

## 4 key trends for 2020

- 1. As of April 1<sup>st</sup>, 2020, 44 countries and 31 provinces or cities are operating a carbon pricing scheme, through a carbon tax and/or an Emissions Trading System (ETS).** Together, these jurisdictions account for around 60% of global GDP. 3 new countries have implemented an explicit price on carbon over the past year: Canada, South Africa and Singapore.
- 2. Depending on the authority enacting the initiative, the explicit carbon prices as of March 1<sup>st</sup>, 2020, range from less than USD 1 (approximately EUR 1) to USD 123 (EUR 114) per ton of CO<sub>2</sub>e.** However, 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 CO<sub>2</sub>e by 2020, and between USD 50 and USD 100 per ton of CO<sub>2</sub>e by 2030.
- 3. Carbon pricing schemes generated USD 48 billion (EUR 42 billion) in 2019, a slight increase compared with 2018 (USD 45 billion).** 53% of the 2019 revenue stems from carbon taxes while the other 47% are generated by carbon quotas. These carbon revenues are mostly directed to the general budget or earmarked for specific environmental or broader development projects.
- 4. The global economic crisis triggered by the Covid-19 resulted in a drop of carbon emissions.** In 2008, the financial crisis caused a price collapse on carbon markets, wiping out the financial incentive for industries to reduce their emissions. Since then, price stabilization measures have been implemented to address this fragility. The current health and economic crises will be a real test to the stabilization mechanisms in place (see opposite).

## FOCUS ON...

### THE EUROPEAN MARKET STABILITY RESERVE

A significant surplus of allowances has flooded the European carbon market since 2009. Among the chief causes were the 2008 economic crisis, the unexpected impacts of other energy and climate policies to limit carbon emissions, and international permits piling up over European allowances due to the Kyoto mechanism. This surplus, which still was equivalent in 2018 to a year's worth of emissions, led to lower carbon prices. The European Union addressed this by establishing its Market Stability Reserve (MSR) which has operated since January 2019. The MSR automatically regulates the quantity of allowances in circulation, either by placing them in the reserve if they are too many or by releasing them if there is a deficit. Since the introduction of this system, carbon prices have significantly increased up to €20/tCO<sub>2</sub>e. Yet, the MSR has never been tested in a context of an economic crisis like the one which we are currently experiencing.

### CARBON PRICING IN CANADA

In 2019, Trudeau's Liberal Government announced the implementation of a pan-Canadian approach to pricing carbon pollution countrywide. The carbon pollution pricing system has two components:

- the fuel charge which is equivalent to a carbon tax applying to final consumers,
- the Output-Based Pricing System (OBPS) for emissions-intensive trade-exposed industries that are exempt from the levy. This system is similar to a federal carbon market.

The federal government will return all direct proceeds collected either to each province or directly to families and exposed-businesses/sectors. Each province and territory are given the choice to adopt the federal system or to design their own carbon pollution pricing system if they respect the minimum federal price (Can\$30/tCO<sub>2</sub>e). However, some provinces including Alberta, Ontario and Saskatchewan are appealing the federal requirement. The Supreme Court will release its decision in 2020.

# Features of carbon prices in 2020

## Instruments:

■ ESTABLISHED EMISSIONS TRADING SCHEME ■ ESTABLISHED CARBON TAX

Jurisdiction	Start year	Price in USD/tCO <sub>2</sub> (nominal value)* 1	Share of emissions (%) 2	Sectoral scope						Fuels covered		
Finland	1990	83.97	36									
Poland	1990	0.08	4									
Norway	1991	58.56	60									
Sweden	1991	122.79	40									
Denmark	1992	25.80	40									
Slovenia	1996	18.87	24									
Estonia	2000	2.18	3	■	■							
Latvia	2004	9.81	15	■	■		■	■				
British Columbia	2008	30.11	70									
Liechtenstein	2008	98.35	26									
Switzerland	2008	98.35	33	■								
Ireland	2010	28.35	49									
Iceland	2010	30.38	29									
Ukraine	2011	0.41	71									
Japan	2012	2.63	68									
United Kingdom	2013	23.33	23	■			■					
France	2014	48.64	35									
Mexico	2014	3.44	46									
Portugal	2015	25.76	29									
Alberta	2017	22.72	45									
Chile	2017	5.00	39	■	■							
Colombia	2017	5.05	24									
Argentina	2018	10.00	20									
Prince Edwards Island	2019	22.58	Unk.					■				
Canada - federal mechanism	2019	22.58	Unk.									
New-Brunswick	2020	22.58	40	■			■					
Singapore	2019	3.60	80	■	■							
Newfoundland and Labrador	2019	15.05	91									
Northwest Territories	2019	15.05	Unk.									

## Sectors:

■ ENERGY ■ BUILDING ■ OTHERS (waste, forestry, agriculture, ...)  
 ■ INDUSTRY ■ TRANSPORT ■ AVIATION

## Fuels:

■ COAL ■ GAS  
 ■ OIL

Jurisdiction	Start year	Price in USD/tCO <sub>2</sub> (nominal value)* 1	Share of emissions (%) 2	Sectoral scope								
EU ETS	2005	27.93	45	■	■							
Alberta	2007	22.58	48	■	■							
Switzerland	2008	12.66	11	■	■							
New Zealand	2008	16.54	51	■	■	■	■	■	■			
RGGI	2009	5.52	18	■								
Tokyo	2010	5.44	20		■	■						
Saitama	2011	5.44	18	■	■	■						
California	2012	17.34	80	■	■	■	■	■				
Kazakhstan	2013	1.14	50	■	■							
Quebec	2013	17.48	85	■	■	■	■	■				
China	Beijing	2013	12.22	45	■	■	■	■	■			
	Guangdong	2013	2.98	60	■	■						
	Shanghai	2013	6.01	57	■	■	■	■	■			
	Shenzhen	2013	1.58	40	■	■	■	■	■			
	Tianjin	2013	2.17	55	■	■						
	Chongqing	2014	2.48	50	■	■						
	Hubei	2014	4.37	35	■	■						
	Fujian	2016	1.35	60	■	■						
	National**	2020	Unk.	30	■							
	South Korea	2015	31.26	70	■	■	■	■	■	■	■	
Massachusetts	2018	8.01	20	■								
Canada - federal mechanism	2019	22.58	Unk.	■	■							
Newfoundland and Labrador	2019	22.58	43	■	■							
Nova Scotia	2019	22.58	80	■	■							
Saskatchewan	2019	22.58	58	■	■							
Mexico	2020	Unk.	37	■	■							

1 Price in USD/tCO<sub>2</sub>:  
 ■ Up to 10  
 ■ Between 11 and 30  
 ■ More than 30

2 Share of emissions covered:  
 ■ Up to 35%  
 ■ Between 36% and 65%  
 ■ More than 65%

\* ETS prices: mean values observed between March 2019 et 2020.

\*\* China's national ETS was launched in Dec. 2017, it will be fully operational in 2020.

Unk.: Unknown.

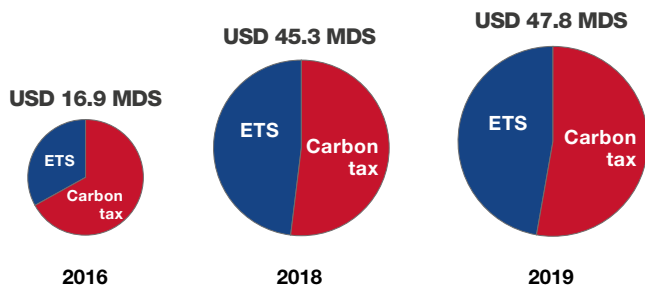
## 1 Share of state revenues

- 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

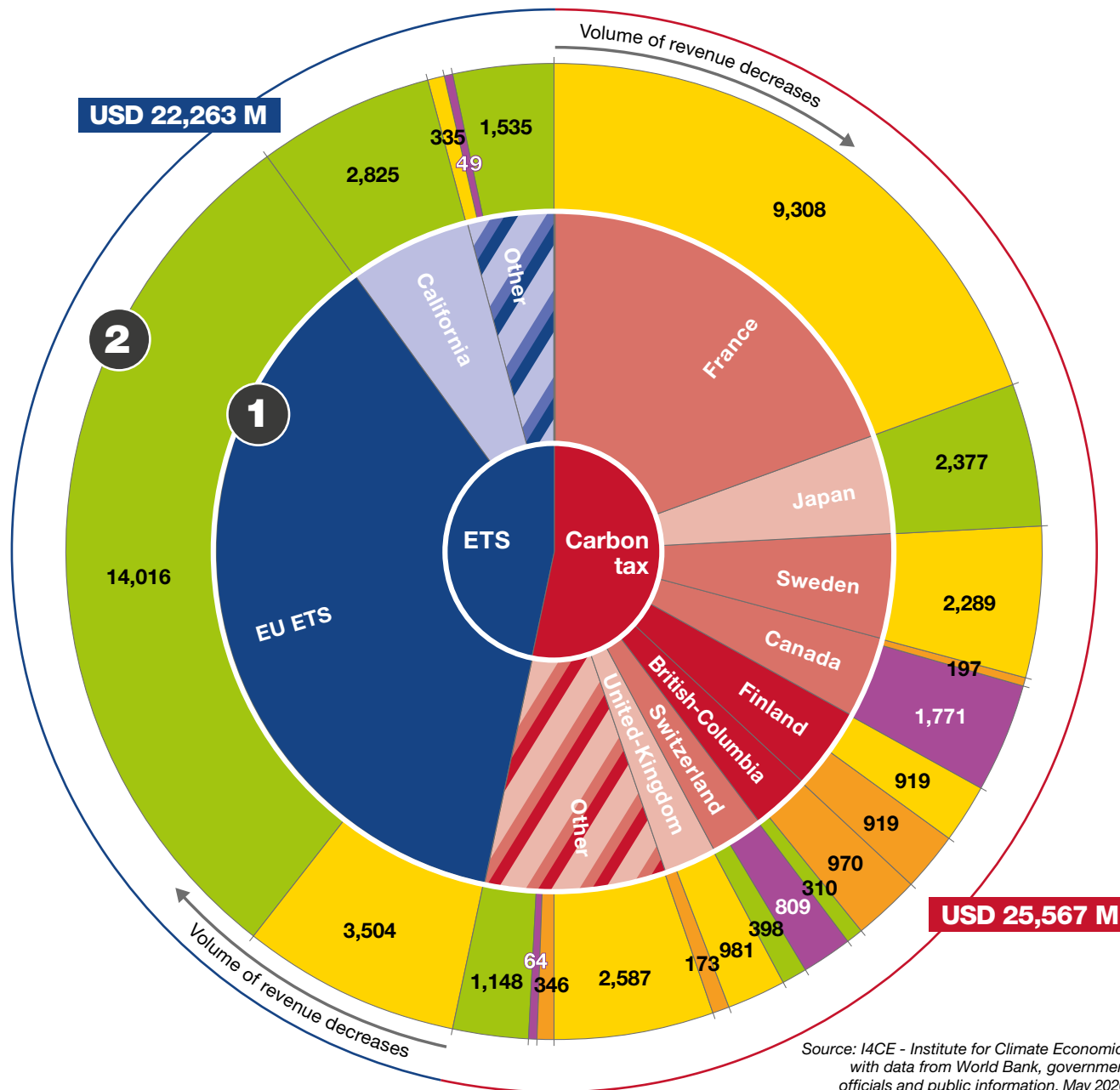
- General budget allocation
- Tax exemptions
- Direct transfers
- Earmarking

### Revenue evolution 2016-2018-2019



### Key takeaways

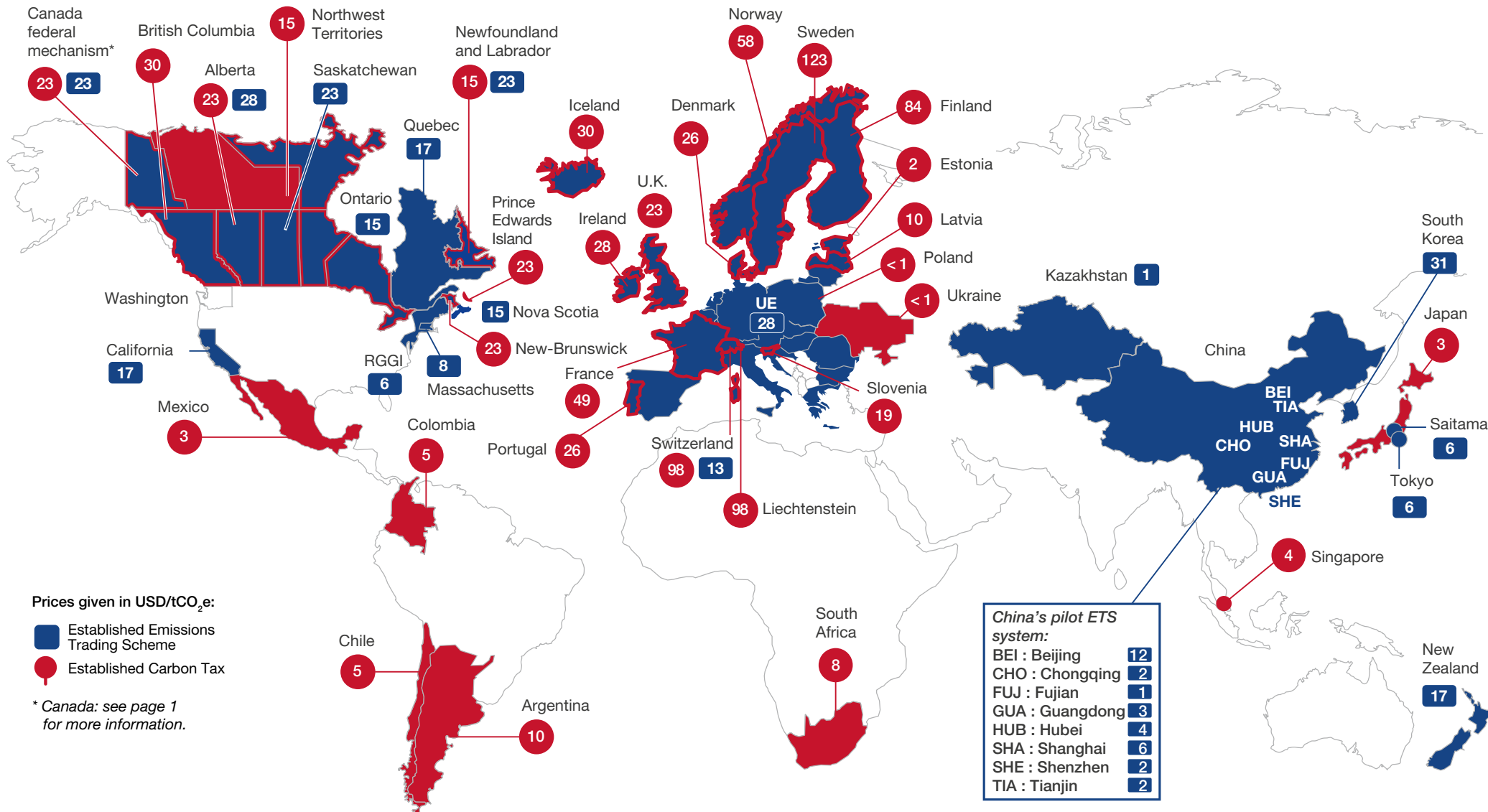
- 53% of carbon revenues are generated by carbon taxes amounting to USD 26 billion. ETS initiatives have generated more than USD 22 billion.
- In spite of Brexit, more than 67% of carbon revenues come from European Union member countries.



Note: Figures represented here are for calendar year 2019 or fiscal year 2019/2020. If no data was available, calendar year 2018 was taken into account.

Source: I4CE - Institute for Climate Economics with data from World Bank, government officials and public information, May 2020.

# Map of explicit carbon prices around the world in 2020



Source: I4CE – Institute for Climate Economics with data from ICAP, World Bank, government officials and public information, May 2020.

Realisation: SophieBerlioz.fr (3236)