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Recent developments, challenges and opportunities in commodity markets*

Summary

Recent developments and trends in key commodity markets are examined in this background note, analysing the factors influencing commodity prices, production and trade in 2023 and the first quarter of 2024. In recent years, the dynamics of commodity markets have experienced significant transformations that present both challenges and opportunities for commodity-dependent developing countries. Geopolitical and trade tensions and political instability have further exacerbated market volatility, impacting commodity prices and supply chains. Several market movements are highlighted of specific commodities in the three main groups: food, minerals and energy. In general, 2023 saw decreasing trends in prices of fuel (such as oil and gas), minerals critical for the energy transition (such as cobalt, lithium and nickel) and food, excluding tropical beverages, due to improvements in the global supply and lower demand. The war in Ukraine and the situation in the Middle East affected specific markets, such as precious metal prices, which increased due to geopolitical uncertainty. Two policy issues are also highlighted in this note, namely Regulation (EU) 2023/1115 on deforestation-free products (31 May 2023) of the European Union and the proliferation of trade access agreements related to critical energy transition minerals. Both of these policy issues have implications for commodity markets and commodity-dependent developing countries.

^{*} Mention of any firm or licensed process does not imply the endorsement of the United Nations.



Introduction

1. Paragraph 208 of the Accra Accord (TD/442) gives a mandate to the Trade and Development Board of the United Nations Conference on Trade and Development (UNCTAD) to establish a multi-year expert meeting on commodities and development. The mandate was reaffirmed in paragraph 17 of the Doha Mandate (TD/500/Add.1), extending it for the period between 2013 and 2016. The mandate was further extended to 2020, in paragraph 100 (s) of the Nairobi Maafikiano (TD/519/Add.2) and, more recently, reiterated in paragraphs 123 and 127 (l) of the Bridgetown Covenant (TD/541/Add.2).

2. In this note, commodity market developments during 2023 are analysed, with a focus on trade patterns, price trends and the causes of price fluctuations. Policy issues associated with agricultural commodities and critical minerals are also highlighted, particularly the new Regulation (EU) 2023/1115 on deforestation-free products (31 May 2023) of the European Union¹ and trade-related measures affecting critical energy transition mineral value chains. The commodities under analysis are categorized into three main groups: (a) food and beverage commodities; (b) minerals, ores and metals; and (c) energy sources.

I. Recent developments in commodity markets

A. Overview of price dynamics

3. The UNCTAD free market commodity price index for all commodity groups has been highly volatile in the past two years but has lately stabilized, although at levels higher than those prior to the coronavirus disease (COVID-19) pandemic. The index peaked at 235.6 points in August 2022, primarily propelled by supply disruptions and price hikes across commodities stemming from the war in Ukraine. However, the index shifted direction in September 2022, experiencing a decline to 147.6 points by June 2023 (figure 1). This downturn resulted from reduced demand spurred by concerns regarding a global economic recession. Between June and September 2023, the index saw a notable 12 per cent increase, attributed to a surge in fuel prices that resulted from supply cuts announced by the Organization of Petroleum Exporting Countries and allies, known as OPEC Plus. Still, this uptrend was followed by a subsequent decrease from September to December 2023. The index has since stabilized at around 150 points, in March 2024, reflecting the latest data available at the time of the preparation of this note.

¹ Available at https://environment.ec.europa.eu/topics/forests/deforestation/regulation-deforestationfree-products_en.



Figure 1 UNCTAD commodity price index

Source: UNCTAD, based on UNCTADstat database.

4. The UNCTAD food price index reached peaks in May 2022 and May 2023, reaching 138.7 and 135.9 points, respectively, but dropped to 123.9 points in December 2023 (figure 2). The war in Ukraine and weather conditions are among the factors contributing to these fluctuations.² Despite the non-renewal of the Black Sea Initiative, which expired on 17 July 2023 and was expected to put downward pressure on food prices,³ Ukraine has established a temporary shipping corridor across the western Black Sea, with the assistance of Bulgaria and Romania, improving the supply of grains.⁴

5. The UNCTAD tropical beverages index was volatile in the first three quarters of 2023, alternating between periods of rising and falling prices. After this period, the index started on an upward trajectory, rising from 118.3 to 159.5 points between October 2023 and March 2024 (figure 2). This reflects an increase of roughly 35 per cent, due to the significant rise in cocoa and coffee prices, which was caused in part by negative weather conditions, including the impact of the El Niño phenomenon (box 1).

6. The UNCTAD vegetable oilseed index experienced a decline throughout 2023, dropping from 155.9 to 134.4 between January and December 2023. This downward trend continued into the first quarter of 2024. A major contributing factor to this decline is the fall in soya bean prices, which account for 63 per cent of this index. According to Agricultural Market Information System (AMIS) data, global soya bean production increased from 378.3 million tons in 2022/2023, to 393.4 million tons in 2023/2024.⁵ This increase in supply has put downward pressure on soya bean prices, which, in turn, has impacted the overall vegetable oilseed index.

² World Bank, 2024a, Food security update, 29 February, available at

https://www.worldbank.org/en/topic/agriculture/brief/food-security-update/data-and-research.

³ See https://www.un.org/en/black-sea-grain-initiative.

⁴ Economist Intelligence Unit, 2024, Commodities outlook 2024: Resilient prices amid global headwinds, London.

⁵ See https://www.amis-outlook.org/home/en/ (accessed 31 May 2024).



Source: UNCTAD, based on UNCTADstat database.

7. The UNCTAD minerals, ores and non-precious metals index experienced a decline between February and May 2023, falling from 194.4 points to 172.3 points (figure 3). This decline was driven by price decreases across key commodities such as aluminium, copper, iron ore and nickel. Following this decline, the index entered a period of relative stability from June to December 2023, fluctuating between 176.5 and 181.4 points. This stability was followed by a slight downward trend in the first quarter of 2024.



Figure 3 Minerals, ores and non-precious metals index

Source: UNCTAD, based on UNCTADstat database.

8. After reaching 289.6 points in August 2022, the UNCTAD fuel index decreased to 204.8 in December 2022. This downturn continued between January and June 2023, falling from 180.6 to 146.2 points (figure 4). This decline was due to decreases across all fuel commodities, particularly natural gas and coal. After this period, the index increased to 174.2 points in September 2023, mainly due to a \$20 per barrel increase in crude oil prices, before decreasing to 149.1 points by December 2023. The index remained almost stable during the first quarter of 2024.



Source: UNCTAD, based on UNCTADstat database.

B. Recent developments in selected commodities

1. Food and beverage commodities

9. After increasing to \$525 per metric tons in May 2022 due to reduced exports from Ukraine, wheat prices continued to decline until the end of 2022, reaching \$388 per metric tons in December 2022 (figure 5). This downward trend in wheat prices persisted into 2023 and the first quarter of 2024, despite the non-renewal of the Black Sea Initiative. The price of a ton of wheat fell from \$381 to \$272 between January 2023 and March 2024, marking a 29 per cent decrease. This is the lowest level for the last three years, but it is still \$52 higher than the 2015–2019 average. One factor behind the decline in wheat prices was improved production in and exports from the Russian Federation, which increased from 76.1 to 104.2 million tons between 2021/22 and 2022/23, according to AMIS.⁶ However, the situation remains vulnerable to further disruptions in supply and to changes in expectations, and future price trends will hinge on developments in the Black Sea region, given the significant role of the region in supplying wheat to international markets.

⁶ Ibid.



•••••• Sugar (monthly average of International Sugar Agreement daily prices; free on board and stowed; Caribbean ports), cents per pound (right axis)

Source: UNCTAD, based on UNCTADstat database.

Figure 5

10. Forecasts for world wheat production in 2023/24 indicate a decline from 806 to 788.4 million tons (figure 6) for the first time since 2018/19, marking a 2.2 per cent decrease from 2022/23. This decline is primarily attributed to reductions in output from Australia (-14.6 million tons), the Russian Federation (-11.4 million tons) and Kazakhstan (-4.3 million tons).⁷ In Australia, the production drop can be attributed to a rainfall deficit and low soil moisture levels.⁸ In Kazakhstan, the June 2023 drought, followed by excessive rains in the third quarter of 2023, severely affected the major grain-producing northern region.⁹ Dry weather conditions in part of the Caucasus region contributed to the decline in the Russian Federation.¹⁰ Additionally, world wheat exports for the 2023/24 period are projected to see a moderate decline of 0.8 per cent from 2022/23 levels.

⁷ Market trends are analysed using data from the Agricultural Market Information System, based on the national marketing year for production and the international trade year for exports and imports. These two different timelines allow for a comparison of data between countries, but not with national data.

⁸ United States of America, Department of Agriculture, 2023, Commodity intelligence report, Australia wheat: Production to fall from record highs after extended dryness, 26 September, Foreign Agricultural Service.

⁹ United States of America, Department of Agriculture, 2024, Kazakhstan: Grain and feed update, 28 February, Foreign Agricultural Service.

¹⁰ AMIS, 2024, Market Monitor, No. 115, February.



Figure 6 Trends in wheat production and exports

(Millions of tons)

Note: (e) indicates estimate for 2022/23 and (f) indicates forecast for 2023/24.

11. Maize prices experienced a decline throughout 2023, dropping from \$307 to \$212 between January and December 2023, despite a slight rebound in September 2023 (figure 5), marking a 31 per cent decrease. This downturn trend continued into the first quarter of 2024, reaching \$191 in March 2024. This price decrease can be attributed to competitive prices in the Black Sea region, increased production in the main exporting countries and favourable prospects for the next harvest, with world production in 2023/24 expected to rise by 5.5 per cent to 1235.6 million tons, a record level (figure 7). Simultaneously, after increasing by almost 1.9 per cent in 2022/23, maize exports are set to rise by almost 5.8 million tons in the 2023/24 season.¹¹ This anticipated growth is driven by significantly increased imports from China (by 8.8 million tons), the major world importing country, primarily reflecting strong demand from the domestic feed industry, as maize is primarily used in animal feed for meat production.¹²

Source: UNCTAD, based on AMIS data.

¹¹ See https://www.amis-outlook.org/home/en/ (accessed 31 May 2024).

¹² Food and Agriculture Organization of the United Nations (FAO), 2024, Country briefs: China, 29 March, Global Information and Early Warning System on Food and Agriculture, available at https://www.fao.org/giews/en/.



Figure 7 Trends in maize production and exports (Millions of tons)

Source: UNCTAD, based on AMIS data.

Note: (e) indicates estimate for 2022/23 and (f) indicates forecast for 2023/24.

12. After a slight decline in early 2023, the benchmark price of Thailand rice surged by 35.3 per cent, rising from \$476 to \$644 between March and December 2023 (figure 5). This increase occurred in the context of the introduction of export restrictions by important exporters of rice (for example, India) to boost domestic supplies in response to rising domestic prices and robust demand in Asia and Africa.¹³ The first quarter of 2024 saw a slight decrease in this benchmark price, driven by the depreciation of currencies of major exporters against the United States dollar, sluggish global rice demand amid increased prices and an increase in seasonal supply.¹⁴

13. World rice production forecasts for 2023/24 indicate an increase of 3.5 million tons over the estimate for 2022/23, reaching a new annual record high of 529.2 million tons (figure 8).¹⁵ However, projections for international rice exports in 2023/24 show an opposite trend. The forecasts indicate a marginal decline, with anticipated exports of 51.1 million tons, down 3.4 per cent on the already reduced levels seen in 2022/23.¹⁶ It is worth noting that, over the last 10 years, the export-to-production ratio for rice has been 9.5 per cent for rice, compared to 14.4 per cent for maize and 23.8 per cent for wheat.

¹³ Glauber J and Mamun A, 2024, India's export restrictions on rice continue to disrupt global markets, supplies and prices, 7 February, International Food Policy Research Institute.

¹⁴ World Bank, 2024b, Lower food prices amid improved supply outlooks, 24 May.

¹⁵ See https://www.amis-outlook.org/home/en/ (accessed 31 May 2024).

¹⁶ FAO, 2024, FAO cereal supply and demand brief, World food situation, 5 July.



Figure 8 Trends in rice production and exports

(Millions of tons)

Note: (e) indicates estimate for 2022/23 and (f) indicates forecast for 2023/24.

14. The price of sugar increased by 50.3 per cent between October 2022 and September 2023, rising from 17.5 to 26.3 cents per pound, reaching its highest level since September 2011. This surge was partly due to the El Niño phenomenon, which reduced global sugar supplies after dry weather damaged crops in India and Thailand.¹⁷ Subsequently, the price declined to 21.5 cents per pound in March 2024, reflecting increased production in Brazil and dry water that allowed sugar cane production to continue and sugar exports to leave ports faster than expected.¹⁸

15. World sugar production in the 2023/24 season is estimated at 183.5 million tons, an increase of 8.2 million tons compared to 2022/23. This growth is primarily driven by higher production in Brazil, which is expected to more than offset declines in Pakistan and Thailand. Consumption is projected to reach a new record level, driven by growth in India and Pakistan. Exports are expected to rise with higher shipments from Brazil and Thailand, offsetting lower shipments from India and Pakistan.¹⁹

16. Cocoa prices skyrocketed in 2023, surging by 67.2 per cent between January and December 2023, a climb from 115.3 to 192.8 cents per pound (figure 9). This upward trend continued through the first quarter of 2024, with prices reaching 337.3 cents per pound in March 2024, a rise of 235 per cent since September 2022. Weather conditions, particularly the El Niño phenomenon, significantly negatively impacted crop yields in Côte d'Ivoire and Ghana, which collectively accounted for 58 per cent of the world's production between 2022 and 2023.²⁰ Other factors contributing to the substantial increase in cocoa prices include illegal mining in Ghana (leading to deforestation) and low productivity due to the ageing of cocoa trees, both of which have led to a reduction in cocoa production.²¹

Source: UNCTAD, based on AMIS data.

¹⁷ World Economic Forum, 2023, Sugar prices are at their highest level since 2011. Here's what's causing the surge, 22 November.

¹⁸ World Bank, 2024c, Commodity Markets Outlook, April 2024, Washington, D.C.

¹⁹ United States of America, Department of Agriculture, 2023, Sugar: World markets and trade, November 2023, Foreign Agricultural Service

²⁰ UNCTAD, 2024, Chocolate price hikes: A bittersweet reason to care about climate change, 28 March.

²¹ International Cocoa Organization, 2024, Cocoa Market Review, March, available at https://www.icco.org/cocoa-market-report-for-march-2024/.

Additionally, the prevalence of swollen shoot cocoa virus disease is further exacerbating the decline in cocoa production in Côte d'Ivoire.²²

17. Compared to the 2022/23 season, the global cocoa market is facing a considerable imbalance between supply and demand. Forecasts indicate a drop in both production and demand but with a supply deficit foremost, in the context of low levels of stocks. World cocoa gross production is expected to fall to 4.5 million tons, a 10.9 per cent decrease compared to the 2022/23 season. This drop in supply, which has led to a historic rise in prices, is expected to impact world cocoa demand, which is expected to fall by 4.8 per cent, to 4.8 million tons.²³ This significant fall in supply and demand underlines the complex challenges facing the world cocoa market, which is expected to remain at very high prices for the rest of 2024.²⁴

18. The price of robusta coffee fluctuated from 107 cents per pound in January 2023 to 146 cents per pound in June 2023, before falling back to 115 cents per pound in October 2023 (figure 9). During the first quarter of 2024, the price of robusta coffee peaked at 194 cents per pound in March 2024, its highest level in three decades, according to the UNCTADstat database. This rise is due to concerns about supply shortages in Indonesia and Viet Nam, the main robusta suppliers facing poor yields on the back of negative weather shocks.²⁵



Figure 9 **Price trends of selected tropical beverage commodities**

Source: UNCTAD, based on UNCTADstat database.

²² Ibid.

²³ International Cocoa Organization, 2024, *Quarterly Bulletin of Cocoa Statistics*, Issue No. 1, 29 February.

²⁴ World Bank, 2024c-

²⁵ Baffes J and Tema K, 2024, Beverage prices surge amid supply shortfalls, 11 March, World Bank Blogs.

Box 1

How does El Niño affect the volatility of food and beverage prices?

El Niño is a climate phenomenon that describes the unusual warming of surface waters in the eastern tropical Pacific Ocean. It is the "warm phase" of a wider phenomenon known as the El Niño–Southern Oscillation.^a The El Niño phenomenon influences the volatility of agricultural commodity prices through its profound effects on global weather patterns. The phenomenon disrupts normal weather patterns, leading to large and often unpredictable variations in temperature, precipitation and extreme weather events, such as droughts and floods. These weather patterns have a profound impact on agricultural productivity.

During El Niño episodes, regions such as Oceania and South-East Asia often experience drought conditions, resulting in lower yields of staple crops, including cocoa, rice, sugar and wheat. Conversely, in regions such as South America, particularly in countries such as Brazil and Argentina, El Niño can bring excessive rainfall, causing flooding and damaging crops, including soy and coffee. El Niño has historically been associated with a rise in agricultural commodity prices.^b

The record-high prices recently registered for cocoa and robusta coffee are largely explained by weather disruptions, including the El Niño phenomenon, in a context of increasingly variable weather patterns partially linked to climate change. The price of sugar was also affected by this climatic phenomenon in 2023, reaching its highest level since 2011 due to the deterioration of production in India and Thailand because of El Niño.

The consequences of severe and increasingly volatile weather events can be particularly serious for developing countries that depend heavily on agriculture for their income and food security. The 1982–1984 global food crisis was intricately linked to El Niño, particularly the famines that struck populations in the Horn of Africa and the Sahel. This climatic phenomenon also contributed to the 1991–1992 drought in Southern Africa, which affected almost 100 million people. More recently, a so-called "triple dip" La Niña episode in 2020–2023 led to three consecutive years of drought in Ethiopia, Kenya and Somalia, leaving millions of people facing severe famine.^c

Source: UNCTAD.

^a See https://education.nationalgeographic.org/resource/el-nino/.

^b World Bank Group, 2015, Commodity Markets Outlook: Understanding El Niño, October,

Washington, D.C.

^c World Health Organization, 2023, El Niño Southern Oscillation (ENSO), 9 November.

II. Minerals, ores and metals

A. Critical energy transition minerals

19. Critical energy transition minerals are natural resources that play a crucial role in transitioning from traditional fossil fuel-based energy systems to cleaner, more sustainable alternatives. These minerals are essential for renewable energy technologies, such as solar panels, wind turbines, electric vehicle batteries and energy storage systems. Some of these minerals are aluminium, cobalt, copper, lithium and nickel.

20. UNCTAD is leading the development of a framework on trade and production for critical energy transition minerals within the United Nations framework for a just transition. Additionally, UNCTAD serves as the secretariat for two workstreams of the Panel on Critical Energy Transition Minerals, launched on 26 April 2024 by the Secretary-General of the United Nations. The first workstream focuses on benefit sharing, local value addition and economic diversification. The second workstream addresses transparent and fair trade and investments. The panel aims at developing common and voluntary principles that guide the transition to renewable energies while ensuring that countries and local communities

benefit economically from critical minerals, all while safeguarding social and environmental protection.²⁶

21. After reaching a peak at \$3,498 per metric ton in March 2022 (figure 10), aluminium prices declined to \$2,402 per metric ton in December 2022. Despite a slight rebound in April 2023, this downward trend persisted from January to August 2023, falling from \$2,502 to \$2,137. The decline is largely attributed to a slowdown in global manufacturing activity, including a deceleration of the construction sector in China, amid mounting concerns of a recession. Additionally, increased supply from China contributed to the significant price decline.²⁷ From September 2023 to March 2024, aluminium prices exhibited relative stability, oscillating between \$2,185 and \$2,226 per metric ton. These prices are expected to rise in the coming months, supported by an improving global economy and stronger demand from the electric vehicle sector and for renewable energy infrastructure.²⁸

22. Copper prices were very volatile in 2022 and 2023. The price reached a peak in March 2022 at \$10,231, followed by a correction to \$7,651 in October 2022, marking a decline of 25 per cent, before recovering to \$9,038 in January 2023. Subsequently, the price of copper fell to \$7,937 in October 2023, partly explained by the deceleration of the property sector in China and the deterioration in demand in many developed countries.²⁹ Copper prices increased by \$752 between October 2023 and March 2024. This recent trend is partially explained by stronger demand in China, in the context of production cuts and disruptions in South America.³⁰

23. Nickel prices declined by 42 per cent, dropping from \$28,195 to \$16,104 between January and December 2023 (figure 10). This reduction is primarily attributed to the surge in production in Indonesia, from 0.85 million tons in 2019 to 1.8 million tons in 2023, according to the United States Geological Survey.³¹ The strategy of Indonesia of developing a domestic nickel processing industry to feed a future electric vehicle battery manufacturing sector has attracted substantial foreign investment, including from China.³²

24. In 2023, primary nickel production was expected to reach 3.4 million tons, while demand was forecasted at 3.2 million tons. For 2024, forecasts indicate a further surplus of 239,000 tons, with production expected to reach 3.7 million tons and demand at 3.5 million tons. World primary nickel production is therefore expected to rise 9 per cent in 2024, after increasing by 17.3 per cent in 2022 and 12 per cent in 2023, mainly due to increases in China and Indonesia.³³

²⁶ See https://www.un.org/en/climatechange/critical-minerals.

²⁷ World Bank, 2023a, Commodity Markets Outlook: Under the Shadow of Geopolitical Risks, October 2023, Washington, D.C.

²⁸ World Bank, 2024c.

²⁹ World Bank, 2023a.

³⁰ World Bank, 2024c.

³¹ United States, Department of the Interior, Geological Survey, 2021, *Mineral Commodity Summaries* 2021 and ibid., 2024, *Mineral Commodity Summaries* 2024, Reston, Virginia.

³² World Bank, 2024c.

³³ Stainless Steel World, 2023, The world nickel market in 2023 and 2024 – two years with surpluses, available at https://stainless-steel-world.net/the-world-nickel-market-in-2023-and-2024-two-years-with-

surpluses/#:~:text=Primary%20nickel%20production%20in%202023,usage%20to%20reach%203.47 4Mt (accessed 2 August 2024).







Source: UNCTAD, based on World Bank commodity price data.

25. The price of lithium carbonate surged 12-fold between January 2021 and November 2022 (figure 11), driven by the increase in demand for lithium-ion batteries, used in producing electric cars. However, following this period, the price experienced a sharp decline. Between January and December 2023, the price decreased from \$67,426 to \$14,962, a fivefold reduction. This downturn was primarily attributed to slowing demand from China for electric vehicles and an oversupply of lithium in the wake of the previous high prices (box 2).³⁴

26. In 2022, the price of cobalt reached \$81,820 per ton in April 2022 but declined to \$51,493 per metric ton in December 2022 (figure 11). The decline in the price of cobalt continued in 2023 and the first quarter of 2024, reaching \$28,239 in March 2024. This trend is explained by the easing of supply constraints from the Democratic Republic of the Congo and Indonesia, which has increased production. Global cobalt supply increased by 17 per cent between 2022 and 2023, while demand increased by 10 per cent, creating a market surplus of 14.2 kt, the largest surplus in recent years. ³⁵ Moreover, the shift towards cobalt-free batteries, such as lithium iron phosphate batteries, should continue to have an impact on demand, driving down cobalt prices. The share of lithium iron phosphate batteries doubled between 2020 and 2023, accounting for over 40 per cent of global electric vehicle demand in terms of capacity in 2023. China leads in the production and adoption of lithium iron phosphate batteries, with two thirds of electric vehicle sales utilizing this technology in 2023, compared to less than 10 per cent in the United States and Europe.³⁶

⁴⁴ Financial Times, 2024, Lithium price plunges on slowing Chinese demand for electric vehicles, 25 January.

³⁵ Cobalt Institute, 2024, Cobalt Market Report 2023, London.

³⁶ International Energy Agency, 2024a, Trends in electric vehicle batteries, available at https://www.iea.org/reports/global-ev-outlook-2024/trends-in-electric-vehicle-batteries (accessed 3 August 2024).



Figure 11 Price trends of lithium and cobalt, June 2019–March 2024

Source: UNCTAD, based on Thomson Reuters data.

Box 2

The decline of nickel, lithium and cobalt prices: Challenges and opportunities

Lithium, cobalt and nickel prices fell by 78 per cent, 34 per cent and 42 per cent, respectively, in 2023 (figures 10 and 11). The decline was partly due to a surge in production and an oversupply of these raw materials, following strong demand for electric vehicles and batteries in 2021 and early 2022. Additionally, slow growth in electric vehicle battery sales, coupled with large-scale production of battery cells and cathodes, led to a significant build-up of downstream products in inventory, reducing demand for these minerals and further exerting downward pressure on prices in 2023. The expansion of battery plants in China, which now accounts for over 70 per cent of global lithium-ion battery production, has been one of the key drivers behind the large build-up of inventory throughout the supply chain. Thus, the glut in the market led to reduced purchases of new materials and contributed to the decline in prices seen in 2023. Moreover, shifting priorities in the electric vehicle sector in China could have contributed to a slowdown in battery demand growth for electric vehicles. Furthermore, the record rise in prices in 2022 led many consumers to secure large volumes to ensure the continuity of their activities, further contributing to the reduction in purchases of new materials in 2023.^a

High prices for minerals critical to the energy transition could encourage companies to invest in new technologies and develop new chemicals that use fewer of these minerals or a different set of minerals. These new materials are often essential for the next generation of batteries. As battery technology and chemistry evolve, different minerals are likely to be used in batteries and storage, while other minerals are likely to be used less, leading to significant fluctuations in demand and price volatility in the market for critical minerals. For example, increased production of lithium iron phosphate batteries, which do not use cobalt and nickel, will likely impact the demand for these minerals. This change in demand could have major structural consequences on the prices of these minerals and, consequently, on the economies of the main producers.

The downward trend in critical energy transition mineral prices has a significant impact on various stakeholders. On the consumer side, the impact is particularly positive, notably due to lower prices of lithium-ion batteries and other clean technologies. Lower costs of these critical energy transition minerals result in more affordable clean energy solutions, encouraging wider adoption. For example, this decline in raw materials in 2023 led to a 14 per cent fall in the price of batteries.^b However, lower prices could discourage investment in new mining projects, essential for expanding the supply of materials needed for clean energy technologies. Moreover, this could lead to the closure of existing mines, further limiting the availability of these resources. As a result, the production of batteries, electric vehicles and other clean energy products may be constrained, hindering progress towards a sustainable energy future. For example, the sharp decline in nickel prices in 2023 led to significant financial difficulties for several plants in Australia and New Caledonia, potentially impacting production and nickel prices in the medium term. Moreover, countries heavily dependent on the export of these minerals face economic instability due to declining prices, which directly impacts revenues of economies. This may lead to cuts in government budgets and social protection programmes and higher unemployment and exacerbate income inequality.^c

Source: UNCTAD.

^a International Energy Agency, 2024b, Global Critical Minerals Outlook 2024, Paris.

^b International Energy Agency, 2024a.

^c UNCTAD, 2023, *Commodities and Development Report 2023: Inclusive Diversification and Energy Transition* (United Nations publication, Sales No. E.23.II.D.9, Geneva).

B. Precious metals

27. Despite a slight decrease in February 2023, gold prices increased by \$102 between January and April 2023 due to a weakening dollar, geopolitical uncertainty related to the war in Ukraine and high inflation.³⁷ From April to September 2023, the price of gold fell moderately from \$2,000 to \$1,916 per troy ounce, attributed to the appreciation of the United States dollar and concerns about rising long-term interest rates.³⁸ Gold prices, known to fluctuate with geopolitical uncertainties (box 3), then rose by 13 per cent between October 2023 and March 2024 (figure 12).

28. From May 2023 to March 2024, platinum prices decreased by 14 per cent despite repeated forecasts of a growing supply deficit (figure 12). The low demand for platinum resulting from the electric vehicle "revolution" helps explain the decline, as 40 per cent of platinum demand is used to manufacture catalytic converters employed to clean exhaust fumes in the automotive sector.³⁹ Demand from the jewellery and automotive sectors, which account for around 60 per cent of global platinum demand, is expected to increase slightly in 2024. However, reduced production in South Africa and the Russian Federation may have an upward impact on prices for the rest of 2024.⁴⁰

World Bank, 2023b, Commodity Markets Outlook: Lower Prices, Little Relief, April 2023, Washington, D.C.

³⁸ World Bank, 2023a.

³⁹ Reuters, 2024, Platinum metals face a structural hit to demand from electric vehicle revolution, 20 March.

⁴⁰ World Bank, 2024c.



Figure 12

Source: UNCTAD, based on World Bank commodity price data.

Box 3

Gold price and geopolitical events

The relationship between gold prices and geopolitical events is well established, with gold often seen as a safe-haven asset in times of geopolitical uncertainty and instability. When geopolitical tensions rise, for example during conflicts, political crises or trade disputes, investors tend to turn to gold as a store of value and protection against economic and political turbulence. The increased demand for gold drives up its price. Geopolitical events can also affect other financial markets and currencies, prompting investors to take refuge in gold as a more stable investment.

Geopolitical tensions often sow uncertainty in the financial markets. Fearing a fall in equities or bonds, investors look for assets perceived as less risky. Gold, with its historic reputation for stability, becomes a preferred choice. Increased demand due to risk aversion often leads to a rise in the price of gold. The price of gold reached a nominal high of \$2,331 per troy ounce in April 2024 (see figure), largely because of the situation in the Middle East.

Geopolitical events can also disrupt supply chains and trigger inflationary pressures. Investors see gold as a store of value, which means that its price tends to rise when inflation increases. This dynamic encourages investors to hold gold as a hedge against inflation in times of geopolitical uncertainty. For example, the price peaked at \$1,969 per troy ounce in August 2020, due to the risks to global supply chains caused by fears over the COVID-19 pandemic. However, not all geopolitical events have an impact on gold prices. The severity, duration and potential economic consequences of an event determine its influence on the price of gold.



III. Energy

29. In 2023, Brent crude oil prices declined from \$83 to \$75 per barrel between January and June 2023 (figure 14), attributed to concerns about a global economic slowdown. Then, it increased by 26 per cent between June and September 2023, due to the reduction of OPEC Plus production, before experiencing a correction and finishing at \$80 per barrel in December 2023. The first quarter of 2024 was marked by a slight increase of \$5 in crude oil prices, amid the situation in the Middle East.

30. Global oil demand is expected to increase by 1.1 million barrels per day in 2024 despite weak deliveries, particularly in Europe, which led to a contraction in OECD demand in the first quarter. Despite the end of the post-COVID-19 rebound, increasing vehicle efficiency and the expansion of the electric vehicle fleet still holding back oil demand, growth in 2025 is expected to be slightly higher than in 2024, at 1.2 million barrels per day, primarily due to the normalization of economic growth after the disruptions of 2020/23. Global oil supply is expected to increase by 580 thousand barrels per day this year to a record 102.7 million barrels per day, with non-OPEC Plus production rising by 1.4 million barrels per day while OPEC Plus production falls by 840 thousand barrels per day are expected in 2025, with non-OPEC Plus countries adding a further 1.4 million barrels per day.⁴¹

31. Throughout 2023, the natural gas index continued to fall, reaching 95.2 points in December 2023 (figure 13), down 62 per cent from 2022, primarily due to significant price drops in Europe. This decline can be attributed to reduced manufacturing activities, which allowed the European Union to increase natural gas inventories. The increasing contribution of renewable energy sources and nuclear power generation also explains the

⁴¹ International Energy Agency, 2024c, *Oil Market Report – May 2024*, Paris.

reduction.⁴² The possibility of an escalation of the situation in the Middle East represents a major risk, as the region is a key supplier of natural gas. Around 20 per cent of the world's liquified natural gas supply passes through the Strait of Hormuz.⁴³ In addition, although the European Union has managed to reduce its gas imports from the Russian Federation, it continues to import gas by pipeline from the Russian Federation under trade agreements that are due to expire at the end of 2024 (box 4). These factors are expected to impact gas price volatility in 2024.⁴⁴





Source: UNCTAD, based on UNCTADstat database.

⁴² Risk Assistance Network and Exchange, 2024, E[uropean] U[nion]: European natural gas prices fall to pre-crisis levels, Situation report, 23 February.

⁴³ World Bank, 2024c.

⁴⁴ Ibid.

Box 4

How the war in Ukraine has changed gas supplies to the European Union

The war in Ukraine has fundamentally changed the supply of gas to Europe, creating opportunities for liquefied natural gas. Before the war, Europe imported a considerable proportion of its energy from the Russian Federation, particularly natural gas (35 per cent), through a network of pipelines. The Russian Federation was also dependent on the European Union for its energy exports, with around 40 per cent of its crude oil and natural gas sold to the European Union.^a The disruption caused by the war in Ukraine led to a spike in the price of natural gas in Europe, which rose by almost 148 per cent between February and August 2022 (see figure).

The war in Ukraine has heightened concerns about the reliability and security of transit routes between the Russian Federation and the European Union. The European Union has since sought to diversify its gas supplies and reduce dependence on the Russian Federation by investing in liquified natural gas infrastructure. The Russian Federation accounted for less than 15 per cent of the total gas imports of the European Union in 2023, compared with almost 45 per cent in 2021 for all pipelines and liquified natural gas, according to the European Network of Transmission System Operators for Gas. The European Union replaced some of the gas from the Russian Federation with liquified natural gas imports and larger quantities of gas from Norway and North Africa. Liquified natural gas imports, particularly from Azerbaijan, Qatar and the United States, have increased considerably. The share of gas exports from the United States to the European Union rose from 5.7 to 19.4 per cent between 2021 and 2023.

For the European gas market, 2024 will be a pivotal year, as the agreement with the Russian Federation to supply the European Union through Ukraine expires at the end of the year.



Price trends of natural gas: European Union, January 2018–March 2024

IV. Renewable energy

32. Renewable energy consumption surged by 5.2 per cent between 2022 and 2023, rising from 85.8 to 90.2 exajoules (figure 14). However, there are differences between regions. Europe saw a growth rate of 8.9 per cent, while North America experienced a decline for the first time in 10 years. Regions such as Asia and the Pacific and Africa recorded average growth rates of 6 and 5.3 per cent, respectively.⁴⁵

Figure 14 **Renewable electricity and biofuels consumption** (Exajoules)



Source: UNCTAD, based on data from Energy Institute, 2024. *Note:* Based on gross generation and not accounting for cross-border electricity supply.

33. Global renewable energy capacity increased by almost 50 per cent between 2022 and 2023, representing 510 gigawatts in 2023, which marked the highest growth rate in the last two decades. This brought total capacity to nearly 3,882 gigawatts by the end of 2023. The surge can be attributed particularly to the expansion of production capacity in Brazil, China, the United States and Europe. In 2023, China added as much solar photovoltaic power as the entire world did in 2022, with wind power additions also increasing by 66 per cent year-on-year. Solar photovoltaic energy alone accounted for three quarters of renewable capacity additions worldwide in 2023.⁴⁶

A. Recent policy measures affecting certain commodity markets

34. Global commodity markets are shaped by policy measures that regulate the production, trade and environmental impact of extraction and production of primary products. In 2022/23, new policy developments emerged related to issues such as deforestation and the sustainable supply of critical energy transition minerals. This section highlights two policy areas: Regulation (EU) 2023/1115 on deforestation-free products and trade access agreements related to critical energy transition minerals. They could influence global commodity flows and present challenges and opportunities for commodity-dependent developing countries.

⁴⁵ Energy Institute, 2024, *Statistical Review of World Energy*, London.

⁴⁶ International Energy Agency, 2023a, *Renewables 2023: Analysis and forecast to 2028*, Paris.

1. Regulation (EU) 2023/1115 on deforestation-free products: Challenges and opportunities for agricultural commodity-dependent developing countries

35. In June 2023, the European Commission introduced a regulation setting mandatory due diligence rules for all operators and traders who place, or export palm oil, cattle, wood, coffee, cocoa, rubber, and soy to or from the European Union market. The regulation also applied to many derived products such as chocolate, furniture, printed paper, and selected palm oil-based products. The regulation requires operators to trace the commodities they sell, back to the plot of land where they were produced. Only products that have been produced on land that has not been subject to deforestation or forest degradation after 31 December 2020, and that have been produced in compliance with the relevant domestic legislation of the country of origin, will be allowed on the European Union market or exported from the European Union from 31 December 2024 onwards.⁴⁷

36. Meeting the environmentally motivated due diligence requirements, such as the Regulation (EU) 2023/1115 on deforestation-free products, introduced by importing countries poses certain challenges for developing countries that export agricultural products. In particular, adaptation to a full traceability regime will require stakeholders of agricultural value chains for export in developing countries to coordinate adequate solutions for each country and value chain. Failure to successfully implement adequate and affordable traceability schemes, including third-party certification, may negatively affect volumes exported to jurisdictions that introduce such due diligence requirements or result in redirection of trade flows to other jurisdictions, which may also introduce a price discount for non-traceable commodities. This may be particularly challenging for smallholder producers in developing countries.

37. The introduction of open, compatible and affordable traceability and certification solutions for all stakeholders of agricultural value chains for export in developing countries is important to ensure that the interests of different public and private sector stakeholders are met. In particular, increased transparency, international cooperation and resources available for technical assistance programmes to commodity-dependent developing countries are necessary to contribute to an inclusive and consensual movement towards more environmentally and economically sustainable agricultural value chains around the world.

2. Trade-related measures affecting critical energy transition mineral value chains

38. As the world transitions toward cleaner energy sources and technologies, the demand for critical energy transition minerals, such as cobalt, copper, lithium, nickel and rare earth elements has surged and, with it, the number of trade-related agreements regarding these minerals. The agreements aim at ensuring reliable access to supplies of critical energy transition minerals while promoting mutually beneficial trading relationships. Resource-rich countries, often endowed with abundant mineral resources, seek to capitalize on their natural endowment by adding value through trade, investment and industrial policies. Conversely, consumer countries that depend on these minerals for advanced technologies, such as electric vehicles, renewable energy systems and electronics, seek to ensure stable and diversified supply chains.

39. The number of critical energy transition mineral agreements has taken off since 2020, including doubling between 2022 and 2023 (figure 15).⁴⁸ These agreements cover various areas: research, investment and finance, environmental and social impacts, recycling, access to resources, refining or processing and commercial cooperation. While 79 and 59 per cent of the agreements concerned research and access to resources, respectively, only 18 per cent mention the economic diversification of producing countries.

⁴⁷ See https://environment.ec.europa.eu/topics/forests/deforestation/regulation-deforestation-freeproducts_en.

⁴⁸ UNCTAD, Division on International Trade and Commodities, 2024, Trade and development implications of key aspects of the energy transition: Critical energy transition minerals. Presentation at the fourteenth session of the Trade and Development Commission, 22–26 April.



Figure 15 Number of agreements on critical energy transition minerals

40. Another recent development is the European Union Critical Raw Materials Act of the European Union, ⁴⁹ passed in April 2024, which is designed to address dependency risks and foster economic stability by enhancing supply chains, advancing circularity through recycling and resource efficiency and boosting domestic value creation. It also prioritizes research and innovation in alternative materials and substitutes, which are vital for the energy transition. Furthermore, the Act aims at stimulating European Union demand for domestically sourced, processed and recycled minerals. Additionally, it seeks to incentivize partnerships between resource-rich developing countries and the European Union, promoting mutual benefit and sustainable resource management.⁵⁰

41. The Inflation Reduction Act, passed by the United States in August 2022, provides a major boost to the country's electric vehicle industry.⁵¹ The Act provides tax credits and subsidies for electric vehicles with one condition: the critical minerals used in their batteries must be sourced from North America or countries that have a trade agreement with the United States, from the year 2025.⁵² Given the size of the United States automotive market, this requirement is a powerful incentive for exporters of electric vehicles and battery components.

42. Many countries that are major producers of critical minerals, such as lithium, cobalt and rare earths, have implemented policies to limit or regulate their exports. The objectives of these measures vary from country to country. For a country such as China, these measures aim to guarantee domestic availability for strategic industries, such as renewable energies, electric vehicles and electronics manufacturing.⁵³ Resource-rich countries such as

⁴⁹ European Commission, 2024, Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1724 and (EU) 2019/1020.

⁵⁰ Ibid.

⁵¹ United States, 2022, H.R.5376 – Inflation Reduction Act of 2022.

⁵² United States, Department of the Treasury, 2023, Treasury releases proposed guidance to continue U[nited] S[tates] manufacturing boom in batteries and clean vehicles, strengthen energy security, 1 December.

⁵³ International Energy Agency, 2023b, Announcement on the implementation of export control of items related to gallium and germanium, 8 December.

Indonesia and Namibia have imposed export quotas, customs duties or export bans to promote structural transformation and downstream diversification within their borders.⁵⁴

43. Indonesia reinstalled export restrictions on nickel ore export in 2020. Similar measures were applied to other raw materials, such as bauxite, with export restrictions implemented from June 2023.⁵⁵ Other countries have also adopted comparable measures. For example, in June 2023, Namibia introduced export restrictions on critical unprocessed energy transition minerals, including cobalt, graphite, lithium, manganese and rare earth minerals, to take advantage of the growing demand for metals as part of the energy transition.⁵⁶ In addition, Malaysia is considering banning exports of rare earth minerals, while Zimbabwe is considering a similar approach for raw lithium.⁵⁷

⁵⁴ Global Trade Alert, 2023, Namibia: Export ban of unprocessed critical minerals, 8 June.

⁵⁵ Asia Times, 2023, Indonesia's mineral export bans face hot global fire, 5 July; Global Trade Alert, 2022, Indonesia: Government announced an export ban on bauxite, 21 December; and ibid., 2023, Indonesia: Government changed export duties on several minerals, 14 July.

⁵⁶ *Reuters*, 2023, Namibia bans export of unprocessed critical minerals, 8 June.

⁵⁷ Ibid., 2023, Malaysia to ban export of rare earths to boost domestic industry, 11 September, and ibid., 2023, Zimbabwe lithium export earnings treble as projects take off, 1 November.