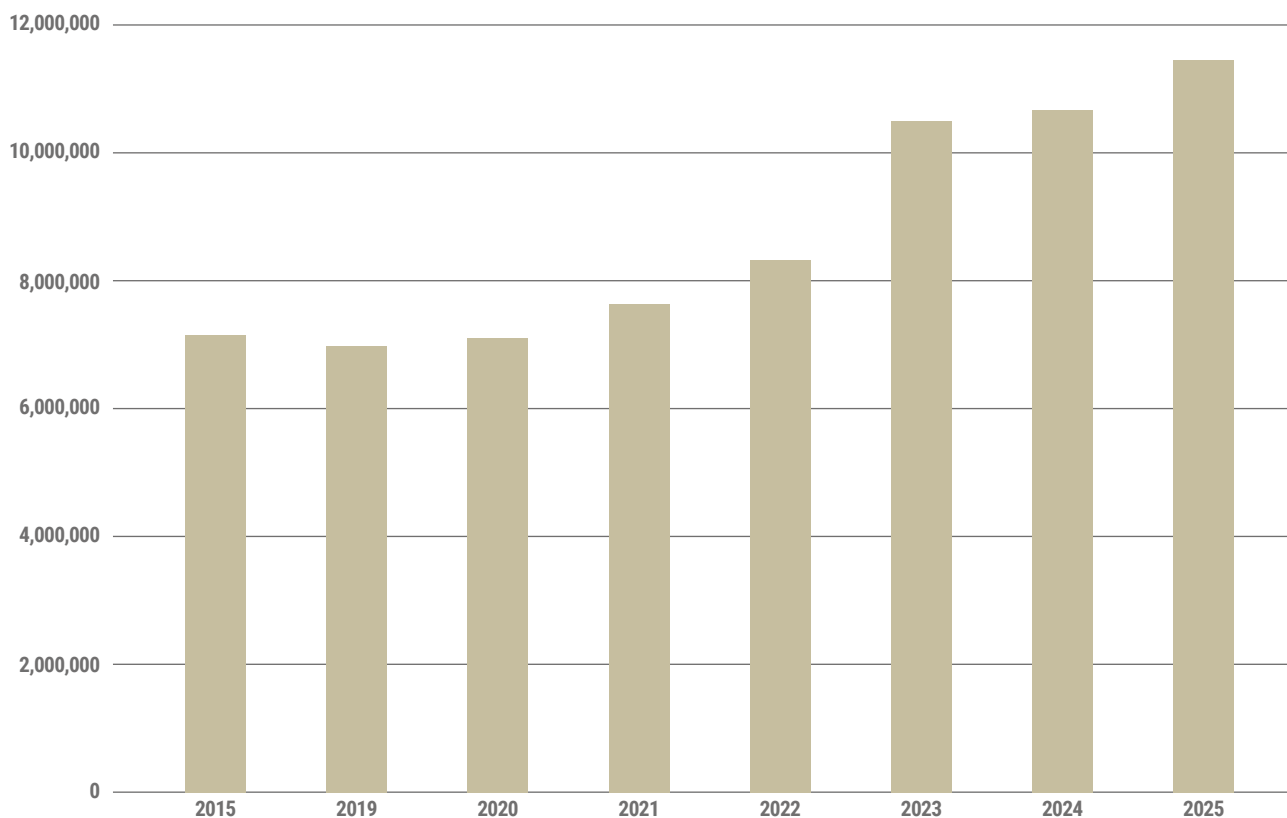


^(*)Data source: U.S. Geological Survey.

Cobalt - Reserves

World Cobalt Reserves

(metric tons)



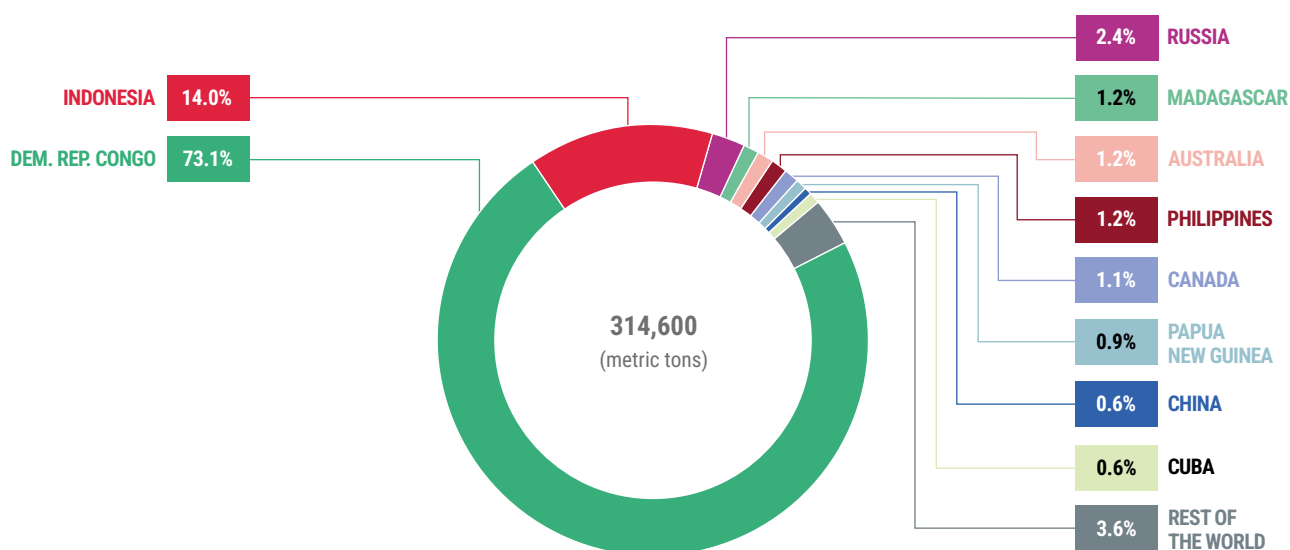
Cobalt - Production

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	6,000	5,740	5,630	5,295	5,790	5,220	4,780	3,700
Canada	6,900	3,340	3,690	4,361	3,060	4,220	3,350	3,500
China	7,700	2,500	2,200	2,200	2,200		2,000	2,000
Dem. Rep. Congo	63,000	100,000	98,000	119,000	144,000	175,000	226,000	230,000
Cuba	4,300	3,800	3,800	4,000	3,700	3,300	3,450	2,000
Indonesia			1,100	2,700	9,600	19,000	35,000	44,000
Madagascar	3,700	3,400	850	2,800	3,500	4,000	3,100	3,900
Morocco		2,300	2,300	2,300	2,000			
New Caledonia	3,680				2,000	2,570		
Papua New Guinea		2,910	2,940	2,953	2,990	3,070	2,630	2,800
Philippines	4,300	5,100	4,500	3,600	3,900	3,800	3,100	3,700
Russia	6,200	6,300	9,000	8,000	9,200	8,700	8,000	7,700
South Africa	3,000	2,100						
Türkiye				2,400	2,100	2,500	2,200	1,900
United States	760	500	600	650	500	500	200	300
Zambia	4,600							
Others	11,600	6,320	7,640	4,567	6,600	6,080	7,780	9,100
World	125,740	144,310	142,250	164,826	201,140	237,960	301,590	314,600

The World's Top 10 (2025)

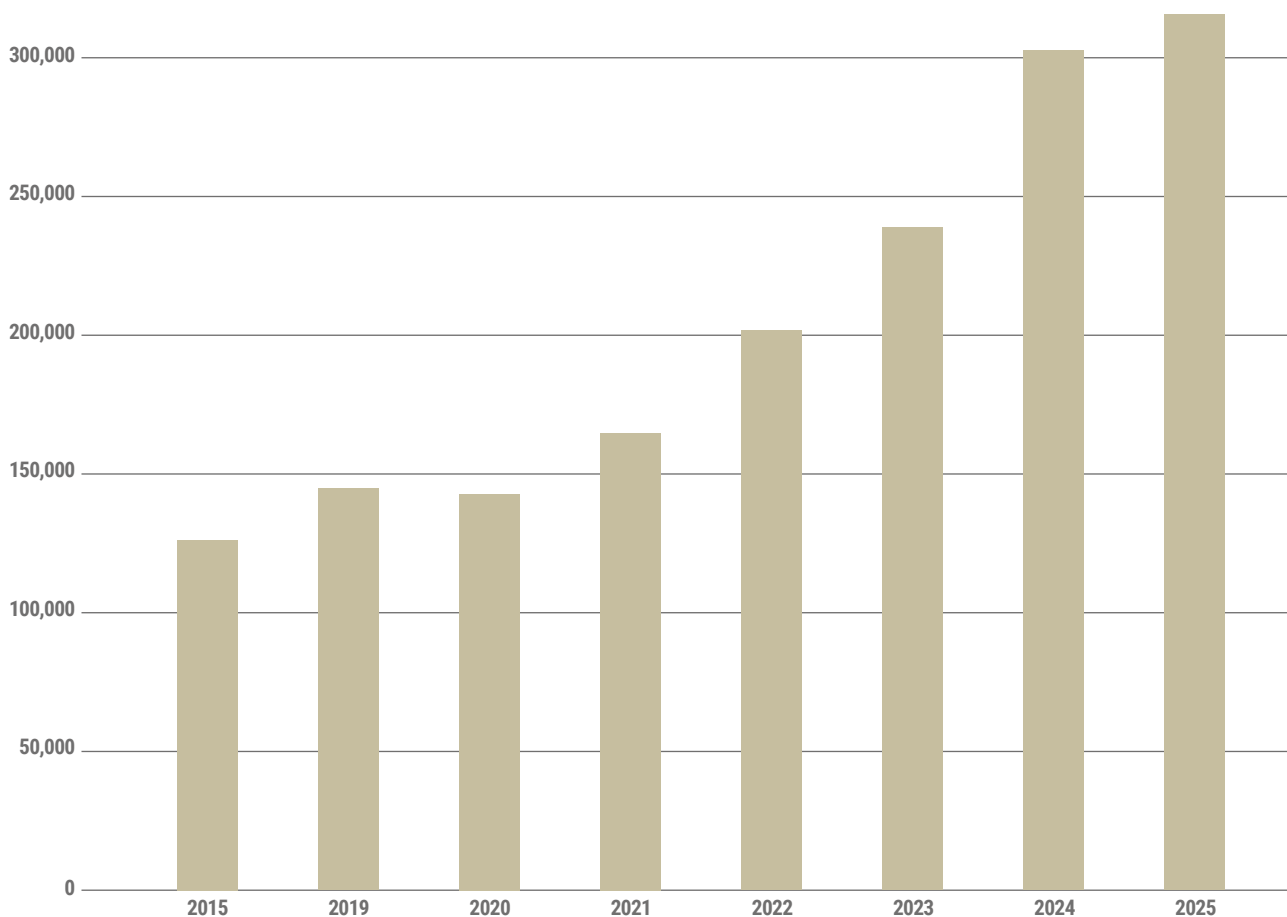


^(*)Data source: U.S. Geological Survey.

Cobalt - Production

World Cobalt Production

(metric tons)



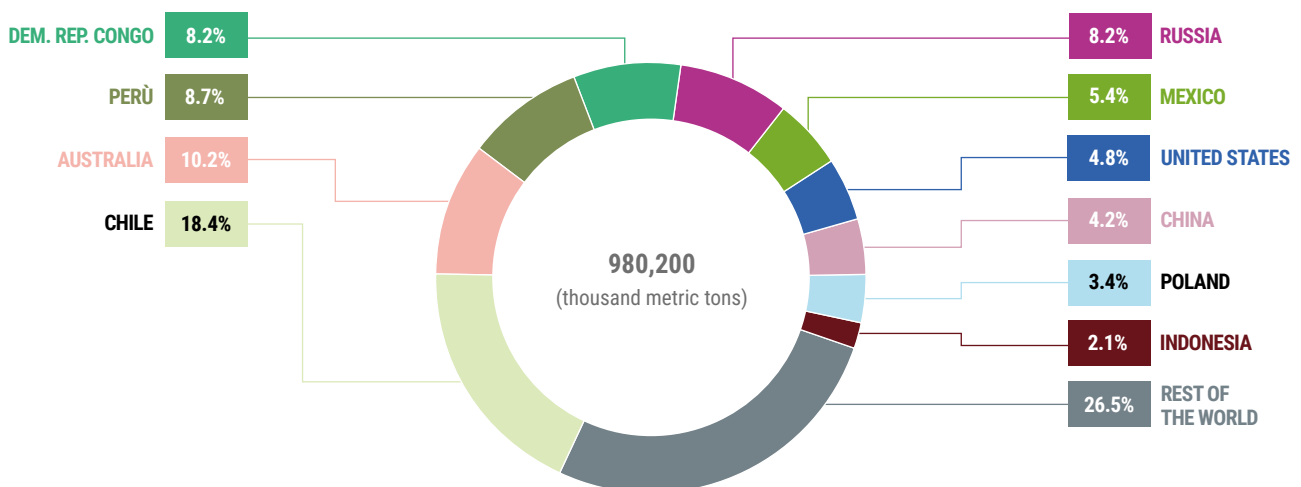
Copper - Reserves

Countries^(*)

(thousand metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	88,000	87,000	88,000	93,000	97,000	100,000	100,000	100,000
Canada	11,000		9,000	9,800	7,600	7,600	8,300	7,000
Chile	210,000	200,000	200,000	200,000	190,000	190,000	190,000	180,000
China	30,000	26,000	26,000	26,000	27,000	41,000	41,000	41,000
Dem. Rep. Congo	20,000	19,000	19,000	31,000	31,000	80,000	80,000	80,000
Germany			2,000					
India							2,200	2,200
Indonesia		28,000		24,000	24,000	24,000	21,000	21,000
Kazakhstan		20,000	20,000	20,000	20,000	20,000	20,000	20,000
Mexico	46,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000
Peru	82,000	87,000	92,000	77,000	81,000	120,000	100,000	85,000
Poland			32,000	31,000	30,000	34,000	34,000	33,000
Russia	30,000	61,000	61,000	62,000	62,000	80,000	80,000	80,000
United States	33,000	51,000	48,000	48,000	44,000	50,000	47,000	47,000
Zambia	20,000	19,000	21,000	21,000	19,000	21,000	21,000	21,000
Others	150,000	220,000	200,000	180,000	200,000	180,000	180,000	210,000
World	720,000	871,000	871,000	875,800	885,600	1,000,600	977,500	980,200

The World's Top 10 (2025)

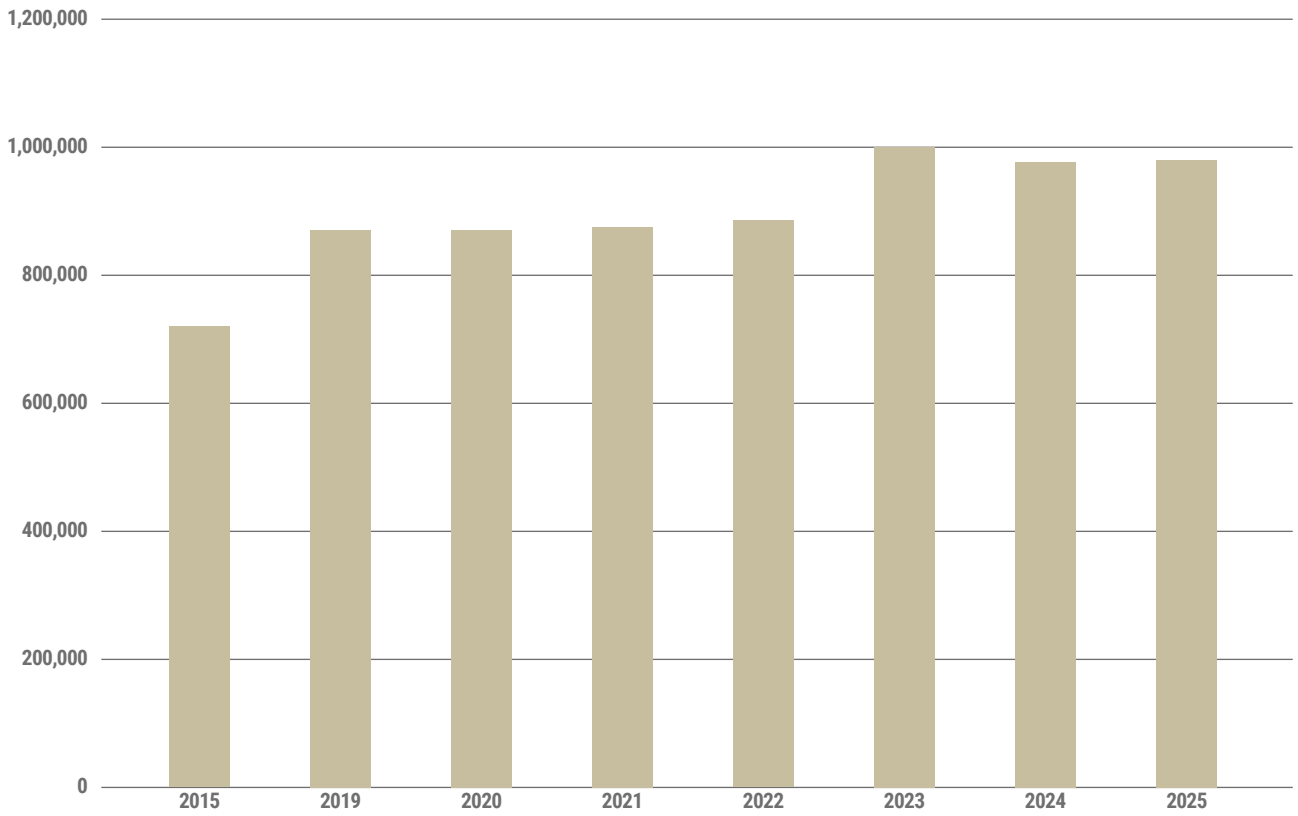


^(*)Data source: U.S. Geological Survey.

Copper - Reserves

World Copper Reserves

(thousand metric tons)



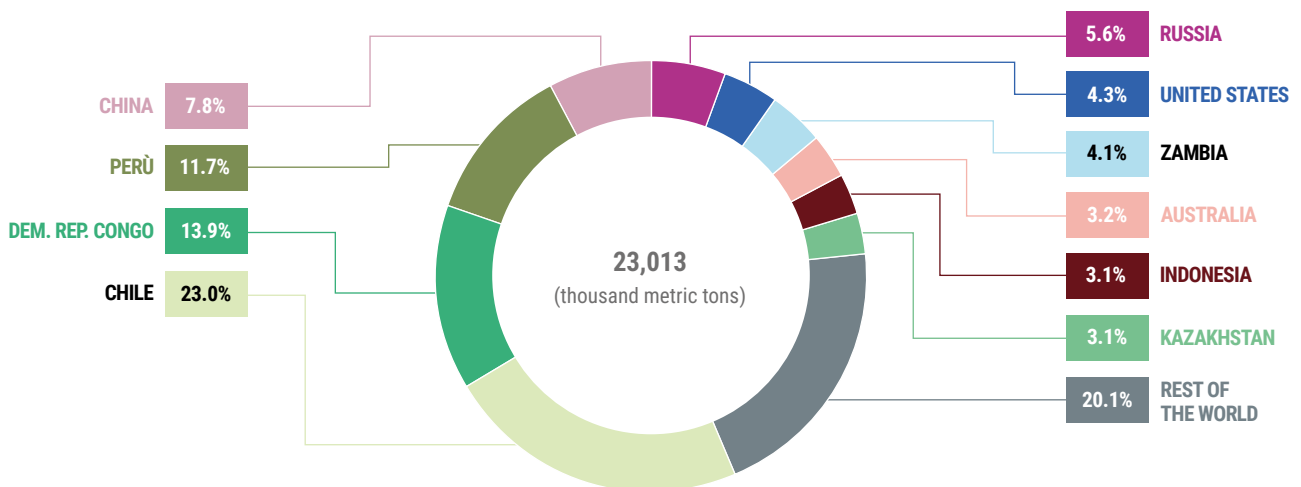
Copper - Production

Countries^(*)

(thousand metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	971	934	885	813	819	778	765	730
Canada	697	573	585	550	520	500	515	500
Chile	5,760	5,790	5,730	5,620	5,330	5,250	5,510	5,300
China	1,710	1,680	1,720	1,910	1,940	1,820	1,840	1,800
Dem. Rep. Congo	1,020	1,290	1,600	1,740	2,350	2,930	2,990	3,200
India						27	27	23
Indonesia			505	731	941	907	1,010	710
Kazakhstan		562	552	510	593	740	724	710
Mexico	594	715	733	734	754	699	717	690
Peru	1,700	2,460	2,150	2,300	2,450	2,760	2,740	2,700
Poland		399	393	391	393	395	400	410
Russia	732	801	810	940	936	890	1,020	1,300
United States	1,380	1,260	1,200	1,230	1,230	1,130	1,050	1,000
Zambia	712	797	853	842	797	712	823	940
Others	3,800	3,100	2,840	2,850	2,850	3,020	2,850	3,000
World	19,076	20,361	20,556	21,161	21,903	22,558	22,981	23,013

The World's Top 10 (2025)

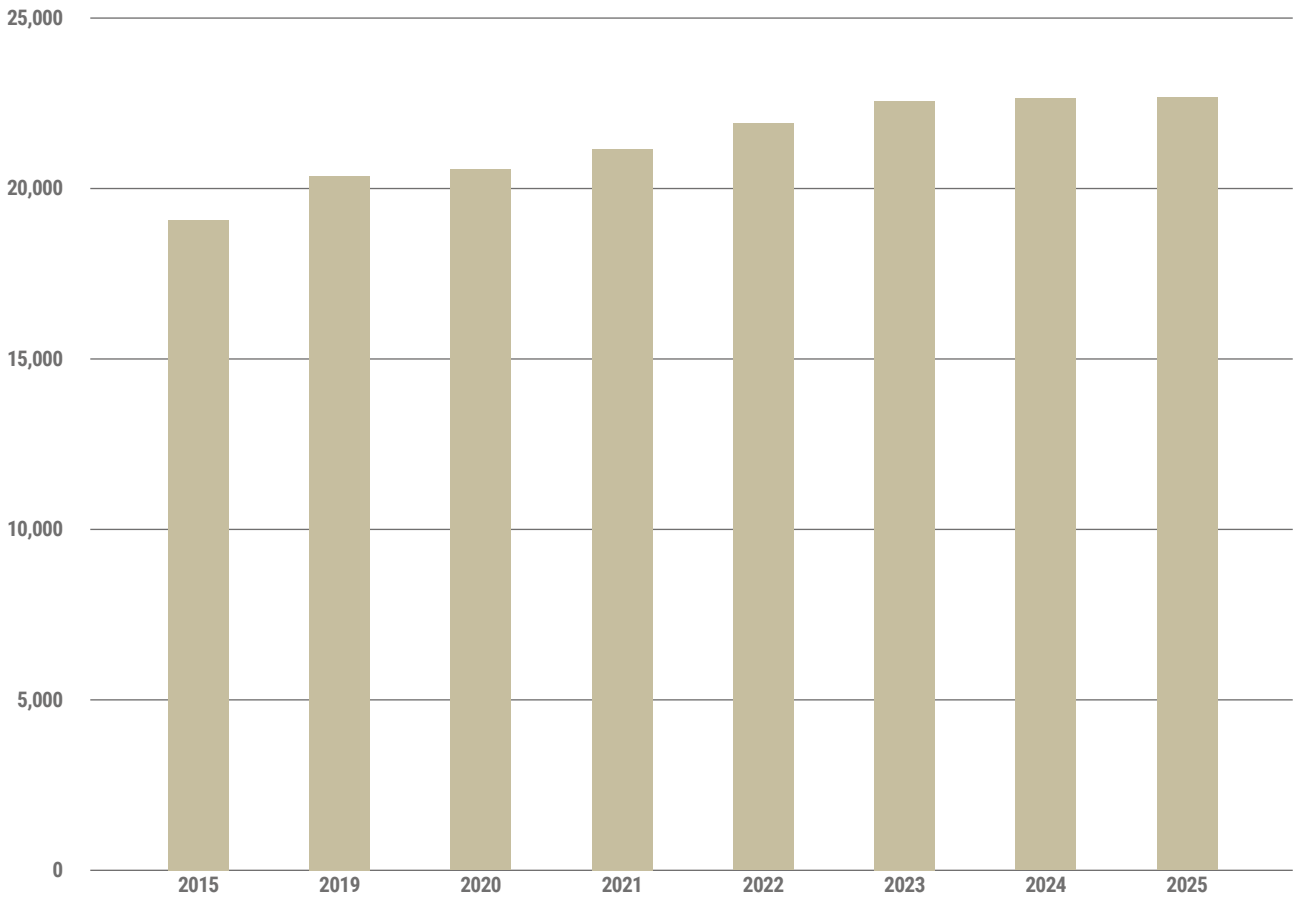


^(*)Data source: U.S. Geological Survey.

Copper - Production

World Copper Production

(thousand metric tons)



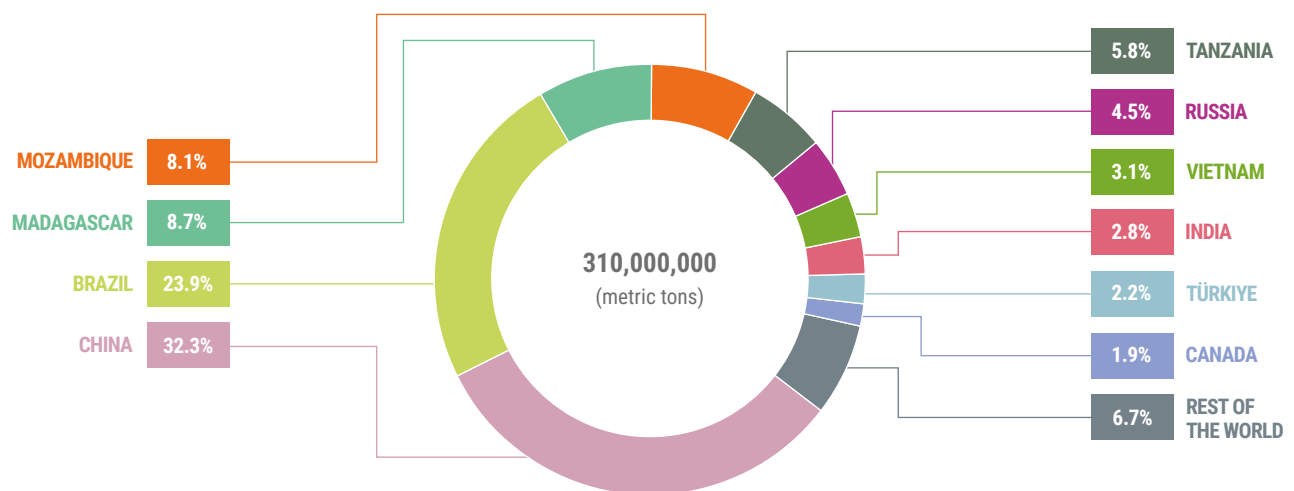
Graphite - Reserves

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Brazil	72,000,000	72,000,000	70,000,000	70,000,000	74,000,000	74,000,000	74,000,000	74,000,000
Canada						5,700,000	5,900,000	5,900,000
China	55,000,000	73,000,000	73,000,000	73,000,000	52,000,000	78,000,000	81,000,000	100,000,000
India	8,000,000	8,000,000	8,000,000	8,000,000	8,000,000	8,600,000	8,600,000	8,600,000
North Korea		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
South Korea					1,800,000	1,800,000	1,800,000	1,800,000
Madagascar	940,000	1,600,000	26,000,000	26,000,000	26,000,000	24,000,000	27,000,000	27,000,000
Mexico	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000
Mozambique		25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000
Norway		600,000	600,000	600,000	600,000	600,000	600,000	600,000
Russia					14,000,000	14,000,000	14,000,000	14,000,000
Sri Lanka			1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Tanzania		18,000,000	17,000,000	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000
Türkiye	90,000,000	90,000,000	90,000,000	90,000,000	90,000,000	6,900,000	6,900,000	6,900,000
Uzbekistan		7,600,000	7,600,000	7,600,000	7,600,000			
Vietnam							9,700,000	9,700,000
Other							10,900,000	11,900,000
World	229,040,000	300,900,000	323,800,000	324,800,000	323,600,000	263,200,000	290,000,000	310,000,000

The World's Top 10 (2025)

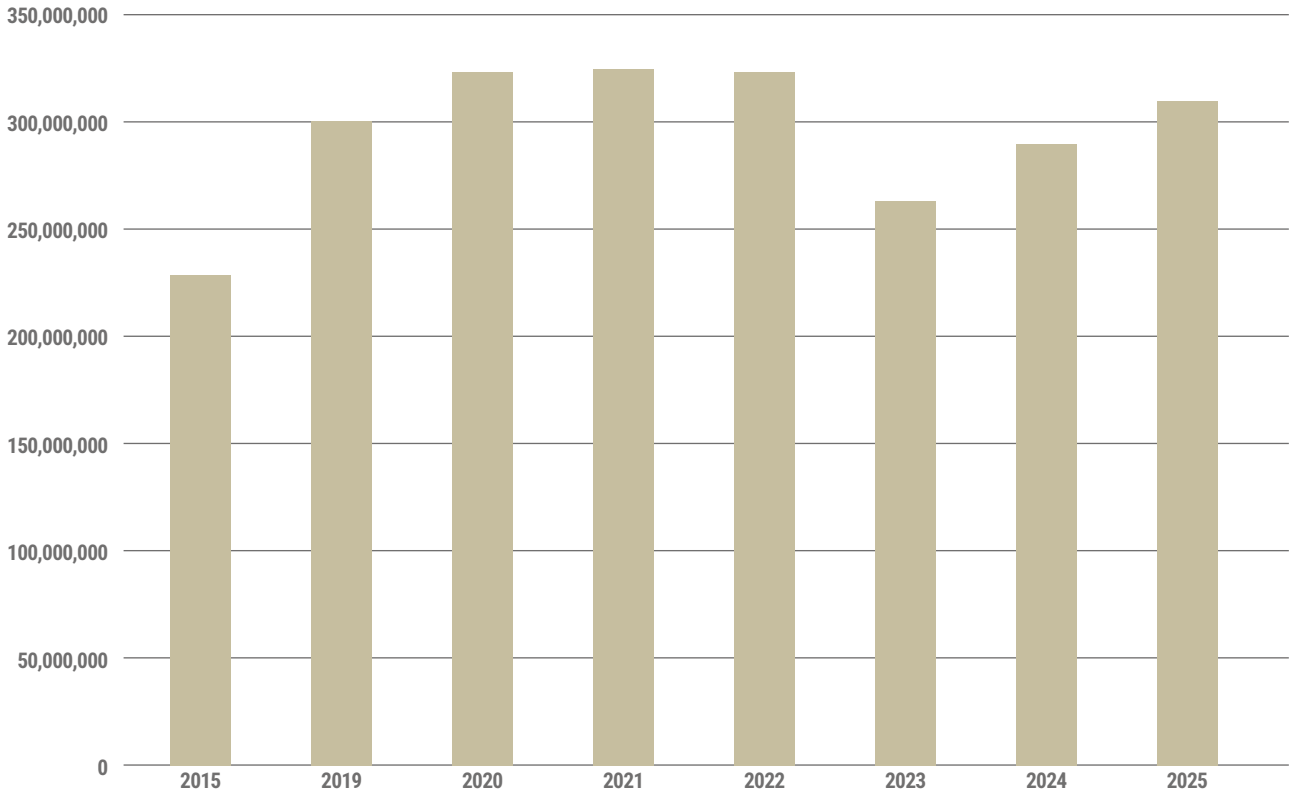


^(*)Data source: U.S. Geological Survey.

Graphite - Reserves

World Graphite Reserves

(metric tons)



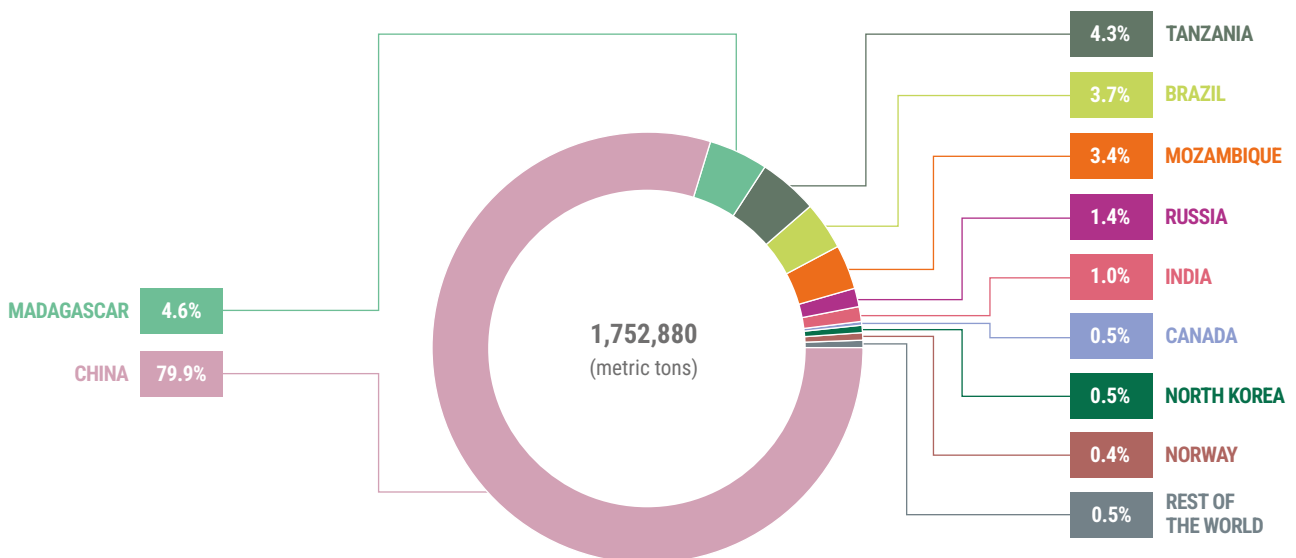
Graphite - Production

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Austria		1,000	500	500	500	500	100	200
Brazil	80,000	96,000	63,500	82,000	72,000	66,300	58,000	65,000
Canada	30,000	11,000	8,000	12,000	13,000	5,470	11,700	8,000
China	780,000	700,000	762,000	820,000	1,210,000	1,210,000	1,270,000	1,400,000
Germany		800	300	250	170	180	140	140
India	170,000	35,000	6,000	7,000	11,000	25,600	17,600	17,000
North Korea	30,000	6,000	8,100	8,100	8,100	8,100	8,100	8,000
South Korea				10,500	23,800	9,620	1,000	500
Madagascar	5,000	48,000	20,900	70,000	130,000	63,000	85,000	80,000
Mexico	22,000	9,000	3,300	2,100	2,000	1,300	706	740
Monzambique		107,000	28,000	72,000	166,000	98,000	39,000	60,000
Norway	8,000	16,000	12,000	6,290	10,380	6,480	5,340	6,600
Pakistan		14,000						
Russia	15,000	25,100	25,000	15,000	16,000	15,000	20,000	25,000
Sri Lanka	4,000	4,000	4,000	3,000	2,600	3,000	3,000	3,200
Tanzania		150			6,120	13,200	27,000	75,000
Türkiye	32,000	2,000	2,500	2,700	2,800	2,800	2,600	2,200
Ukraine	5,000	20,000	16,000	10,000	1,000	1,670	900	800
Uzbekistan		100	100	110				
Vietnam		5,000	5,000	5,000	500	2,500	500	500
Zimbabwe	7,000							
World	1,188,000	1,100,150	965,200	1,126,550	1,675,970	1,532,720	1,550,686	1,752,880

The World's Top 10 (2025)

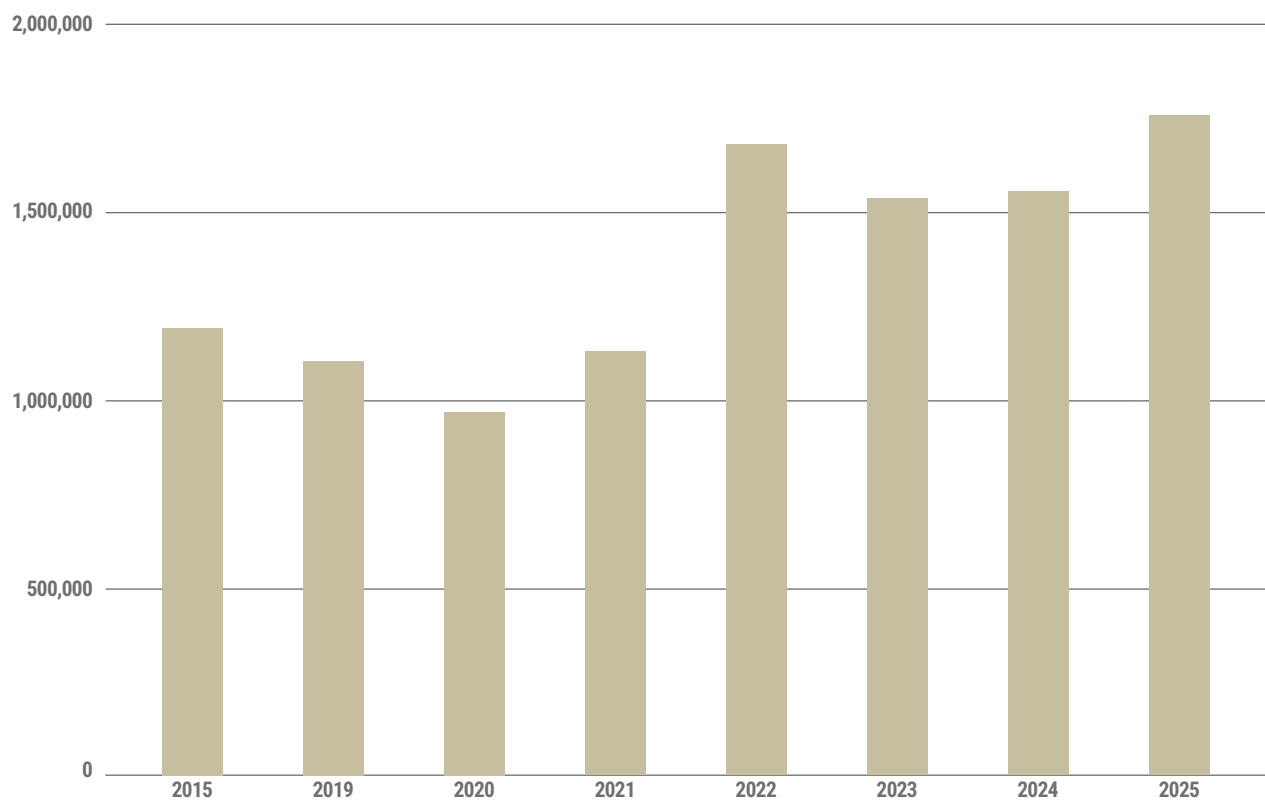


^(*)Data source: U.S. Geological Survey.

Graphite - Production

World Graphite Production

(metric tons)



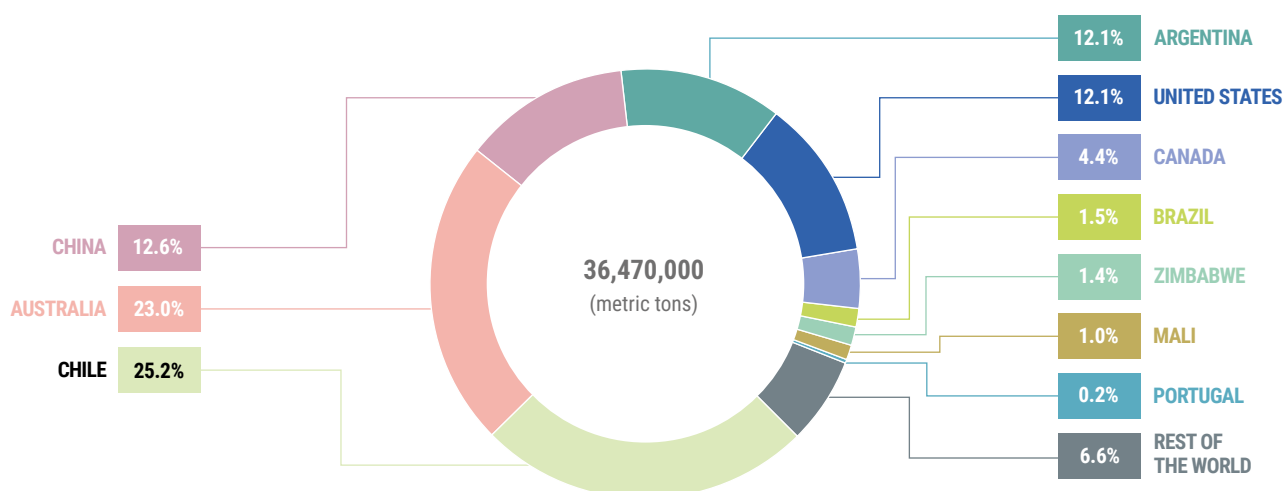
Lithium - Reserves

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Argentina	2,000,000	1,700,000	1,900,000	2,200,000	2,700,000	3,600,000	4,000,000	4,400,000
Australia	1,500,000	2,800,000	4,700,000	5,700,000	6,200,000	6,200,000	7,000,000	8,400,000
Brazil	48,000	95,000	95,000	95,000	250,000	390,000	390,000	540,000
Canada		370,000	530,000		930,000	930,000	1,200,000	1,600,000
Chile	7,500,000	8,600,000	9,200,000	9,200,000	9,300,000	9,300,000	9,300,000	9,200,000
China	3,200,000	1,000,000	1,500,000	1,500,000	2,000,000	3,000,000	3,000,000	4,600,000
Mali								370,000
Namibia							14,000	
Portugal	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
United States	38,000	630,000	750,000	750,000	1,000,000	1,100,000	1,800,000	4,400,000
Zimbabwe	23,000	230,000	220,000	220,000	310,000	310,000	480,000	500,000
Others		1,100,000	2,100,000	2,700,000	3,300,000	2,800,000	2,800,000	2,400,000
World	14,369,000	16,585,000	21,055,000	22,425,000	26,050,000	27,690,000	30,044,000	36,470,000

The World's Top 10 (2025)

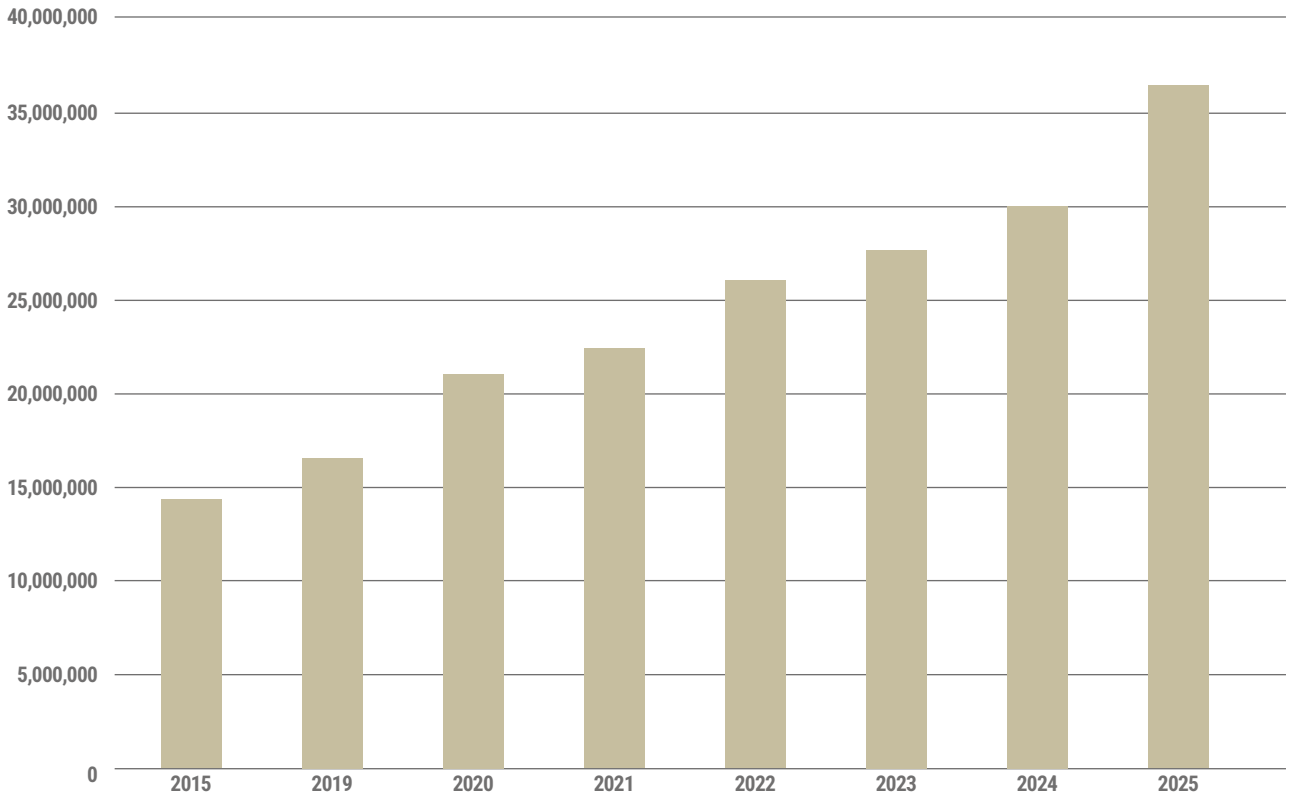


^(*)Data source: U.S. Geological Survey.

Lithium - Reserves

World Lithium Reserves

(metric tons)



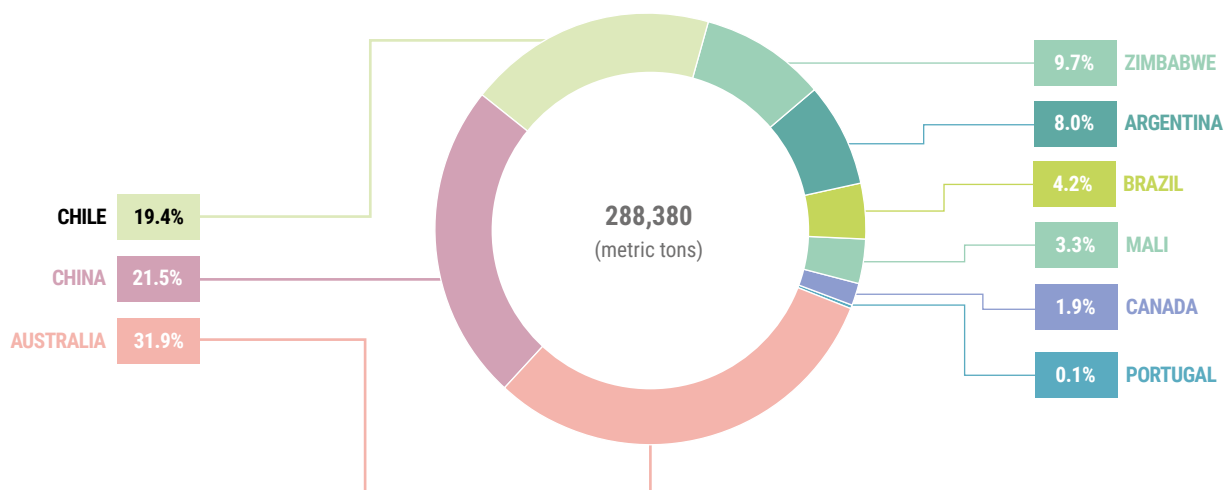
Lithium - Production

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Argentina	3,600	6,300	5,900	5,970	6,590	8,630	13,800	23,000
Australia	14,100	45,000	39,700	55,300	74,700	91,700	82,700	92,000
Brazil	200	2,400	1,420	1,700	2,630	5,260	10,200	12,000
Canada		200			520	3,240	4,820	5,600
Chile	10,500	19,300	21,500	28,300	38,000	41,400	48,900	56,000
China	2,000	10,800	13,300	14,000	22,600	35,700	41,400	62,000
Mali							770	9,400
Namibia						2,700		
Portugal	200	900	348	900	380	380	380	380
Zimbabwe	900	1,200	417	710	1,030	14,900	20,000	28,000
World	31,500	86,100	82,585	106,880	146,450	203,910	222,970	288,380

The World's Top 9 (2025)

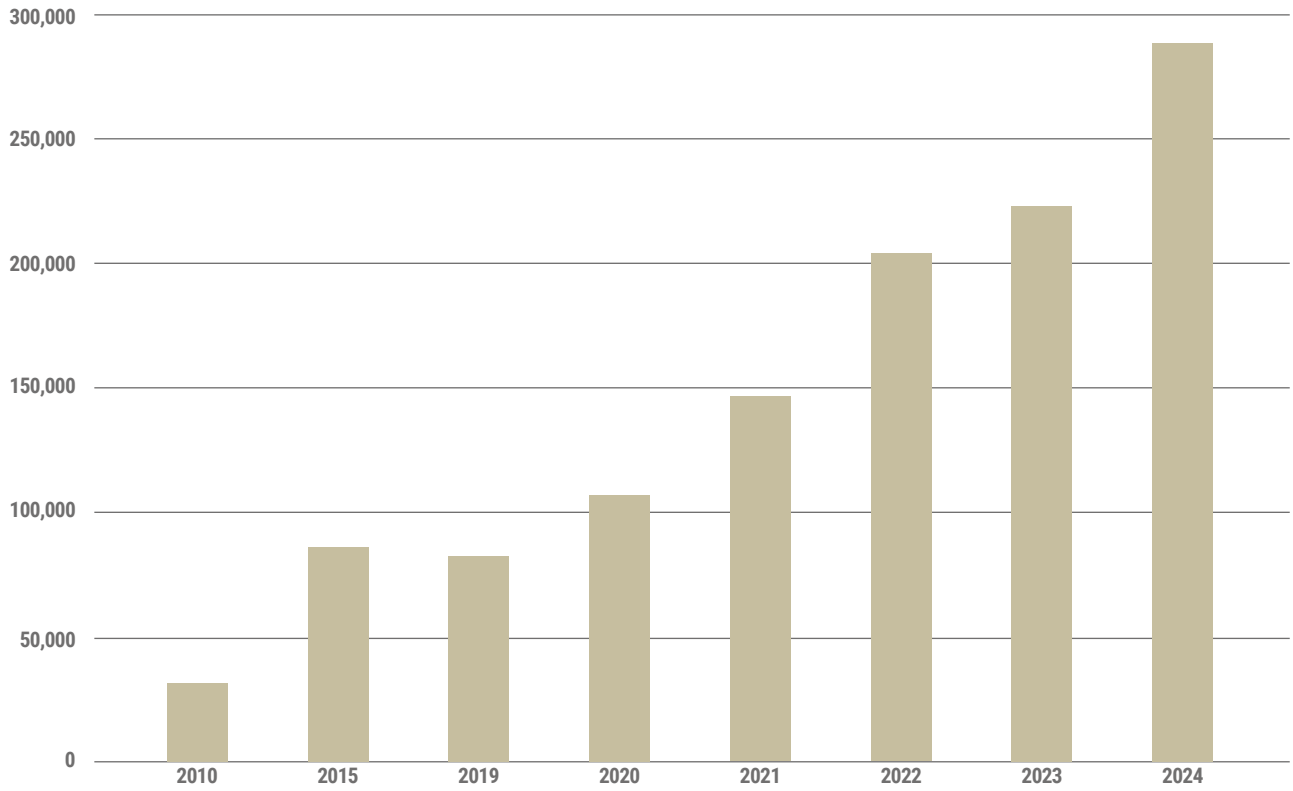


^(*)Data source: U.S. Geological Survey.

Lithium - Production

World Lithium Production

(metric tons)



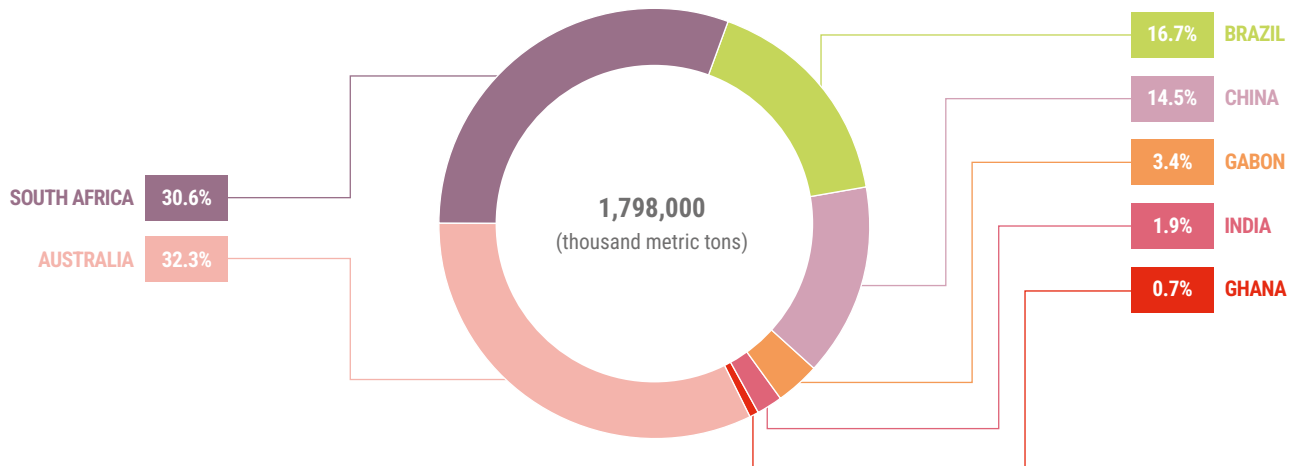
Manganese - Reserves

Countries^(*)

(thousand metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	91,000	100,000	230,000	270,000	270,000	500,000	500,000	580,000
Brazil	50,000	140,000	270,000	270,000	270,000	270,000	270,000	300,000
China	44,000	54,000	54,000	54,000	280,000	280,000	280,000	260,000
Gabon	22,000	61,000	61,000	61,000	61,000	61,000	61,000	61,000
Ghana	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
India	52,000	34,000	34,000	34,000	34,000	34,000	34,000	34,000
Kazakhstan	5,000	5,000	5,000	5,000	5,000	5,000	5,000	
Mexico	5,000	5,000	5,000	5,000	5,000	5,000		
South Africa	200,000	260,000	520,000	640,000	640,000	600,000	560,000	550,000
Ukraine	140,000	140,000	140,000	140,000	140,000	140,000		
World	622,000	812,000	1,332,000	1,492,000	1,718,000	1,908,000	1,718,000	1,798,000

The World's Top 7 (2025)

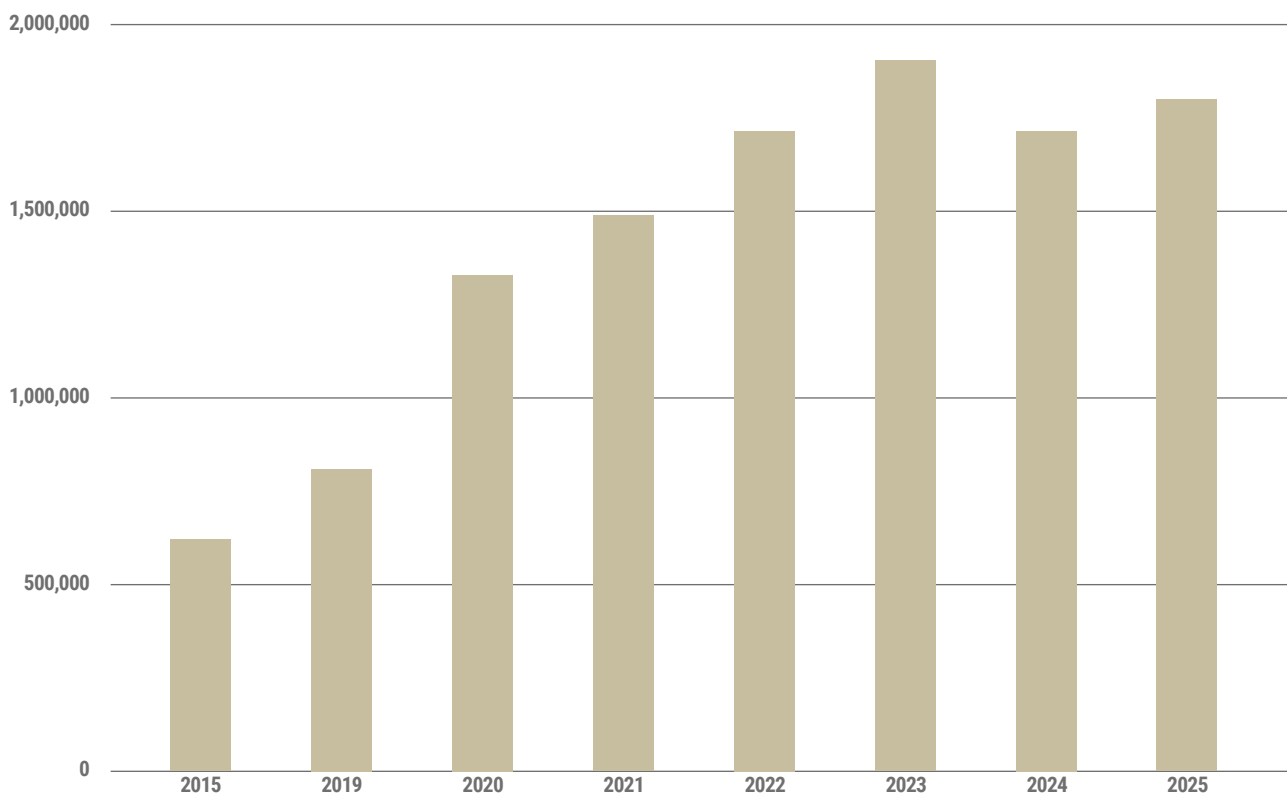


^(*)Data source: U.S. Geological Survey.

Manganese - Reserves

World Manganese Reserves

(thousand metric tons)



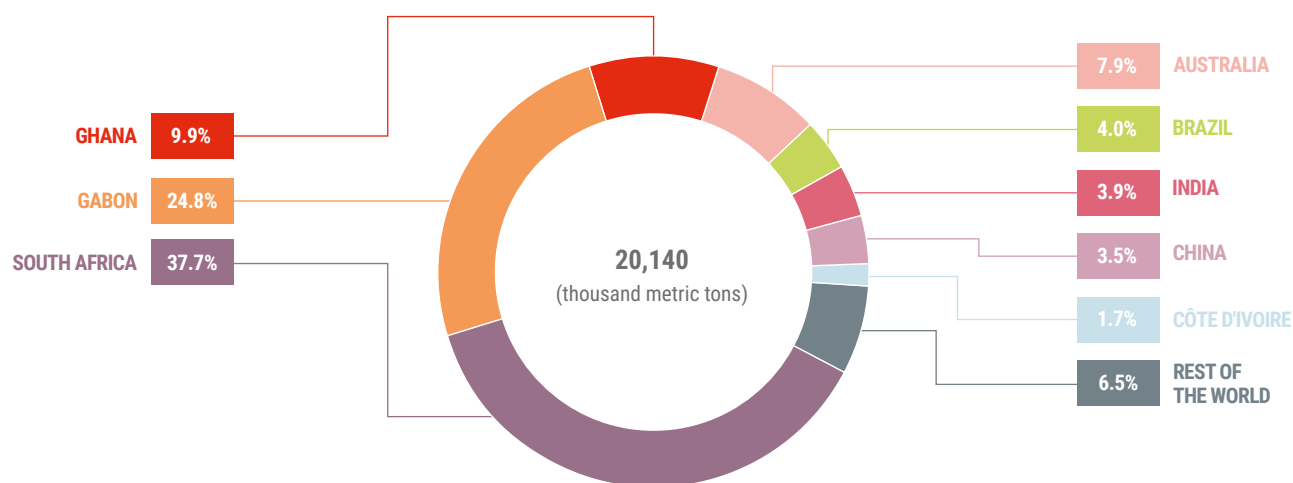
Manganese - Production

Countries^(*)

(thousand metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	2,450	3,180	3,330	3,260	3,040	2,860	1,600	1,600
Brazil	1,090	1,740	494	542	624	580	705	800
Burma		430	254	206	207	210		
China	3,000	1,330	1,340	991	743	767	690	700
Côte d'Ivoire		482	525	362	394	357	340	350
Gabon	2,020	2,510	3,310	4,340	4,670	4,490	4,640	5,000
Georgia		116	186	224	166	160		
Ghana	416	1,550	637	940	844	818	1,280	2,000
India	900	801	632	453	721	744	731	790
Kazakhstan	222	140	158	90	129	130		
Malaysia	201	390	347	356	247	410		
Mexico	220	202	198	226	221	220		
South Africa	5,900	5,800	6,500	7,200	7,300	7,300	7,490	7,600
Ukraine	410	500	578	600	323	320		
Vientnam		158	121	146	155	160		
Other	678	270	260	150	325	1,230	1,240	1,300
World	17,507	19,599	18,870	20,086	20,109	20,756	18,716	20,140

The World's Top 8 (2025)

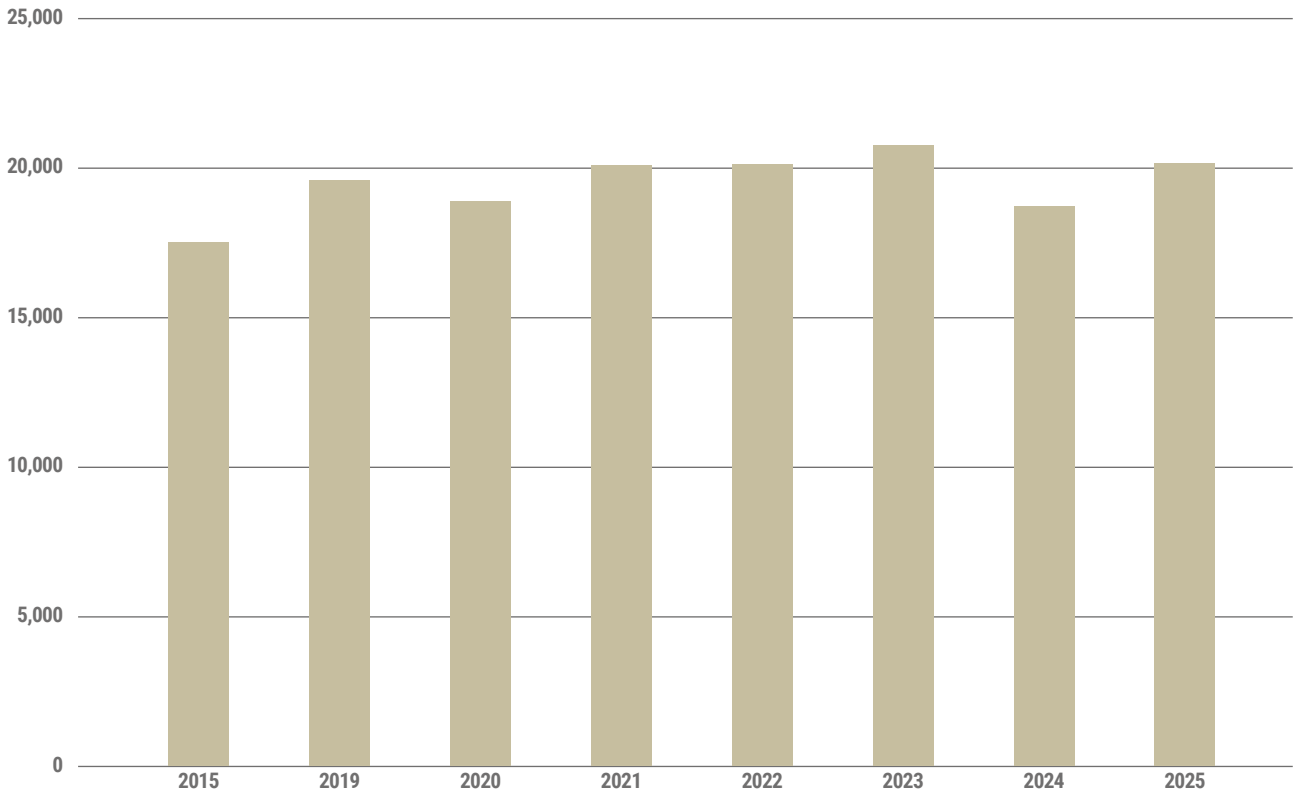


^(*)Data source: U.S. Geological Survey.

Manganese - Production

World Manganese Production

(thousand metric tons)



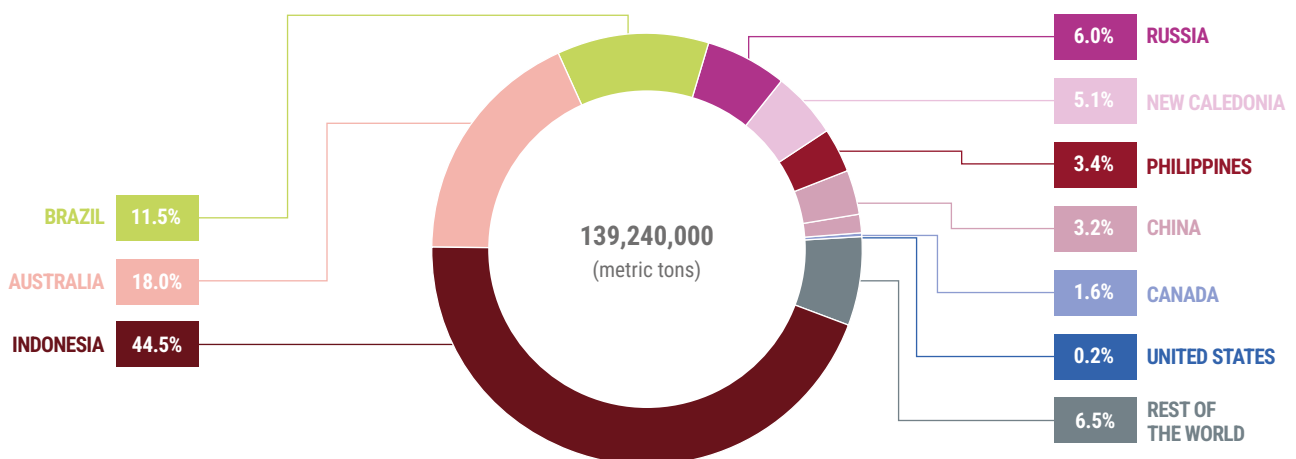
Nickel - Reserves

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	19,000,000	20,000,000	20,000,000	21,000,000	21,000,000	24,000,000	24,000,000	25,000,000
Botswana								
Brazil	10,000,000	11,000,000	16,000,000	16,000,000	16,000,000	16,000,000	16,000,000	16,000,000
Canada	2,900,000	2,600,000	2,800,000	2,000,000	2,200,000	2,200,000	2,200,000	2,200,000
China	3,000,000	2,800,000	2,800,000	2,800,000	2,100,000	4,200,000	4,400,000	4,400,000
Colombia	1,100,000							
Cuba	5,500,000	5,500,000	5,500,000					
Guatemala	1,800,000							
Indonesia	4,500,000	21,000,000	21,000,000	21,000,000	21,000,000	55,000,000	55,000,000	62,000,000
Madagascar	1,600,000							
New Caledonia	8,400,000				7,100,000	7,100,000	7,100,000	7,100,000
Philippines	3,100,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000
Russia	7,900,000	6,900,000	6,900,000	7,500,000	7,500,000	8,300,000	8,300,000	8,300,000
South Africa	3,700,000							
United States	160,000	110,000	100,000	340,000	370,000	340,000	310,000	340,000
Others	6,500,000	14,000,000	14,000,000	20,000,000	20,000,000	9,100,000	9,100,000	9,100,000
World	79,160,000	88,710,000	93,900,000	95,440,000	102,070,000	131,040,000	131,210,000	139,240,000

The World's Top 9 (2025)

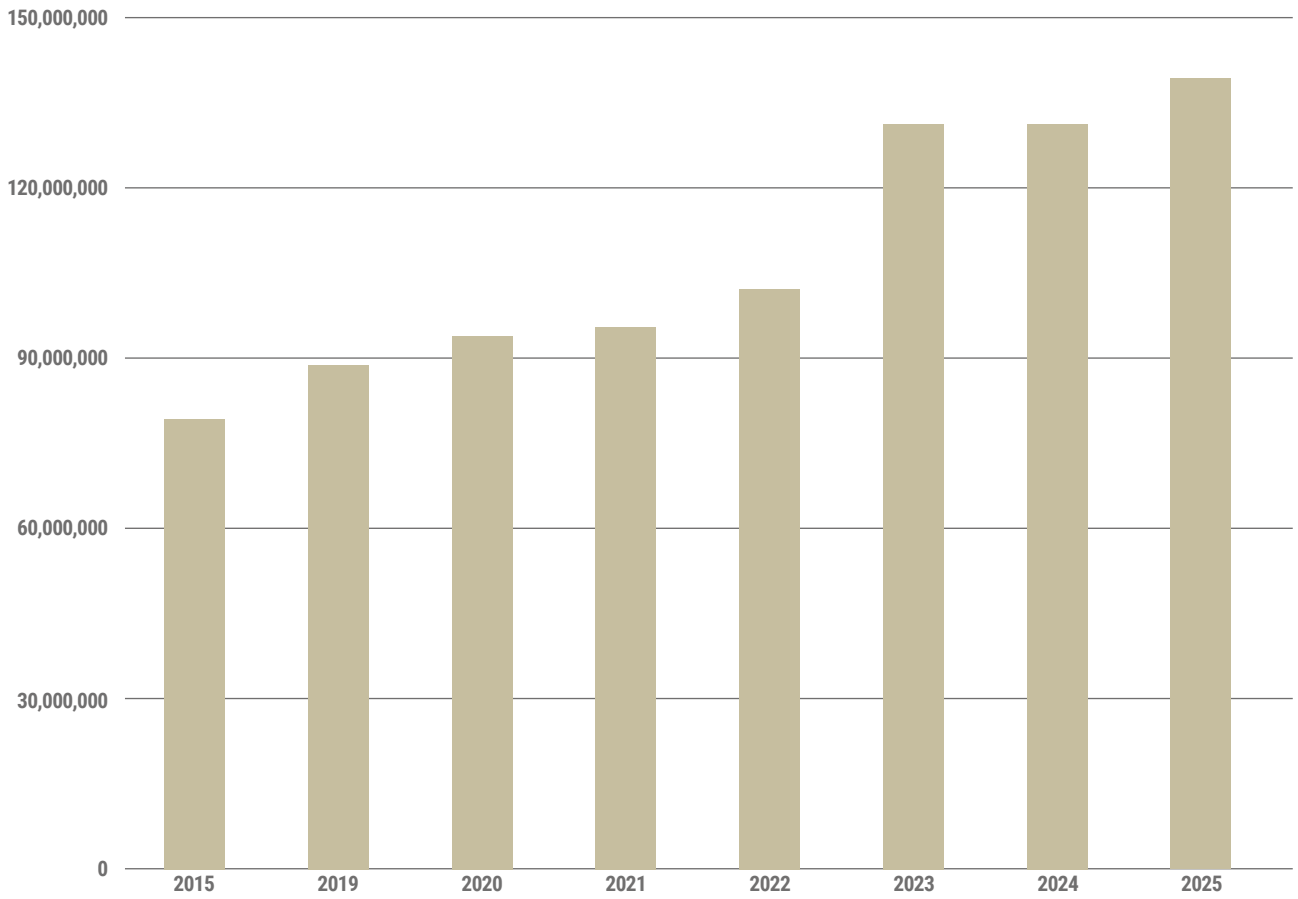


^(*)Data source: U.S. Geological Survey.

Nickel - Reserves

World Nickel Reserves

(metric tons)



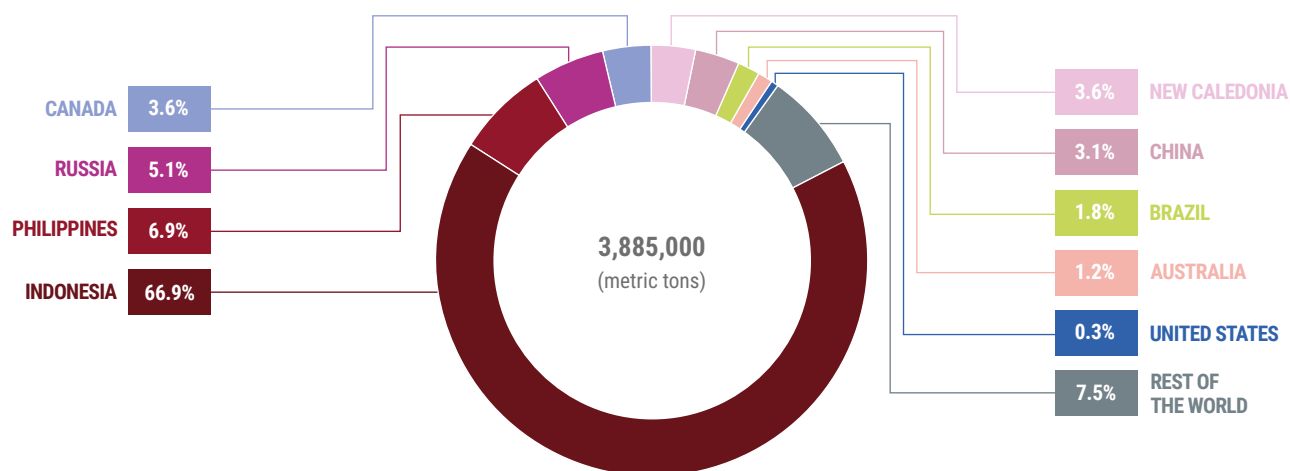
Nickel - Production

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	222,000	159,000	169,000	151,000	155,000	149,000	110,000	45,000
Brazil	160,000	60,600	77,100	76,000	88,500	82,700	77,000	70,000
Canada	235,000	181,000	167,000	134,000	143,000	159,000	190,000	140,000
China	92,900	120,000	120,000	109,000	114,000	117,000	120,000	120,000
Colombia	40,400							
Cuba	56,400	49,200						
Dominican Republic		56,900						
Guatemala	52,400							
Indonesia	130,000	853,000	771,000	1,040,000	1,580,000	2,030,000	2,200,000	2,600,000
Madagascar	45,000							
New Caledonia	186,000	208,000	200,000	186,000	200,000	231,000	110,000	140,000
Philippines	554,000	323,000	334,000	387,000	345,000	413,000	330,000	270,000
Russia	269,000	279,000	283,000	205,000	222,000	210,000	210,000	200,000
South Africa	56,700							
United States	27,200	13,500	16,700	18,400	17,500	16,400	8,000	10,000
Others	157,000	310,000	373,000	429,000	404,000	340,000	300,000	290,000
World	2,284,000	2,613,200	2,510,800	2,735,400	3,269,000	3,748,100	3,705,990	3,885,000

The World's Top 9 (2025)

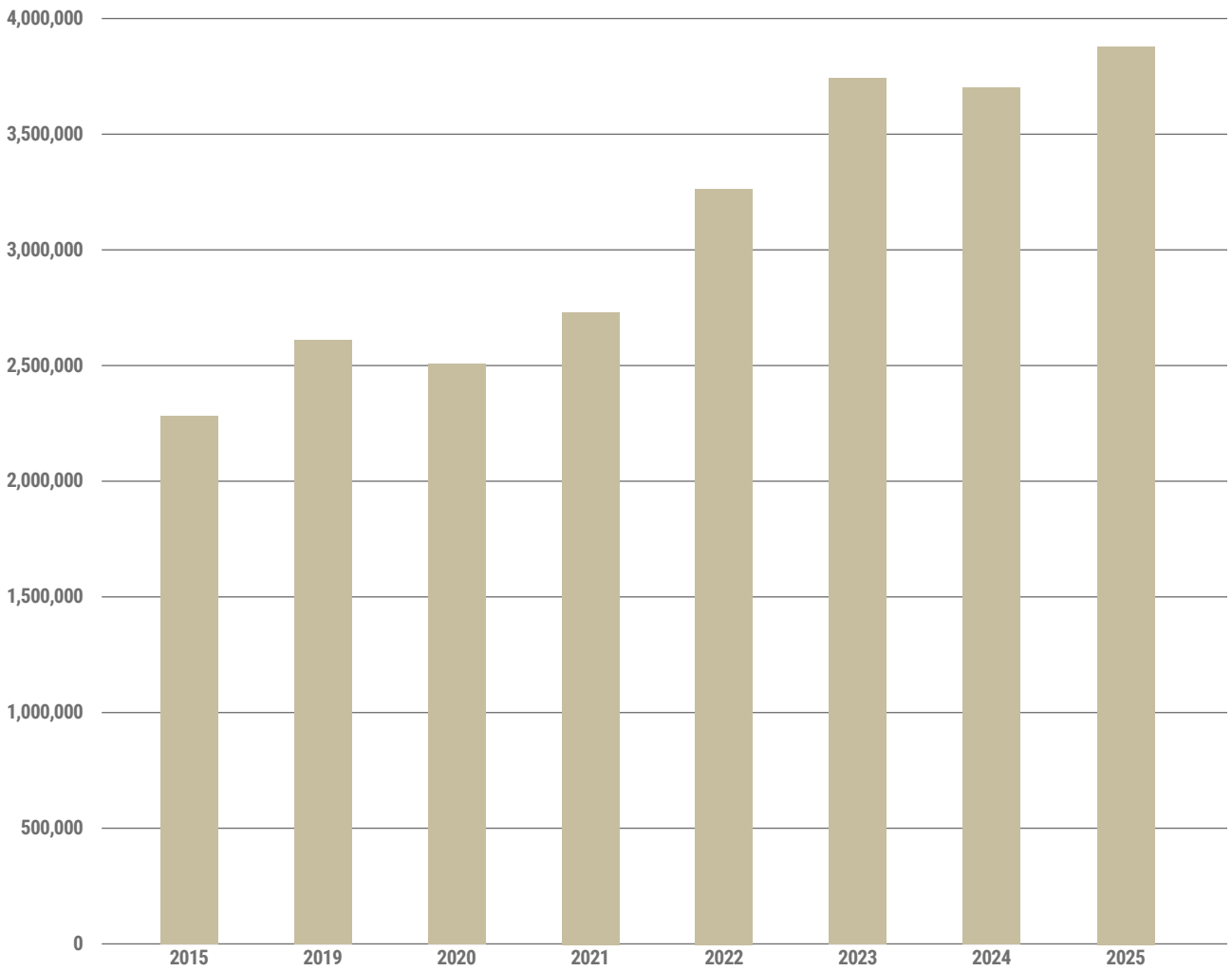


^(*)Data source: U.S. Geological Survey.

Nickel - Production

World Nickel Production

(metric tons)



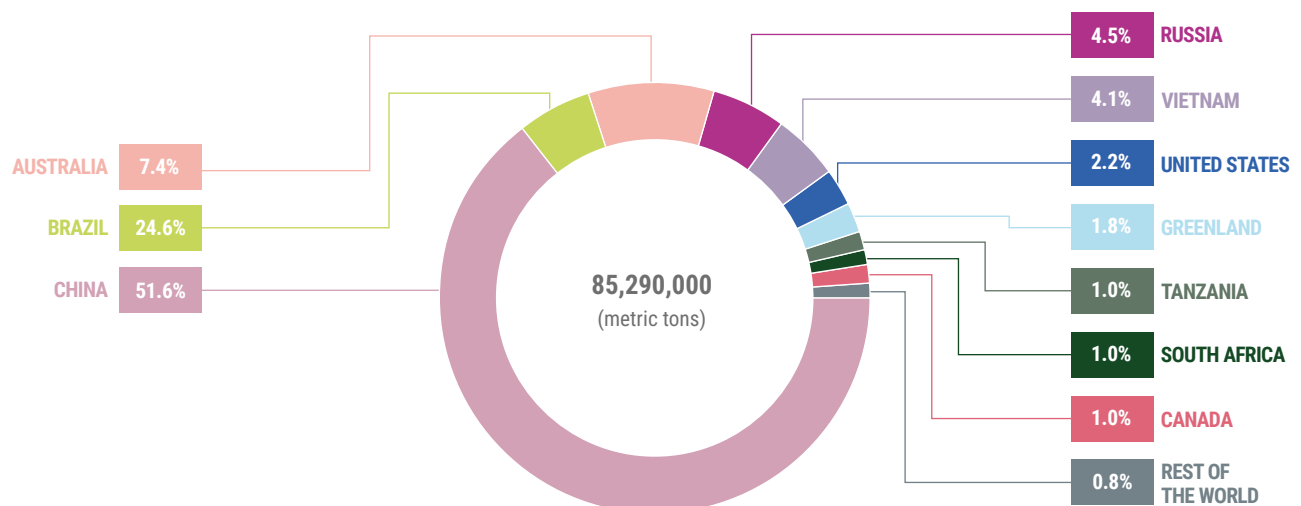
Rare Earths - Reserves

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia	3,200,000	3,300,000	4,100,000	4,000,000	4,200,000	5,700,000	5,700,000	6.300.000
Brazil	22,000,000	22,000,000	21,000,000	21,000,000	21,000,000	21,000,000	21,000,000	21.000.000
Canada		830,000	830,000	830,000	830,000	830,000	830,000	830.000
China	55,000,000	44,000,000	44,000,000	44,000,000	44,000,000	44,000,000	44,000,000	44.000.000
Greenland		1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1.500.000
India	3,100,000	6,900,000	6,900,000	6,900,000	6,900,000	6,900,000	6,900,000	
Malaysia	30,000							710.000
Russia		12,000,000	12,000,000	21,000,000	21,000,000	10,000,000	3,800,000	3.800.000
South Africa		790,000	790,000	790,000	790,000	790,000	860,000	860.000
Tanzania				890,000	890,000	890,000	890,000	890.000
Thailand						4,500	4,500	
United States	1,800,000	1,400,000	1,500,000	1,800,000	2,300,000	1,800,000	1,900,000	1.900.000
Vietnam		22,000,000	22,000,000	22,000,000	22,000,000	22,000,000	3,500,000	3.500.000
Others	41,000,000	310,000	310,000	280,000	280,000			
World	126,130,000	115,030,000	114,930,000	124,990,000	125,690,000	115,414,500	90,884,500	85,290,000

The World's Top 10 (2025)



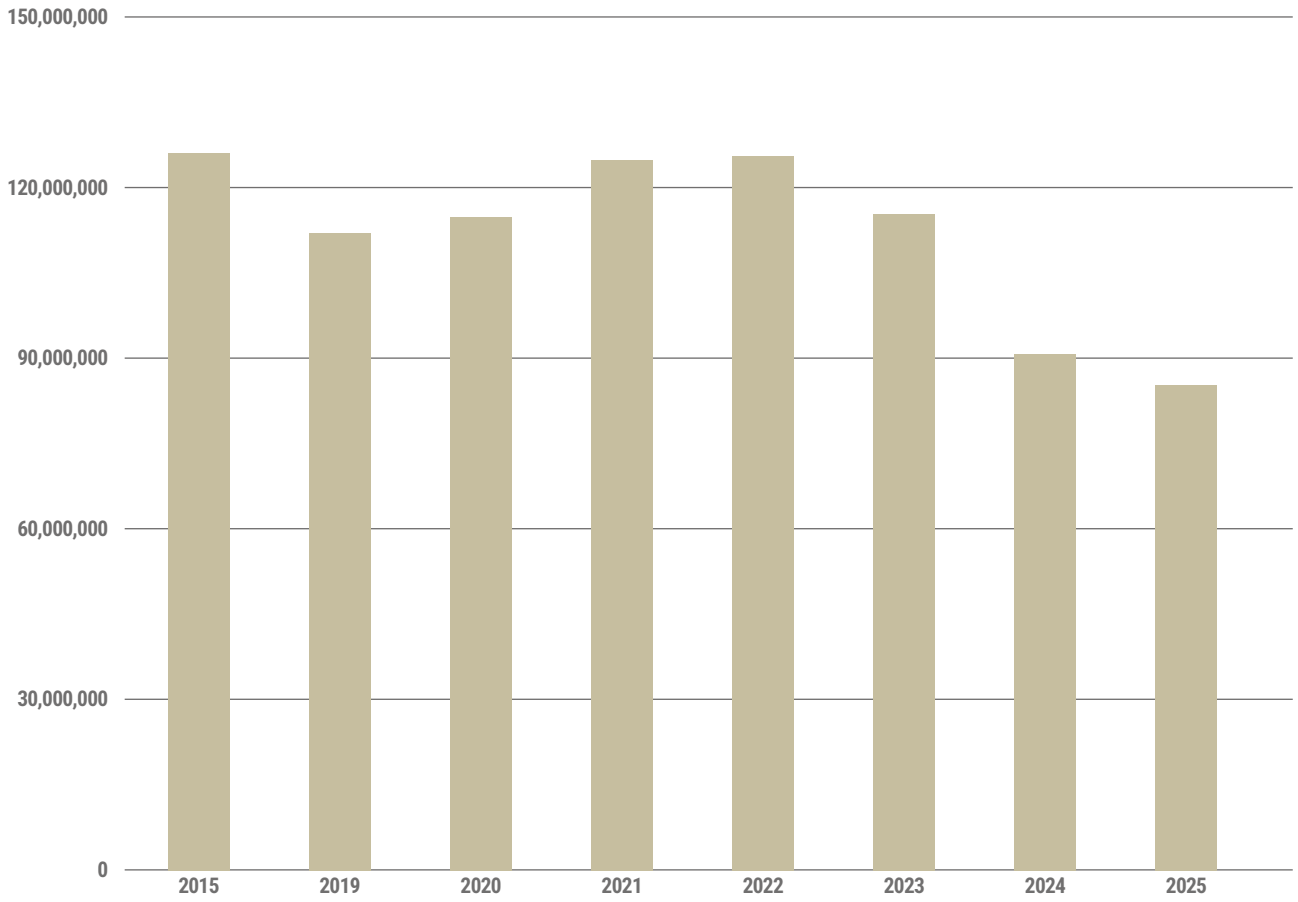
^(*) Data source: U.S. Geological Survey.

^(**) The aggregate includes the following states according to international definitions: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. However, some of these countries may not produce rare earths.

Rare Earths - Reserves

World Rare Earths Reserves

(metric tons)



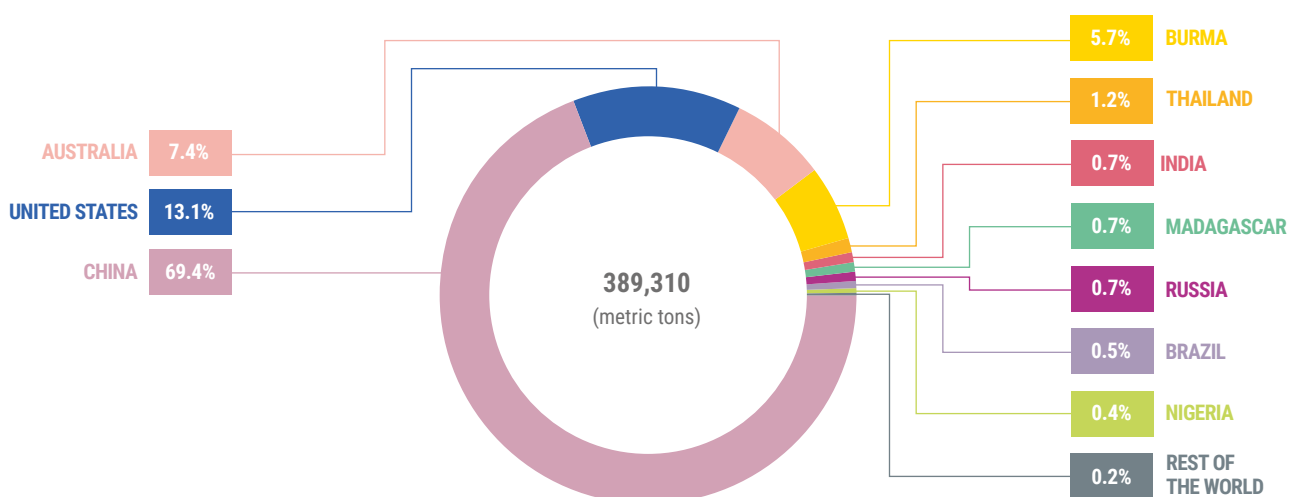
Rare Earths - Production

Countries^(*)

(metric tons)

	2015	2019	2020	2021	2022	2023	2024	2015
Australia	12.000	20.000	21.000	24.000	18.000	16.000	29.000	29.000
Brazil	880	710	600	500	80	140	560	2.000
Burma					12.000	43.000	27.000	22.000
Burundi		200	300	200				
China	105.000	132.000	140.000	168.000	210.000	255.000	270.000	270.000
India	1.700	2.900	2.900	2.900	2.900	2.900	2.900	2.900
Madagascar		4.000	2.800	6.800	960	2.100	1.400	2.700
Malaysia	500				80	310	140	110
Nigeria							1.500	1.500
Myanmar		25.000	31.000	35.000	12.000	7.200		
Russia	2.800	2.700	2.700	2.600	2.600	2.500	2.600	2.600
Thailand	760	1.900	3.600	8.200	7.100	3.600	2.100	4.800
United States	5.900	28.000	39.000	42.000	42.000	41.600	45.500	51.000
Vietnam	250	1.300	700	400	1.200	300	300	150
Others		66	100	60	80	1.440	1.000	550
World	129,790	218,776	244,700	290,660	309,000	376,090	384,000	389,310

The World's Top 10 (2025)

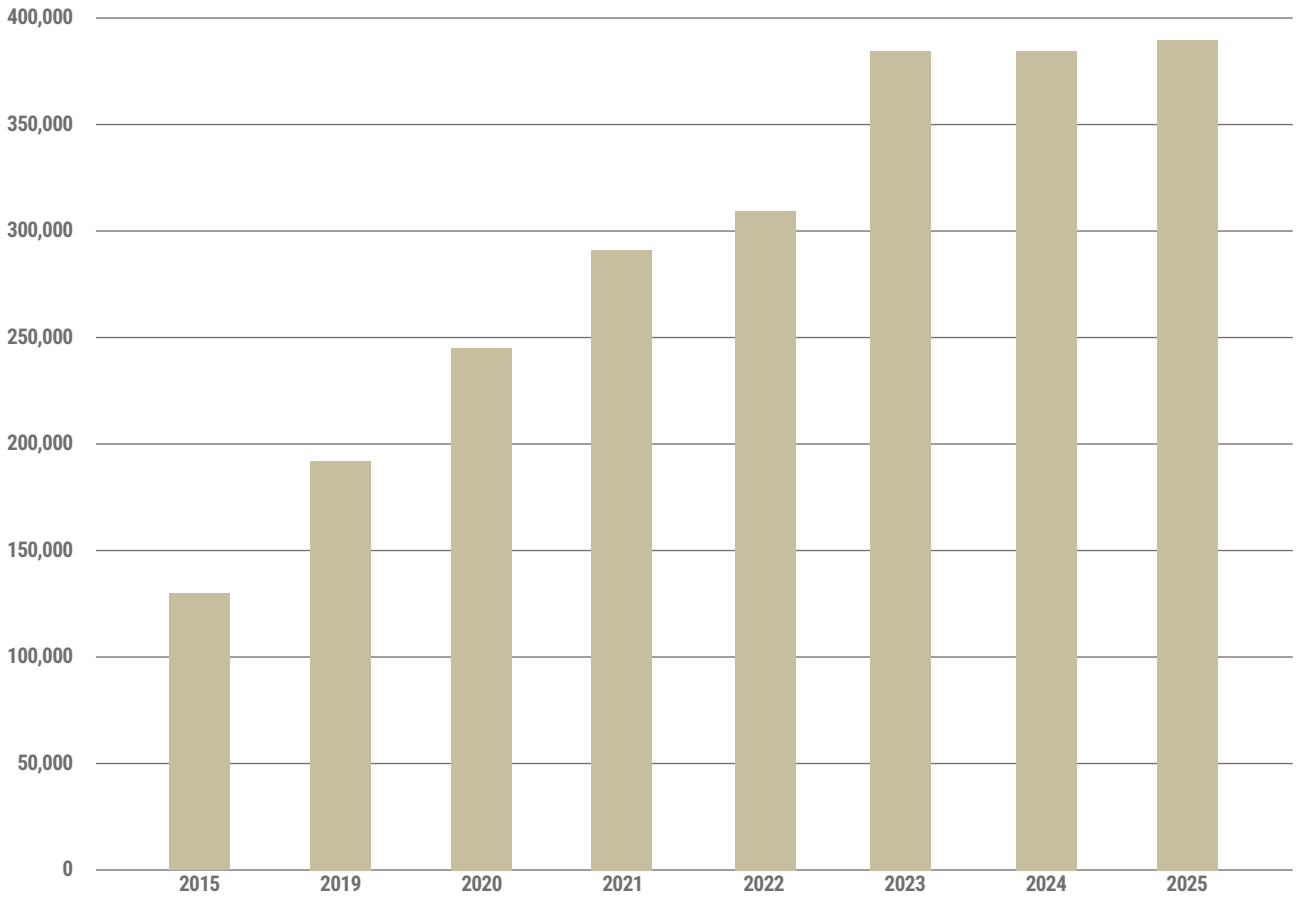


^(*)Data source: U.S. Geological Survey.

Rare Earths - Production

World Rare Earths Production

(metric tons)



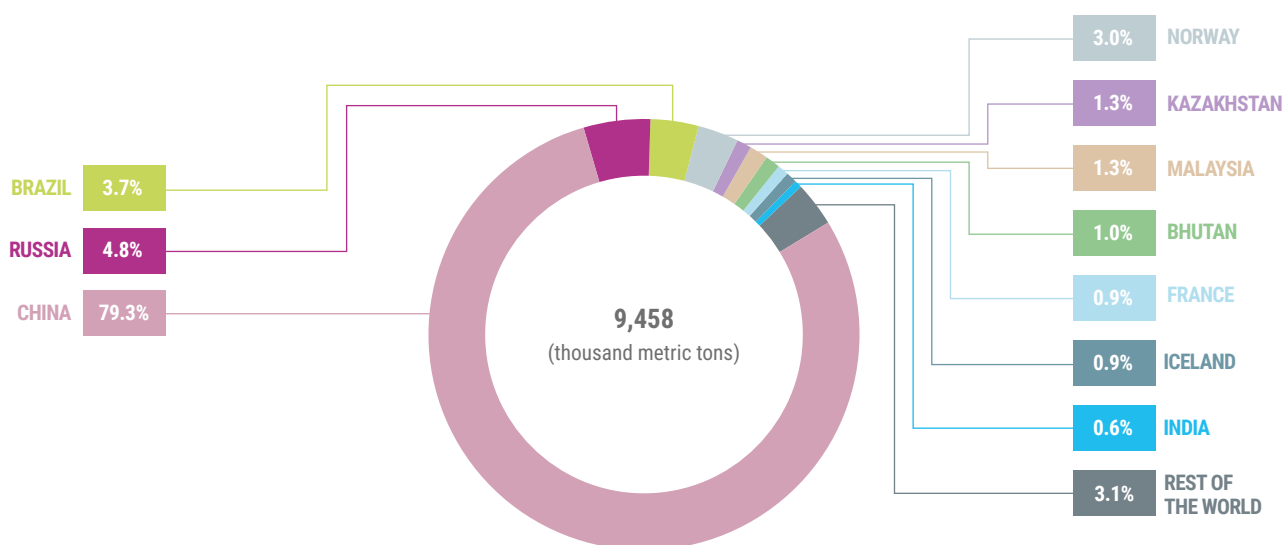
Silicon - Production

Countries^(*)

(thousand metric tons)

	2015	2019	2020	2021	2022	2023	2024	2025
Australia			42	50	48	39	47	47
Bhutan	78	90	67	85	75	82	98	98
Brazil	117	340	404	389	391	386	350	350
Canada	54	57	47	49	49	52	57	57
China	5,000	5,700	5,600	6,400	6,670	7,270	7,900	7,500
France	121	130	112	127	121	113	111	89
Germany				63	62	59	29	13
Iceland	75	88	103	111	128	97	118	88
India	60	60	59	59	59	59	59	59
Kazakhstan			67	122	101	134	127	127
Malaysia	68	150	109	85	91	91	120	120
Norway	375	375	345	362	339	299	300	280
Poland			42	49	47	33		
Russia	747	610	576	644	626	527	479	455
South Africa	84	96				50	51	45
Spain	81	66	55	60	52	49	47	44
Ukraine	59	63	40	49	28	2		
United States	411	310	277	313	310			
Others	300	278	175	128	223	130	162	86
World	7,630	8,413	8,120	9,145	9,420	9,463	10,055	9,458

The World's Top 10 (2025)



^(*)Data source: U.S. Geological Survey.

Silicon - Production

World Silicon Production

(thousand metric tons)

