Executive Summary

State and Trends of Carbon Pricing 2023
THE PAST YEAR HAS SEEN GOVERNMENTS FACE CHALLENGES ON SEVERAL FRONTS

• Facing a global energy crisis and high inflation, many countries responded with relief measures: lowering energy prices for businesses and households through changes to energy taxes, fossil fuel subsidies, or price controls, or by making direct payments.

• These measures saw already high levels of government debt continue to climb.

• Despite these challenges, there was continued momentum for climate action. Several high-emitting countries strengthened domestic climate policies and targets, though global efforts still fall short of what is required.

• In this context, the political economy of carbon pricing has become even more complex.
ETSs AND CARBON TAXES HAVE WEATHERED THE 2022 GLOBAL ENERGY CRISIS RELATIVELY WELL

• Prices increased in half of ETSs or carbon taxes, although in real terms surging inflation will have offset some of the increase.

• There were only a few instances where governments wound back ETSs or carbon taxes in response to the energy crisis by delaying the start of a new instrument, postponing a planned expansion or price increase, or in one case repealing a carbon tax.

• With several new instruments launched and some scope expansions, the number of implemented instruments increased to 73 with the share of global GHG emissions covered around 23%.
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ETS and Carbon Tax

Implemented or Scheduled

ETS Implemented or Scheduled for Implementation
ETS or Carbon Tax Under Consideration

Carbon Tax Implemented or Scheduled for Implementation

ETS or Carbon Tax Under Consideration

Instruments are considered “scheduled for implementation” once they have been formally adopted through legislation and have an official, planned start date. Instruments are considered “under consideration” if the government has announced its intention to work toward the implementation of a carbon pricing initiative and this has been formally confirmed by official government sources. Some countries that have mechanisms implemented also have additional instruments under consideration. For subnational jurisdictions only the subnational instrument is reflected.

MAP OF CARBON TAXES AND ETSs

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The Executive Summary provides an overview of carbon pricing across ETSs and carbon taxes, focusing on the 2030 carbon price corridor, which is highlighted in the figure. The 2030 carbon price corridor for 2023 USD 61—122 per tCO2e is shown in the figure. The carbon price (USD/tCO2e) is plotted on the y-axis, ranging from 0 to 160, while the x-axis represents different ETSs and carbon tax jurisdictions.

### Carbon Price Corridor

- **2030 Carbon Price Corridor**
  - The 2030 carbon price corridor for 2023 USD 61—122 per tCO2e is highlighted in the figure.
  - The carbon price (USD/tCO2e) ranges from 0 to 160.
  - The x-axis represents different ETSs and carbon tax jurisdictions.

### Carbon Taxes vs. ETSs

- **Note:** Nominal prices on April 1, 2023, or most recent exchange-traded or auction prices before April 1, 2023, are shown for illustrative purposes only. Only the main rate is shown for each instrument.

### Coverage of Jurisdiction's Emissions

- Instruments indicated with * are in jurisdictions with multiple instruments, so coverage of those jurisdictions’ total emissions may be higher than indicated by an individual instrument. The EU ETS includes 27 EU member states plus Norway, Iceland, and Liechtenstein. Several federal and subnational policies in Canada are priced at the same rate, reflecting the Pan-Canadian Approach that requires all Canadian provinces and territories to have a carbon pricing system in place that aligns with the Pan-Canadian Approach. Prices are not necessarily comparable between instruments because of different sectors covered and allocation methods applied, specific exemptions, and selection of instruments for carbon pricing purposes. Prices are also not adjusted for inflation.

### Carbon Tax vs. ETS

- **Tax** vs. **ETS**
  - The 2023 USD 61—122 per tCO2e is indicated in the figure.
  - The figure includes jurisdictions with multiple instruments, so coverage of those jurisdictions’ total emissions may be higher than indicated by an individual instrument.

### Additional Notes

- Prices were not available for some instruments, so approximate estimates are included based on the recommendations in the report of the High-Level Commission on Carbon Prices adjusted for inflation. Seven jurisdictions apply different carbon tax rates to different sectors or fuels. In these cases, the included price reflects the highest general tax rate or primary fuel covered by the carbon tax. The instruments included in the x-axis reflect prices provided by each instrument. Instruments indicated with * are in jurisdictions with multiple instruments, so coverage of those jurisdictions’ total emissions may be higher than indicated by an individual instrument. The EU ETS includes 27 EU member states plus Norway, Iceland, and Liechtenstein. Several federal and subnational policies in Canada are priced at the same rate, reflecting the Pan-Canadian Approach that requires all Canadian provinces and territories to have a carbon pricing system in place that aligns with the Pan-Canadian Approach. Prices are not necessarily comparable between instruments because of different sectors covered and allocation methods applied, specific exemptions, and selection of instruments for carbon pricing purposes. Prices are also not adjusted for inflation.

### Coverage Differences

- **Coverage Differences**
  - The figure shows carbon prices adjusted for inflation. Several jurisdictions apply different carbon tax rates to different sectors or fuels. In these cases, the included price reflects the highest general tax rate or primary fuel covered by the carbon tax. The instruments included in the x-axis reflect prices provided by each instrument. Instruments indicated with * are in jurisdictions with multiple instruments, so coverage of those jurisdictions’ total emissions may be higher than indicated by an individual instrument. The EU ETS includes 27 EU member states plus Norway, Iceland, and Liechtenstein. Several federal and subnational policies in Canada are priced at the same rate, reflecting the Pan-Canadian Approach that requires all Canadian provinces and territories to have a carbon pricing system in place that aligns with the Pan-Canadian Approach. Prices are not necessarily comparable between instruments because of different sectors covered and allocation methods applied, specific exemptions, and selection of instruments for carbon pricing purposes. Prices are also not adjusted for inflation.

### Coverage Categories

- **Coverage Categories**
  - Coverage is categorized into four ranges:
    - >60% coverage of jurisdiction’s emissions
    - 40%—60% coverage of jurisdiction’s emissions
    - 20%—40% coverage of jurisdiction’s emissions
    - <20% coverage of jurisdiction’s emissions

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### References

- Note: Nominal prices on April 1, 2023, or most recent exchange-traded or auction prices before April 1, 2023, are shown for illustrative purposes only. Only the main rate is shown for each instrument. Information is not available. Prices are not necessarily comparable between instruments because of different sectors covered and allocation methods applied, specific exemptions, and selection of instruments for carbon pricing purposes. Prices are also not adjusted for inflation. Several jurisdictions apply different carbon tax rates to different sectors or fuels. In these cases, the included price reflects the highest general tax rate or primary fuel covered by the carbon tax. The instruments included in the x-axis reflect prices provided by each instrument. Instruments indicated with * are in jurisdictions with multiple instruments, so coverage of those jurisdictions’ total emissions may be higher than indicated by an individual instrument. The EU ETS includes 27 EU member states plus Norway, Iceland, and Liechtenstein. Several federal and subnational policies in Canada are priced at the same rate, reflecting the Pan-Canadian Approach that requires all Canadian provinces and territories to have a carbon pricing system in place that aligns with the Pan-Canadian Approach. Prices are not necessarily comparable between instruments because of different sectors covered and allocation methods applied, specific exemptions, and selection of instruments for carbon pricing purposes. Prices are also not adjusted for inflation.
Governments continue to face trade-offs between different objectives, such as increasing revenue, promoting community acceptance, and managing international competitiveness.

Revenues from ETSs and carbon taxes are often used for specific purposes—almost 40% of the revenue is earmarked for green spending, and 10% is used to compensate households or businesses. Both are seen as ways to increase support for these policies.

The revenue potential of ETSs and carbon taxes has become more relevant in light of increasing pressures on public budgets.
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SCALE AND USES OF CARBON REVENUE IN 2021

SHARE OF REVENUE BY COUNTRY

- EU ETS: 43.4%
- United Kingdom: 9.5%
- Germany: 8.7%
- United States: 5.5%
- New Zealand: 1.4%
- France: 9.3%
- Canada: 8.5%
- Sweden: 2.6%
- Japan: 2.4%
- Norway: 1.8%
- Other: 6.9%

SHARE OF REVENUE BY TYPE OF MECHANISM

- ETS: 70%
- Carbon Tax: 30%

SHARE OF REVENUE ALLOCATED TO DIFFERENT USES

- Earmarking: 46%
- General Budget: 29%
- Other: 6%
- Tax Cuts: 9%
- Direct Transfers: 10%
UPTAKE OF ETSs AND CARBON TAXES ARE RISING IN EMERGING ECONOMIES; HIGH-INCOME COUNTRIES STILL DOMINATE

- Most existing instruments are in high-income countries in North America and Europe, at either the national, subnational, or regional level. High-income jurisdictions account for the highest carbon prices.
- There is only one instrument in the Middle East and Africa region. However, several African countries are exploring options and taking preparatory steps.
- Interest from emerging economies is driven by the need for climate change mitigation policy but also managing transition risks, exploring revenue opportunities, and preparing for European Union accession.
CARBON CREDIT MARKETS EXPERIENCED A SLOWDOWN AFTER YEARS OF RAPID GROWTH

• Both issuances and retirements of carbon credits fell slightly compared to 2021, although they remain significantly above levels in preceding years.

• Voluntary demand from companies remains the primary driver of market activity, but compliance demand could become more important.

• Prices and price trends varied: prices for exchange-traded credits declined across all categories, especially those from nature-based projects, while some participants have seen prices increase in over-the-counter transactions.

• Macroeconomic conditions, prominent critiques of carbon credits and offsetting, and bottlenecks in issuance are among the apparent causes of dynamics over the past year.
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PRICES OF STANDARDIZED CARBON CREDIT CONTRACTS 2021–2023

Removals is a basket assessment of carbon credits from nature-based or technological projects that remove GHG emissions from the atmosphere. Avoidance is a basket assessment of carbon credits from projects that avoid GHG emissions. Nature Based reflects nature-based carbon credits from projects that either avoid or remove GHG emissions. Renewable Energy reflects carbon credits from renewable energy projects that avoid GHG emissions. CORSIA Eligible reflects carbon credits eligible for use in the CORSIA program. Source: Based on data from S&P Global Platts, 2022. By S&P Global Inc. Prices shown are monthly averages. More details on Platts’ assessments can be found in the Platts’ specification guide: https://www.spglobal.com/commodities/en/content/dam/reader/PlattsSMART/files/commodity-coverage/methodology-specifications/method_carbon_credits.pdf
CARBON CREDIT MARKETS CONTINUE TO DIVERSIFY AND BECOME MORE SOPHISTICATED

- New investors, financial products, technological platforms, and service providers are laying the foundations for what some expect will be a decade of significant growth.

- Different initiatives seek to promote standardization and improve transparency in carbon credit markets—seeking to encourage market growth and integrity of corporate action.

- Implementation of Article 6 is moving forward as more countries sign bilateral cooperation agreements and the first activities to generate authorized emissions reductions are developed.