

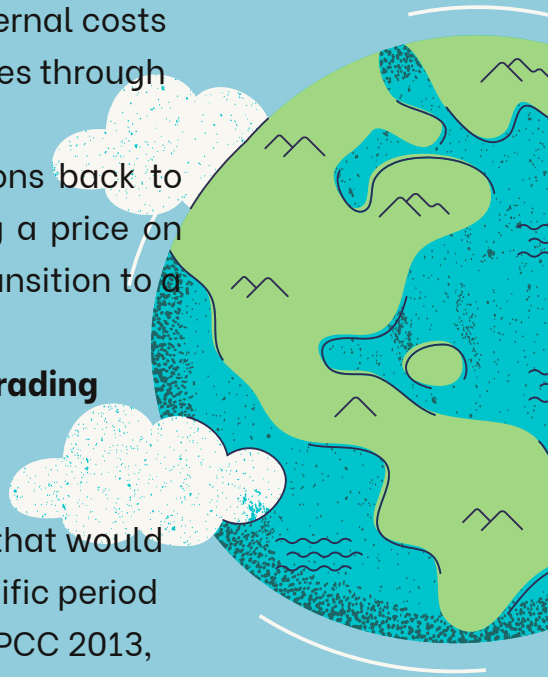
Carbon Pricing: Key Concepts

Carbon pricing is an economic instrument that captures the external costs of greenhouse gas (GHG) emissions and ties them to their sources through a price, usually based on the carbon dioxide (CO₂) emitted.

This helps shift the burden for the damage from GHG emissions back to those who are responsible for it and who can avoid it. Setting a price on carbon emissions is an essential policy tool for achieving the transition to a low-carbon economy.

There are many types of carbon pricing: **Carbon Tax, Emission Trading Systems and Offset Mechanisms.**

The carbon price is generally normalized to the amount of GHG that would lead to the same equivalent warming as a ton of CO₂ over a specific period and is specified as a price per ton of CO₂e (or CO₂ equivalent). (IPCC 2013, 2014c).



1. Carbon Tax

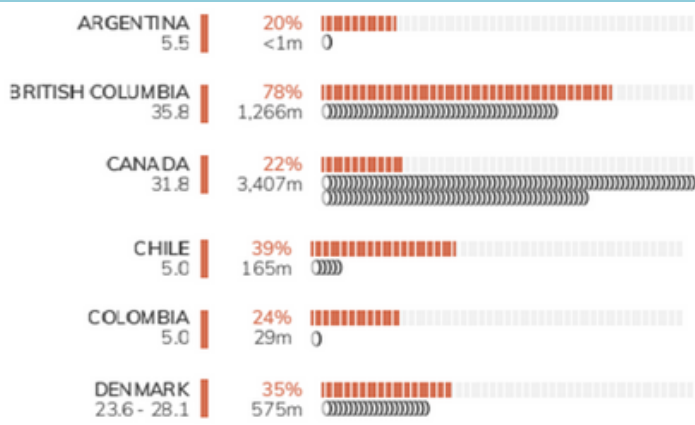
A carbon tax directly sets a price on carbon by defining an explicit tax rate on GHG emissions or – more commonly – on the carbon content of fossil fuels, i.e., a price per tCO₂e.

Carbon tax implemented or scheduled for implementation



Source: The World Bank. 2021. "State and Trends of Carbon Pricing 2021" (May), World Bank, Washington, DC.

Carbon price, coverage and revenues generated by some carbon taxes



2. What are Carbon Markets?

Carbon Markets is a collective term for various approaches to carbon trading, that is, intangible trade-in units that allow emission of a specific amount – usually a metric tonne – of greenhouse gases. A carbon market can be implemented as:

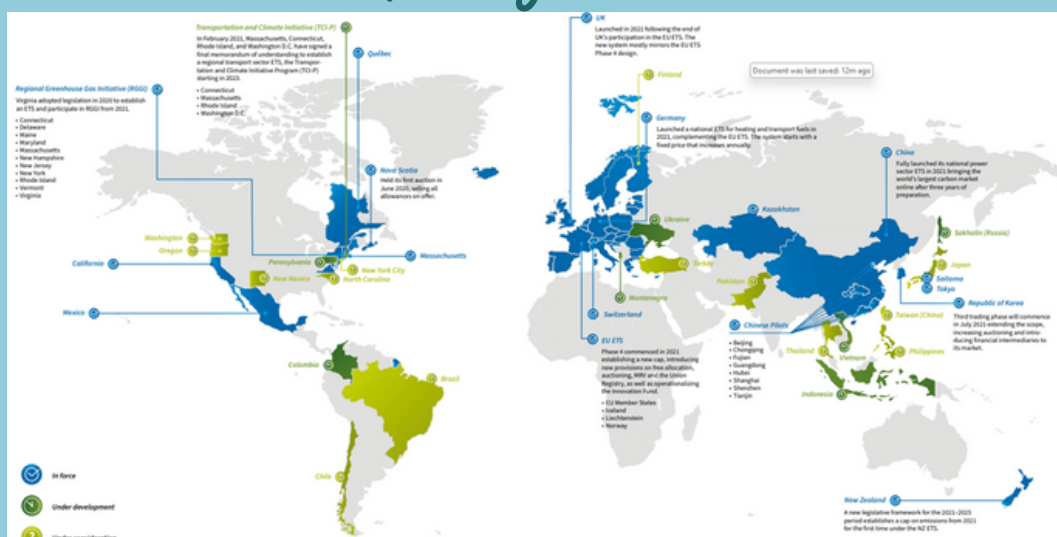
2.1. An Emission Trading System:

An Emission Trading System (ETS) is also known as a regulated carbon market. It imposes an absolute or relative ceiling (cap) on aggregate emissions from covered entities and enables these and other market participants to trade-in allowances.

2.2. Baseline-and-credit System:

It defines an emission baseline and rewards emission reductions beyond that baseline with tradable carbon credits that can serve to offset emissions elsewhere.

The state of play of ETS in 2021



ICAP. (2021). Emissions Trading Worldwide: Status Report 2021. Berlin: International Carbon Action Partnership.

Emission Trading System. Allowance Allocation

How governments decide to distribute permits is a fundamental design element of an ETS. Within an ETS, the Government economically incentivise firms, corporations, and other entities to cut emissions by setting a limit (a 'cap') on emissions and issuing allowances within the limit that each allow for one tonne of GHG emissions. Then, allowances are distributed, usually for free or through auctions. Companies in these sectors need to hold one permit/allowance for every ton of emissions they release. They may either receive (free allocation) or buy permits (auctioning) and trade them with other companies. Distribution methods and formulas vary across ETS jurisdictions and sectors. For more information on ETS allowance allocation, please visit: ICAP Briefs (icapcarbonaction.com)

ETS. Key Information

- Launched in 2021, **China National ETS** is the world's largest ETS, with more than 2200 companies, covering 4 billion tCO₂ (40% of Chinese Emissions).
- There are currently 64 Carbon Pricing Initiatives being implemented worldwide.
- Governments raised more than **USD 45 billion from carbon pricing in 2020**.
- In 2022, Carbon Pricing initiatives will cover more than 11.65 GtCO₂e (21% of global GHG emissions).

3. Offset Mechanism

An offset mechanism designates the GHG emission reductions from project or program-based activities, which can be sold domestically or in other countries. Offset programs issue carbon credits according to an accounting protocol and have their own registry. These credits can be purchased for compliance or at the voluntary carbon market for individuals, companies or governments to compensate for their emissions.

Credits issued, registered activities, average 2020 price and sectors covered by offset mechanisms

Name of the mechanism	Credits issued (MtCO ₂ e)	Registered activities	Average price (USD)
American Carbon Registry	7.30	15	5.36
Climate Action Reserve	4.61	33	2.34
Gold Standard	34.35	59	5.27
Verified Carbon Standard	140.37	127	1.62
Clean Development Mechanism	74.00	15	2.02



Source: World Bank, 2021

3.1 Voluntary Carbon Markets

The voluntary carbon market (VCM) was formed to drive finance to activities that reduce greenhouse gas (GHG) emissions. Over time, the VCM has evolved and matured into a robust and effective means to tackle climate change by driving resources to projects which deliver independently verified and additional emissions reductions on a global scale.

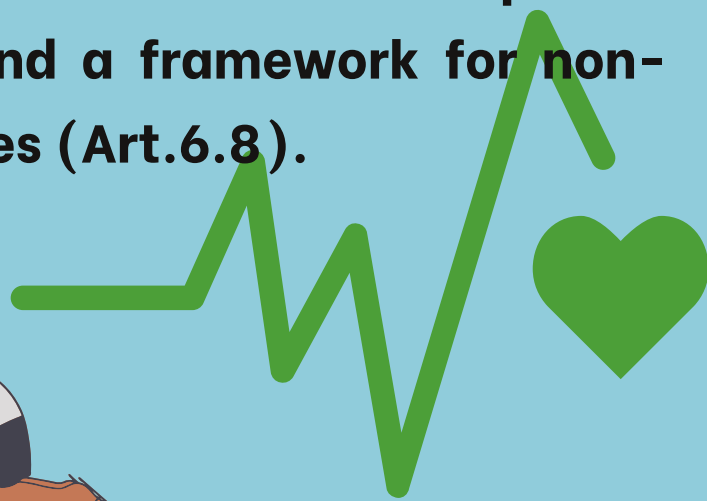
Despite the economic downturn caused by the COVID 19 pandemic, carbon markets have registered growth in both registered projects and issued credits in 2020. The largest share is observed under the voluntary carbon markets. The volume of traded voluntary carbon offsets hit record volumes of 188.2 MtCO₂e in 2020. This growth represents an 80% increase over 2019. According to Ecosystem Marketplace, the VCM hit a record USD 1 Billion in 2021 as new trades.



3.2 What is the article 6 of the Paris Agreement?



The Paris Agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. Article 6 of the Paris Agreement calls for the use of carbon markets (and other non-market mechanisms) as a tool to mitigate climate change while promoting sustainable development and raising ambition in emission reductions. Article 6 has three main components: **cooperative approaches (Art. 6.2), a sustainable development mechanism (Art. 6.4) and a framework for non-market-based approaches (Art.6.8).**



4. Climate Finance

Financial resources and sound investments are needed to address climate change, reduce emissions, promote adaptation to the impacts that are already occurring, and build resilience.

It is important for all governments and stakeholders to understand and assess the financial needs of developing countries, as well as to understand how these financial resources can be mobilized. Provision of resources should also aim to achieve a balance between adaptation and mitigation.

Transitioning to a green economy can unlock new economic opportunities and jobs. An investment of USD 1, on average, yields USD 4 in benefits



Carbon Pricing

Price signal on GHG emissions
(Mitigation action)

vs

Climate Finance

Financing (from public, private, and alternative sources) to support mitigation and adaptation actions that will address climate change

