

Regional Climate Week

Asia-Pacific

Johor, Malaysia – 13-17 November 2023



United Nations
Climate Change

REGIONAL
CLIMATE
WEEKS



Session 1b: Introduction to carbon pricing



United Nations
Climate Change

REGIONAL
CLIMATE
WEEKS

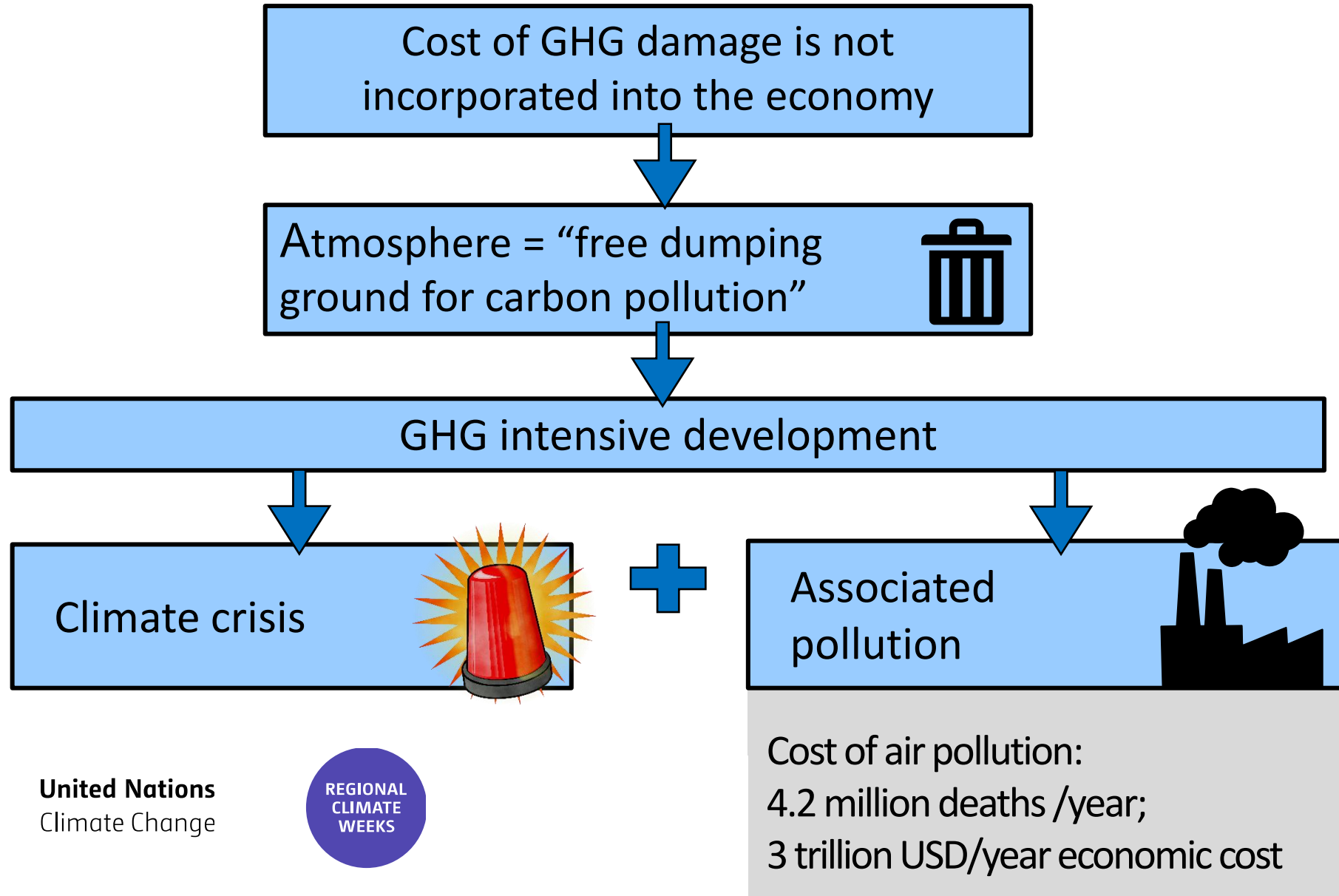
What is carbon pricing?



United Nations
Climate Change

REGIONAL
CLIMATE
WEEKS

Initial situation: World without Carbon Pricing:



United Nations
Climate Change



Carbon Pricing - Opportunities

- **Putting a price on carbon reduces emissions and the costs associated with these emissions**, costs that end up being borne by everyone, including companies and societies, through an array of impacts resulting from climate change.
- Carbon pricing has long been recognized as a **cost-effective** means to reduce greenhouse gas (GHG) emissions.
- Proposed national actions to mitigate climate change, embodied by Nationally Determined Contributions (NDCs), are widely understood to be collectively insufficient to achieve the ambitious goals of the Paris Agreement.
 - Carbon pricing has proven to be **one of the most effective tools to unlock potential from the private sector**, companies, as well as investors. It is therefore an important **part of the toolkit** available to policy makers, both to **achieve current NDCs at least cost** and to **encourage greater ambition in future**.



United Nations
Climate Change



Price signal on carbon emissions

Carbon Price:

What is it?

- Price signal on greenhouse gases (GHG) emissions: **X\$ per tCO₂e**

Why put it in place?

- To **take into account** [all of] [part of] the **cost of carbon pollution** (social cost of carbon) in decisions (planning, investments, operations, etc.).
- Recognized by most economists as the **simplest**, most **straightforward** and most **cost-effective** way to address GHG emissions

“Putting a price on carbon is the only effective way to curb emissions to combat climate change”

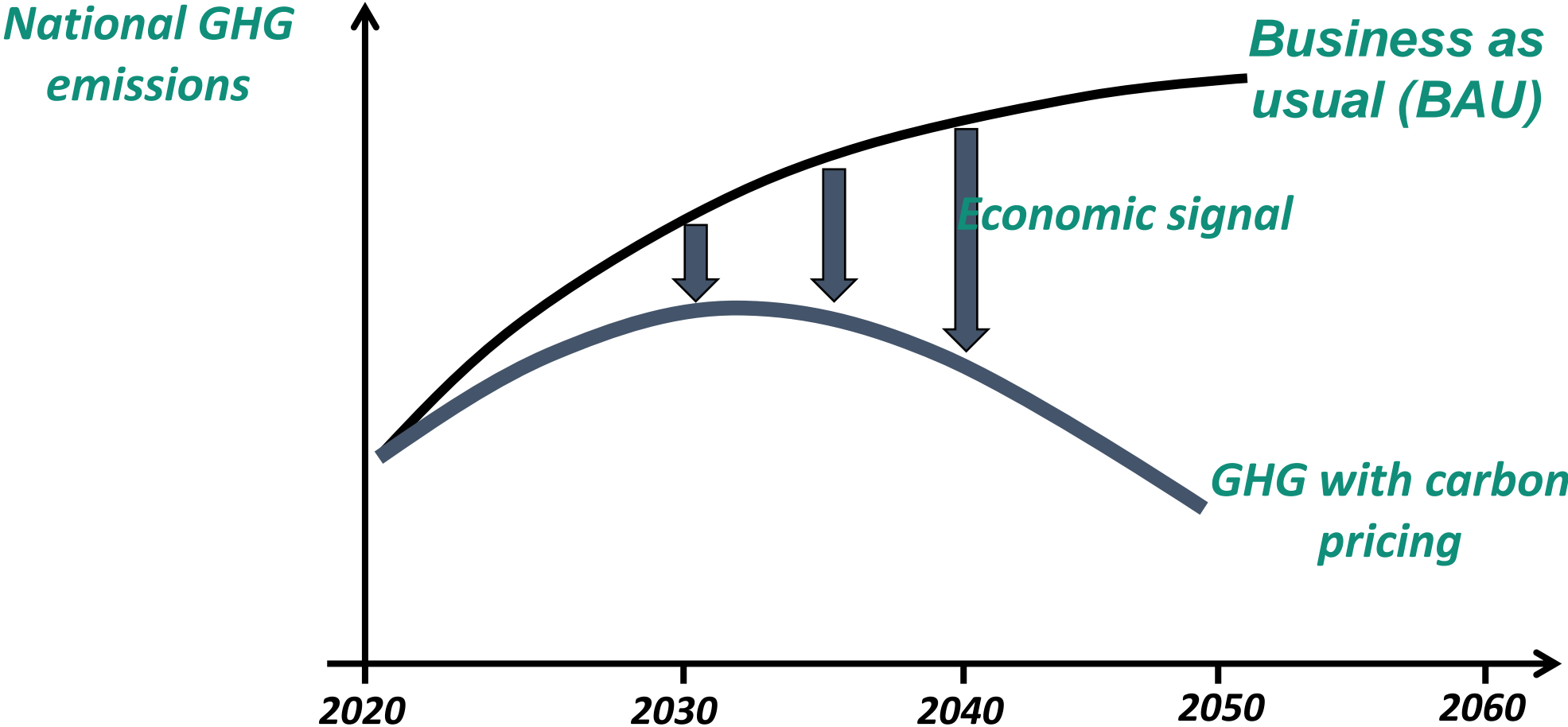
Jean Tirole (2014 Nobel Price in Economics).



United Nations
Climate Change



Price signal on carbon emissions



United Nations
Climate Change



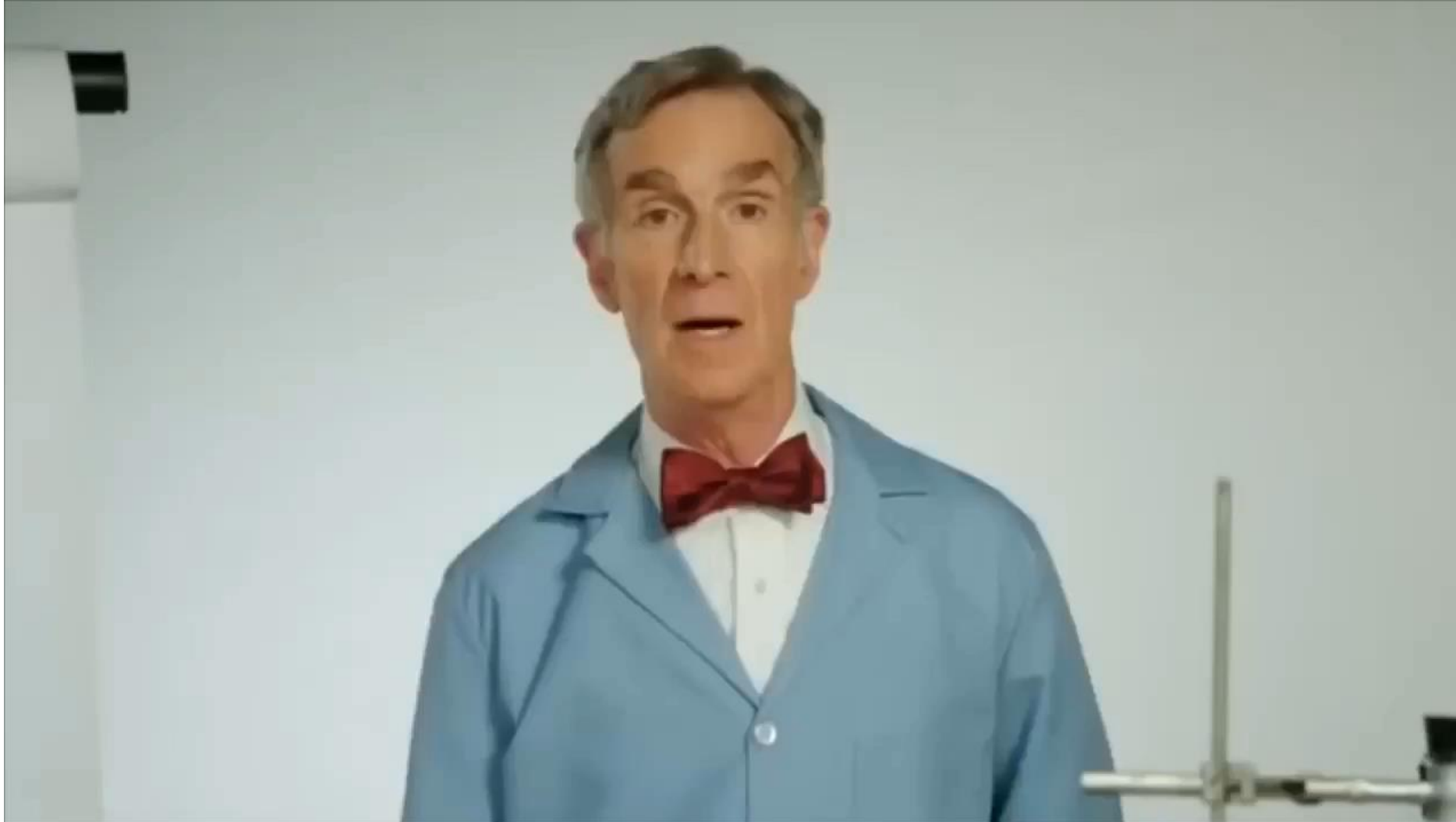
How carbon pricing works?



United Nations
Climate Change

**REGIONAL
CLIMATE
WEEKS**

How carbon pricing works



United Nations
Climate Change



How carbon pricing works

A few considerations:

- Governments require tax income to be able to operate
- Carbon pricing is **not about increasing taxes.**
- Carbon pricing is about **taxing the “bads”** (pollution) instead of taxing the “goods”



(e.g., tobacco products)

Response to signal
↑ Reduces the associated health costs
↑ Reduces associated import costs

No response to signal
↑ Creates revenues



United Nations
Climate Change



How carbon pricing works

A few considerations:

- Governments require tax income to be able to operate.
- Carbon pricing is **not about increasing taxes**.
- Carbon pricing is about **taxing the “bads”** (pollution) instead of **taxing the “goods”**.



E.g...: payroll tax

↓ Discourages the creation of added value

↓ Encourages undeclared work / informal sector



United Nations
Climate Change



How carbon pricing works



→ fosters a move towards low carbon technologies & practices



United Nations
Climate Change



Quiz time



United Nations
Climate Change

**REGIONAL
CLIMATE
WEEKS**

Quiz time

What does empirical evidence show about countries which have implemented carbon pricing and those which did not?

A

Overall not much difference !

B

Emissions in countries with carbon pricing: ~ +3%/year
Emissions in countries without carbon pricing: ~ -2%/year



United Nations
Climate Change



Based on [Best, Burke, Jotzo 2020](#)

Quiz time

Putting in place carbon pricing will increase my taxation level?

A

Yes absolutely

B

It depends as I could at the same time cut other taxes



United Nations
Climate Change



Carbon pricing and the NDC achievement



United Nations
Climate Change

**REGIONAL
CLIMATE
WEEKS**

Relation to the Paris Agreement

Potential roles for carbon pricing

- For achieving successive NDCs
 - (adjustable policy which can be revised over time)
 - For LT-LEDS (long-term economic signal)
 - Also, potentially for cooperative mitigation action under Art. 6
-
- Carbon pricing can play an **important role in realizing the ambitions** of the Paris Agreement and implement the Nationally Determined Contributions (NDCs).
 - Para. 136 of the first COP 21 Decision (**1/CP.21** Adoption of the Paris Agreement): recognizes the important role of providing incentives for emission reduction activities, including tools such as domestic policies and **carbon pricing**.
 - Two-thirds of all submitted Nationally Determined Contributions (NDCs) under the Paris Agreement consider the **use of carbon pricing and carbon markets to achieve** their emission reduction targets



United Nations
Climate Change





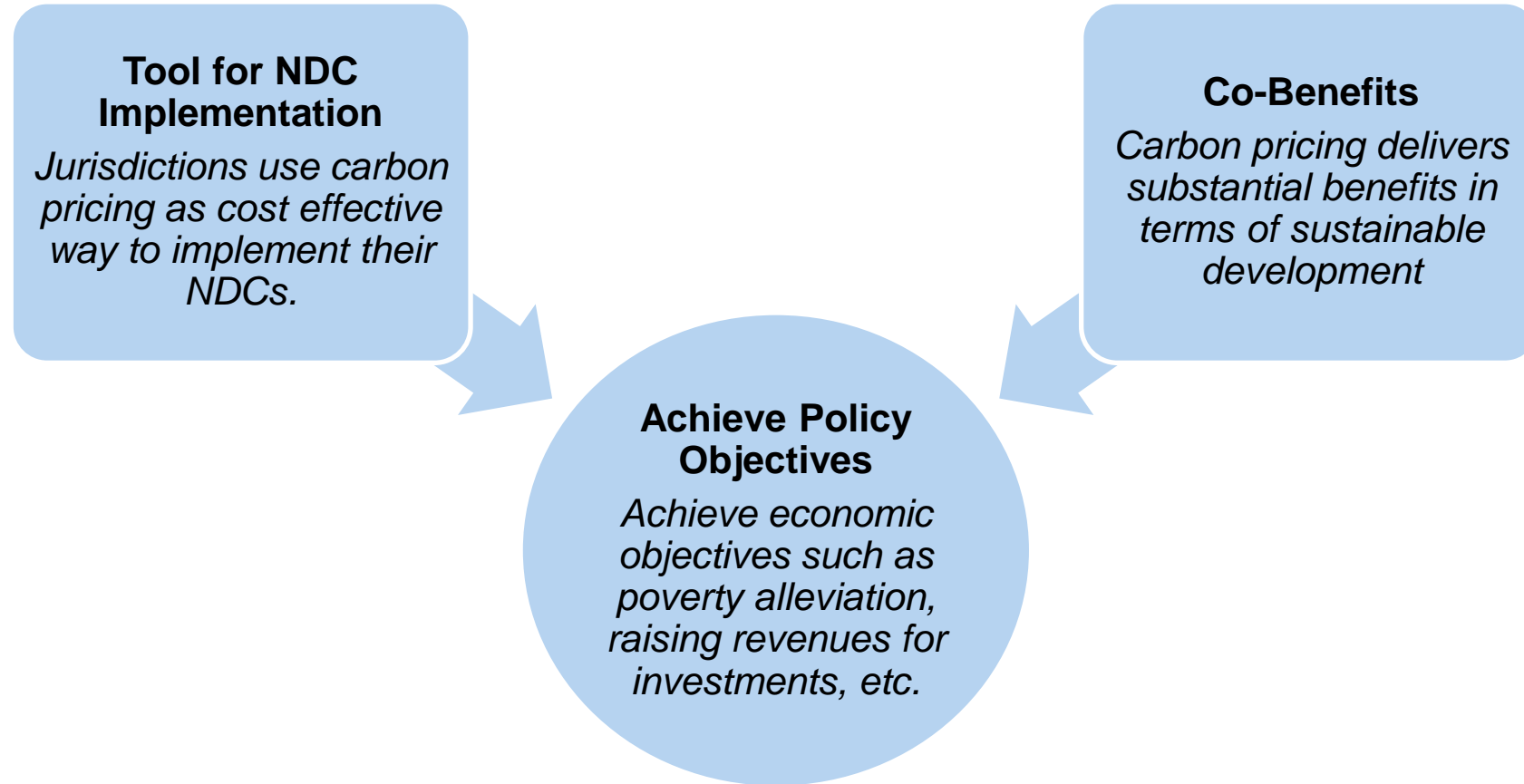
Co-benefits of carbon pricing



United Nations
Climate Change



Why Carbon Pricing?



United Nations
Climate Change



Co-benefits of carbon pricing



Carbon price

Associated benefits

- **Reduce emissions.**
- **Encourage action by peers.**
- Environmental and health benefits.
- Economic diversification / job creation
 - Penetration of new technologies
 - Attracting investments
- Raises revenue for other purposes
 - Investments / cutting inefficient taxes
- Increased energy security.
- Reduce the cost of fossil fuel subsidies.
- Reduced exposure to carbon border measures.



United Nations
Climate Change

REGIONAL
CLIMATE
WEEKS

Achieving national priorities

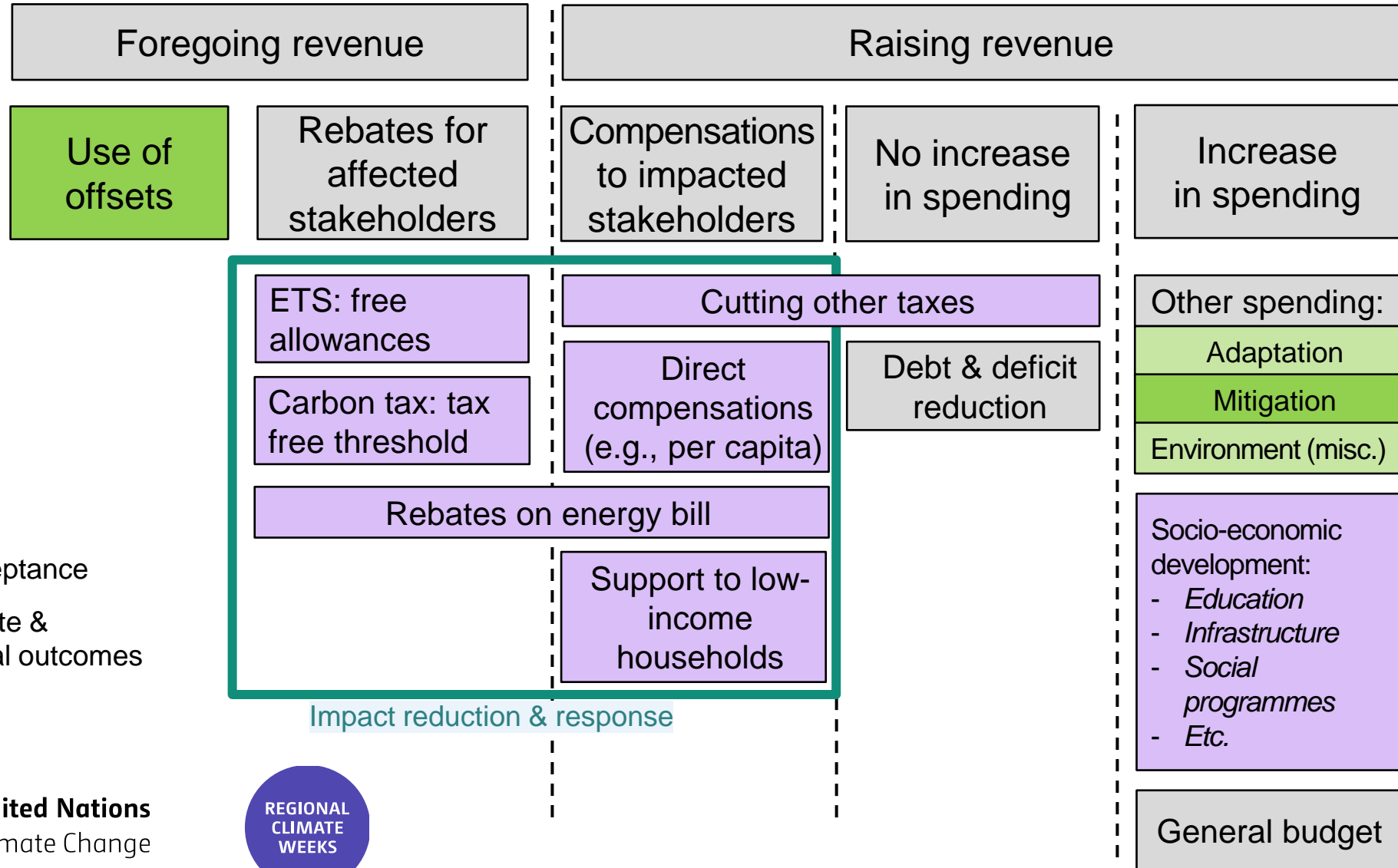
Objective / priority	Solution
Trigger investments	Revenues from carbon pricing to give loan guarantees for investors (e.g., in sustainable energy projects)
Limit trade exposure from pricing carbon	Provide large discounts and compensations to entities covered (e.g., free allowances under ETS)
Reduce poverty	Focus reinvestments on 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



United Nations
Climate Change



Carbon revenues



Building acceptance
 Further climate & environmental outcomes



United Nations
Climate Change



Benefits of Carbon Pricing

Help

- Facilitate emission pathways compatible with keeping global temperature rise to well below 2°C above pre-industrial levels and pursuing efforts to hold the increase to 1.5°C as per Paris Agreement.

Spur

- Investment and innovation in clean technology by increasing the relative cost of using carbon-intensive technology.
- Business and individuals seeking cost-effective ways to lower their GHG emission will be encouraged into green financing and clean tech.

Promote

- The achievement of SDGs by channeling financing to SD projects.

Generate

- Revenue which can be recycled into green economy through government spending for R&D.
- Revenue to help vulnerable communities adapt to the effects of climate change.

Create

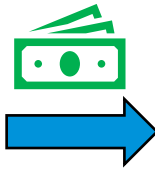
- Environmental, health, economic, and social co-benefits.



United Nations
Climate Change

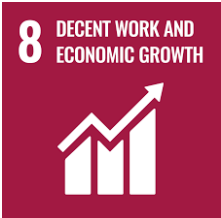


Carbon Pricing Co-Benefits against UN's SDGs



Visible Direct Benefits

Associated Benefits



with Investments in....

Leading to Social Impact on....



United Nations
Climate Change



REGIONAL
CLIMATE
WEEKS

Actual Co-Benefits derived from Carbon Revenues

Programs		Examples
Action	Energy Efficiency Programs	<ul style="list-style-type: none"> • Home retrofitting, less CO2 over lifetime of installations, generated jobs • Bulgaria finances energy savings of public buildings • California created 60,000 energy efficiency projects for households and to coordinate energy efficiency with water efficiency
	Sectoral transformation	<ul style="list-style-type: none"> • Promotion of low/zero emission vehicles in road, transit, rail, maritime • Expand and improve public transport • Sustainable transport with electric vehicle incentives, sustainable mobility, consumer rebates for vehicles
R&D /Innovation		<ul style="list-style-type: none"> • Re-invested to advancing low-carbon technologies or building resilience • EU commercial scale demonstration of carbon capture and sequestration • Innovative mitigation technology, intelligent logistics in Quebec • Advanced mitigation technology for heavy duty vehicles, freight equipment • Healthy soils and manure management in agriculture, farm-waste-to-fuel
Compensating Households or businesses		<ul style="list-style-type: none"> • Direct bill assistance to lower income households • Re-invest in disadvantaged and low-income communities • Returned to consumers and businesses in the form of a dividend • Use revenues to reduce existing taxes on labor and capital (tax swap) to minimize economic costs, and result in net economic benefits • Wealth transfer to even out regional disparities • Support electro-intensive industries through transition phase



United Nations
Climate Change



THANK YOU FOR ATTENDING!



United Nations
Climate Change

REGIONAL
CLIMATE
WEEKS



United Nations
Climate Change

**REGIONAL
CLIMATE
WEEKS**