2 Fiscal revenues from non-renewable natural resources in Latin America and the Caribbean

Principal findings

Hydrocarbon revenues surged in 2022 in the context of elevated market volatility

International oil and gas prices surged in the first half of 2022 due to Russia's invasion of Ukraine and constrained global supply. While oil prices gave ground in the second half of the year as macroeconomic concerns weighed on market sentiment, natural gas prices remained exceptionally volatile. Rising hydrocarbon output in the region led hydrocarbon revenues to register 4.4% of GDP (compared to 2.6% of GDP in 2021), a significant upswing.

Mining revenues rose marginally in 2022 amidst weakening prices and lower production volumes.

After a short-lived jump after Russia's invasion of Ukraine, prices for many metals and minerals fell for the year. Demand in China was buffeted by consecutive COVID-19 lockdowns, weakening residential construction, and reduced steel production. However, prices for coal and lithium continued to rise strongly. Fiscal revenues from mining rose to 0.75% of GDP (up from 0.67% of GDP in 2021), driven by strong outturns in Chile (where lithium revenues compensated for a fall in copper receipts) and Colombia.

Market uncertainty and macroeconomic headwinds impacted fiscal revenues from non-renewable natural resources in Latin America and the Caribbean during 2023.

Global energy markets remained volatile in 2023, reflecting shifts in market sentiment, normalisation of natural gas prices in Europe, and disparate trends in the supply and demand of hydrocarbons. While the overall trend in prices remained down, higher than expected oil demand in the third quarter sparked a rally that was given further impetus by the escalation of the conflict between Israel and Hamas after the October 7th attacks. Metals and minerals prices largely fell for the year, but some rebounded in the second half due to rising demand in China.

Hydrocarbon revenues in the region dipped to an estimated 3.9% of GDP (compared to 4.4% of GDP in 2022). Lower prices dragged down payments of royalties and other State participations in the commercial value of production, which represent the primary fiscal instruments applied to the sector. Mining revenues are estimated to have contracted sharply, falling to 0.5% of GDP in 2023 (compared with 0.8% of GDP in 2022). Volatile CIT receipts were the principal factor behind this decline.

Hydrocarbon revenues surged in 2022 in the context of elevated market volatility

Global energy markets were marked by significant volatility in 2022. Prices for oil and natural gas surged in the first half of the year due to Russia's invasion of Ukraine in February 2022 and the subsequent application of economic sanctions on the Russian Federation by the European Union and the United States. In March, benchmark prices leapt for most energy products, including month-on-month increases of 56% for natural gas in Europe (or 592% year-on-year) and 21% for Brent crude oil (or 77% year-on-year). Prices remained high for the remainder of the first half of the year because of additional policy measures, constrained production (especially in OPEC+ countries) and a reordering of energy trade. Members of the European Union adopted a plan to reduce natural gas imports from the Russian Federation by two-thirds by the end of 2023. Additionally, in March, the United States banned imports of Russian oil, liquified natural gas (LNG), and coal.

Trends in energy prices largely decoupled in the second half of the year. Natural gas prices were highly volatile; in Europe, prices reached an all-time high of USD 70 per million British thermal units (MMBtu) in August due to large European purchases of LNG in global markets and the Russian Federation’s cut in supply to some European countries. However, prices subsequently trended lower as gas inventories in Europe filled ahead of schedule and industrial and residential demand declined. By December, the price of natural gas in Europe was down 49% from its high in August and down 5% from a year prior. In contrast, oil prices slid as markets priced in the impact of higher crude oil production, increasingly restrictive monetary policy and slowing global growth. The spot price of Brent in December was 33% below its peak in June but 9% over the price at the end of 2021. Despite its weak second half performance, the average annual price of Brent was up 41.7% for the year.

Latin America and the Caribbean (LAC) experienced a strong increase in hydrocarbon production and exports in 2022. The region produced 7.9 million barrels per day, up 7.6% from the previous year but still well below the high of 9.6 million barrels per day in 2014 (Table 2.1). Production in Brazil reached an all-time high during the year and crude oil output in Mexico hit its highest level since 2018. Oil output continued to ramp up in Guyana as an additional floating production storage and offloading unit, the Liza Unity, entered operation (Bank of Guyana, 2023[1]). Sizeable increases in production were also seen in Argentina – especially from the Vaca Muerte shale formation – and in the Bolivarian Republic of Venezuela. The rise in crude oil exports was largely driven by Brazil, Colombia and Guyana.

Natural gas production also increased in 2022, although the trend was not generalised across the region. In Argentina, natural gas output rose 7%, reflecting strong production in the Vaca Muerta shale gas field. Exports from Argentina, largely to Chile, also grew strongly. Trinidad and Tobago also experienced a rise in production (marking a modest rebound after contracting sharply in 2020 and 2021) and a significant increase in exports. Peru experienced a similar dynamic, with higher exports due to a base effect; the Melchorita natural gas liquefaction plant temporarily closed during the months of May, July and August 2021 (Banco Central de Reserva del Perú, 2023[2]). In the Plurinational State of Bolivia, production continued to trend lower as existing fields are depleted. Export volumes also decreased due to lower demand in Argentina and Brazil.

Table 2.1. Latin America and the Caribbean and selected country groupings: Crude oil and natural gas production and exports, 2021-2022

Thousand barrels daily, billion standard cubic metres and percentages

Selected country groupings and countries	Crude oil (thousand barrels daily)						Dry natural gas (billion standard cubic meters)					
	Production			Exports			Production			Exports		
	2021	2022	%	2021	2022	%	2021	2022	%	2021	2022	%
Latin America and the Caribbean	7301	7858	7.6	3829	4072	6.3	178	183	2.6	27	30	11.3
Argentina	508	583	14.8	…	…	…	40	43	7.1	1	3	290.5
Bolivia	31	28	-10.9	…	…	…	15	14	-9.5	12	10	-15.4
Brazil	2905	3022	4.0	1292	1346	4.2	24	23	-5.5	…	…	…
Colombia	736	754	2.4	422	487	15.4	1	1	0.0	…	…	…
Ecuador	473	481	1.7	316	313	-0.8	11	11	-1.2	…	…	…
Guatemala	7	7	-1.8	…	…	…	0	0	…	…	…	…
Guyana	117	290	147.7	42	101	139.4	…	…	…	…	…	…
Mexico	1780	1843	3.6	1091	1012	-7.3	30	31	5.7	…	…	…
Peru	38	41	5.6	…	…	…	12	12	1.5	4	5	22.5
Trinidad and Tobago	60	58	-2.4	61	54	-11.9	26	27	4.1	9	11	15.7
Venezuela	595	704	18.3	448	438	-2.2	16	18	11	…	…	…
Other LAC	51	49	-4.5	156	320	105.1	2	2	0.0	…	…	…
Total World	77 214	80 833	4.7	40 794	43 477	6.6	4 083	4 108	0.6	1 286	1 288	0.1
OPEC	27 190	29 556	8.7	19 656	21 389	8.8	640	649	1.4	110	103	-5.9
Saudi Arabia	9 313	10 644	14.3	6 227	7 364	18.2	116	122	5.4	…	…	…
Non-OPEC	50 025	51 277	2.5	21 138	22 088	4.5	3 443	3 459	0.5	1 177	1 185	0.7
Russian Federation	10 112	10 314	2.0	4 510	4 780	6.0	702	618	-11.9	251	176	-29.8
United States	11 268	11 911	5.7	2 963	3 604	21.6	978	1 029	5.3	188	195	3.8

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from the U.S. Energy Information Administration (EIA) and Annual Statistical Bulletin 2023, Organization of the Petroleum Exporting Countries (OPEC).

Against this backdrop, hydrocarbon revenues in the LAC region registered a marked increase in 2022. Total fiscal revenues from oil and gas exploration and production – upstream activities – reached USD 115.5 billion for the year, roughly double the 2021 level of USD 58.4 billion (Table 2.2). Relative to GDP, revenues reached an average of 4.4% of GDP (compared with 2.6% of GDP in 2021), bolstered by an exceptionally strong increase in Trinidad and Tobago (+6.9 percentage points of GDP year-on-year). Non-tax revenues, principally related to royalties and other related payments associated with the commercial value of production, reached 3.5% of GDP (compared to 2.3% of GDP in 2021) with significant increases in most countries, especially in Guyana. Tax revenues also registered significant dynamism, especially in Trinidad and Tobago.

Table 2.2. Latin America and the Caribbean (10 countries): General government fiscal revenues from oil and gas exploration and production, by type of revenue, 2021-2022

Percent of GDP, percentage points of GDP and percentages

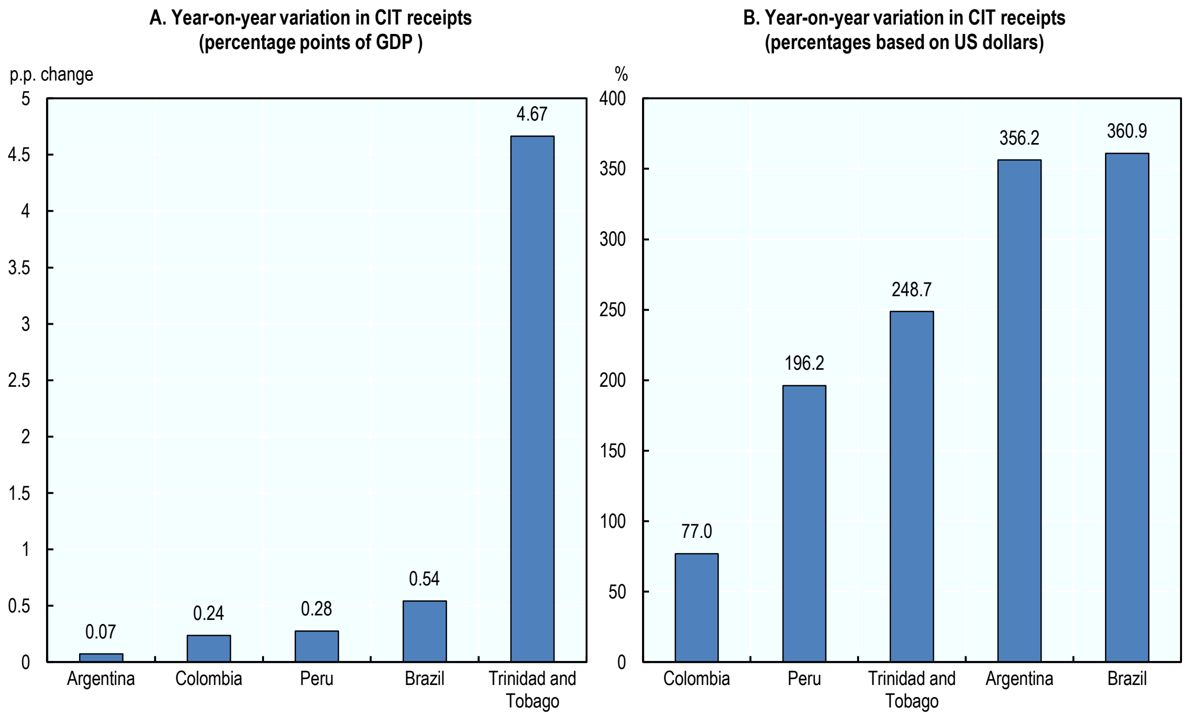
Country	Billions of US dollars			Percentage of GDP								
	Total revenues			Total revenues			Tax revenues			Non-tax revenues		
	2021	2022	2022/2021 (%)	2021	2022	2022/2021 (p.p. of GDP)	2021	2022	2022/2021 (p.p. of GDP)	2021	2022	2022/2021 (p.p. of GDP)
Argentina	2.2	3.4	55	0.4	0.5	0.1	0.05	0.12	0.1	0.4	0.4	0.0
Bolivia (Plur. State of)	1.3	1.7	30	3.2	3.8	0.6	0.1	0.1	0.0	3.1	3.7	0.6
Brazil	21.4	50.0	134	1.3	2.6	1.3	0.18	0.73	0.5	1.1	1.9	0.8
Colombia	3.5	9.4	172	1.1	2.7	1.7	0.4	0.6	0.2	0.7	2.1	1.4
Ecuador	8.7	11.2	29	8.2	9.8	1.6	…	…	…	8.2	9.8	1.6
Guatemala	0.04	0.06	44	0.05	0.06	0.01	0.02	0.02	-0.003	0.03	0.04	0.02
Guyana	0.4	1.4	245	5.3	9.7	4.4	…	…	…	5.3	9.7	4.4
Mexico	18.3	32.2	75	1.4	2.2	0.8	0.03	0.04	0.01	1.4	2.2	0.8
Peru	1.6	2.9	82	0.7	1.2	0.5	0.2	0.4	0.3	0.5	0.8	0.2
Trinidad and Tobago	1.0	3.2	216	4.4	11.3	6.9	2.6	7.2	4.7	1.8	4.0	2.2
LAC	58.4	115.5	98	2.6	4.4	1.8	0.4	0.9	0.6	2.3	3.5	1.2

Note: Revenue-to-GDP ratios for Latin America and the Caribbean correspond to a simple average of the countries included in the sample. Figures may not sum due to rounding. Data for Mexico correspond to federal government oil revenue; they exclude own revenues of Pemex, the State-owned oil and gas producer. Data for Ecuador correspond to oil revenues of the non-financial public sector derived from exports of crude oil. Data for Guyana refer to revenues deposited in the Natural Resource Fund.
Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from ECLAC's Fiscal Revenues from Non-Renewable Natural Resources in Latin America and the Caribbean database.

Hydrocarbon tax revenues were buoyed by a dramatic increase in CIT payments during 2022. Compared with 2021, CIT receipts more than doubled in US dollar terms for several countries in the region (Figure 2.1). Higher production and favourable price dynamics improved profitability and led to greater advance tax payments for fiscal year 2022. Operating income at Ecopetrol rose significantly in US dollar terms (+79%) (Ecopetrol, 2023[3]). Likewise, operating income at Petrobras rose 52% in US dollar terms, building on a 274% increase in 2021 (Petrobras, 2022[4]; Petrobras, 2023[5]). Strong profits in 2021 also led to an increase in payments for annual tax filings made in 2022, as estimated tax payments paid during fiscal year 2021 fell short of year-end tax liabilities.

Figure 2.1. Latin America and the Caribbean (5 countries): Year-on-year variation in general government CIT receipts from oil and gas exploration and production, 2021-2022

Percentage points of GDP and percentages based on US dollars



Note: Data for Mexico correspond to federal government oil revenue, they exclude own revenues of Pemex, the State-owned oil and gas producer.
Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from ECLAC's Fiscal Revenues from Non-Renewable Natural Resources in Latin America and the Caribbean database.

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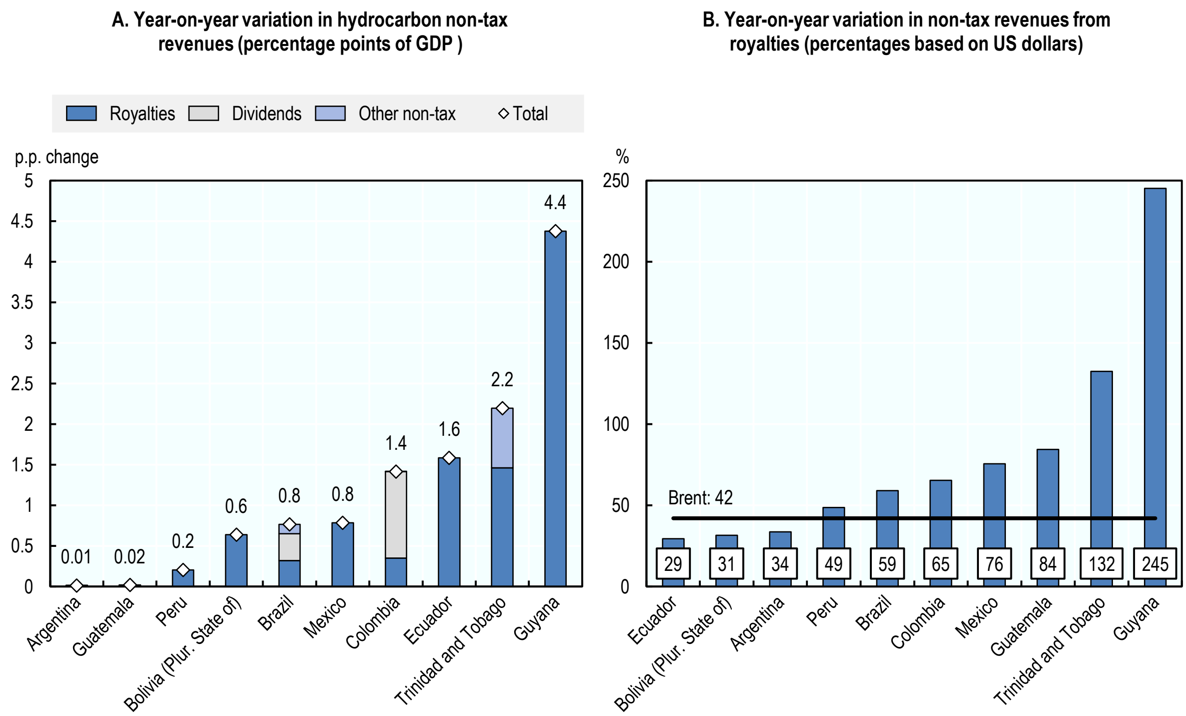
Non-tax hydrocarbon revenues, which make up the bulk of oil and gas revenues in most countries, also grew strongly. Payments of royalties and other participations in the commercial value of production surged in US dollar terms, and in some countries exceeded the increase in the annual average spot price of Brent (Figure 2.2).

This dynamic was particularly apparent in Guyana and Trinidad and Tobago. In Guyana, oil output continues to expand rapidly; the principal driver of higher revenues was production as new fields are being brought online. Higher hydrocarbon production was also a determining factor of strong revenue growth for Brazil, Mexico and Peru. In Colombia, the strong outturn also reflected a more than tripling of the payments for the government's participation in production, which is determined by the price of Western Texas Intermediate and thresholds specified in the contracts with producers (ANH, 2023[6]). In contrast to other countries, the impulse to royalties in Trinidad and Tobago was purely from prices as hydrocarbon production largely slipped during the year.

Figure 2.2. Latin America and the Caribbean (10 countries): Year-on-year variation in general government non-tax revenues from oil and gas exploration and production, 2021-2022

Percentage points of GDP and percentages based on US dollars



Note: Data for Mexico correspond to federal government oil revenue, they exclude own revenues of Pemex, the State-owned oil and gas producer. Data for Ecuador correspond to oil revenues of the non-financial public sector derived from exports of crude oil. Data for Guyana refers to revenues deposited in the Natural Resource Fund.
Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from ECLAC's Fiscal Revenues from Non-Renewable Natural Resources in Latin America and the Caribbean database.

StatLink https://stat.link/6cyame

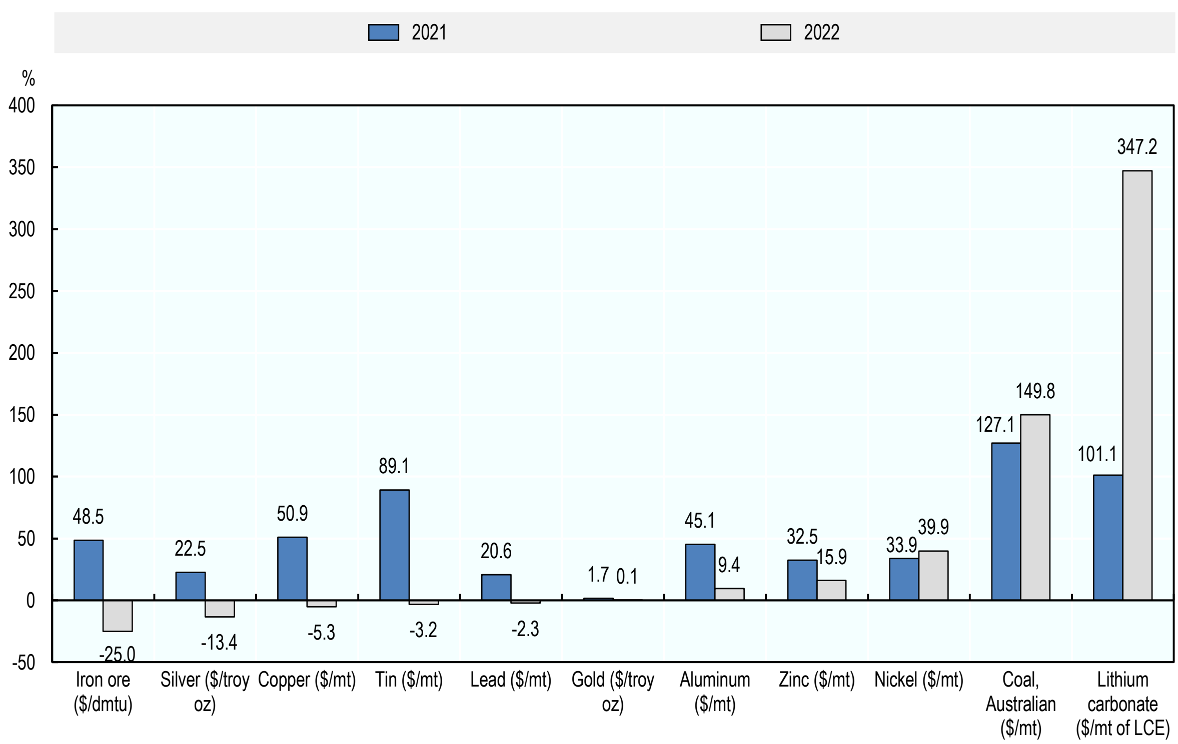
Other non-tax revenues were also significant in some countries. In Brazil, dividend payments by Petrobras to the federal government reached 0.6% of GDP (compared with 0.2% of GDP in 2021). This was complemented by an additional 0.1% of GDP in signing bonuses from the second transfer-of-rights production sharing auction that was held in December 2021 (Tesouro Nacional, 2023[7]). In Colombia, dividend payments by Ecopetrol to the Treasury reached 1.1% of GDP, compared with less than 0.1% of GDP in 2021, reflecting high profits during the previous year and the issuance of an extraordinary dividend paid in June (Ecopetrol, 2023[3]; Ministerio de Hacienda y Crédito Público de Colombia, 2023[8]). In the case of Trinidad and Tobago, the country received extraordinary payments, equivalent to 0.9% of GDP, within the framework of an agreement between the country and major producers, such as British Petroleum (BP) and Royal Dutch Shell, to settle past obligations (Central Bank of Trinidad and Tobago, 2023[9]).

Mining revenues rose modestly in 2022 amidst weakening prices and lower production volumes

Markets for metals and minerals in 2022 were buffeted by the war in Ukraine and rising uncertainty about global economic conditions. During the first half of the year, prices for many metals and minerals continued their upwards momentum, building on the sharp increase experienced in 2021 as economic activity rebounded. However, this rally was cut short as industrial production slowed and market participants became increasingly wary of the deterioration of global macroeconomic fundamentals. Markets were significantly impacted by COVID-19 lockdowns in China, which disrupted domestic industrial production, as well as the downturn in the real estate market. Prices for most industrial metals and minerals ended the year in negative territory (Figure 2.3). While prices for iron ore fell (-25%) they experienced a high level of volatility during the year, reaching a high in March as a response to the invasion of Ukraine – one of the largest exporters of the mineral – before sliding as residential construction and steel production declined in China.

Figure 2.3. Year-on-year variation of international spot prices for selected minerals and metals, 2021-2022

Percentage



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on World Bank Commodity Price Data (The Pink Sheet), World Bank, and Ministerio de Economía de la Argentina.

StatLink https://stat.link/xrlvp2

However, market dynamics also drove prices up for some metals and minerals during the year. The surge in natural gas prices, which was further fueled by the war in Ukraine and the subsequent economic sanctions imposed on the Russian Federation, prompted coal prices to more than double. Spot prices for

Australian coal peaked at a record high of USD 431 per metric ton in September before trending lower in the fourth quarter of the year. Prices for nickel also posted continued strength mainly due to lower supply caused by disruptions in production in the Russian Federation and higher demand as traders made large purchases to cover short positions (LME, 2023[10]). Strong lithium demand for battery production and tight supply gave rise to a quadrupling in prices.

Mineral output in Latin America and the Caribbean generally trended lower in 2022 (Table 2.3). Copper production in Chile, the world's largest producer, contracted 5.2%, driven in large part by a 10.4% decline in output at Codelco because of lower ore grades and the depletion of existing mines (Codelco, 2023[11]). In contrast, production of copper expanded in Peru largely due to the initiation of production at the Quellaveco mine and increased output at the Cerro Verde mine, which compensated for lower production at other mines due to social conflicts (Banco Central de Reserva del Perú, 2023[2]).

Production of other industrial metals such as zinc, lead and tin also declined in most countries. Iron ore output also contracted, largely due to disruptions to production in Brazil caused by heavy rainfall (Vale, 2023[12]). Silver output contracted significantly among the largest producers, particularly in Mexico and Peru. Gold production also fell, but higher output in Mexico and the Plurinational State of Bolivia partially offset the decline.

Table 2.3. Latin America and the Caribbean (11 countries): Mine production, by country and product, 2021-2022

Thousands of metric tons and percentages

Metals and minerales	Year and percent age change	Price	Production in thousands of metric tons unless otherwise specified											
			LAC-11	Argentina	Bolivia	Brazil	Chile	Colombia	Dominican Republic	Ecuador	Jamaica	Mexico	Nicaragua	Peru
Copper	2021	6 174	9 584		3	1 153	5 625		5			473		2 326
	2022	9 317	9 295		4	1 024	5 330		5			486		2 445
	% variation	50.9	-3.0			-11.1	-5.2					2.8		5.1
Zinc	2021	2 266	2 854		500	426						395		1 533
	2022	3 003	2 626		518	418						319		1 370
	% variation	32.5	-8.0		3.8	-1.9						-19.1		-10.7
Lead	2021	1 825	540		93							182		264
	2022	2 200	488		90							143		255
	% variation	20.6	-9.6		-3.4							-21.7		-3.4
Tin	2021	17 125	65		20	18								27
	2022	32 384	59		18	13								28
	% variation	89.1	-8.6		-10.7	-25.9								4.6
Níckel	2021	13 787	408			342		38	28					
	2022	18 465	432			361		42	29					
	% variation	33.9	5.7			5.4		9.2	5.0					
Iron ore	2021	109	442 892			423 185		750				6 807		12 149

	2022	162	423 259			403 025		497				6 800		12 937
	% variation	48.5	-4.4			-4.8		-33.7				-0.1		6.5
Coal	2021	61	65 460					60 747				4 569		145
	2022	138	67 696					62 872				4 633		192
	% variation	127.1	3.4					3.5				1.4		
Bauxite / alumina	2021	1 704	39 386			33 365			72		5 950			
	2022	2 473	36 711			31 608			104		4 999			
	% variation	45.1	-6.8			-5.3			45.6		-16.0			
Lithium	2021	1 770	36	6		2	28							
	2022	1 800	47	6		2	39							
	% variation	1.7	32.3	6.9		29.4	37.8							
Gold (metric tons)	2021	1 770	480	35	46	82	34	55	25	13		81	11	97
	2022	1 800	475	35	53	77	31	49	22	15		83	11	97
	% variation	1.7	-1.0	0.0	16.8	-6.2	-9.6	-10.9	-12.4	19.8		3.1	5.7	-0.8
Silver (metric tons)	2021	21	11 141	824	1 292		1 383	27	80	2		4 176	23	3 334
	2022	25	10 199	551	1 219		1 274	34	73	2		3 941	22	3 083
	% variation	22.5	-8.5	-33.2	-5.7		-7.9	26.5	-7.9	-10.8		-5.6	-6.5	-7.5

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Instituto Nacional de Estadísticas del Estado Plurinacional de Bolivia; Agência Nacional de Mineração do Brasil; Comisión Chilena de Cobre (Cochilco); Agencia Nacional de Minería de Colombia; Oficina Nacional de Estadística de la República Dominicana; Banco Central del Ecuador; Instituto Nacional de Estadística y Geografía de México; Banco Central de Nicaragua, Instituto Nacional de Estadística e Informática de Perú; Energy Institute; and, United States Geological Survey, Mineral Commodities Summaries: Bauxite and Alumina, 2024.

A defining feature of metals and minerals production in the region for 2022 was the solid growth in lithium output. Argentina, Brazil, and Chile accounted for 36% of global lithium production during the year and an estimated 53% of reserves (Energy Institute, 2023[13]). However, among these countries, only Chile currently stands out as a major producer, representing 30% of global output alone. Lithium output in Chile was propelled in 2022 by a 50% increase in production capacity by SQM, the country's principal producer (SQM, 2023[14]). Production in Argentina is also ramping up, with six projects under construction in 2022 and a large number under consideration[1]. In contrast, lithium carbonate output in the Plurinational State of Bolivia remains limited, despite having potentially the largest reserves of lithium in the world (Ministerio de Minería y Metalurgia de Bolivia, 2023[15]; USGS, 2024[16]).

Despite the softening of international prices and generally lower production levels, fiscal revenues from mining rose in the LAC region in 2022. Total mining revenues reached USD 30.4 billion (up 11% from the 2021 level of USD 27.4 billion) (Table 2.4). However, this increase was largely due to the exceptional outturn in Colombia, which was bolstered by high coal prices and rising production. In relative terms, mining revenues averaged 0.75% of GDP (up from 0.67% of GDP in 2021). Mining tax revenues remained dominant, averaging 0.47% of GDP (compared to 0.42% of GDP in 2021) propelled by increases in Colombia, Peru and the Plurinational State of Bolivia. Non-tax revenues, largely payments of royalties tied to the commercial value of production, were impacted by price and production dynamics in some countries. However, the regional average benefitted from a surge in lithium payments in Chile and greater coal royalties in Colombia.

Table 2.4. Latin America and the Caribbean (12 countries): General government revenues from mining, 2021-2022

Billions of US dollars, percentage, percentage of GDP and percentage points of GDP

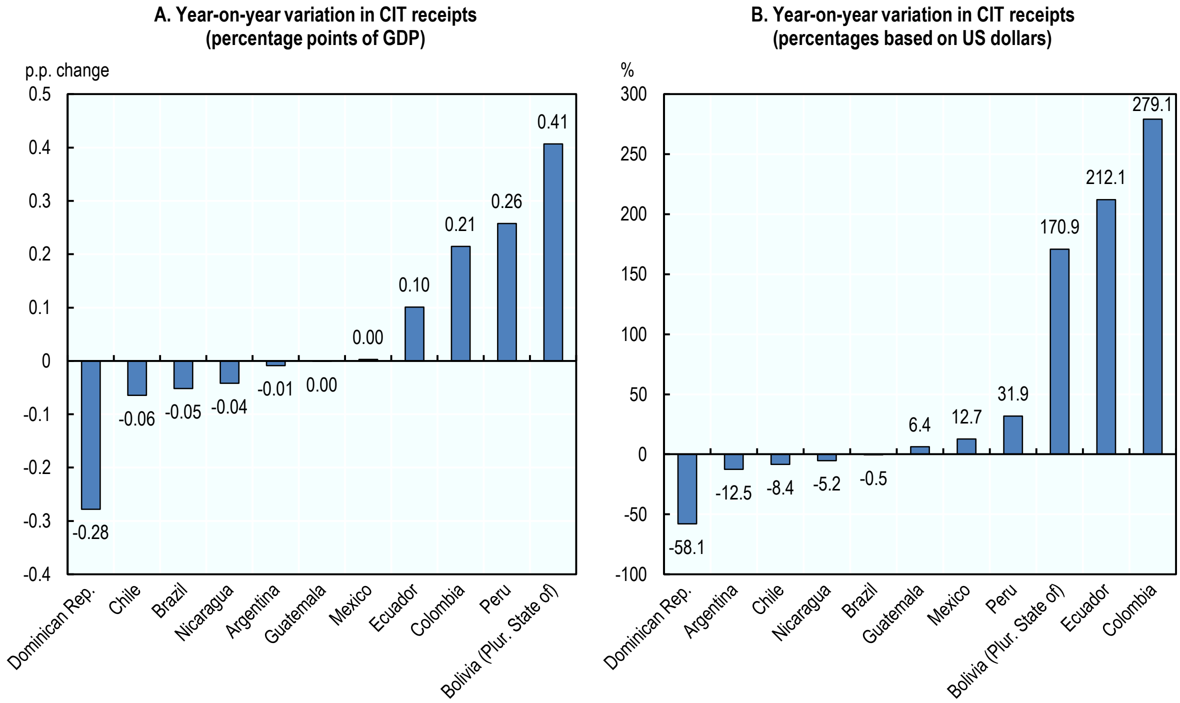
Country	Billions of US dollars			Percentage of GDP								
	Total revenues			Total revenues			Tax revenues			Non-tax revenues		
	2021	2022	2022/2021 (%)	2021	2022	2022/2021 (p.p. of GDP)	2021	2022	2022/2021 (p.p. of GDP)	2021	2022	2022/2021 (p.p. of GDP)
Argentina	0.3	0.3	-4	0.05	0.04	-0.01	0.04	0.03	-0.01	0.02	0.01	0.00
Bolivia	0.4	0.6	53	0.90	1.27	0.37	0.28	0.69	0.41	0.62	0.58	-0.04
Brazil	8.0	7.7	-3	0.48	0.40	-0.08	0.36	0.30	-0.05	0.13	0.10	-0.03
Chile	9.5	9.8	3	3.01	3.25	0.24	1.85	1.79	-0.06	1.16	1.47	0.31
Colombia	1.0	2.9	206	0.30	0.85	0.55	0.09	0.30	0.21	0.21	0.54	0.33
Ecuador	0.1	0.4	190	0.12	0.33	0.21	0.07	0.17	0.10	0.05	0.16	0.11
Guatemala	0.03	0.03	1	0.03	0.03	0.00	0.02	0.02	-0.001	0.006	0.005	0.00
Jamaica	0.02	0.01	-34	0.14	0.08	-0.06	0.00	0.00	0.000	0.14	0.08	-0.06
Mexico	3.8	4.2	13	0.29	0.29	0.00	0.29	0.29	0.002	…	…	…
Nicaragua	0.1	0.1	13	0.57	0.58	0.01	0.40	0.42	0.02	0.17	0.17	0.00
Peru	3.8	4.3	13	1.66	1.74	0.08	1.23	1.48	0.25	0.43	0.26	-0.17
Dominican Republic	0.5	0.2	-65	0.54	0.15	-0.38	0.43	0.15	-0.28	0.11	0.01	-0.10
LAC	27.4	30.4	11	0.67	0.75	0.08	0.42	0.47	0.05	0.25	0.28	0.03

Note: Revenue-to-GDP ratios for Latin America and the Caribbean corresponds to a simple average of the countries included in the sample. Figures may not sum due to rounding. In the case of Chile, lithium revenues refer to property rents received by the central government from the participation of the State in lithium sales as established in contracts with SQM Salar S.A. and Albemarle Ltda.
Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from ECLAC's Fiscal Revenues from Non-Renewable Natural Resources in Latin America and the Caribbean database.

The regional increase in tax revenues was driven by higher CIT payments in Colombia, Ecuador, Peru and the Plurinational State of Bolivia (Figure 2.4). The increase in the Plurinational State of Bolivia reflected large annual tax filing payments as profits in the sector rose sharply in 2021 due to surging prices for tin and zinc. Minera San Cristóbal, the principal private zinc mining company in the country, registered its highest profits since 2017 in 2021, a marked improvement over the financial loss reported in 2020 (Minera San Cristóbal, 2023[17]). Payments for annual tax filings also boosted CIT receipts in Peru, especially in the first half of the year. Income tax payments in 2022 for the annual tax filing season for fiscal year 2021 reached an all-time high in the country, with the mining sector representing 43% of the total[2]. However, CIT revenues from the sector for the year rose less dramatically, due largely to the high base of comparison with the 4th quarter of 2021, when mining companies made substantial extraordinary payments to address outstanding tax liabilities (Ministerio de Economía y Finanzas del Perú, 2023[18]). In Colombia, there was a similar uptick in CIT receipts for the annual tax campaign, reflecting both higher profits from the dramatic increase in the price of coal as well as advance payments for fiscal year 2022.

Figure 2.4. Latin America and the Caribbean (11 countries): Year-on-year variation in general government CIT receipts from mining, 2021-2022

Percentage points of GDP and percentages based on US dollars



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from ECLAC's Fiscal Revenues from Non-Renewable Natural Resources in Latin America and the Caribbean database.

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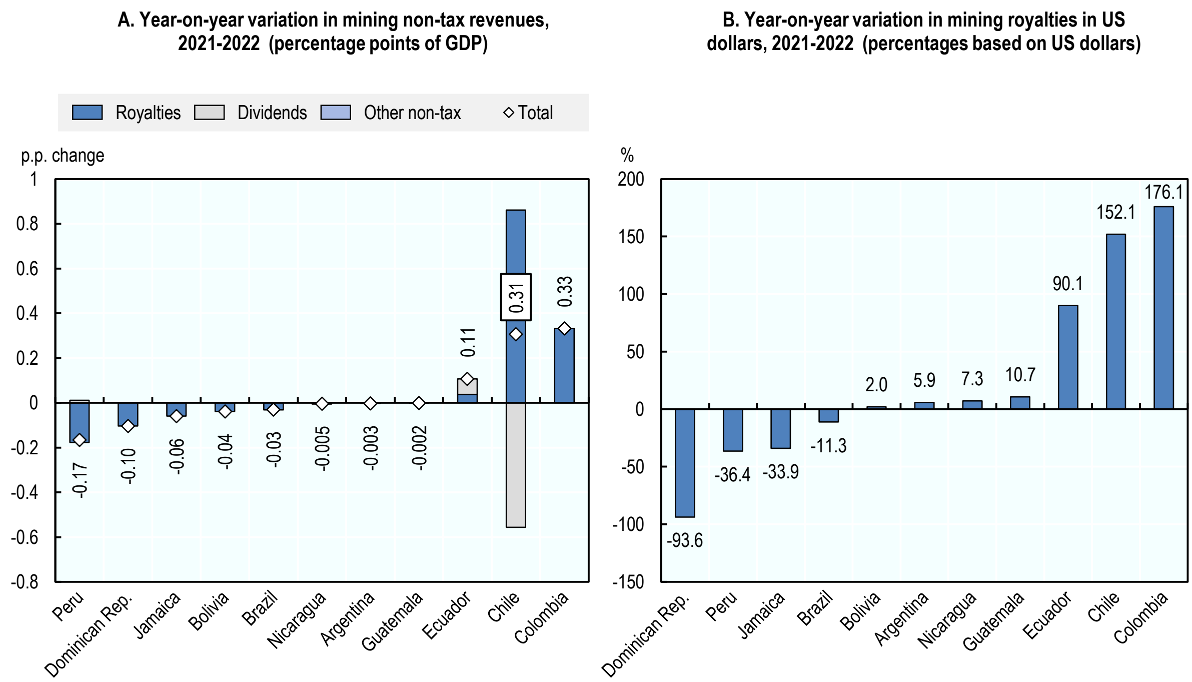
Non-tax revenues from mining in 2022 were impacted by weakening prices and, in some cases, lower production (Figure 2.5). In Brazil, payments of the federal royalty as well as state-level payments based on the commercial value of production dipped as iron ore prices fell over the year. Likewise, royalty receipts in Peru slipped, but this was also influenced by extraordinary payments in 2021 to liquidate outstanding liabilities by two major mining companies. While price and production influenced royalty payments, declines in some countries were the result of one-off events. In the Dominican Republic, receipts were impacted by prepayments made by Barrick Gold for the years 2021-2023 during 2020 to support COVID-19 relief efforts in the country[3]. Payments of the bauxite levy in Jamaica declined due to a major fire that led to the closure of the Jamalco alumina refinery in August 2021 (Ministry of Finance and the Public Service of Jamaica, 2023[19]). Limited production commenced in August 2022 with the intention to reach regular levels by the end of 2023.

Figure 2.5. Latin America and the Caribbean (11 countries): Year-on-year variation in general government mining non-tax revenues, 2021-2022

Percentage points of GDP and percentages based on US dollars



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from ECLAC's Fiscal Revenues from Non-Renewable Natural Resources in Latin America and the Caribbean database.

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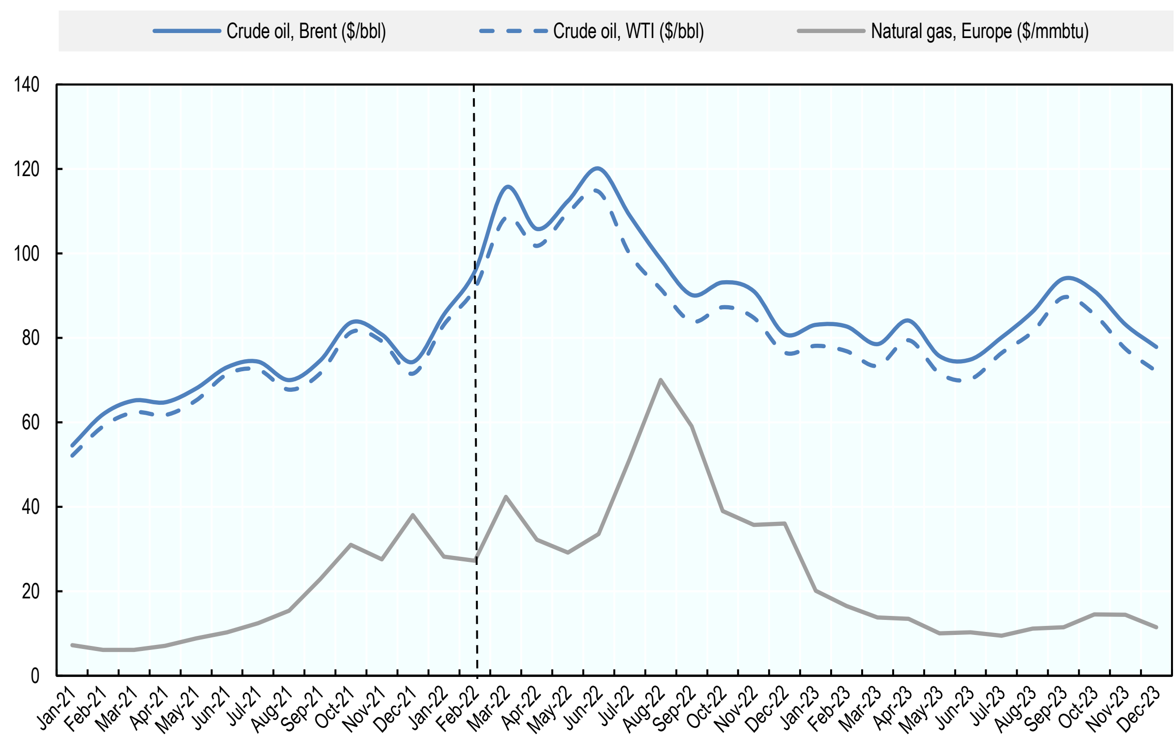
In contrast, non-tax revenues rose strongly in Chile, Colombia and Ecuador in 2022. In Chile, the year-on-year increase was the result of the interplay between falling copper-related revenues and a dramatic upswing in lithium-related payments to the central government. Falling copper prices led to lower receipts of the special contribution paid by Codelco on the USD value of its exports[4]. Additionally, payments of dividends by Codelco to the Treasury fell sharply to 0.1% of GDP (compared with 0.6% of GDP in 2021) (Codelco, 2023[20]). However, these losses were more than compensated by the State's participation in the sales of lithium products by SQM Salar S.A. and Albemarle Limitada, which generated revenues equivalent to 1% of GDP (DIPRES, 2023[21]). In Colombia, royalties associated with coal mining continued to expand significantly in line with the strong growth in prices and an uptick in production. Higher gold production and exports in Ecuador drove royalty payments higher. This was complemented by profit-sharing payments made by mining concessionaires to the Treasury that were equivalent to 0.1% of GDP.

Uncertainty and price volatility strongly impacted fiscal revenues from non-renewable natural resources in the LAC region during 2023

Increasing uncertainty about macroeconomic trends in a high interest rate environment weighed on energy markets during early 2023. Industrial production in advanced economies slowed sharply and even contracted in some European countries, particularly Germany. Economic output also proved sluggish in China; growth in the second quarter significantly undershot market expectations. Against this backdrop, prices in June for Brent and Western Texas Intermediate declined 38% and 39% year-on-year, respectively, while spot prices for natural gas in Europe contracted sharply (-69%) (Figure 2.6).

Figure 2.6. International spot prices for selected energy commodities, January 2021 – December 2023

US dollars per barrel and US dollars per million BTUs



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on World Bank Commodity Price Data [online] https://www.worldbank.org/en/research/commodity-markets.

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Price dynamics during the first half of the year were also shaped by persistent oversupply conditions. Although consumption rebounded strongly, production continued to outpace demand. In response to this situation, several members of the Organization of Petroleum Exporting Countries and allied countries (OPEC+) announced voluntary production cuts of 1.66 million barrels per day between May and the end of the year[5]. In July, Saudi Arabia announced an additional voluntary cut of 1 million barrels per day; the Russian Federation also committed to a reduction in its oil exports.

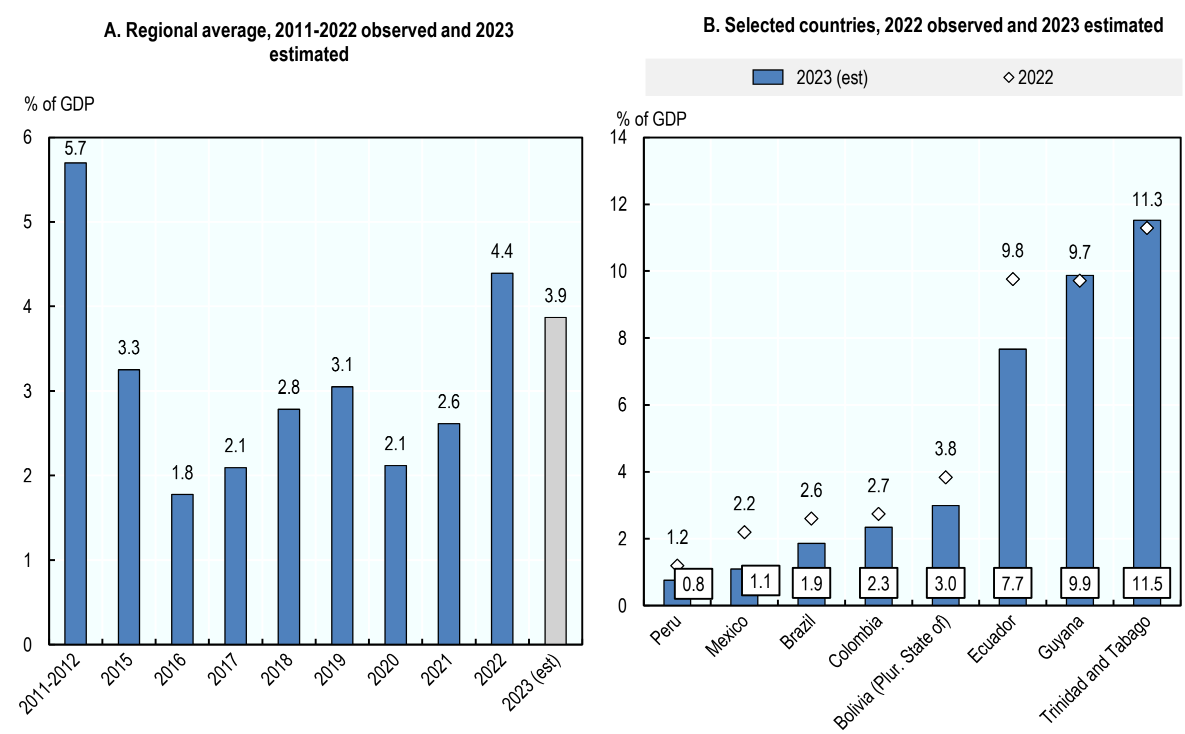
Global oil markets exhibited significant volatility in the second half of 2023. Economic activity in the United States surpassed expectations during the third quarter. Likewise, consumption in China rose sharply, propelled by a large increase in petrochemical output and a rebound in transportation after lifting COVID-19 restrictions in 2022. Oil prices rallied in the third quarter reflecting changing market sentiment; Brent reached USD 94 per barrel in September, compared to USD 74.89 in June (+26%). However, these gains were largely reversed by year's end as production in the United States and Brazil reached record levels and production in the Islamic Republic of Iran hit a five-year high (IEA, 2023[22]).

The escalation of the conflict between Israel and Hamas after the 7 October attacks intensified uncertainty in global markets in the fourth quarter of the year. While international oil prices continued to trend lower, natural gas prices in Europe increased. Natural gas prices on the continent were significantly impacted by the shutdown of a coastal gas field in Israel and an explosion of pipeline infrastructure in the Baltic Sea (World Bank, 2023[23]). Disruptions to tanker traffic in the Red Sea also exerted pressure on oil prices, but this proved to be transitory and was offset by slowing global oil demand and increased output in the fourth quarter of the year.

Hydrocarbon revenues in the LAC region fell in 2023 in line with market conditions. General government revenues from oil and gas exploration and production activities averaged an estimated 3.9% in 2023 (down from 4.4% of GDP in 2022) (Figure 2.7). Non-tax revenues from royalties and other participations in the commercial value of production, which make up the bulk of revenues in the region, declined in most countries due to the fall in oil prices. In Brazil, record production attenuated the fall in payments of royalties and special participations but could not offset the halving of dividends paid by Petrobras to the federal government. While oil output increased in Mexico, revenues in national currency tumbled due to the appreciation of the Mexican peso and the deferral to 2024 of Pemex's profit-sharing duty payments for the months of October and November.[6]

Figure 2.7. Latin America and the Caribbean (10 countries): General government revenues from oil and gas exploration and production, 2013 – 2023

Percentage of GDP



Note: 10 countries include Argentina, Bolivia (Plurinational State of), Brazil, Colombia, Ecuador, Guatemala, Guyana, Mexico, Peru, and Trinidad and Tobago. Data for Mexico correspond to federal government oil revenue, they exclude own revenues of Pemex, the State-owned oil and gas producer. In Ecuador to oil revenues of the non-financial public sector derived from exports of crude oil. In Guyana to revenues deposited in the Natural Resource Fund. Regional average refers to simple average. Figures for 2023 are based on official sources, forecasts and estimates based on the 2023 annual variation in representative products applied to revenues in 2022.
Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from ECLAC's Fiscal Revenues from Non-Renewable Natural Resources in Latin America and the Caribbean database.

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Lower production of oil and gas aggravated the impact of lower prices on non-tax revenues in some countries. A marginal reduction in oil output in Ecuador combined with the decline in the export price led to a sharp contraction in oil revenues as a share of GDP; being a dollarised economy, these price shocks are not buffered by movements in the exchange rate (Ministerio de Economía y Finanzas del Ecuador, 2024[24]). Although production of crude oil contracted significantly in Trinidad and Tobago, royalty revenue surged, in part due to production-sharing contract payments related to the previous year, when prices were high. In the Plurinational State of Bolivia, hydrocarbon revenues fell due to the progressive depletion of existing fields reducing natural gas production and declining demand lowering exports to Brazil (Banco Central de Bolivia, 2023[25]).

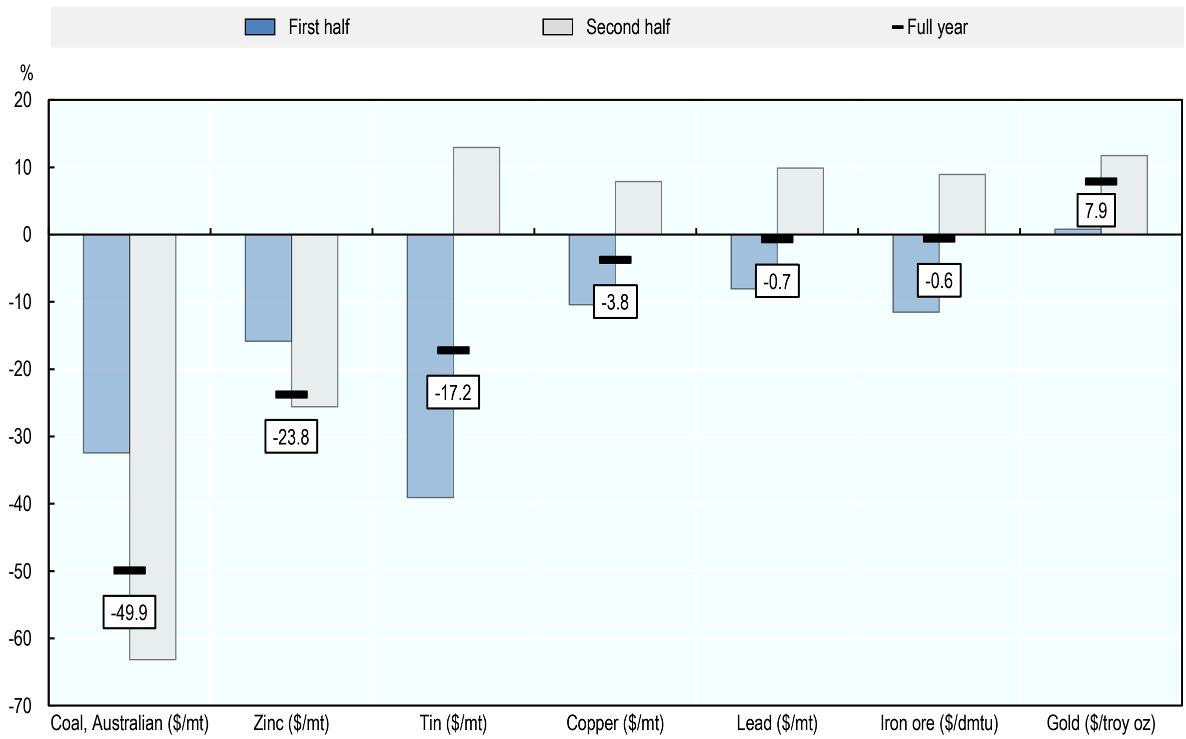
Hydrocarbon tax revenues generally trended lower in 2023 as the decline in international prices impacted profit margins. CIT receipts contracted in Brazil and Peru because of lower payments from annual tax declarations for fiscal year 2022 and a decline in estimated tax payments for fiscal year 2023 (Receita Federal, 2024[26]; Ministerio de Economía y Finanzas del Perú, 2024[27]). A similar dynamic occurred in Trinidad and Tobago, where CIT payments, which constitute a significant share of total revenues from oil, contracted sharply as price swings impacted profit margins. In contrast, CIT receipts in Colombia were robust in the face of lower prices due in large part to the structural tax reform approved in late 2022[7]. Most notably, the reform set the CIT rate to 35% and included several provisions specifically targeting the oil and gas sector. Hydrocarbon producers must now pay a CIT surcharge that ranges from 5 percentage points to 15 percentage points depending on the price level. Royalty payments are also no longer deductible from the CIT[8].

The factors that roiled energy markets in 2023 also affected global markets for minerals and metals. The deceleration of industrial production in advanced economies and weak residential construction in China prompted a significant correction in the prices of a wide range of minerals and metals during the first half of the year (Figure 2.8). However, prices rebounded in the second half of the year.

Imports of copper concentrates and refined copper in China grew strongly, supported by rising investments in the country's electricity sector, supporting a recovery in copper prices. Iron ore prices also recovered because year-end steel production caps in China, which reduced output in prior years, were not enforced. Gold prices also rallied in part due to the escalation of the conflict between Israel and Hamas after the 7 October attacks. In contrast, prices for thermal coal fell markedly because higher supply from Australia and Indonesia outpaced demand growth. Lithium prices, which surged in 2022, plummeted due to oversupply in the market.

Figure 2.8. Year-on-year variation of international spot prices for selected minerals and metals, 2022-2023

Percentage



Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on World Bank Commodity Price Data [online] https://www.worldbank.org/en/research/commodity-markets.

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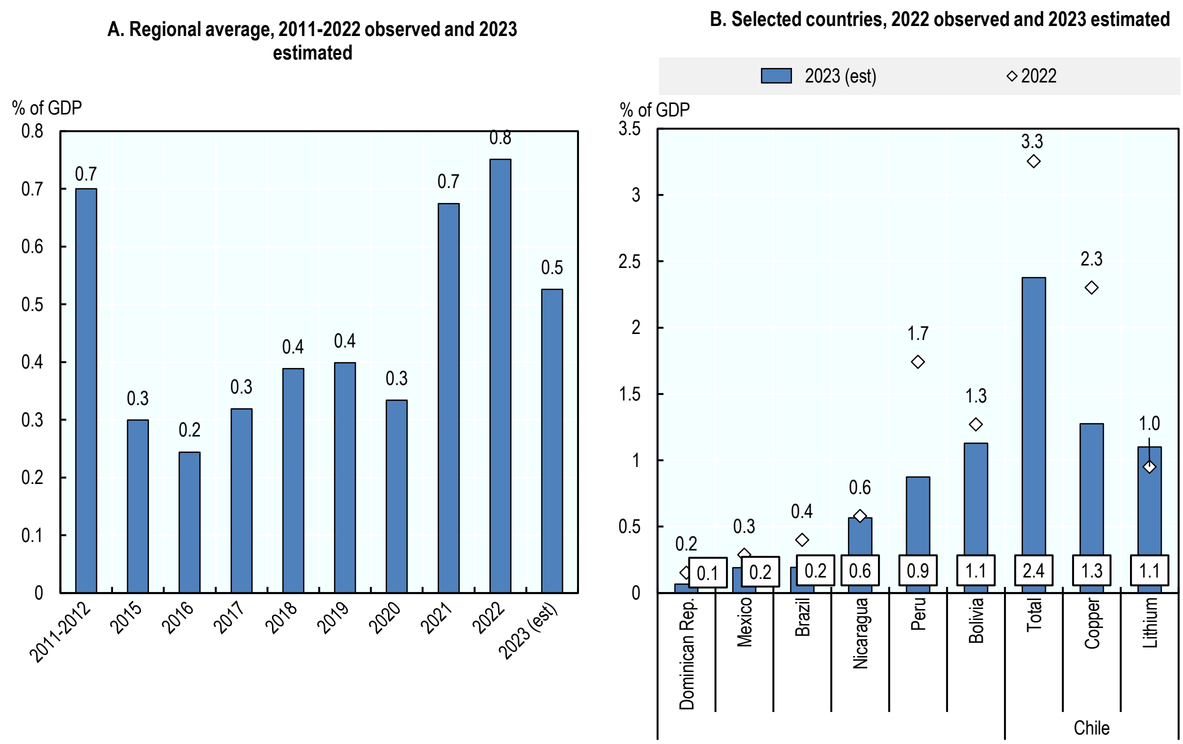
Fiscal revenues from mining in Latin America and the Caribbean were affected by trends in global markets and domestic production. Mining revenues are estimated to have fallen to 0.53% of GDP (compared to a high of 0.75% of GDP in 2022) (Figure 2.9). Lower prices dragged down non-tax revenues from royalties tied to the commercial value of production in most countries. However, lithium payments in Chile remained strong despite the decline in prices. The principal driver of lower mining revenues was a collapse in CIT payments in Brazil, Chile and Peru. Advance CIT payments made in 2022 were higher than year-end tax liabilities in some cases, leading to a significant decline in annual tax payments made in 2023 (DIPRES, 2024[28]; Receita Federal, 2024[26]). Advance tax payments in 2023 were lower as taxpayers made use of 2022 overpayments to cover their estimated liabilities (Ministerio de Economía y Finanzas del Perú, 2024[27]).

Figure 2.9. Latin America and the Caribbean (12 countries): General government fiscal revenues from mining, 2011-2023

Percentage of GDP



Note: 12 countries include Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Dominican Republic, Ecuador, Guatemala, Jamaica, Mexico, Nicaragua, and Peru. In the case of Chile, lithium revenues refer to property rents received by the central government from the participation of the State in lithium sales as established in contracts with SQM Salar S.A. and Albemarle Ltda. Regional average refers to simple average. Figures for 2023 are based on official sources, forecasts and estimates based on the 2023 annual variation in representative products applied to revenues in 2022.
Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on data from ECLAC's Fiscal Revenues from Non-Renewable Natural Resources in Latin America and the Caribbean database.

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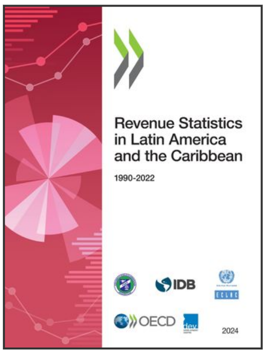

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