

Global Carbon Account 2018

Authors: Clément **Métivier** | Clément **Bultheel** | Sébastien **Postic**.
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INTRODUCTION

This overview presents key trends regarding the implementation of explicit carbon pricing policies throughout the world in 2018. A timeline, a world map, a detailed table and a graph provide comprehensive information on the jurisdictions that have implemented or plan to implement explicit carbon pricing policies, the type of instrument chosen, the sectors and fuels covered, the pricing levels, and the use of revenues.

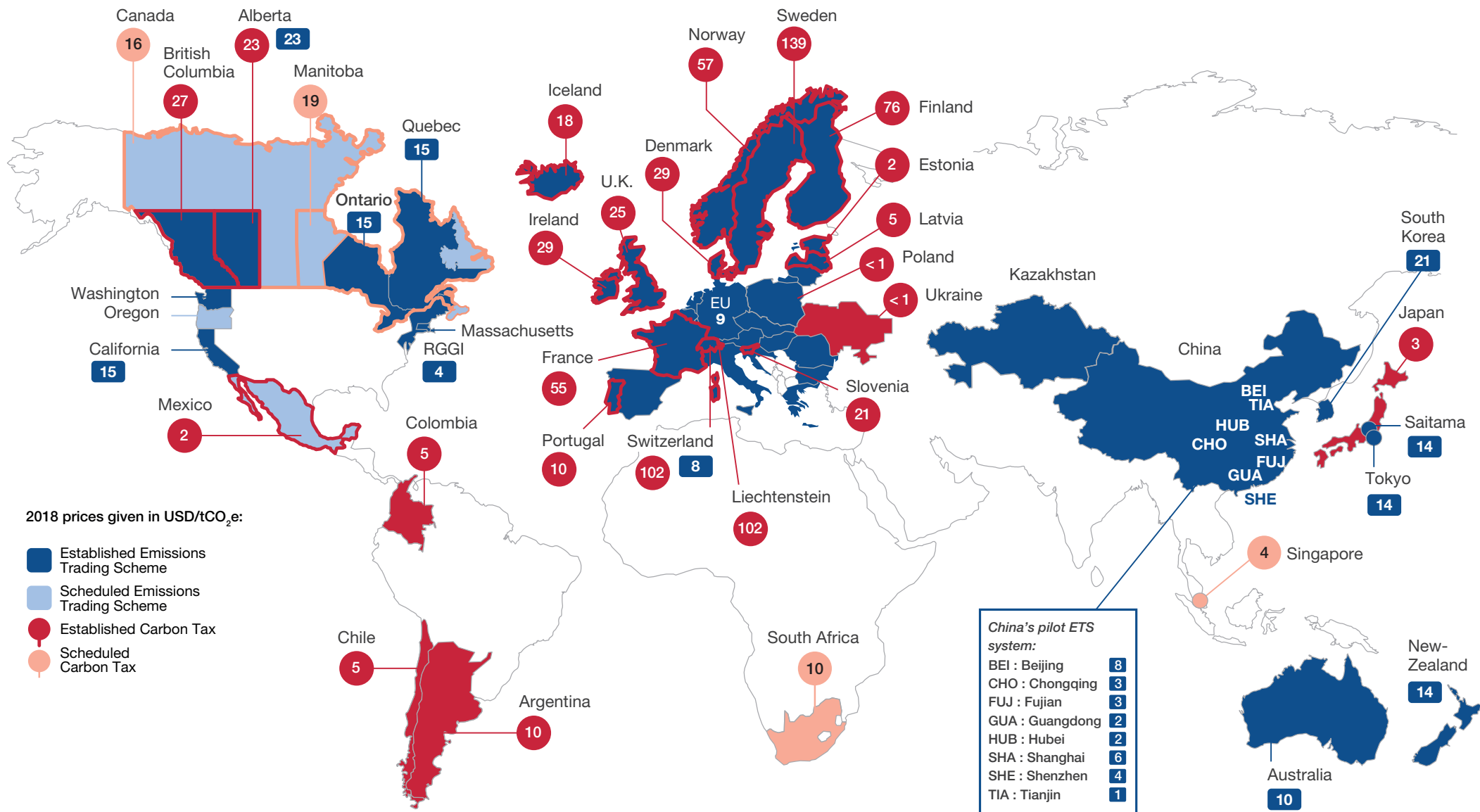
5 key trends in 2018

- 1. (Too) Few jurisdictions have implemented an explicit carbon price.** As of April 1, 2018, 46 countries and 26 provinces or cities have adopted carbon pricing policies, consisting of carbon taxes and Emissions Trading Schemes (ETS). These jurisdictions account however for around 60% of global GDP.
- 2. However, the adoption of carbon pricing policies is accelerating.** In 2017, 3 ETS and 3 carbon taxes have been implemented, and more than 25 carbon pricing instruments have been announced for the years to come. In April 2018, between 20 and 25% of global greenhouse gas (GHG) emissions are covered by an explicit carbon price, up from 13% in 2016, mainly due to the entry into force of China's ETS in December 2017.
- 3. Carbon revenues represent an increasingly important financing tool for both the environment and the economy.** I4CE estimates that carbon pricing initiatives generated USD 32 billion (EUR 26 billion) in revenues in 2017, up from USD 22 billion in 2016. In 2017, 65% of

carbon pricing revenues come from carbon taxes. Regarding revenue allocation, each jurisdiction makes clear choices, but no trend emerges at the global level.

- 4. Carbon prices are perceived as too low for the economic sphere.** The explicit price of a CO₂ ton in 2018 varies generally between less than USD 1 (EUR 1) and USD 139 (EUR 114) depending on the jurisdiction. However, more than 75% of emissions regulated by carbon pricing are covered by a price below USD 10 (EUR 8), a level considered too low to support the low-carbon transition in both the public and private sectors.
- 5. Explicit carbon prices in 2018 are not aligned with the 2°C trajectory.** To achieve the goals of the international community on climate change while sustaining economic growth, the High-Level Commission on carbon prices led by economists Stern and Stiglitz recommends to reach a carbon price 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.

Map of explicit carbon prices around the world in 2018



Features of carbon prices in 2018

Instruments:

- ESTABLISHED EMISSIONS TRADING SCHEME
- ESTABLISHED CARBON TAX
- SCHEDULED EMISSIONS TRADING SCHEME
- SCHEDULED CARBON TAX

Jurisdiction	Start year	Price in USD/tCO ₂ (nominal value) ①	Share of emissions (%) ②	Sectoral scope						Fuels covered		
Finland	1990	76	36									
Poland	1990	< 1	4									
Norway	1991	57	60									
Sweden	1991	139	40									
Denmark	1992	29	40									
Slovenia	1996	21	24									
Estonia	2000	2	3									
Latvia	2004	5	15									
British Columbia	2008	27	70									
Liechtenstein	2008	102	26									
Switzerland	2008	102	33									
Iceland	2010	18	55									
Ireland	2010	29	49									
Ukraine	2011	< 1	71									
Japan	2012	3	68									
United-Kingdom	2013	25	23									
France	2014	55	35									
Mexico	2014	2	46									
Portugal	2015	10	29									
Alberta	2017	23	45									
Chile	2017	5	42									
Colombia	2017	5	24									
Argentina	2018	10	NA									
Manitoba	2018	19	50									
Canada	2019	16	NA									
Singapore	2019	4	80									
South Africa	2019	10	80									

① Price in USD/tCO₂:

- Less than 10
- Between 11 and 30
- More than 30

② Share of emissions covered:

- Less than 35%
- Between 36% and 65%
- More than 65%

* ETS prices: mean values observed between April 2017 and April 2018. Tax prices observed on April 1, 2018.

** 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.

Sectors:

- ENERGY
- BUILDING
- WASTE
- INDUSTRY
- TRANSPORT
- AVIATION

Fuels:

- COAL
- OIL
- GAS

Jurisdiction	Start year	Price in USD/tCO ₂ (nominal value) ² ①	Share of emissions (%) ②	Sectoral scope							
European Union	2005	9	45								
Alberta	2007	23	45								
New-Zealand**	2008	14	51								
Switzerland	2008	8	11								
RGGI	2009	4	20								
Tokyo	2010	14	20								
Saitama	2011	14	18								
California	2012	15	85								
Kazakhstan	2013	0	50								
Quebec	2013	15	85								
China	Beijing	2013	8	45							
China	Guangdong	2013	2	60							
China	Shanghai	2013	6	57							
China	Shenzhen	2013	4	40							
China	Tianjin	2013	1	55							
China	Chongqing	2014	3	40							
China	Hubei	2014	2	35							
China	Fujian	2016	3	60							
China	National***	2017	NA	30							
South Korea	2015	21	68								
Australia	2016	10	50								
British Columbia	2016	NA	0								
Ontario	2017	15	82								
Washington	2017	NA	67								
Massachusetts	2018	0	20								
Mexico	2018	NA	NA								
Canada	2019	NA	NA								
Manitoba	2019	NA	NA								
Oregon	2021	NA	NA								

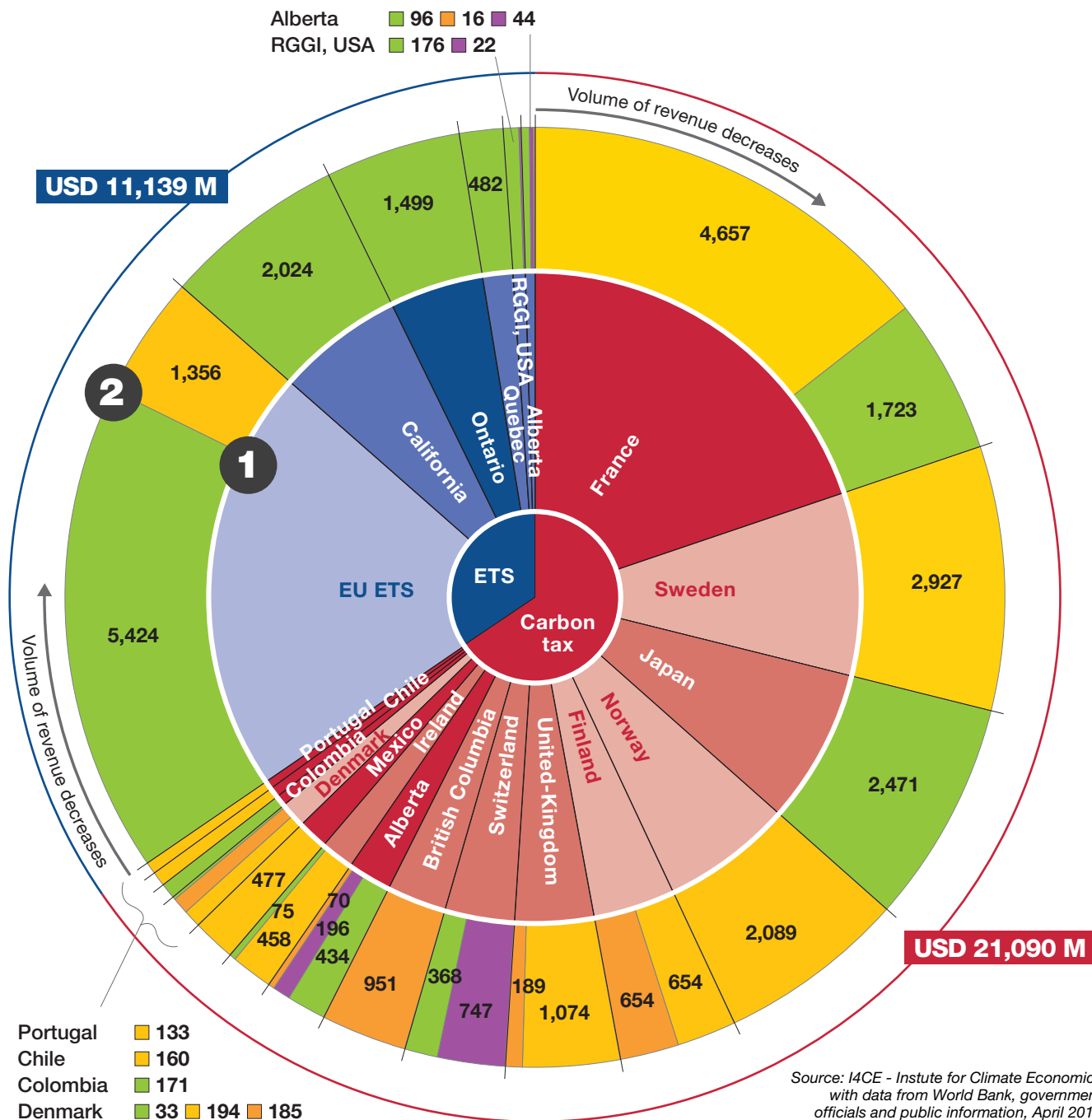
Carbon pricing: use of revenues (in million USD)

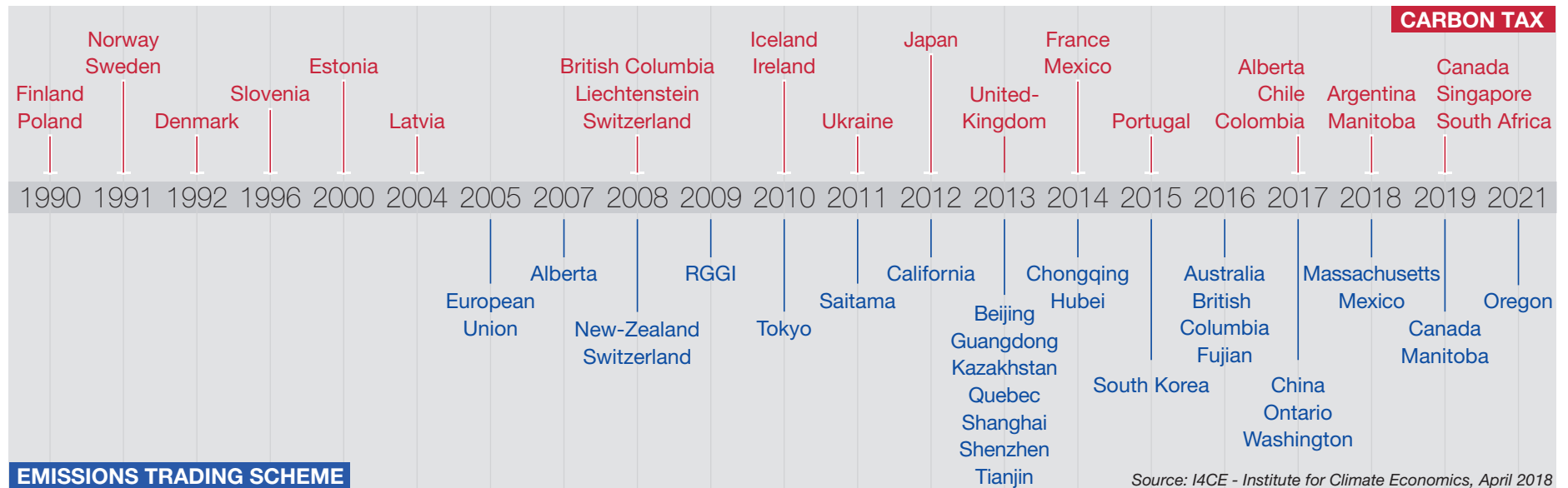
1 Year of implementation

- Carbon tax since 2013
- Carbon tax between 2008 and 2013
- Carbon tax before 2007
- Emissions Trading Scheme since 2013
- Emissions Trading Scheme between 2008 and 2013
- Emissions Trading Scheme before 2007

2 Revenue uses

- Earmarking
- General budget allocation
- Tax exemptions
- Direct transfers





Explicit and implicit price of carbon

Two instruments put a price explicitly on GHG emissions: the carbon tax sets a price per ton of CO₂ and the CO₂ Emissions Trading Scheme (ETS) is a quantity-based instrument. Implicit carbon prices such as fuel excise taxes (price per liter) or taxes on electricity production (price per kWh) in the residential and commercial, transport, industry, and energy sectors are also to be taken into account when calculating effective carbon rates for emissions related to the relevant fuels. In contrast, subsidies and other 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 is around USD 260 billion in 2016. Effective carbon prices as a whole, set up or not in order to reduce emissions, have an impact on economic stakeholders' decisions, and on the GHG emission levels of the economic sectors and/or fuels covered.

Sources

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For more precisions on the sources used for the 2018 Global Carbon Account, and especially on national sources: contact@i4ce.org

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