

Introduction

The most recent report by the World Meteorological Organizationⁱ stated that recent evidence shows that concentrations of carbon dioxide in the atmosphere have surged at a record-breaking speed in the last seven decades. The last time the planet experienced a comparable concentration of CO₂ was 3-5 million years ago, when the temperature was 2-3°C warmer and sea level was 10-20 meters higher than now.

Economists have termed climate change as a market failure because it imposes huge costs and risks on society, including future generations, and not directly on the polluters. Carbon pricing instruments are mechanisms aimed at internalizing the costs of environmental damages by putting a price on the Green House Gases (GHGs) emissions for different sectors of the economy. Carbon pricing consists of a fee on GHGs emissions to incentivize reduction of carbon emissions. These mechanisms assist in shifting from fossil consumption and changing investment patterns to renewable energies to achieve sustainable development. Today, nearly 40 countries and more than 20 cities, states, and provincesⁱⁱ have already developed or are preparing for a carbon price and have begun linking their marketsⁱⁱⁱ. These countries have started to develop carbon pricing mechanisms as an approach for implementing their Nationally Determined Commitments under the Paris Agreement, which explicitly recognizes the important role of carbon pricing mechanisms to mitigate GHGs emissions. It is estimated that the global carbon market value is \$52 billion USD^{iv}.



Carbon and GHGs

There are six main greenhouse gasses (GHGs). Most of them exist naturally, but human activity, primarily through burning fossil fuels has increased the concentration levels of these gases to dangerous levels. These gasses remain in the atmosphere and reflect sunlight back into the planet, leading to increased surface temperatures. Scientific evidence has acknowledged they are the primary driver of rapid onset of global warming and climate change^v. The commitments adopted by signatory countries under the Paris Agreement are to reduce these emissions and transition into low or zero carbon economies. Carbon dioxide is the largest component of human emissions in terms of volume and other GHGs are also measured in terms of carbon dioxide to compare their contribution to global warming. The image above shows the real volume of CO₂ in tons of global emissions per hour into the atmosphere^{vi}.

Carbon Pricing Mechanisms

There are **four carbon pricing instruments**^{vii}. These four mechanisms aim to drive down GHGs emissions, which are the primary catalysts of climate change. The carbon pricing instruments can potentially **decarbonize economies** and **trigger technological innovation**. These mechanisms can become an important revenue

generating activity for the private sector and national governments^{viii} creating the resources necessary to invest in renewable energy alternatives — most prominently:

- 1) **Emissions taxes:** A carbon tax places a direct tax on GHGs emitters, regardless of the source. This is considered by many as a straightforward policy approach to reducing carbon emissions. Taxes are generally set by modeling the cost of reducing emissions to a specific target. This mechanism has faced political opposition from business and conservative groups.
- 2) **Emissions trading or cap-and-trade systems:** This approach uses free-market principles to achieve a reduction in emissions of particular GHGs. A government or regulatory body sets a limit on the total amount of emissions allowed in a particular sector of the economy and issues or auctions permits (carbon credits) for that amount. Companies or organizations covered by the cap must only emit according to the permits they possess. If companies exceed their allowable limits of emissions, they must obtain credits from other companies that have surplus credits or by investing in projects that offset their emissions (offset projects). Thus, emissions are “capped”, and emitters can “trade” credits until their emissions match the amount of permits they possess. A cap-and-trade system, to the extent that allowances are auctioned, can also raise similar amounts of revenue^{ix}.
- 3) **Fuel or input taxes:** This applies a direct taxation on fuel — in this case fossil fuels — that aims to discourage its purchase and transition into lower polluting fuels. These taxes differ from emissions taxes by focusing a progressive tax bracket on the different fuel inputs (kerosene, gas, propane, diesel, crude oil) instead of the emissions output. These can encourage private sector firms and industries to transition into cleaner fuels or renewable energy sources.
- 4) **Hybrid instruments:** These are a mix of emissions tax and cap-and-trade instruments. Most of current markets pricing mechanisms are actually hybrid systems that are used as transitional mechanisms towards emissions trading or cap-and-trade markets by providing temporary measures to create new revenue sources to reinvest into the markets. These can assist in building the institutional framework necessary to develop a sustained and efficient carbon market.

Risks

- The carbon market demands both environmental and financial integrity to ensure that units being sold are indeed a meaningful proxy for carbon and that trade is transparent and protected from fraud^x.
- Losing environmental integrity of the market, where rather than reducing the release of GHGs into the atmosphere these mechanisms actually serve to increase emissions, as they are used to environmentally justify activities that produce carbon.
- Not properly maintaining cap emissions by adequately issuing allowances and assuring the offset emissions actually represent real reduction of GHGs.
- Without proper design, carbon emitters can migrate across borders to unregulated jurisdictions and carbon-intensive emitters avoid paying their fair share of the costs.
- Without a strong policy framework carbon markets could potentially become financial bubbles without real contributions to reducing CO₂ emissions and independent of national and international priorities of the climate change agenda^{xi}.

Benefits

- Carbon pricing mobilizes domestic investment and generates additional revenue sources which can be invested and aligned with sustainable development programming.
- Carbon pricing markets require capacity building on different scales that can unleash domestic technological innovation.
- A comprehensive design can generate revenues that link to funds for critical investments into adaptation.

- Carbon pricing is a tool for countries to deliver on mitigation actions under the Paris Agreement in a cost effective manner at the domestic level, but also cooperatively (e.g. by using carbon markets together with other jurisdictions).
- Carbon pricing programs could incentivise with proper design sustainable development processes by promoting new job creation, attracting new types of investments, promoting economic diversification and inclusion, increasing energy security, reduction of wastes, reducing pollution and associated public health benefits, and creating new revenue streams for climate compatible development.

Steps to Setting a Carbon Market

1. Set the scope of the market (Geographic area, sectors, emissions sources, and GHGs to be regulated).
2. Collect robust emissions data; determine the level of the cap for the sectors.
3. Distribute emissions allowances to regulated entities while assuring adequate monitoring to address potential leakage issues that prevent sources of carbon emissions from moving to different jurisdictions, with the intent to enhance distributional impacts and create opportunities for governments to raise revenue.
4. Address potential volatility and uncertainty about prices through market stability design features, such as a price floor, ceiling, or allowances reserves.
5. Define a rigorous approach to enforcement of participants' obligations and to government oversight of the system.
6. Engage continuously with stakeholders to understand and address respective positions and concerns to avoid policy misalignment and ensure public and political support as well as encourage collaboration across government and market players.
7. Seek to link domestic carbon markets to international markets. This broadens flexibility as to where emission reductions can take place, and can also improve market liquidity and competitiveness, and facilitate international cooperation.
8. Allow regular reviews of market performance supported by rigorous, independent evaluation to enable continuous improvement and adaptation to changing circumstances.

Potential Parliamentary Actions

1. Inquire about current status of carbon trading mechanism in your country to identify the options available and how these fit with the national circumstances and objectives.
2. Explore the risks and benefits of each mechanism for the national context. The choice and design of a carbon pricing instrument should always be driven by national circumstances and political context.
3. Accelerate the implementation of a carbon pricing policy framework and institutional structure.
4. Support capacity building for the development of carbon pricing market instruments.
5. Promote national consultations to identify and validate the circumstances, needs, constraints and objectives of the various stakeholder groups invested.
6. Call for regional cooperation on carbon pricing dialogues and experience sharing to develop suitable legal frameworks to connect markets to national climate commitments.
7. Monitor government commitments and progress on the NDCs related to carbon reduction.

Parliamentarians should consider the way in which climate policies and legislation can interact with the broader context. An integrated package of climate policies that reduce emissions should support other policy objectives, such as economic growth, employment and efficient infrastructure among other national priorities. This approach will be more likely to gain widespread stakeholder support and to be implemented more effectively. In contrast, incoherent policy packages that lead to duplication or negative interactions will raise costs and could face political or social resistance. Monitoring and oversight of the government's policies should consider these integrated views to examine the best options for developing national carbon markets.

References

- ⁱ World Meteorological Organization, [Green House Bulletin](#), No. 13, October 2017.
- ⁱⁱ World Bank (2016) [Report on State and Trends of Carbon Pricing](#)
- ⁱⁱⁱ UNFCCC Secretariat briefing document
- ^{iv} Climate Markets and Investment Association UNFCCC dialogue meeting presentation, Grenada October 2017
- ^v Intergovernmental Panel on Climate Change (2007) Report
- ^{vi} Source: [Carbon Visuals](#)
- ^{vii} [Globe Advisors \(2016\) Carbon Primer](#)
- ^{viii} The Climate Reality Project (2016) Handbook of Carbon Financing
- ^{ix} <https://www.c2es.org/document/cap-and-trade-vs-taxes/>
- ^x Transparency International (2015) [Carbon Market Corruption Risks and Mitigation Strategies](#)

ParlAmericas Climate Change Program

The ParlAmericas Climate Change Program coordinates the Parliamentary Network on Climate Change to strengthen the legislative agenda on the fight against climate change and its impacts, and to promote actions aligned with the Nationally Determined Contributions adopted in the Paris Agreement. The program promotes legislative actions for climate change mitigation and adaptation. The program seeks to engage with key stakeholders in Latin America and the Caribbean to create alliances and cooperation to accelerate and support countries of the hemisphere in the implementation of the NDCs. The program encourages mechanisms to enhance citizen participation in the development of joint strategies on climate change and the implementation of the Paris Agreement and develops knowledge resources for parliamentarians informed by climate science and international best practices to inform coherent actions on climate change.

ParlAmericas is the inter-parliamentary institution that promotes parliamentary diplomacy in the inter-American system. Convening the national legislatures from North, Central and South America and the Caribbean, ParlAmericas works to strengthen democratic governance in the hemisphere by enhancing the ability of legislators to fulfill their roles and responsibilities through exchanges of parliamentary best practices and by promoting cooperative political dialogue on regional issues.

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