



State and Trends of Carbon Pricing 2019

AND WHAT CARBON PRICING COULD
BE IN GCC SELF-INTEREST?

World Energy Congress, Abu Dhabi, September 12, 2019

Event: Exploring climate change strategies and the opportunities
in Sustainable Finance and Carbon Markets for the GCC

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Carbon Pricing options

Explicit

- Carbon taxes
- Cap-and-trade system
- Emission reduction credits

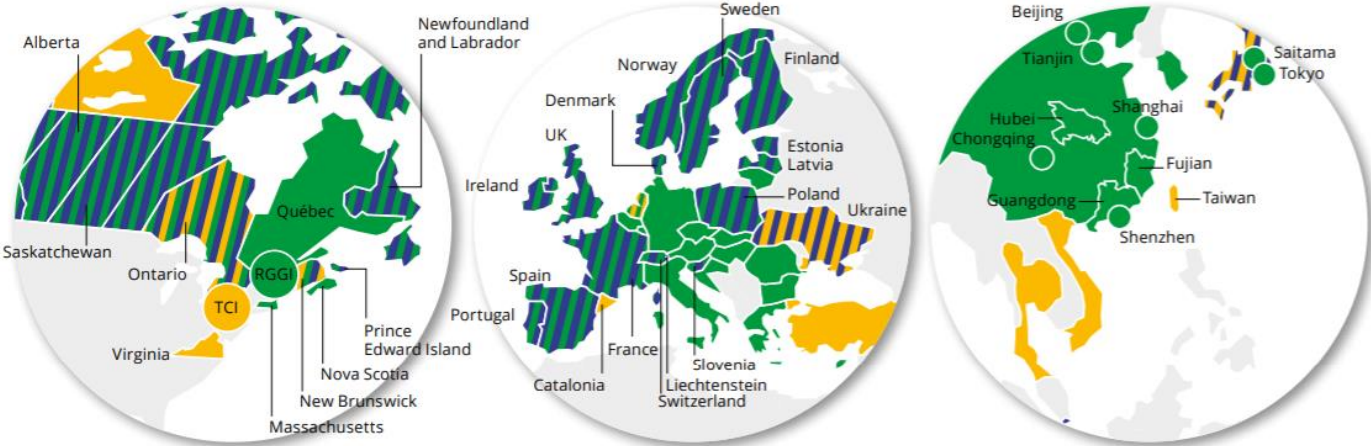
Implicit

- Fuel taxes
- Mandatory Standards
- Fossil fuel subsidies
- Shadow pricing in public and private sector

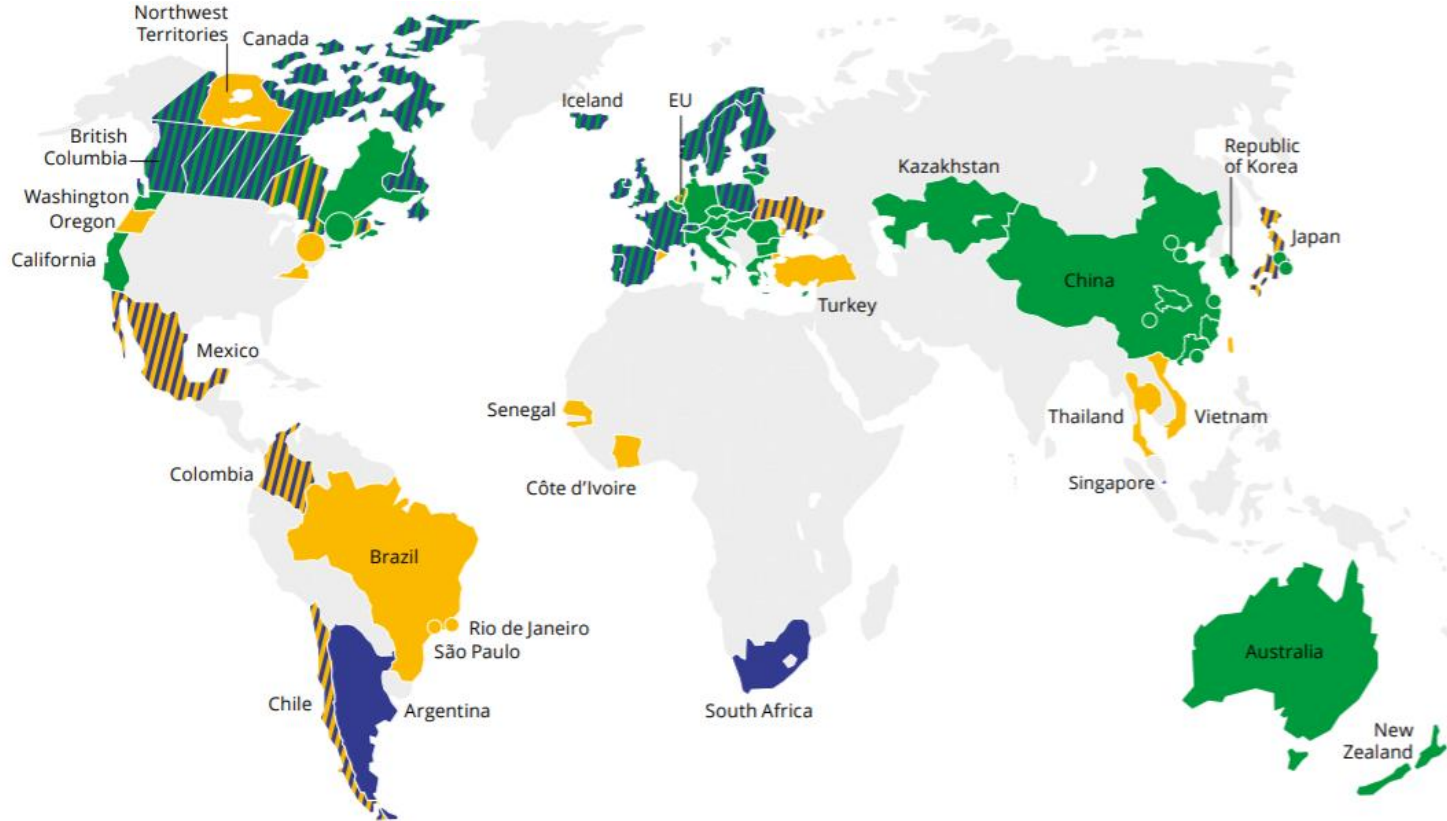
Why Countries Implement Carbon Pricing?

- Improve allocation of resources in the economy by correcting the failure of the markets to reflect full cost of economic activities in product prices
- Enhances the efficient use of energy, resources and existing systems
- Drives innovation, adoption and diffusion of efficient clean technologies and business models; improves returns to low-carbon infrastructure investments (including EE, RES, CCS and CCU)
- Effective and cost-efficient way to reduce emissions (maximizes compliance flexibility)
- Convenient and efficient instrument of collecting fiscal revenue and resource rents (e.g. compared to income taxes): low administration and transaction costs if applied upstream, difficult to evade, reduce informal sector
- Larger co-benefits may go beyond climate such as air quality, healthier ecosystems, broader access to modern energy, etc.

Initiatives continue to slowly emerge

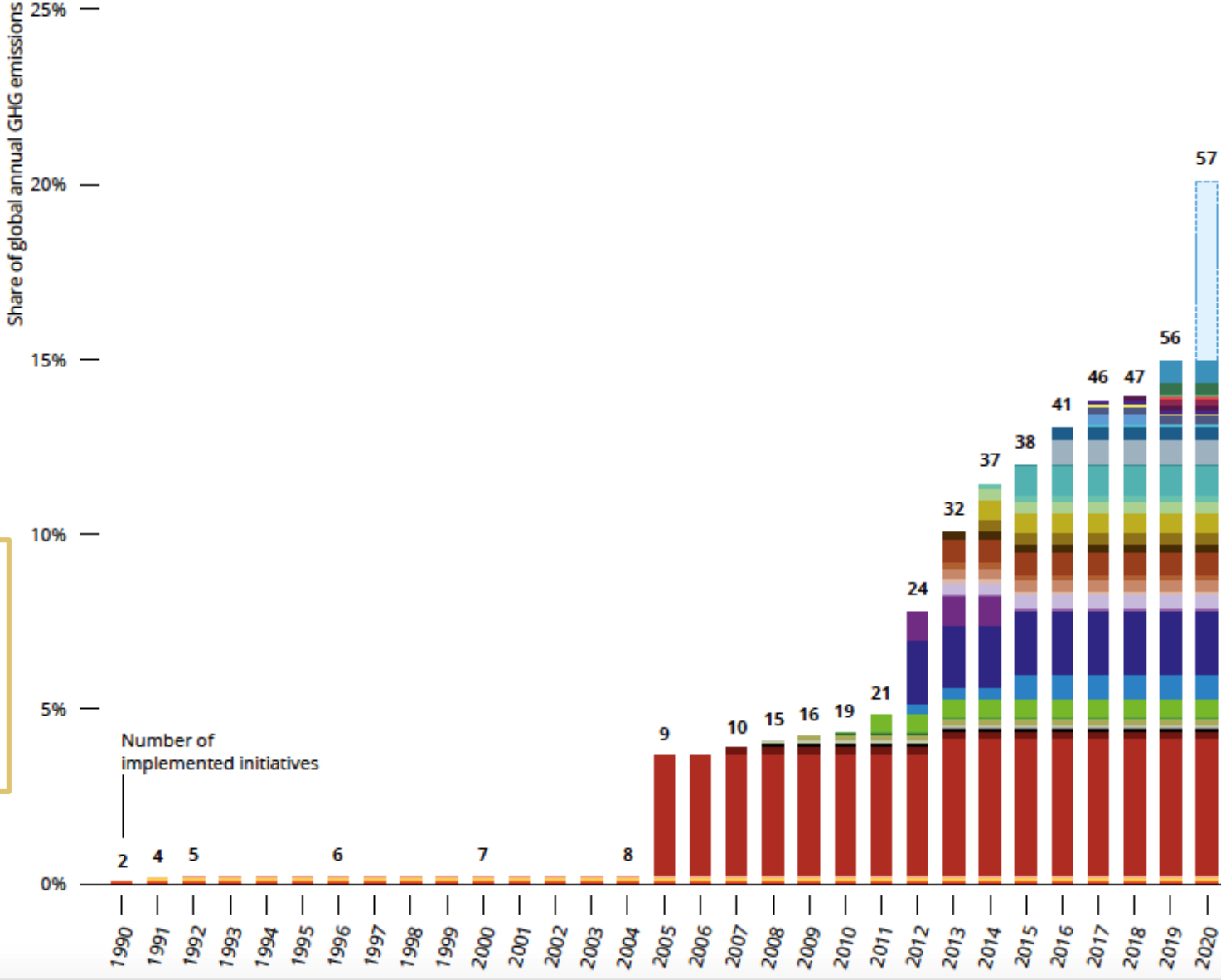


46 national and 28 subnational jurisdictions are putting a price on carbon



- ETS implemented or scheduled for implementation
- Carbon tax implemented or scheduled for implementation
- ETS or carbon tax under consideration
- ETS and carbon tax implemented or scheduled
- Carbon tax implemented or scheduled, ETS under consideration
- ETS implemented or scheduled, carbon tax under consideration
- ETS and carbon tax implemented or scheduled, ETS or carbon tax under consideration

Coverage remains stable

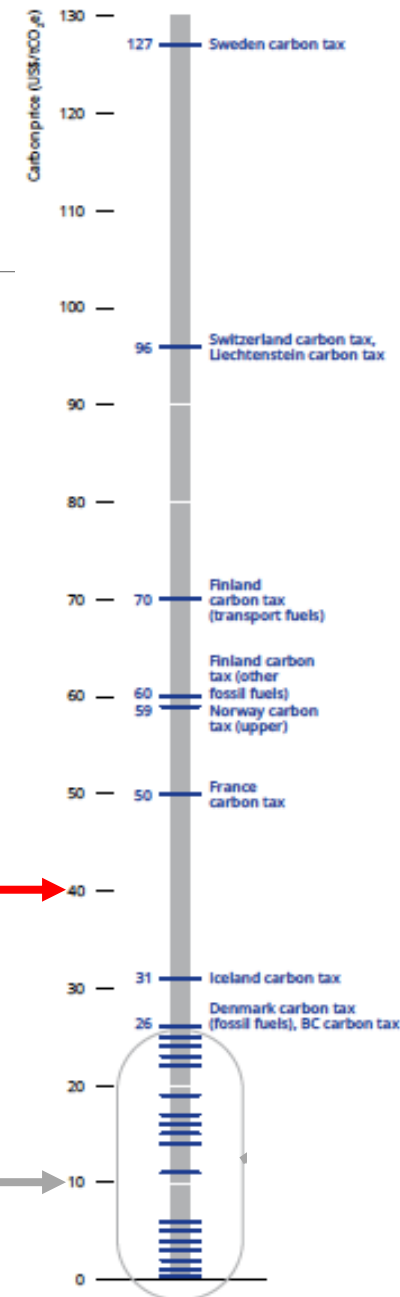


With the Chinese ETS, carbon pricing initiatives would cover about **20 percent of global greenhouse gas (GHG) emissions**. But no substantial change since 2018

Prices have increased, but most remain low

Only 1 percent of CO2 emissions priced at Paris-compatible levels

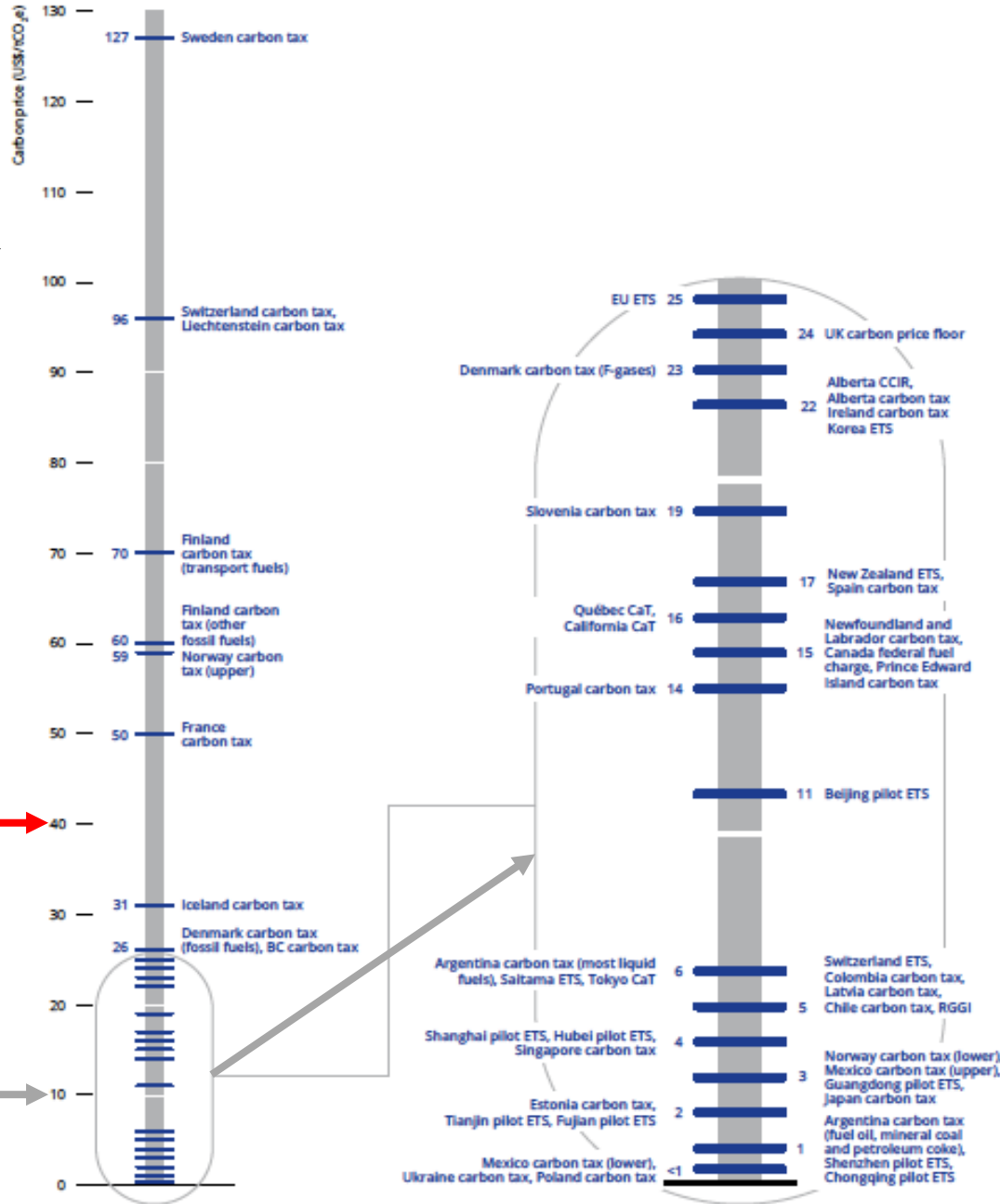
51% of the emissions covered are priced < US\$10/tCO2e



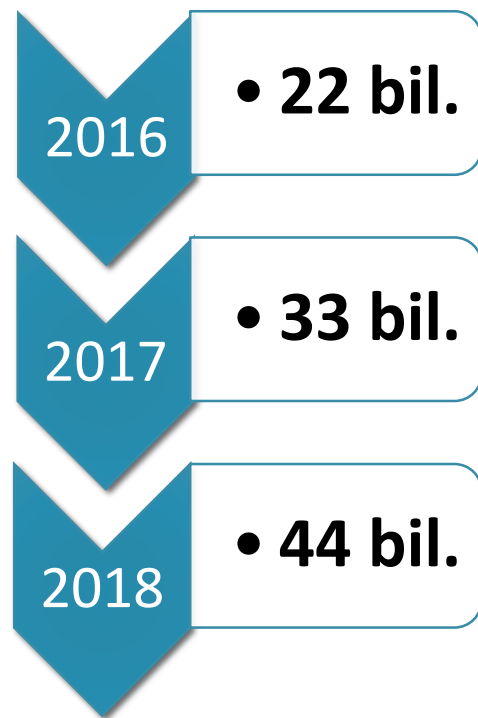
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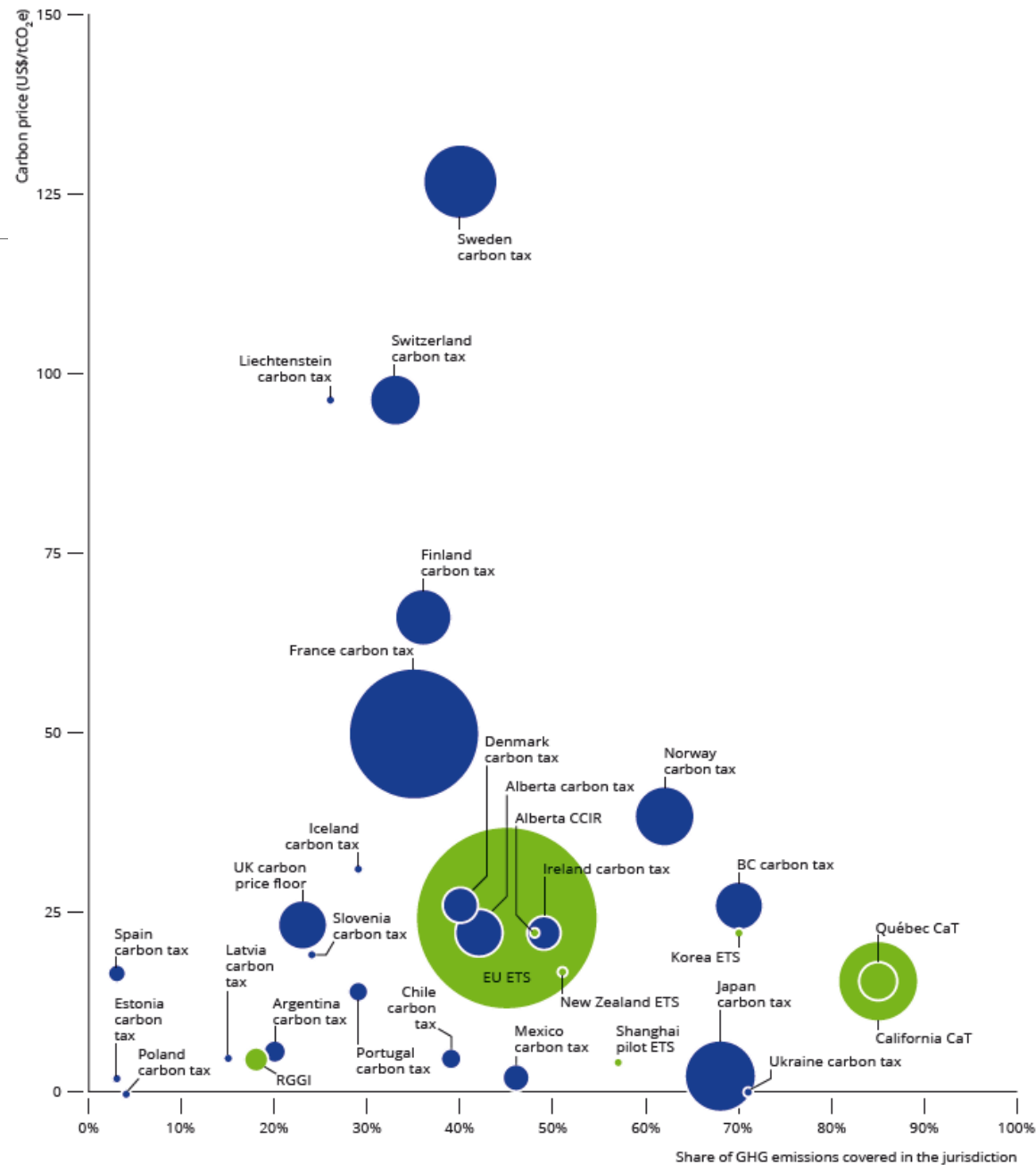
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Carbon revenues are on the rise



... and are recycled to economy in different ways

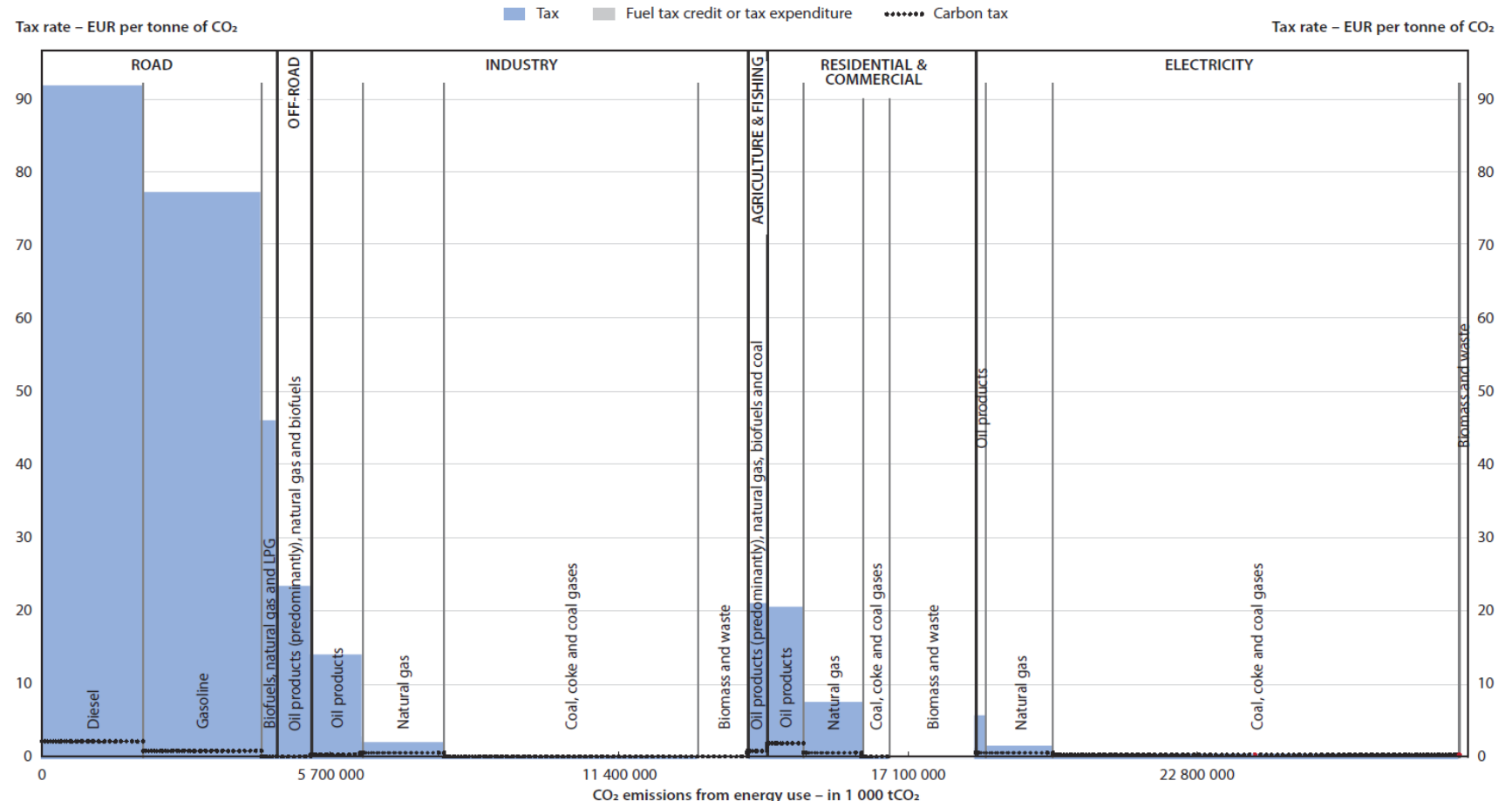


Implicit carbon pricing policies

OECD 2018: Effective tax rates on energy use in the 42 OECD and G20 economies in EUR/tCO₂, 2015 (excluding taxes on electricity output, including carbon emissions from biomass)

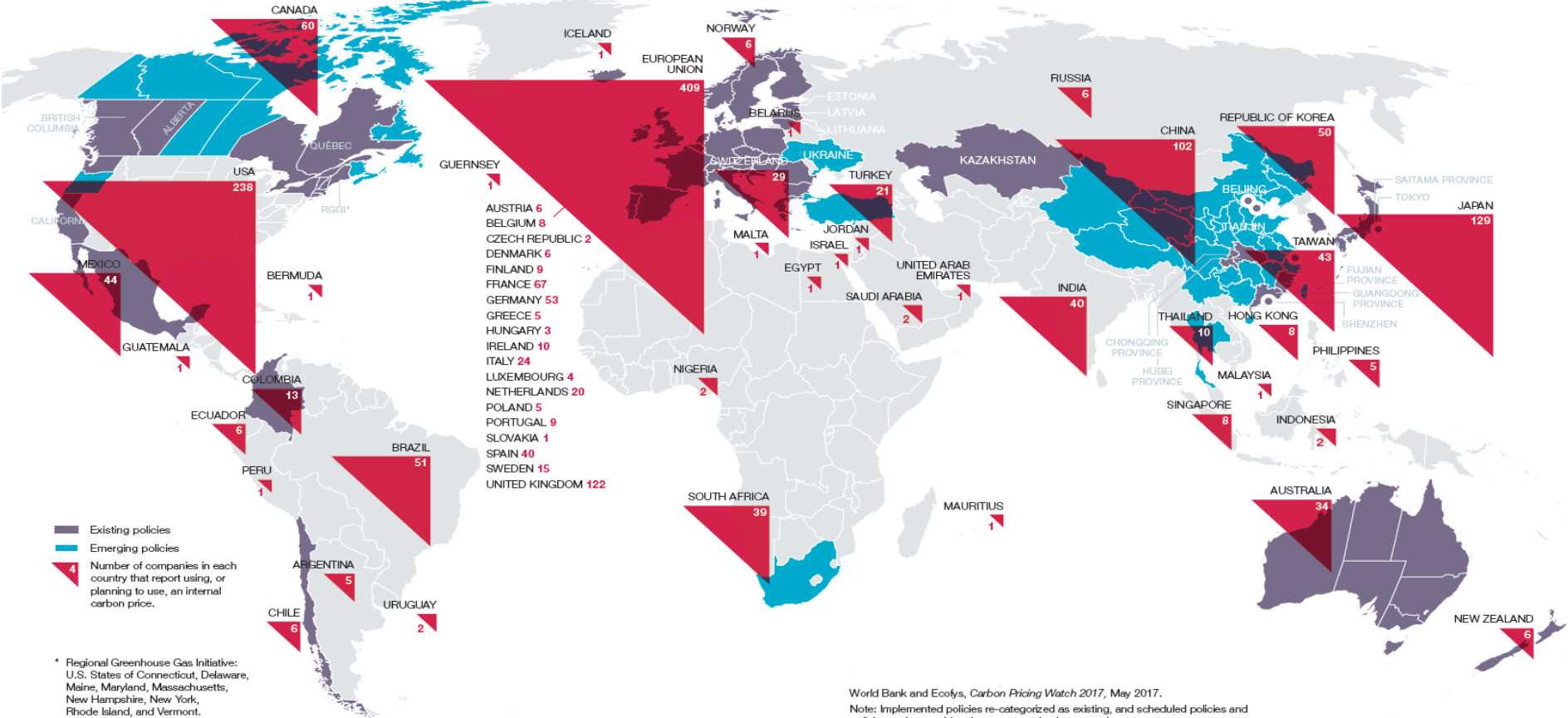
Implicit carbon prices:

- positive (e.g., fuel taxes, emission standards)
- negative (e.g., fossil fuel subsidies)



Note: Tax rates are shown as at 1 April 2015. Carbon emissions from energy use were calculated from data in the Extended World Energy Balances (IEA, 2016b).

1400 Companies Priced/Planned to Price Carbon internally by 2019



World Bank and Ecofys, *Carbon Pricing Watch 2017*, May 2017.
 Note: Implemented policies re-categorized as existing, and scheduled policies and policies under consideration re-categorized as emerging.
 The government of Brazil is currently considering carbon pricing policy proposals.

Companies' use of internal carbon pricing

- Manage **climate policy risk**, prepare for **upcoming climate-related regulations**,
- Find opportunities for **efficiency-improving investments** and **low-carbon technologies**
- **Makes corporate sustainability profitable**



Urgent demand from the Financial Sector, investors, insurance companies and Central Banks

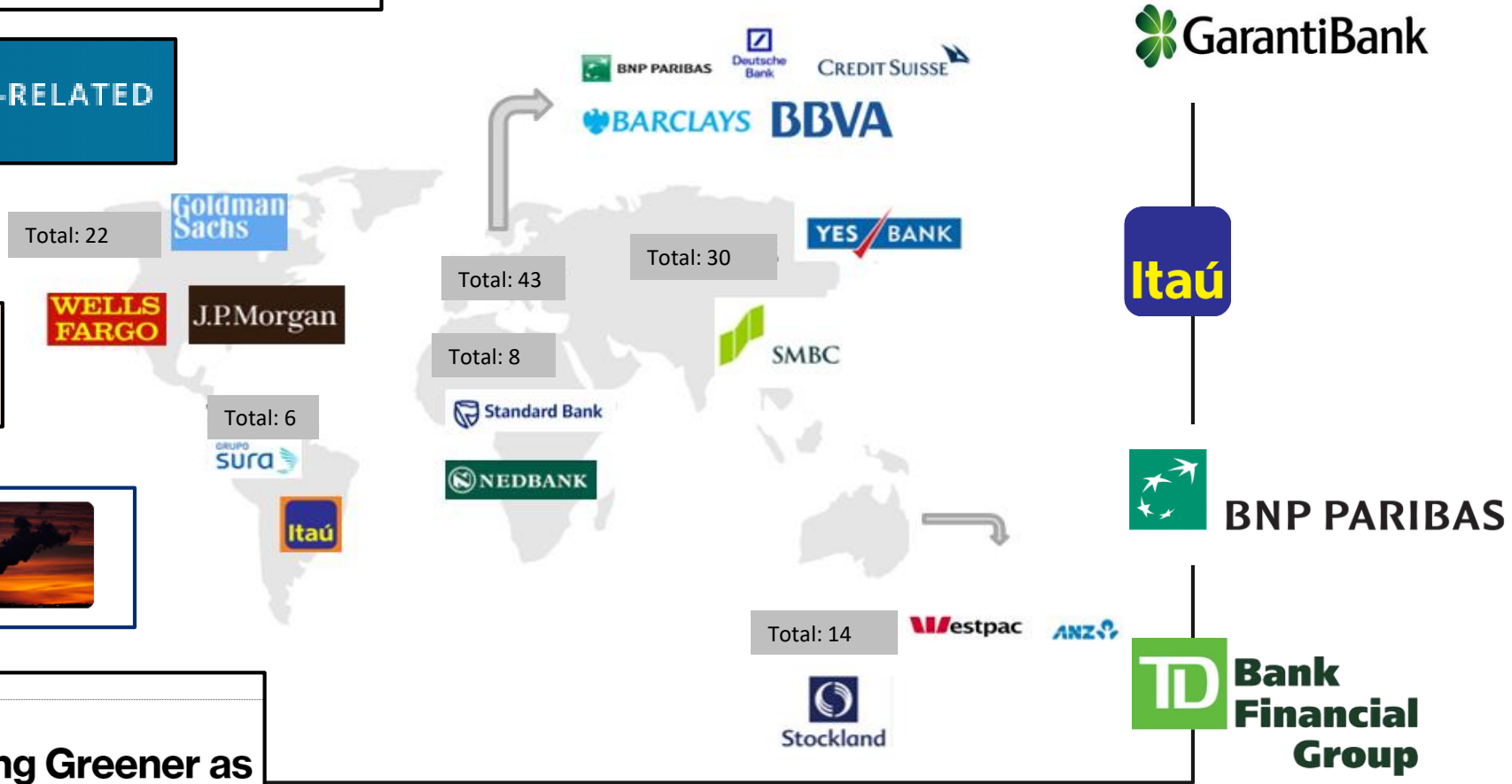
2018 GLOBAL INVESTOR STATEMENT TO GOVERNMENTS ON CLIMATE CHANGE

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

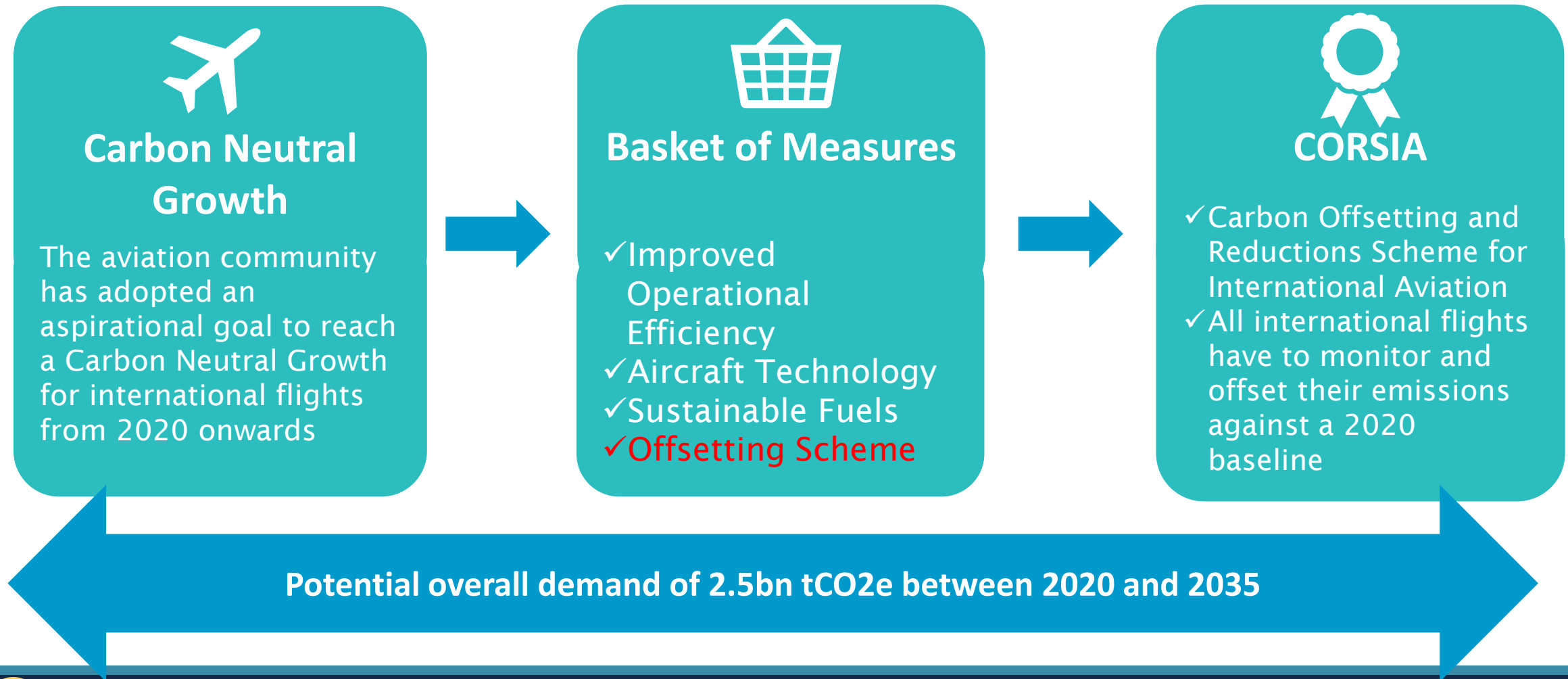
[Munchener Ruckversicherungs-Gesellschaft AG](#) + Add to myFT
Munich Re boss wants higher carbon emission costs

Environmental Leader
Investors Worth \$10 Trillion Call Out 700 Companies Over Transparency
 3 days ago

Bloomberg
 Economics
Central Banks Are Thinking Greener as Climate Change Hits Policy



International Aviation Carbon Neutral Growth from 2020



What Carbon Pricing Could Be in the Self-interest of GCC?

- It is a good time for policy innovation in anticipation of the impacts of climate policies in other countries;
- Paris Agreement created a space for proactive, flexible policy initiatives between the clubs of countries and companies to increase the level of climate mitigation ambition in the mutual self-interest.

What Carbon Pricing Could Be in the Self-interest of GCC?

1. Carbon credits and mitigation outcomes (Art 6.2 and 6.4. of PA)

- **GCC as sellers**: monetizing domestic climate co-benefits of diversification, energy transition or CCS
- **GCC as buyers**: leveraging investments of GCC companies abroad – e.g. solar energy + desalination, CC(U)S

What Carbon Pricing Could Be in the Self-interest of GCC?

2. Emissions trading systems (cap-and-trade)

- Problematic if underlying markets have few players, high concentration of market power and similar technologies (Linking ETS across countries could help);
- High transaction costs for governments and for companies;

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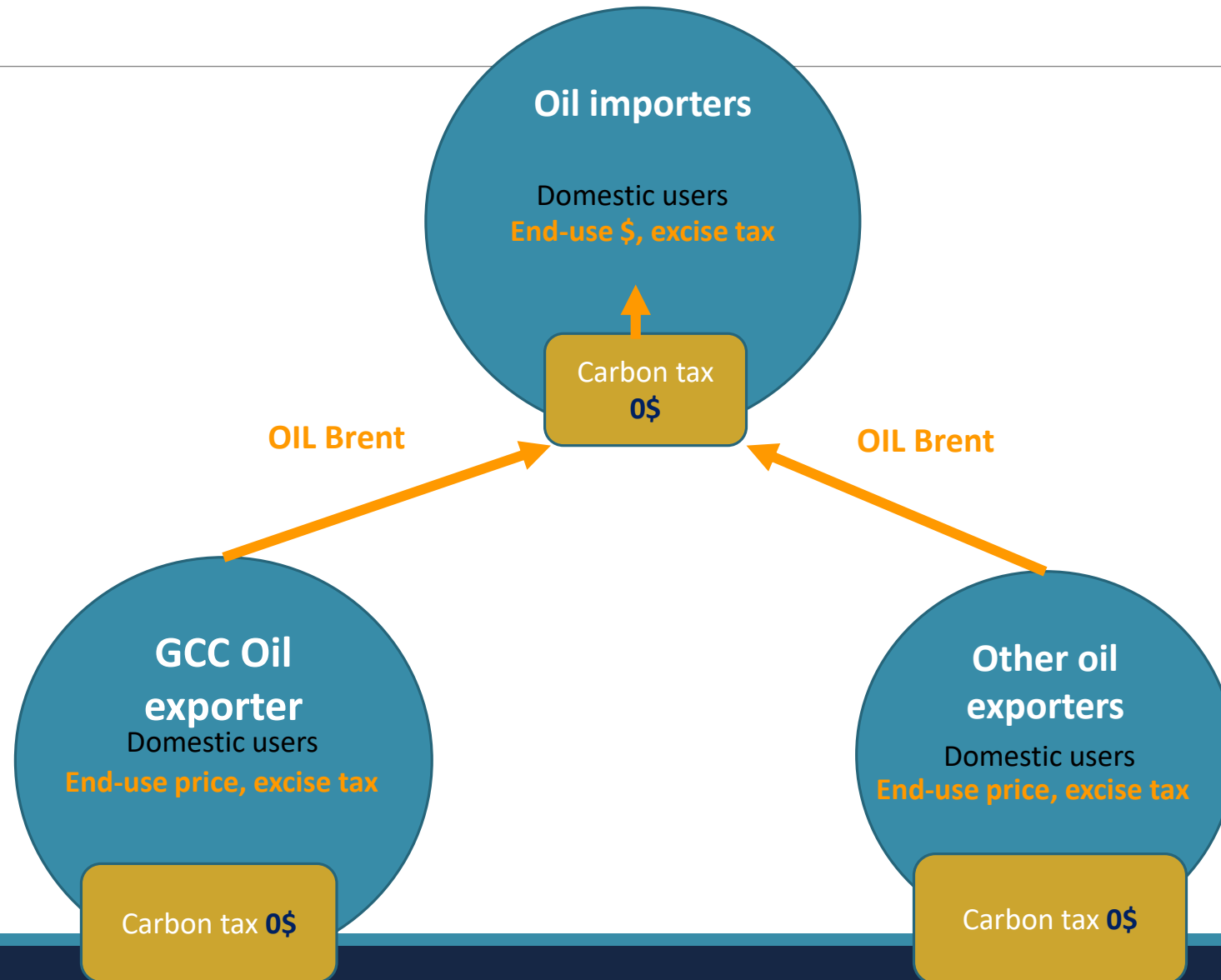
3. GHG emission taxes

- Need to be integrated into domestic energy prices/subsidies reform
- Supports diversification into knowledge-intensive rather than energy-intensive products
- Attracts efficiency-seeking FDI
- Sometimes problematic politically, affect consumer prices more directly (but revenues allow full protection of the vulnerable groups)
- Hydrocarbon importers have stronger self-interest but with adverse trade effects on hydrocarbon exporters: reduced demand, export prices, terms of trade, portion of resource rents collected as carbon tax revenue by fuel importers;

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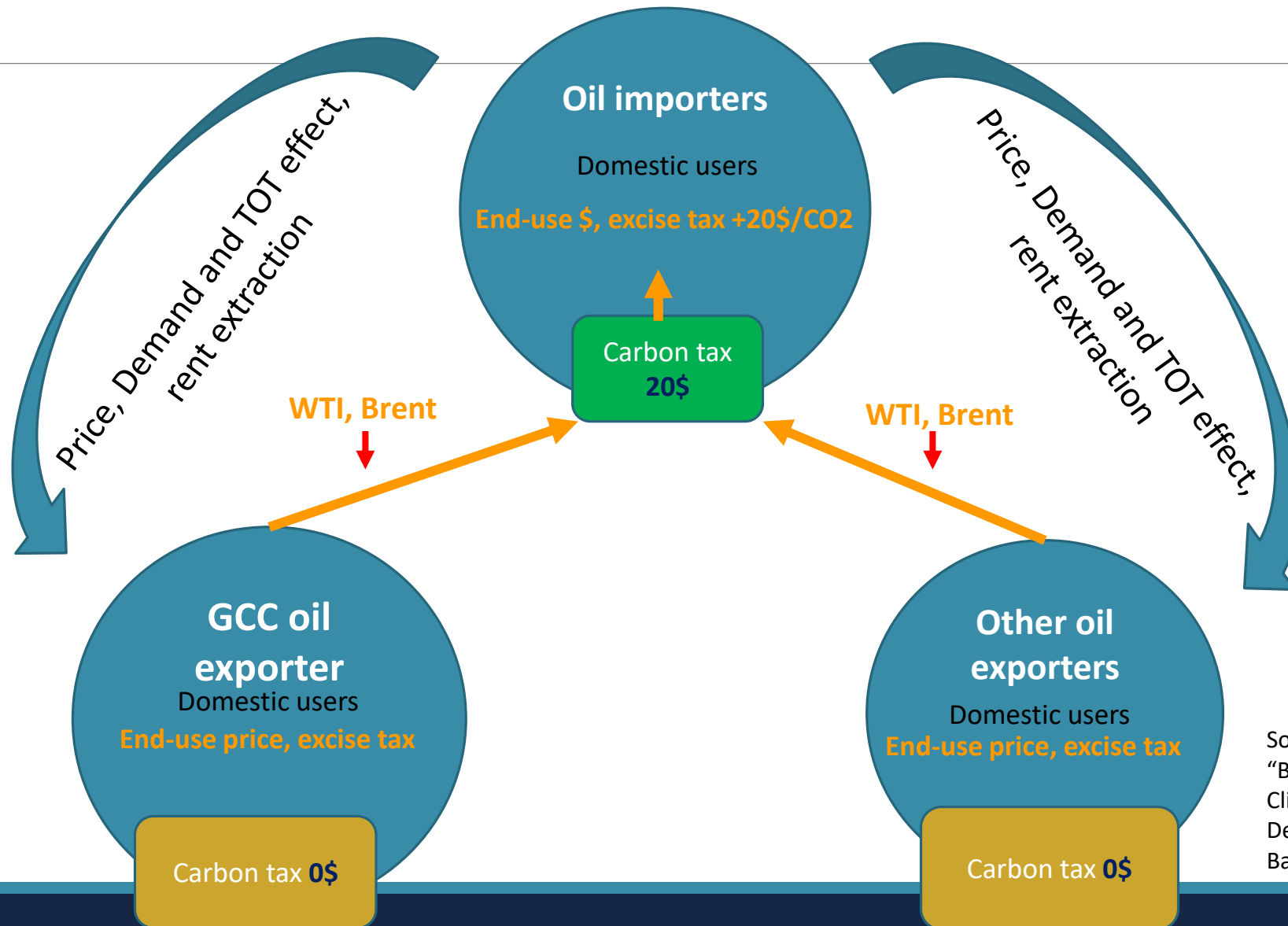
4. Carbon tax and trade agreements with oil/gas importers

Before cooperative wellhead carbon tax agreement



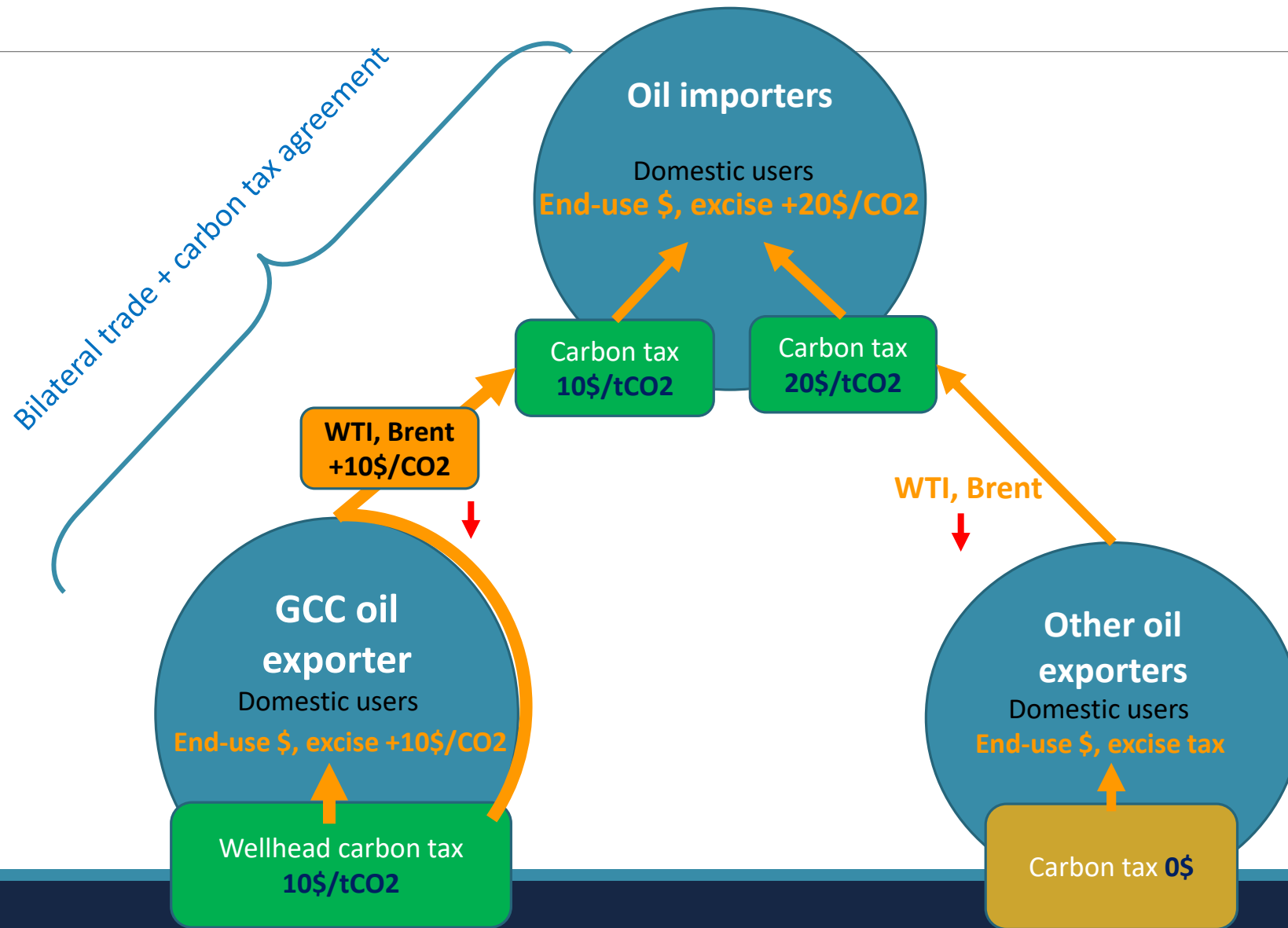
Source: G. Peszko et al.
“Beyond Stranded Assets:
Climate Strategies of Fossil Fuel
Dependent Countries” (World
Bank, Forthcoming)

Unilateral carbon taxes on oil consumption by oil importer



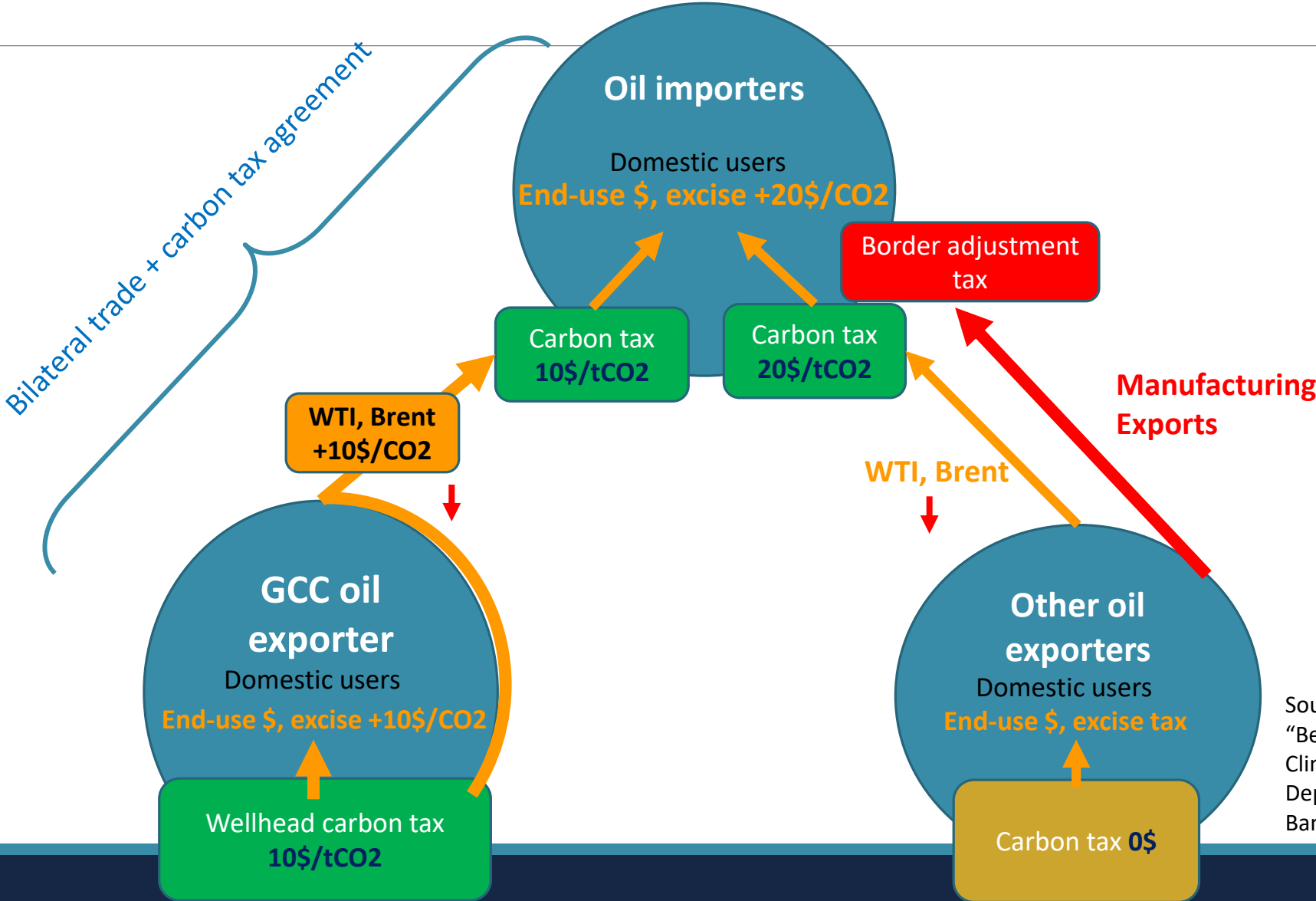
Source: G. Peszko et al. "Beyond Stranded Assets: Climate Strategies of Fossil Fuel Dependent Countries" (World Bank, Forthcoming)

Cooperative bilateral wellhead carbon tax agreement



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Cooperative bilateral wellhead carbon tax agreement



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**Fortune favors the
prepared mind
(Louis Pasteur)**
