# Regional Climate Week

# Latin America and the Caribbean

## Panama City, Panama – 23-27 October 2023

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# Session 2: Domestic considerations in choice of carbon pricing

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# Carbon pricing…
# ….compared to other instruments

| | Renewable energy | Low GHG fuels | Energy efficiency | Process emissions |
|---|---|---|---|---|
| Renewable energy mandates/markets/incentives | ✓ | ✗ | ✗ | ✗ |
| Energy efficiency certificate markets / incentives | ✗ | ✗ | ✓ | ✗ |
| Fossil-fuel tax (but one without “gaps”) | ✓ | ✓ | ✓ | ✗ |
| Carbon pricing | ✓ | ✓ | ✓ | ✓ |

Broadest range

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# Instruments to create a price signal on carbon

| Energy-sector-only instruments | Pricing on GHG emissions |
|---|---|
| Fossil fuel tax<br><br>Tradable energy efficiency certificates | Carbon tax<br><br>Emission trading system (ETS) |
| Payments for renewable energy<br><br>Tradable renewable energy certificates | Payments for emission reductions (e.g., CDM; carbon funds; etc.)<br><br>Payments for REDD activities *(forestry)* |
| Incentivizing clean energy | Incentivizing emission reductions and carbon stocks |

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# Key aspects to consider

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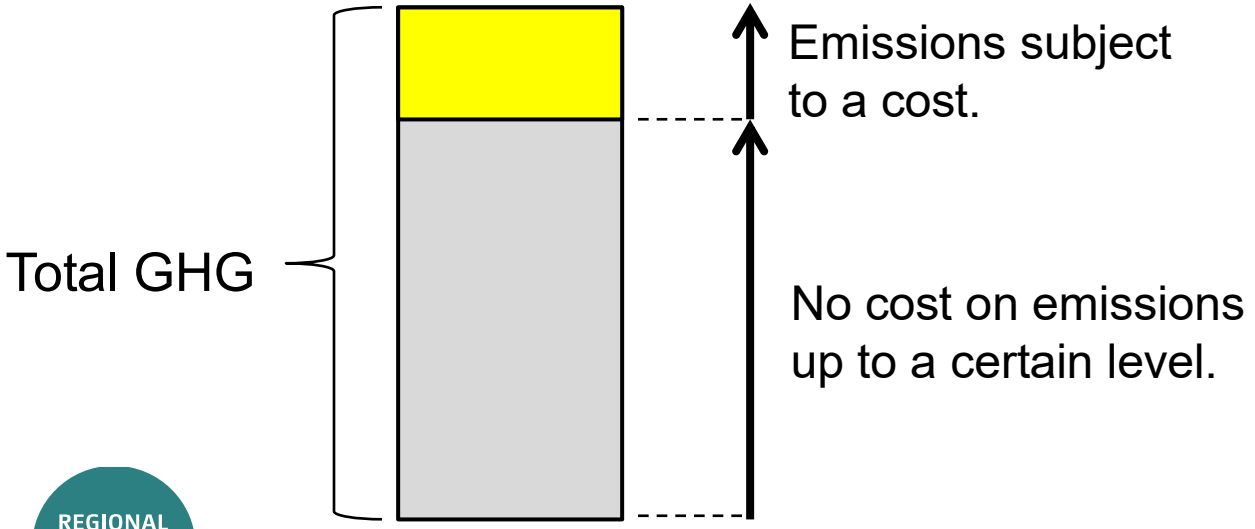
# Price and cost: not the same

**Cost:** expense incurred ≠ **Price:** agreed value per unit

**Concern:** International competition limits the ability of many sectors to pass the carbon price to final customers: risk of "carbon leakage".

**Solution:** Allow a certain level of emissions which can be emitted free of cost for some sectors… while preserving the price signal on emissions:

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# Price and cost: not the same

In carbon tax: tax-free threshold.

➢ carbon tax applies only above this threshold).

In ETS: free allowance.

➢ participants receive emission allowances up to a certain level).

Approaches for granting this rebate:

- Standard intensity-based benchmark.
  (X tCO2e / tonne of product (benchmark)
- Relative discount: X% of emissions.
- Grandfathering: on basis of historical emissions.

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# Elaborating an instrument which fits national circumstances and objectives

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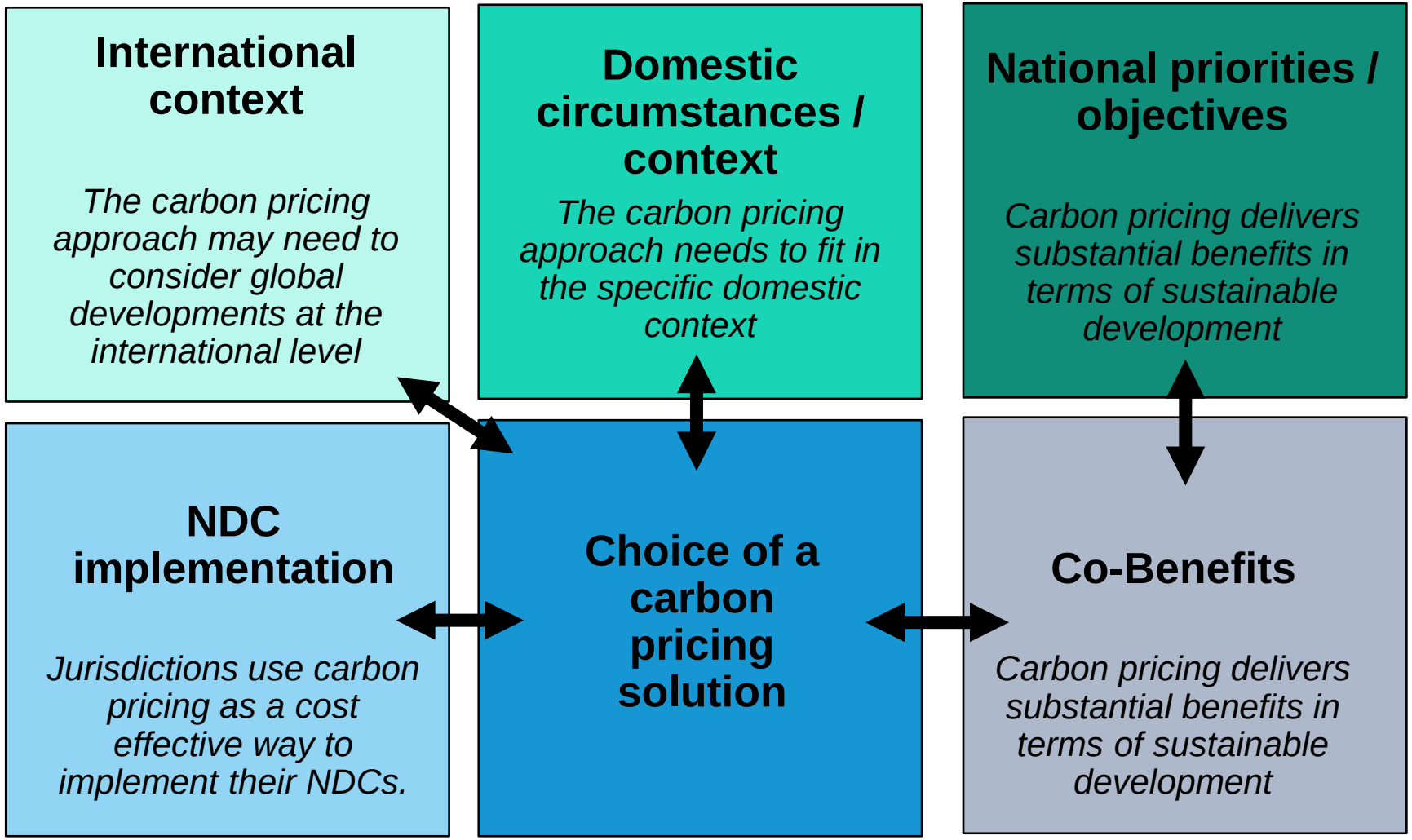
# Guidance

- Carbon pricing / market instrument

  - No single solution.
  - Needs to be tailored to fit the national context.
    - Circumstances (economic, social, governance, etc.).
    - Gaps.
    - Objectives/priorities.

# Choice of a carbon pricing solution

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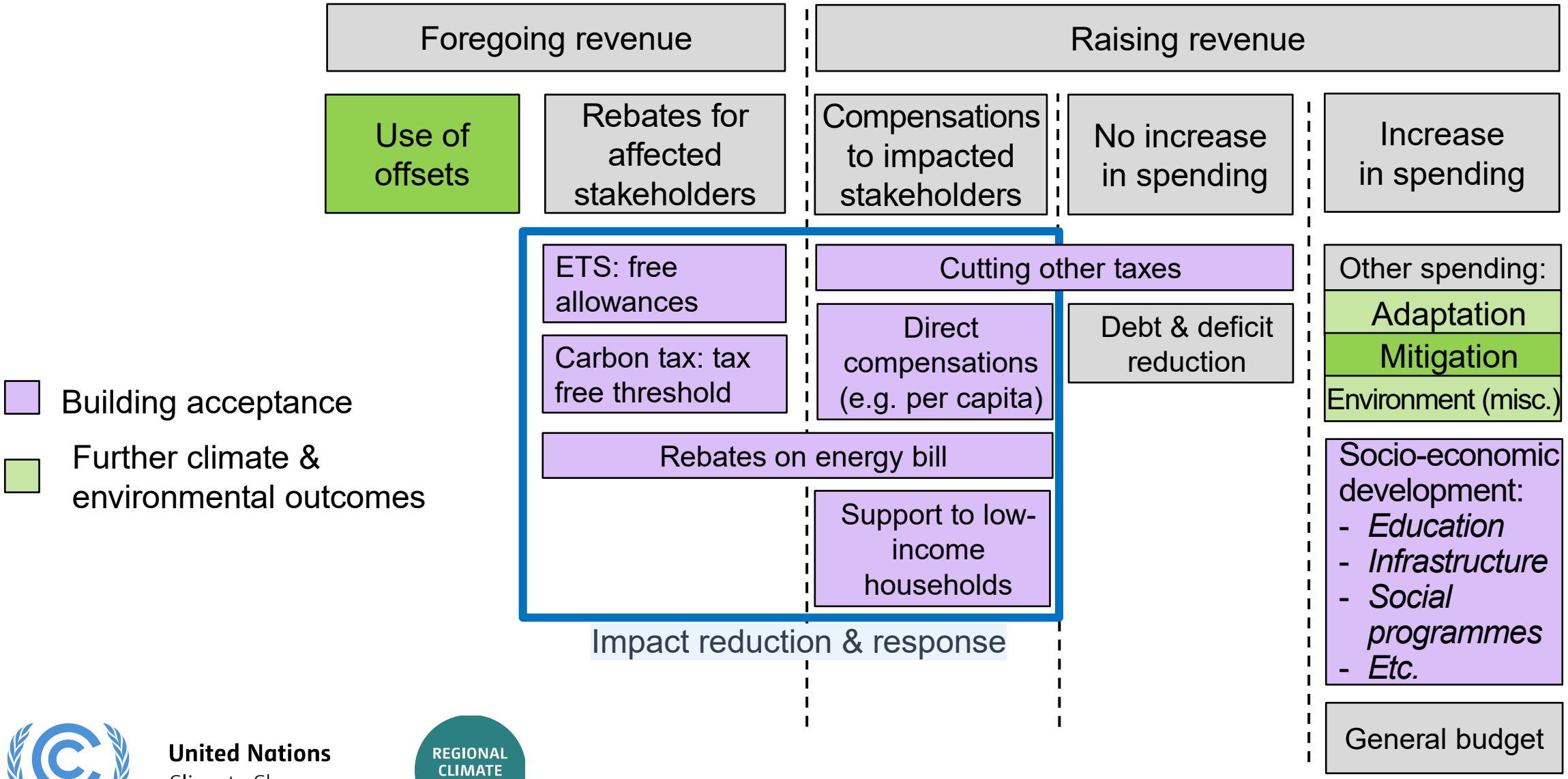
# Achieving national priorities

| Objective / priority | Solution |
|---|---|
| Trigger investments | Revenues from carbon pricing to give loan guarantees for investors (e.g. in sustainable energy projects) |
| Limit trade exposure from pricing carbon | Provide large discounts and compensations to entities covered (e.g. free allowances under ETS) |
| Reduce poverty | Focus reinvestments in job creation |
| Increase energy access | Reuse income to fund/support sustainable decentralized energy access |
| Increase income equality | Redistribute the proceeds on a per capita basis |
| Improve business climate/competitiveness | Use revenues to cut taxes which hinder wealth creation (income tax / capital gain tax) |
| Ensure adaptation | Investments in adaptation measures |
| Increase energy independence | Reinvest in measures which reduce energy imports |

# Carbon Revenues

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# Issues with carbon pricing

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# Issues to consider related to carbon pricing

- A number of conditions are required to ensure that carbon pricing works:
  - A potential for low carbon alternatives…
    - Exists
    - Can be mobilized (not too high barriers - ideally an initial penetration of solutions already exists).
  - Funding/Financing is available for the economy to respond to the price signal.
    - Returning the revenues of carbon pricing in the form of soft-loans is one option.

# Sectors where carbon pricing may not work

- Motorized vehicles:
  - The key barrier for switching to low carbon alternatives is the initial investment (purchase of a car)
  - Increasing the “cost of use” through carbon pricing will only marginally affect the purchase decision

  ➔ Sector better addressed through “fee-bates” (fees/rebate schemes)
- Informal sectors
  - Operation outside the legal framework → would not respond to an economic policy
- Agriculture
  - Scattered sources of emission which are difficult to control ➔ better mobilized with incentive schemes
- Forestry
  - Highly complex sector which is better mobilized through other means

# Issues to discuss about carbon pricing

- Initial introductory price may not be sufficient for putting countries on a path towards achieving the Paris Agreement:

  - Carbon pricing alone may not be sufficient.
  - Complementary measures may be needed (e.g., setting standards; measures for other sectors not covered, etc.).

  - Economic actors however understand (and often expect) that carbon pricing will increase over time → planning for future higher carbon prices.
  - Carbon pricing is a flexible instrument; its stringency and coverage can be revised up over time (e.g., along with climate commitments).
  - Long-term: Carbon pricing is an important tool for managing GHG emissions for as long as there are GHG emissions to manage.

# Common themes

- Scope & coverage: which sectors/GHGs to include? Which threshold?
- Governance and oversight: which are the institutional arrangements?
- MRV and enforcement: who is in charge of MRV? Where does it take place?
- Revenues: how are revenues used?
- Flexibility and linking: using carbon credits? Linking with other schemes?
- Stringency setting (cap or price level): how to set it? When should it be revised?
- Discount or allocation of emission rights: yes or no? on which basis?

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# Carbon Tax - Key Design Elements

Policymakers must consider a range of design choices, including:

- **Scope** – For instance, a carbon tax could be levied on the carbon dioxide content of fossil fuels.
- **Point of Taxation** – A carbon tax can be levied at any point in the energy supply chain. “upstream,” - fewest entities (for instance, suppliers of coal, natural gas processing facilities, and oil refineries) “midstream” (electric utilities) or downstream (energy-using industries, households, or vehicles).
- **Tax and Escalation Rates** –The tax rate should also rise over time to reflect the growing damage expected from climate change. An increasing price over time also provides a signal to emitters that they will need to do more and that their investments in more aggressive technologies will be economically justified.
- **Distributional Impacts** – Lower-income households spend a larger share of their income on energy than higher-income households. As a result, a price on carbon that increases energy costs can have a greater impact on lower-income individuals.
- **Competitiveness** – A carbon price could put domestic energy-intensive, trade-exposed industries (EITEs), such as chemicals, cement/concrete, and steel, at a competitive disadvantage against international competitors that do not face an equivalent price. A shift in demand to those countries could result in “emissions leakage” from one country to another
- **Revenues** – A carbon tax can raise significant revenue. How that revenue is used will ultimately be a political choice. Some or all of it could be returned to consumers in the form of a dividend, or alternatively, it could be reinvested in climate purposes, such as advancing low-carbon technologies or building resilience.



https://www.c2es.org/content/carbon-tax-basics/

# The national landscape
# … which elements are present?

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# The national landscape ... which elements are present?

| | Examples | Likely impact on allowance demand and carbon price in an ETS |
|---|---|---|
| **Complementary**<br>improve functioning of carbon markets | • energy market reform (e.g. facilitating cost pass-through)<br>• infrastructure upgrades<br>• energy efficiency labeling<br>• pollution/emissions measurement |  |
| **Overlapping**<br>duplicate incentives in carbon markets | • feed in tariffs<br>• green certificate programs, such as renewable energy targets |  |
| **Countervailing**<br>oppose incentives in carbon markets | • fossil fuel subsidies<br>• industry tax breaks and special treatment |  |

**Source**: *Emissions Trading in Practice: A Handbook on Design and Implementation* 2021.

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# The national landscape: which elements are present?

| Type | |
|---|---|
| ☐ Fossil fuel subsidies | ❑ Electricity sold under real cost (generation + distribution)<br>❑ Fuels sold at prices below international market price<br>❑ Direct spending (e.g., grants) on fossil-fuel infrastructure<br>❑ Support to state-owned enterprises for the operation of fossil-fuel assets<br>❑ Tax breaks and preferential financing benefitting fossil fuels |

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# The national landscape: which elements are present?

| Type | |
|---|---|
| ☐ Feed-in tariff for RE<br>☐ Tradable RECs<br>☐ Auctions for RE<br>☐ Tax credit/exemption<br>☐ Public grants/loans | (Renewable Energy Certificates) |
| ☐ Fossil fuel taxes and levies | (which fuels/sectors), e.g., coal, gasoline, diesel, natural gas |
| ☐ “Feebates” | (Fee / Rebates depending on GHG)<br>e.g., tax fuel inefficient cars on one side, incentivize low GHG cars on the other side) |

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# The national landscape: which elements are present?

| Type | |
|---|---|
| ☐ Domestic climate fund | To collect / disburse money towards climate action |
| ☐ Use of green bonds | To raise capital towards green activities |
| ☐ Electricity taxes and fees that can be repackaged into carbon pricing? | E.g., Together with its carbon price plans, South Africa reduced/cut taxes & fees on electricity |
| ☐ Any other tax that influences GHG or specifically applies on GHG intensive products? | E.g., some countries tax heavy industrial goods based on output (e.g., cement, glass, etc.) ➜ can easily be switched to tax on GHG emissions instead… without increase in fiscal pressure! |
| ☐ Net metering of electricity<br>☐ Merit order dispatch | Let consumer self-generate with solar PV<br>Use renewable power first when available |

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# The national landscape: which elements are present?

| Type | |
|---|---|
| ☐ Schemes for compensation to impacted stakeholders | Flat rebates on electricity bills<br>Progressive electricity tariffs<br>Monthly payments for households<br>Support programmes for vulnerable groups<br>Social safety net<br>Reduction of taxes/fees on basic needs and public transportation |
| ☐ Monitoring of GHGs | • Monitoring and reporting of emissions (pollutants/GHGs)<br>• Procedures / database and statistics<br>• Corresponding institution in place<br>• Laws/decrees underpinning MRV activities |
| ☐ Institutional framework | • Laws/decrees allowing the taxation of GHGs<br>• Climate change framework mentioning carbon pricing |

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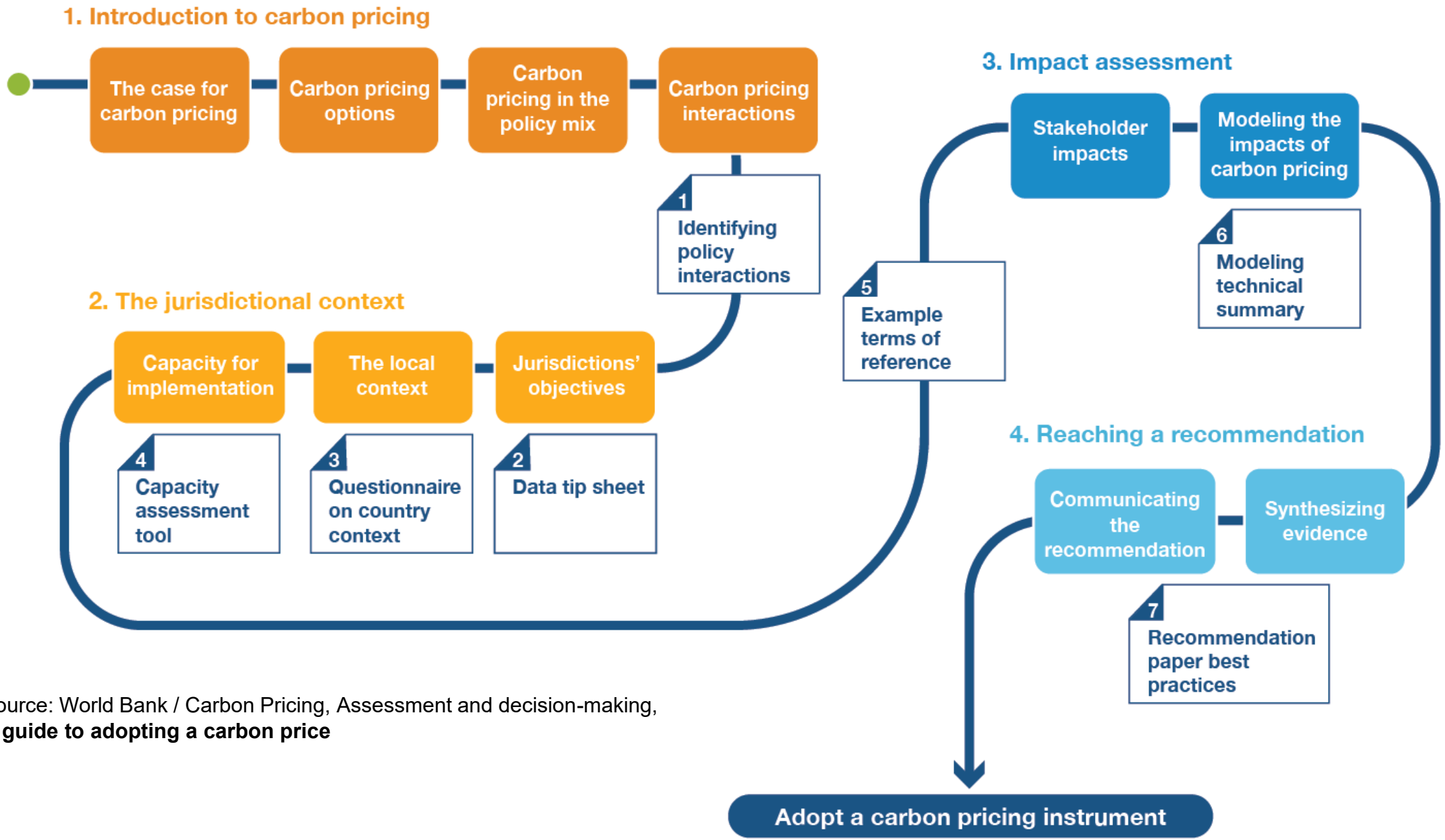
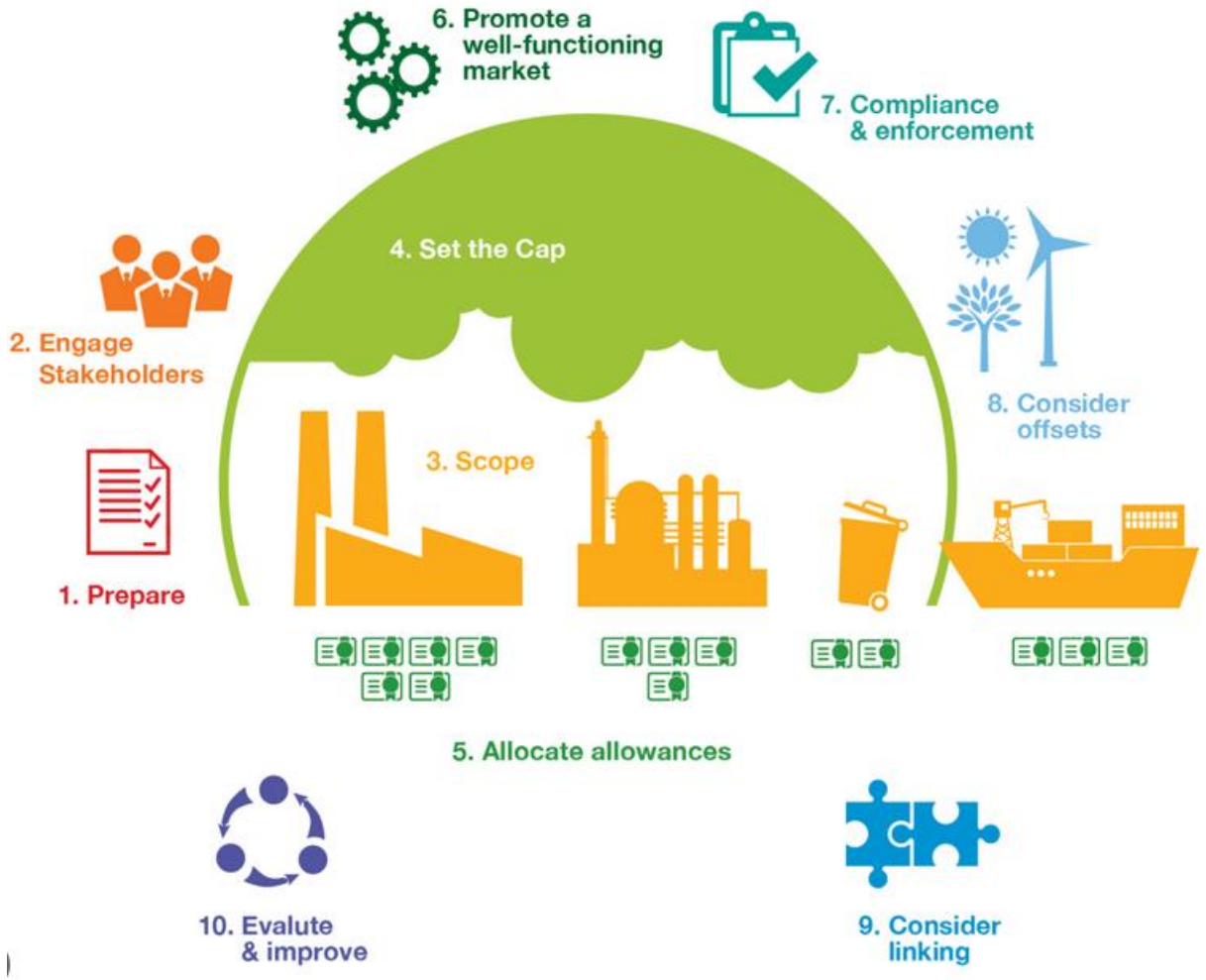
# Steps to consider and introduce carbon pricing




Source: World Bank / Carbon Pricing, Assessment and decision-making,
**A guide to adopting a carbon price**

# Steps to design and implement an ETS

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International Carbon Action Partnership (ICAP). **Updated Handbook for Emissions Trading Design and Implementation**

# Quiz time

## Under carbon pricing, cost and price are synonyms

| | |
|---|---|
| A | No ✓ |
| B | Yes, absolutely true |

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Based on Best, Burke, Jotzo 2020

# Quiz time

## I can convert/retool my energy/fuel taxes into a carbon tax

| | |
|---|---|
| A | Yes |
| B | No ✓ |

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Based on Best, Burke, Jotzo 2020

# Quiz time

## Which elements do I need for putting in place a carbon tax

| | |
|---|---|
| **A** | **The ability to levy taxes** ✓ |
| **B** | **The ability to monitor, report and verify emissions (MRV)** ✓ |

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Based on Best, Burke, Jotzo 2020

# Carbon Pricing. Country Experience & World Café

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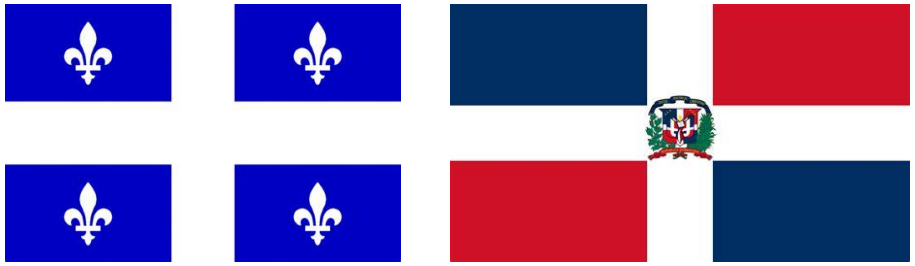
# 1. Country Experience. Carbon Pricing Instrument Snapshot

## 1. Emission Trading System



Quebéc



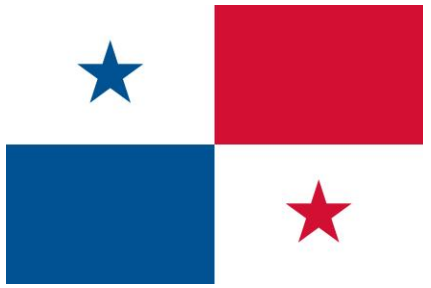
Dominican Republic

## 2. Carbon Tax

Colombia

Trinidad and Tobago

## 3. National Offsetting System



Panamá

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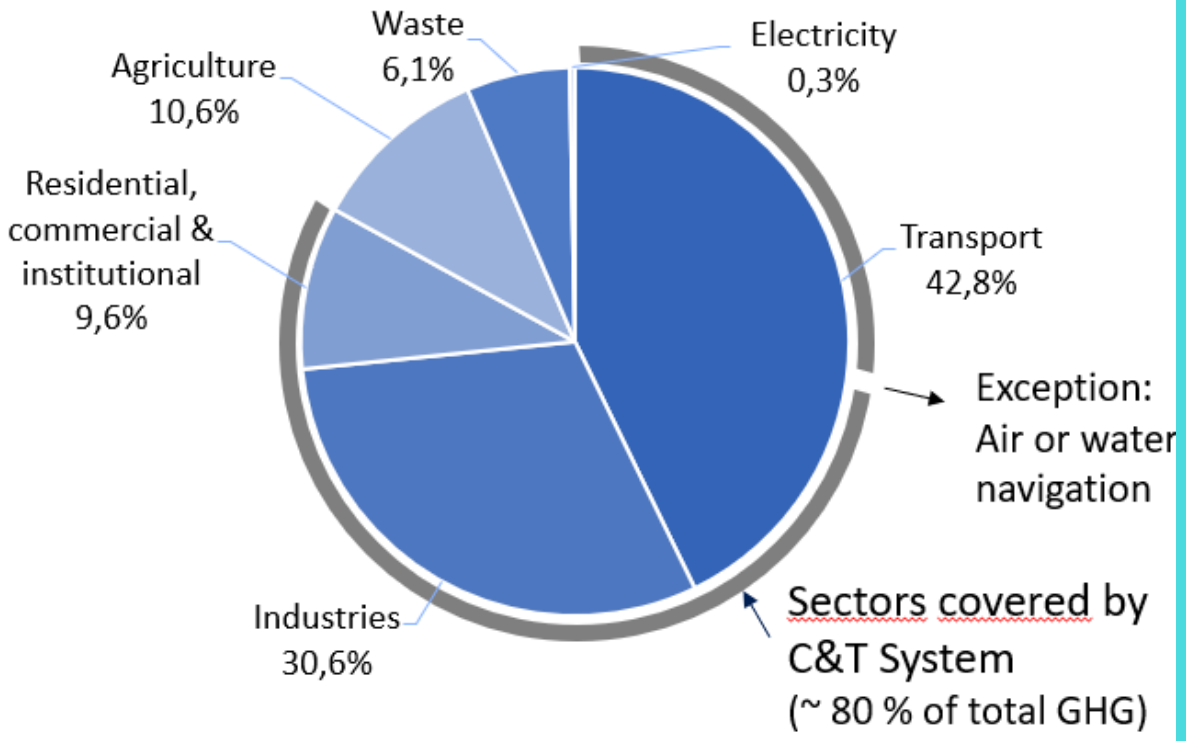
# SCOPE OF THE SYSTEM

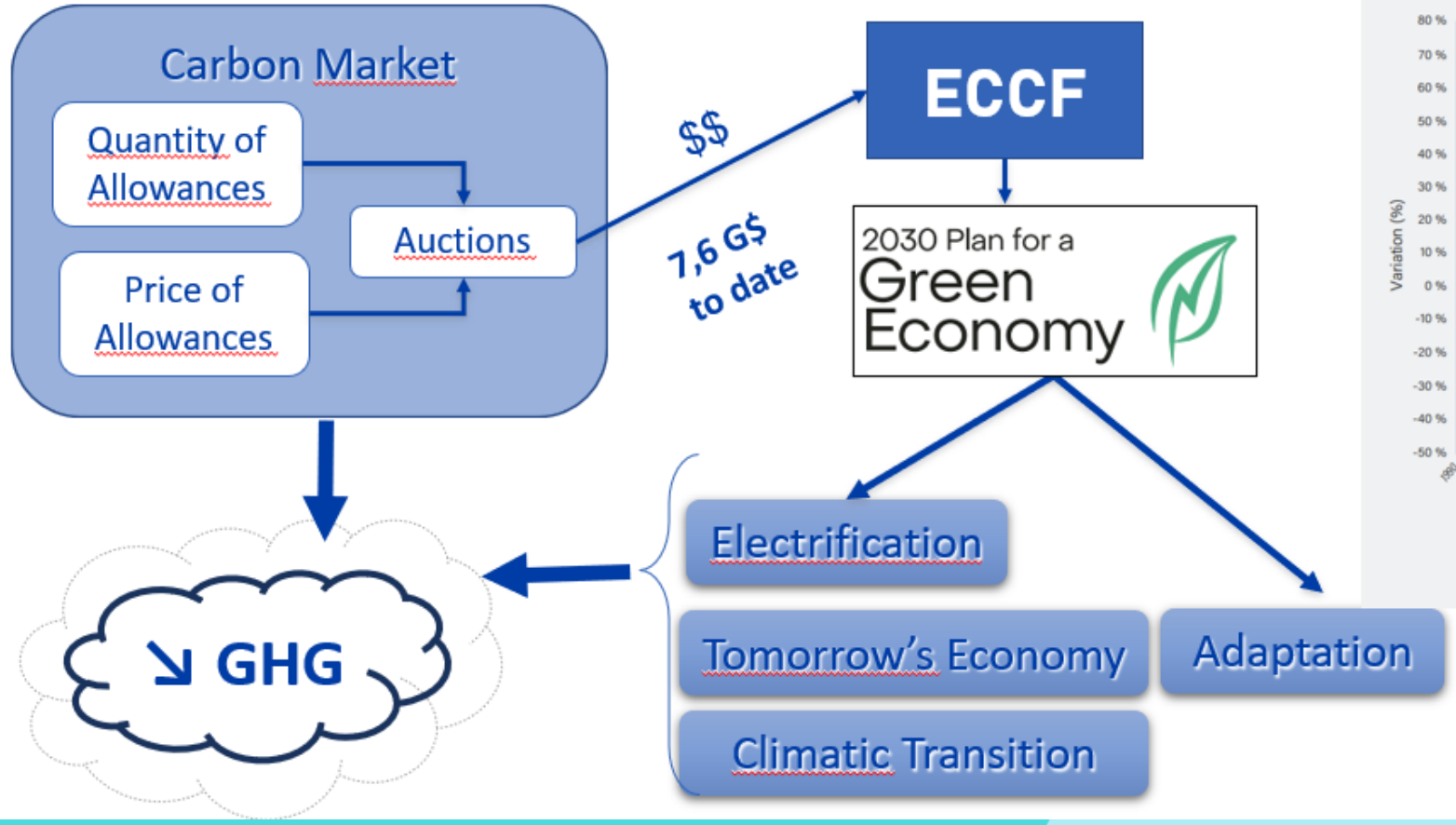
- Covered emitters (with compliance obligations)
  - Electricity and industry
  - Approximately 80 covered facilities
  - Threshold: 25,000 mt $CO_2$ eq. per year
- Fuel distributors
  - Approximately 45 covered distributors
  - Threshold: 200 litres per year
- Opt-ins
  - Approximately 45 voluntary covered facilities
  - Threshold: 10,000 to 25,000 mt $CO_2$ eq. per year

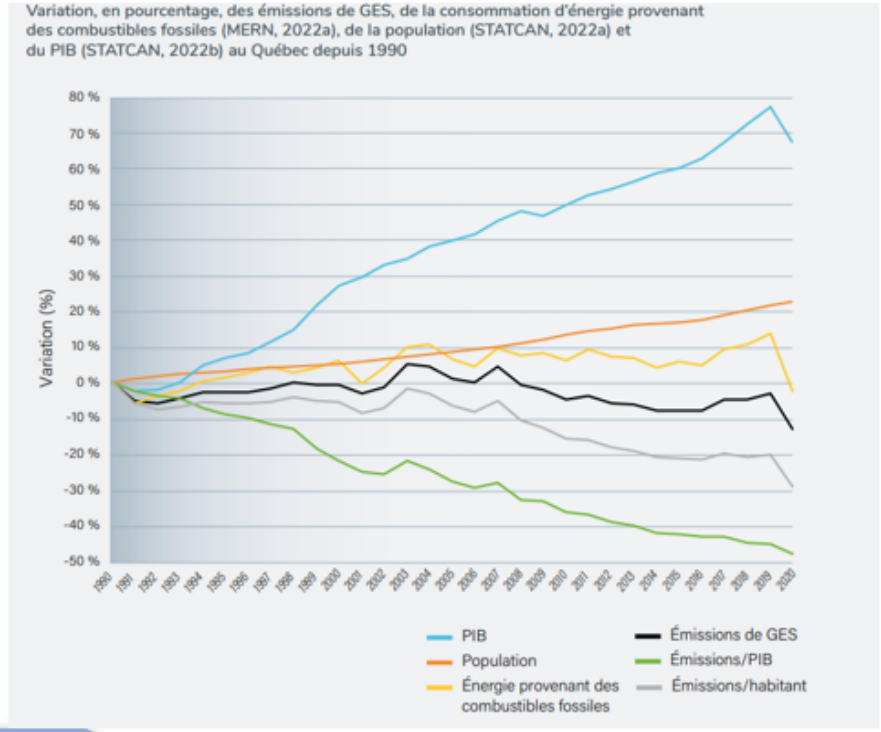
## QUÉBEC GREENHOUSE GAS EMISSIONS INVENTORY IN 2020




Source: inventaire québécois des émissions de gaz à effet de serre en 2020 et leur évolution depuis 1990.

# INTEGRATED APPROACH



# Datos de Panamá

Territorio: 75,517 km2

4,278,500 habitantes (2020)

68% de cobertura boscosa y otras tierras boscosas (2022)

-7,738.3 kt $CO_2$ eq
Balance de GEI para el 2019

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57.4 %
de las emisiones nacionales - sector UTCUTS (2019)

30.1 %
de las emisiones nacionales - sector Energía (2019)

6.6 %
de las emisiones nacionales - sector Agricultura (2019)

3.1%
de las emisiones nacionales - sector Residuos (2019)

2.8 %
de las emisiones nacionales - sector IPPU (2019)

Mercado basado en mecanismo de compensación

## Programa Nacional Reduce Tu Huella (PNRTH)

REDUCE TU HUELLA
Corporativo-Carbono

Energía

Servicios Ambientales

Banca

Manufactura

Transporte

Salud

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## Bolsa Panameña del Carbono (BPC)

MNC
DE PANAMÁ

## Sistema Nacional de Compensación de Emisiones de GEI (SNCP)

UNRE

Forestal

Ganadería

Energía

Manglares

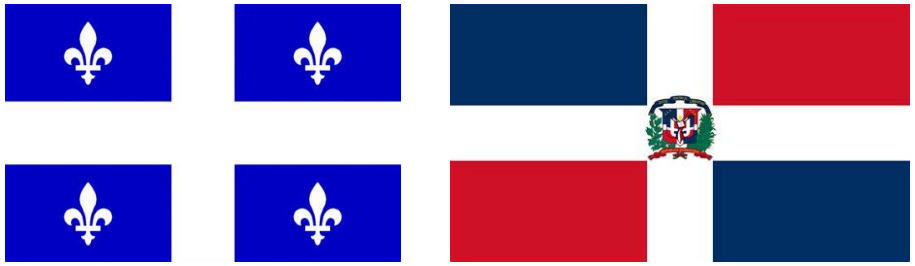
Residuos

Refrigeración

# 2. World Café

## Group Alpha

### 1. Emission Trading System



Quebéc

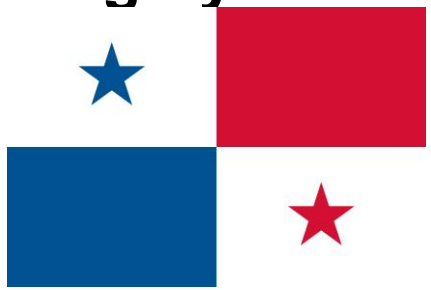
Dominican Republic

## Group Beta

### 2. Carbon Tax & National Offsetting System

Colombia

Trinidad and Tobago



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# 2. World Café

1. Three key **lessons learnt** from implementing/designing the carbon pricing instrument
2. Three **opportunities**
3. Three **main challenges**

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It’s Lunch Time
90 MIN

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