5 key trends in 2019

1. As of May 1, 2019, 25 carbon taxes and 26 Emissions Trading Schemes (ETS) were operating worldwide. The jurisdictions covered by one or more explicit carbon price account for around 60% of global GDP.

2. Carbon prices are making headway globally despite local setbacks. In Canada, provincial elections in Ontario and Alberta led to rolling back provincial pricing schemes; at the same time, the pan-Canadian backstop is being implemented countrywide on all provinces that do not have their own pricing scheme. In France, the yellow vest protests prompted the government to freeze the carbon tax at its current rate of USD 51, yet the tax was not rolled back. The year 2020 shall see Mexico and China ETSs start operations with actual positive prices.

3. Carbon pricing mechanisms generated USD 45 billion (EUR 40 billion) in revenues in 2018, up from USD 32 billion in 2017 and USD 22 billion in 2016. This increase is mostly due to a rise in EU ETS prices, from below USD 10 until 2018 to above USD 25 lately.

4. In 2018, 52% of carbon pricing revenues came from carbon taxes. Carbon revenues are mostly channeled to the general budget, or earmarked for environmental purposes.

5. More than 75% of emissions regulated by carbon pricing are still covered by a price below USD 10 (EUR 8). To stay on the 2°C trajectory while sustaining economic growth, the High-Level Commission on carbon prices led by economists Stern and Stiglitz recommends carbon prices between USD 40 and USD 80 per ton of CO₂ by 2020, and between USD 50 and USD 100 per ton of CO₂ by 2030.

Explicit and implicit price of carbon

Two instruments put a price explicitly on GHG emissions: carbon taxes set a fixed price per ton of CO₂, while CO₂ Emissions Trading Schemes (ETS) impose ceilings on a jurisdiction’s yearly emissions. This Global Carbon Account focuses on explicit carbon prices, yet implicit carbon prices such as fuel excise taxes (price per liter) or taxes on electricity production (price per kWh) are also to be taken into account when calculating the full impact of pollution-related prices on economic actors’ choices. Similarly, subsidies and support measures to the production and/or consumption of fossil fuels are sometimes referred to as «negative implicit carbon prices». The International Energy Agency estimates that the total amount of consumption fossil-fuel subsidies was around USD 260 billion in 2016.
## Features of carbon prices in 2019

### Instruments:

- Established Emissions Trading Scheme
- Scheduled Emissions Trading Scheme
- Established Carbon Tax
- Scheduled Carbon Tax

### Sectors:

- Energy
- Industry
- Building
- Waste
- Aviation

### Fuels:

- Coal
- Oil
- Gas

### Jurisdictions and Prices

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Start Year</th>
<th>Price in USD/tCO (nominal value)</th>
<th>Share of emissions (%)</th>
<th>Sectoral Scope</th>
<th>Fuels covered</th>
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</thead>
<tbody>
<tr>
<td>Finland</td>
<td>1990</td>
<td>70</td>
<td>36</td>
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<tr>
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<td>2019</td>
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<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Source:


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1. Price in USD/tCO:
   - Up to 10
   - Between 11 and 30
   - More than 30

2. Share of emissions covered:
   - Up to 10
   - Between 11 and 30
   - Between 36% and 65%
   - More than 65%

* ETS prices: mean values observed between April 2018 and April 2019. Tax prices observed on April 1, 2019.
** The ETS in New Zealand also covers the forest sector.
*** China’s national ETS was launched in December 2017, it will be fully operational in 2020.
Carbon pricing: use of revenues (in million USD)

1. Share of state revenues
   - Carbon tax - Less than 1%
   - Carbon tax - 1% to 2%
   - Carbon tax - More than 2%
   - ETS - Less than 1%
   - ETS - 1% to 2%
   - ETS - More than 2%

2. Revenue uses
   - Earmarking
   - General budget allocation
   - Tax exemptions
   - Direct transfers

Revenue evolution 2016-2018
- USD 16.9 BN
- USD 32.2 BN
- USD 45.3 BN
- USD 21,837 M
- USD 23,443 M

Key takeaways
- 52% of carbon revenues are generated by carbon taxes, amounting to USD 23 billion. ETS have generated USD 22 billion.
- More than 75% of carbon revenues come from member countries of the European Union.

Note: Figures represented here are for calendar year 2018 or fiscal year 2017/2018. If no data was available, calendar year 2017 was taken into account.

Source: I4CE - Institute for Climate Economics with data from World Bank, government officials and public information, May 2019
Map of explicit carbon prices around the world in 2019

2018 prices given in USD/tCO₂e:
- Established Emissions Trading Scheme
- Scheduled Emissions Trading Scheme
- Established Carbon Tax
- Scheduled Carbon Tax

*The pan-Canadian carbon price applies on provinces that do not have their own pricing scheme.

Source: I4CE – Institute for Climate Economics with data from ICAP, World Bank, government officials and public information, Mai 2019.