



2017–2018 Minerals Yearbook

LATIN AMERICA AND CANADA



Base modified from ESRI ArcGIS online world countries (generalized) map data, 2017
 Mercator Auxiliary Sphere projection
 World Geodetic System 1984 datum

Figure 1. Map of the Latin America and Canada region. The countries covered in this report are labeled on the map; bordering countries are shown in gray and not labeled.

THE MINERAL INDUSTRIES OF LATIN AMERICA AND CANADA

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The countries and dependencies that are covered in this chapter¹ have a combined population of approximately 678 million people and a land area of 30.5 million square kilometers (fig. 1; table 1). In 2018, the real gross domestic product (GDP) based on purchasing power parity of the Latin America and Canada region was \$12,076 billion, accounting for 9% of the world's real GDP. The region's real GDP (including that of the United States) increased by 1.6% in 2018 compared with a growth rate of 1.7% in 2017 (table 2).

The Latin America and Canada region accounted for 54% of the world's production of silver; 44%, of mined copper (Cu content); 35%, of potash; 27%, of lithium; 26%, of zinc; and 24%, of gold. Some countries of the Latin America and Canada region were globally significant producers of metals and industrial minerals, and (or) mineral fuels and related materials (fig. 2). The major producers of silver in the region were Mexico (22.7% of the world's output), Peru (15.4%), and Chile (5.1%). The major producers of copper in the region were Chile (22.4% of the world's output), Peru (12.5%), and Mexico (4%). The major producers of potash in the region were Canada (31.4% of the world's output), and Chile (2.7%). Data on mineral production for selected mineral commodities, by country in the region, are in table 3.

Acknowledgments

The U.S. Geological Survey acknowledges and expresses its sincere appreciation to the following organizations for providing mineral production statistics, basic economic data, and exploration and mineral-related information:

- Argentina—Dirección Nacional de Minería;
- The Bahamas—Department of Statistics;
- Belize—Geology and Petroleum Department;

- Bolivia—Ministerio de Minería y Metalurgia, Instituto Nacional de Estadística, and Asociación Nacional de Mineros Medianos;
- Brazil—Departamento Nacional de Produção Mineral, Serviço Geológico do Brasil, and Instituto Brasileiro de Mineração;
- Canada—Natural Resources Canada;
- Chile—Comisión Chilena de Cobre and Servicio Nacional de Geología y Minería;
- Colombia—Unidad de Planeación Minero Energética, and Instituto Colombiano de Geología y Minería;
- Costa Rica—Dirección de Geología y Minas;
- Dominican Republic—Dirección General de Minería and Servicio Geológico Nacional;
- Guatemala—Ministerio de Energía y Minas, Dirección General de Minería, and Departamento de Desarrollo Minero;
- Guyana—Guyana Geology and Mines Commission;
- Jamaica—Mines and Geology Division of the Ministry of Agriculture and Lands;
- Mexico—Servicio Geológico Mexicano, and Secretaría de Economía;
- Nicaragua—Ministerio de Energía y Minas;
- Paraguay—Dirección de Recursos Minerales;
- Peru—Ministerio de Energía y Minas, and Instituto Geológico Minero y Metalúrgico; and
- Trinidad and Tobago—Ministry of Energy and Energy Industries.

¹The countries and dependencies that are covered in this chapter include Canada, Mexico, and the countries of the Caribbean, Central America, and South America, but not the United States. Mineral production data and other mineral-related information for the United States are provided in volumes I and II of the U.S. Geological Survey Minerals Yearbook and are not included in this volume.

TABLE 1
THE AMERICAS: AREA AND POPULATION IN 2018

Country or territory	Area ¹ (square kilometers)	Estimated population ² (thousands)
Argentina	2,780,400	44,495
Aruba	180	106
Bahamas, The	13,880	386
Barbados	430	287
Belize	22,966	383
Bermuda	54	64
Bolivia	1,098,581	11,353
Brazil	8,515,770	209,469
Canada	9,984,670	37,058
Chile	756,102	18,729
Colombia	1,138,910	49,661
Costa Rica	51,100	4,999
Cuba	110,860	11,338
Dominica	751	72
Dominican Republic	48,670	10,627
Ecuador	283,561	17,084
El Salvador	21,041	6,421
French Guiana	86,500 ³	282 ⁴
Guadeloupe	1,702 ³	394 ⁴
Guatemala	108,889	16,347
Guyana	214,969	779
Haiti	27,750	11,123
Honduras	112,090	9,588
Jamaica	10,991	2,935
Martinique	1,128 ³	369 ⁴
Mexico	1,964,375	126,191
Nicaragua	130,370	6,466
Panama	75,420	4,177
Paraguay	406,752	6,956
Peru	1,285,216	31,989
Puerto Rico	9,104	3,193
Saint Kitts and Nevis	261	52
Suriname	163,820	576
Trinidad and Tobago	5,128	1,390
United States ⁵	9,833,517	326,688
Uruguay	176,215	3,449
Venezuela	912,050	28,870
Regional total	40,354,000	1,004,345
World total	148,940,000 ⁶	7,591,945 ⁷

¹Source: U.S. Central Intelligence Agency, The World Factbook

²Source: The World Bank, 2021 World Development Indicators Database.

³Source: Ministère des Outre-mer, France.

⁴Source: CEROM, Institut d'Émission des Départements d'Outre-Mer, France.

⁵Excludes Puerto Rico and U.S. Virgin Islands.

⁶World area total includes the areal extent of some countries and (or) territories not covered in the Minerals Yearbook.

⁷World population total includes populations of some countries and (or) territories not covered in the Minerals Yearbook.

TABLE 2
THE AMERICAS: GROSS DOMESTIC PRODUCT^{1,2}

Country or territory	Gross domestic product in 2018 based on purchasing power parity		Real gross domestic product growth rate (percentage)		
	Gross value (million dollars)	Per capita (dollars)	2016	2017	2018
	Argentina	1,036,982	23,306	-2.1	2.8
Bahamas, The	14,619	38,825	1.4	3.1	3.0
Barbados	4,601	16,062	2.5	0.5	-0.6
Belize	2,792	7,015	0.1	1.9	2.1
Bolivia	100,627	8,841	4.3	4.2	4.2
Brazil	3,130,872	15,017	-3.3	1.3	1.3
Canada	1,856,559	50,186	1.0	3.2	2.0
Chile	465,171	24,807	1.7	1.2	4.0
Colombia	734,931	14,748	2.1	1.4	2.5
Costa Rica	99,454	19,803	4.2	3.9	2.7
Cuba ³	100,023	8,822	0.5	1.8	2.2
Dominica	838	11,840	2.5	-9.5	0.5
Dominican Republic	192,745	18,775	6.7	4.7	7.0
Ecuador	202,268	11,882	-1.2	2.4	1.3
El Salvador	56,646	8,822	2.5	2.3	2.4
Guatemala	141,423	8,192	2.7	3.0	3.2
Guyana	9,953	12,725	3.8	3.7	4.4
Haiti	20,126	1,809	1.5	1.2	1.5
Honduras	55,603	5,791	3.9	4.8	3.7
Jamaica	29,250	10,724	1.5	0.7	1.9
Mexico	2,587,707	20,506	2.6	2.1	2.2
Nicaragua	37,704	5,836	4.6	4.6	-4.0
Panama	132,802	31,933	5.0	5.6	3.7
Paraguay	91,535	12,978	4.3	5.0	3.4
Peru	424,966	13,213	4.1	2.5	4.0
Puerto Rico	112,138	35,043	-1.3	-2.7	-4.9
Saint Kitts and Nevis	1,391	24,850	2.8	-2.0	2.9
Suriname	9,811	16,627	-5.6	1.8	2.6
Trinidad and Tobago	37,392	26,904	-6.3	-2.3	-0.2
United States	20,611,875	63,056	1.7	2.3	3.0
Uruguay	76,261	21,752	1.7	2.6	1.6
Venezuela	308,781	10,683	-17.0	-15.7	-19.6
Regional total	32,687,846	32,546 ⁴	0.2 ⁵	1.7 ⁵	1.6 ⁵
World total ⁶	128,711,608	16,954 ⁴	3.3	3.8	3.5

¹Source: International Monetary Fund, World Economic Outlook Database, October 2020.

²Gross domestic product listed may differ from that reported in individual country chapters owing to differences in source or date of reporting. Data were not available for Aruba and French Guiana, Guadeloupe, and Martinique.

³Source: United Nations data 2021. Gross domestic product values of Cuba at current prices.

⁴Calculated as gross domestic product divided by population.

⁵Annual change in regional gross domestic product.

⁶World gross domestic product total includes the gross domestic product of some countries and (or) territories not covered in the Minerals Yearbook.

TABLE 3
LATIN AMERICA AND CANADA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2018¹

(Thousand metric tons unless otherwise specified)

Country or locality ²	Metals									
	Aluminum			Antimony, mine output, Sb content (metric tons)	Copper		Gold, mine output, Au content (kilograms)	Iron and steel		Lead Mine output, Pb content (metric tons)
	Alumina	Bauxite	Metal, primary		Mine output, Cu content	Metal, refined, primary		Iron ore, mine output, Fe content	Steel, raw	
Argentina	--	--	419	--	17	--	58,375	15 ^e	5	28,260
Belize	--	--	--	--	--	--	--	--	--	--
Bolivia	--	--	--	2,501	4	3	29,976	--	--	112,140
Brazil	8,258	32,007	659	--	386	132	85,000 ^e	250,000	35,407	7,000 ^e
Canada	1,568	--	2,923	1	543	259	183,047	31,500 ^e	13,443	18,947
Chile	--	--	--	--	4,258	2,461	37,066	8,493	1,145	712
Colombia	--	--	--	--	10	--	35,560	344	1,219	--
Costa Rica	--	--	--	--	--	--	3,699	--	99	--
Cuba	--	--	--	--	--	--	--	--	222	--
Dominican Republic	--	--	--	--	9	--	31,633	--	--	--
Ecuador	--	--	--	50 ^e	42 ^e	--	8,213	--	583	--
El Salvador	--	--	--	--	--	--	--	--	99	--
French Guiana	--	--	--	--	--	--	1,300 ^e	--	--	--
Guatemala	--	--	--	25 ^e	--	--	200 ^e	--	300	264
Guyana	--	1,924	--	--	--	--	19,069	--	--	--
Honduras	--	--	--	12	--	--	2,064	--	--	9,893
Jamaica	2,484	10,058	--	--	--	--	--	--	--	--
Mexico	--	--	--	260 ^e	751	432	117,323	14,021	20,110	240,000 ^e
Nicaragua	--	--	--	--	--	--	7,703	--	--	--
Panama	--	--	--	--	--	--	400 ^e	--	--	--
Paraguay	--	--	--	--	--	--	--	--	25	--
Peru	--	--	--	--	2,371	337	142,642	9,534	1,217	289,195
Suriname	--	--	--	--	--	--	25,536	--	--	--
Trinidad and Tobago	--	--	--	--	--	--	--	--	--	--
Uruguay	--	--	--	--	--	--	860	1	60	--
Venezuela ^p	--	--	86 ^e	--	--	--	480 ^e	1,550	129	--
Regional total	12,310	43,989	4,100 ^e	2,850 ^e	8,400 ^e	3,624	790,000 ^e	315,000 ^e	74,063	706,000 ^e
Share of world total	9.4%	13.0%	6.4%	2.0%	44.2%	18.1%	24.0%	21.3%	4.1%	15.2%
United States	1,570	W	891	--	1,220	1,070	226,000	31,300	86,600	280,000
Share of world total	1.2%	W	1.4%	--	6.4%	5.4%	6.9%	2.1%	4.8%	6.0%
World total	131,000	339,000	63,600	146,000	19,000	20,000	3,290,000	1,480,000	1,810,000	4,640,000

See footnotes at end of table.

TABLE 3—Continued
 LATIN AMERICA AND CANADA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2018¹

(Thousand metric tons unless otherwise specified)

Country or locality ²	Metals—Continued								
	Lead— Continued	Nickel		Platinum-group metals, mine output, metal content		Silver, mine output,	Tin, mine output,	Zinc (metric tons)	
	Metal, refined, primary	Mine output, Ni content	Refinery products	(kilograms)		Ag content (metric tons)	Sn content (metric tons)	Mine output, Zn content	Metal, primary
	(metric tons)			Palladium	Platinum				
Argentina	14,000 ^e	--	--	--	--	1,024	--	22,050	--
Belize	--	--	--	--	--	--	--	--	--
Bolivia	635	--	--	--	--	1,191	17,251	519,630	--
Brazil	--	74	--	--	--	40 ^e	17,000 ^e	167,250	246,400
Canada	160,096	176	136	20,000 ^e	7,100 ^e	353	--	287,119	696,591
Chile	--	--	--	--	--	1,370	--	26,810	--
Colombia	--	--	--	--	269	16	--	--	--
Costa Rica	--	--	--	--	--	--	--	--	--
Cuba	--	51	--	--	--	--	--	45,000 ^e	--
Dominican Republic	--	--	--	--	--	167	--	4,000 ^e	--
Ecuador	--	--	--	--	--	1 ^e	--	--	--
El Salvador	--	--	--	--	--	--	--	--	--
French Guiana	--	--	--	--	--	--	--	--	--
Guatemala	--	--	--	--	--	--	--	--	--
Guyana	--	--	--	--	--	--	--	--	--
Honduras	--	--	--	--	--	31	--	28,421	--
Jamaica	--	--	--	--	--	--	--	--	--
Mexico	104,000 ^e	--	--	--	--	6,116	--	690,895	336,300
Nicaragua	--	--	--	--	--	11	--	--	--
Panama	--	--	--	--	--	--	--	--	--
Paraguay	--	--	--	--	--	--	--	--	--
Peru	--	--	--	--	--	4,163	18,601	1,474,674	333,677
Suriname	--	--	--	--	--	--	--	--	--
Trinidad and Tobago	--	--	--	--	--	--	--	--	--
Uruguay	--	--	--	--	--	--	--	--	--
Venezuela ^p	--	--	--	--	--	--	--	--	--
Regional total	279,000 ^e	301	136	20,000 ^e	7,400 ^e	14,500 ^e	52,900 ^e	3,270,000 ^e	1,612,968
Share of world total	5.7%	13.2%	14.9%	9.1%	3.9%	53.7%	16.4%	26.2%	11.7%
United States	--	18	--	14,300	4,160	934	--	824,000	116,000
Share of world total	--	0.8%	--	6.5%	2.2%	3.5%	--	6.6%	0.8%
World total	4,870,000	2,280	911	220,000	189,000	27,000	323,000	12,500,000	13,800,000

See footnotes at end of table.

TABLE 3—Continued
LATIN AMERICA AND CANADA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2018¹

(Thousand metric tons unless otherwise specified)

Country or locality ²	Industrial minerals						
	Cement, hydraulic	Diamond, natural, gemstones and industrial (thousand carats)	Gypsum	Lithium, mine and brine, lithium carbonate equivalent (metric tons)	Phosphate rock, P ₂ O ₅ content	Potash, K ₂ O equivalent	Salt
Argentina	11,842	--	774	34,050	--	--	1,078
Barbados	160	--	--	--	--	--	--
Belize	--	--	--	--	--	--	--
Bolivia	3,650 ^e	--	1	--	--	--	5
Brazil	53,553	251	3,000 ^e	1,482	2,000 ^e	201	7,400
Canada	13,554	23,194	2,997	--	--	13,835	10,568
Chile	4,300	--	909	96,029	4	1,200	10,012
Colombia	12,452	--	--	--	15 ^e	--	561
Costa Rica	1,900 ^e	--	--	--	--	--	--
Cuba	1,590	--	100	--	--	--	193
Dominican Republic	5,430	--	130	--	--	--	--
Ecuador	5,800	--	--	--	--	--	--
El Salvador	1,000 ^e	--	--	--	--	--	--
French Guiana	80 ^e	--	--	--	--	--	--
Guadeloupe	310 ^e	--	--	--	--	--	--
Guatemala	3,800 ^e	--	133	--	--	--	--
Guyana	410 ^e	62	--	--	--	--	--
Haiti	200 ^e	--	--	--	--	--	--
Honduras	1,800 ^e	--	--	--	--	--	--
Jamaica	930 ^e	--	50 ^e	--	--	--	--
Martinique	150 ^e	--	--	--	--	--	--
Mexico	48,328	--	5,400 ^e	--	460 ^e	--	9,000 ^e
Nicaragua	910 ^e	--	70	--	--	--	--
Panama	2,000 ^e	--	--	--	--	--	38
Paraguay	1,400 ^e	--	--	--	--	--	--
Peru	10,049	--	456	--	1,200 ^e	--	1,510
Suriname	30 ^e	--	--	--	--	--	--
Trinidad and Tobago	663	--	--	--	--	--	--
Uruguay	812	--	--	--	--	--	--
Venezuela ^p	7,000 ^e	--	--	--	6 ^e	--	--
Regional total	194,000 ^e	23,507	14,000 ^e	131,561	3,700 ^e	15,236	40,400 ^e
Share of world total	4.7%	16.0%	4.1%	26.9%	5.2%	34.6%	14.2%
United States	87,000	--	21,100	W	7,250	520	44,000
Share of world total	2.1%	--	6.2%	W	10.3%	1.2%	15.4%
World total	4,140,000	147,000	342,000 ⁴	489,000	70,600	44,000	285,000

See footnotes at end of table.

TABLE 3—Continued
 LATIN AMERICA AND CANADA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2018¹

(Thousand metric tons unless otherwise specified)

Country or locality ²	Mineral fuels and related materials				
	Coal, all grades	Natural gas, dry (million cubic meters)	Petroleum		Uranium, U content (metric tons)
			Crude, including condensate (thousand 42-gallon barrels)	Refinery products (thousand 42-gallon barrels)	
Argentina	38 ^e	47,020	178,631	170,455	--
Belize	--	--	801	--	--
Bolivia	--	20,500 ^e	16,000 ^e	16,100 ^e	--
Brazil	6,000 ^e	40,857	944,117	422,000 ^e	--
Canada	54,300 ^e	172,725	1,900,920	694,000	9,078
Chile	2,295	1,221	1,120	71,700	--
Colombia	85,437	9,599	315,798	136,145	--
Costa Rica	--	--	--	20,000	--
Cuba	--	970	18,000 ^e	13,000 ^e	--
Dominican Republic	--	--	--	--	--
Ecuador	--	349	188,789	80,900	--
El Salvador	--	--	--	--	--
French Guiana	--	--	--	--	--
Guadeloupe	--	--	--	--	--
Guatemala	--	--	3,363	950,277	--
Guyana	--	--	--	--	--
Haiti	--	--	--	--	--
Honduras	--	--	--	--	--
Jamaica	--	--	--	7,340	--
Martinique	--	--	--	--	--
Mexico	11,400 ^e	31,570	675,980	--	--
Nicaragua	--	--	--	4,646,072	--
Panama	--	--	--	--	--
Paraguay	--	--	--	--	--
Peru	217	12,642	17,840	55,700	--
Suriname	--	--	6,000 ^e	5,000 ^e	--
Trinidad and Tobago	--	37,500	23,175	37,500	--
Uruguay	--	--	--	16,000 ^e	--
Venezuela ^p	200 ^e	23,200 ^e	581,000 ^e	141,000 ^e	--
Regional total	160,000 ^e	398,000 ^e	4,870,000 ^e	7,480,000 ^e	9,078
Share of world total	1.8%	12.6%	15.6%	21.2%	16.3%
United States	686,000 ⁵	30,800 ⁵	4,000,000 ⁵	6,190,000 ⁶	582 ⁷
Share of world total	7.5%	1.0%	12.8%	17.5%	1.0%
World total	9,090,000	3,160,000	31,200,000	35,300,000	55,800

See footnotes at end of table.

TABLE 3—Continued
LATIN AMERICA AND CANADA: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2018¹

^qEstimated. ^pPreliminary. W Withheld to avoid disclosing company proprietary data. -- Zero or zero percent.

¹Table includes data available through March 10, 2021. All data are reported unless otherwise noted. World totals, U.S. data, and estimated data are rounded to no more than three significant digits; may not add to totals shown owing to independent rounding. Percentages were calculated using unrounded data.

²In addition to the countries and (or) localities listed, Aruba produced crude petroleum, petroleum refinery products, and sulfur, and Barbados, Curacao, Guadeloupe, Haiti, Martinique, Saba, Saint Eustatius, and Saint Maarten also produced minerals, but available information was inadequate to make reliable estimates of output.

³Based on total sales of cement (domestic and exports).

⁴Gypsum world total may include synthetic gypsum powder production.

⁵Source: U.S. Energy Information Administration.

⁶Source: BP Statistical Review of World Energy. Refinery, throughput.

⁷Source: World Nuclear Association.

Latin America and Canada region

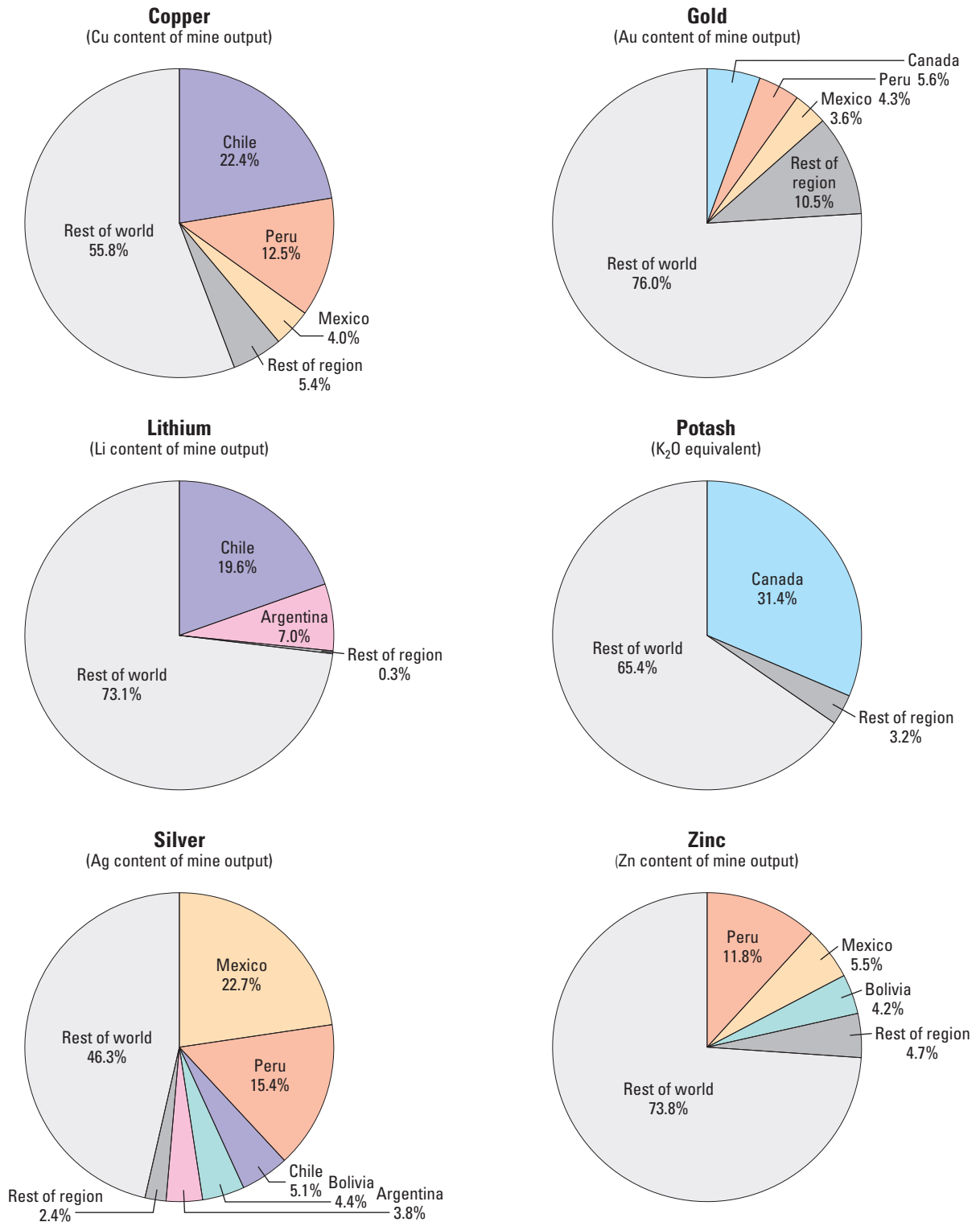


Figure 2. Pie charts showing percentage of world production of selected mineral commodities (copper, gold, lithium, potash, silver, and zinc) by countries of the Latin America and Canada region in 2018. Individual countries of the region are labeled if they accounted for at least 3% of world production. Data are from table 3; however, percentages may differ slightly from those shown in table 3 because of independent rounding. Also, percentages may differ from those reported in individual country chapters owing to differences in the source or date of reporting.