



CARBON PRICING

**Thirteenth IMF-Japan High-Level Tax Conference
for Asian Countries**

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Overview

**OECD work on
Effective Carbon
Prices**

**Inclusive Forum
on Carbon
Mitigation
Approaches**

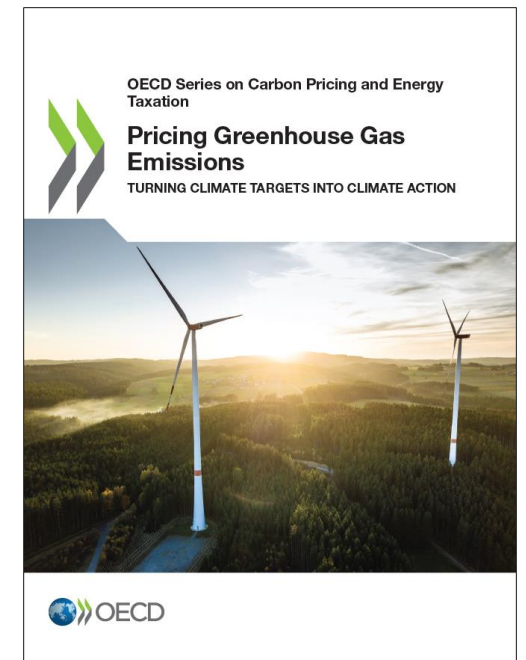


OECD WORK ON EFFECTIVE CARBON RATES



Pricing of greenhouse gas emissions

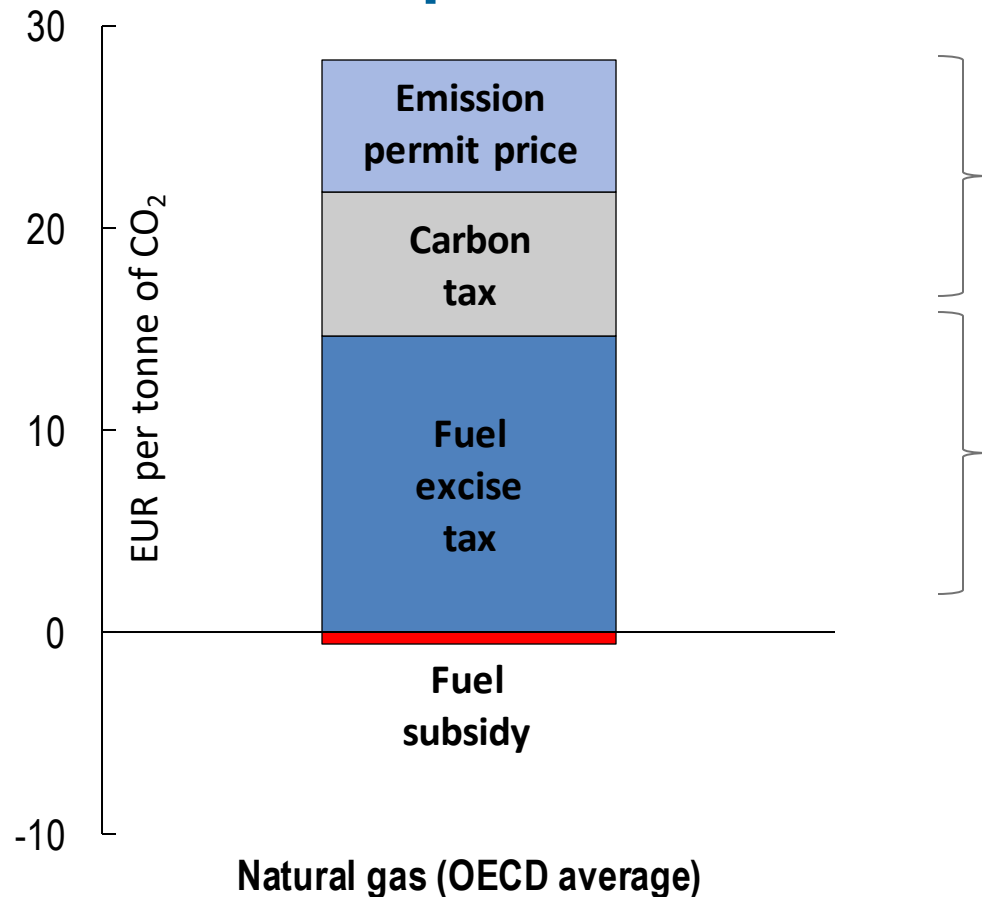
- **Net Effective Carbon Rates** (ECRs) indicator tracks how greenhouse gas (GHG) emissions are priced through carbon prices, energy taxes and subsidies
 - Estimates **positive carbon prices** resulting from carbon taxes, emissions trading systems, and fuel excise taxes, while also accounting for **negative carbon prices** from fossil fuel subsidies
 - **Across more than 70 economies**, representing **80% of global GHG emissions**
 - Includes **Australia, China, India, Indonesia, Japan, Korea, Malaysia, New Zealand** and **the Philippines**
 - For **six sectors** responsible for CO₂ emissions from energy use; plus other GHG emissions (CO₂ from industrial processes, as well as CH₄, N₂O, F-gases)





Net Effective Carbon Rates: how are they constructed?

Net Effective Carbon Rate components



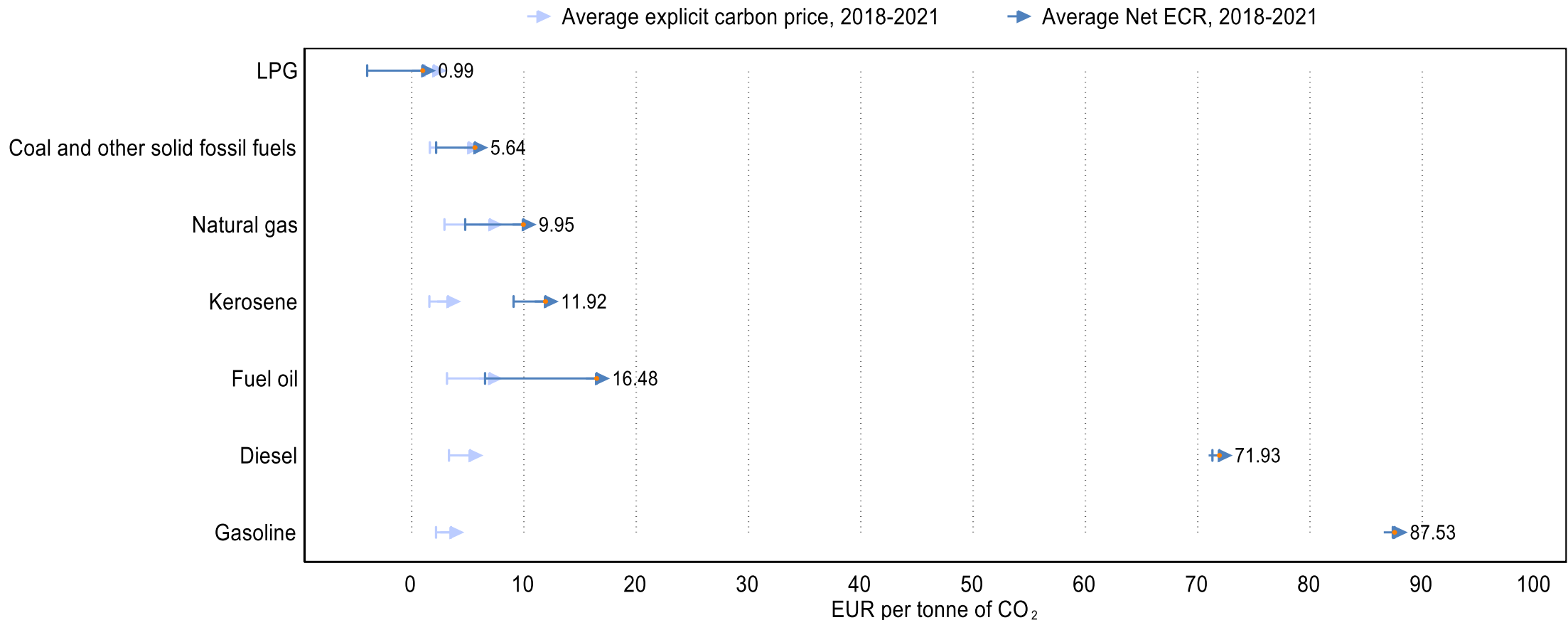
Policy intention is to price carbon

Policy result is to price carbon



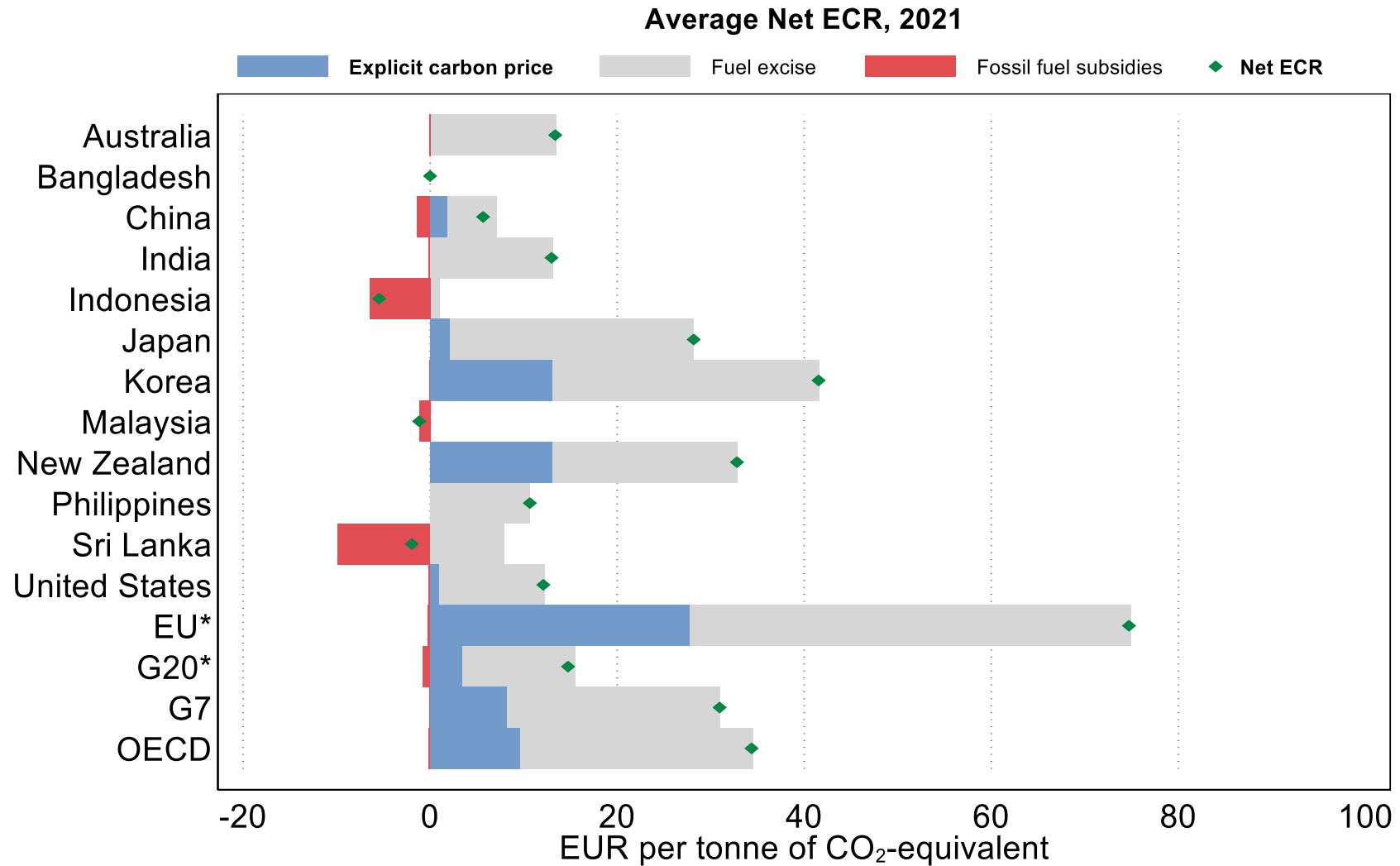
Net effective carbon rates vary significantly by fuel

Average effective carbon prices in EUR/tCO_{2e}, by fuel, all 71 countries covered, 2018-2021





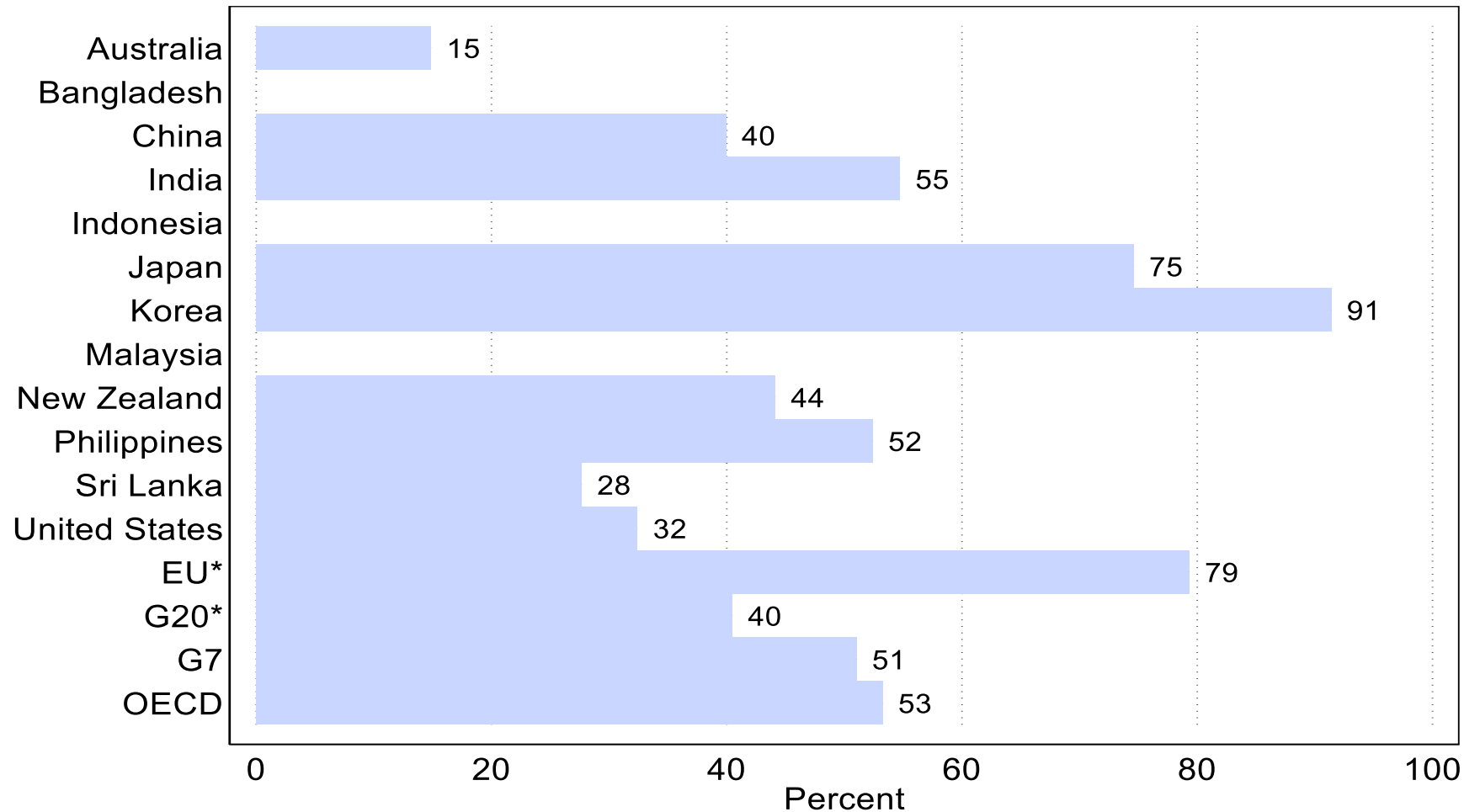
Policy instruments used vary across countries





Large shares of GHG emissions are not priced

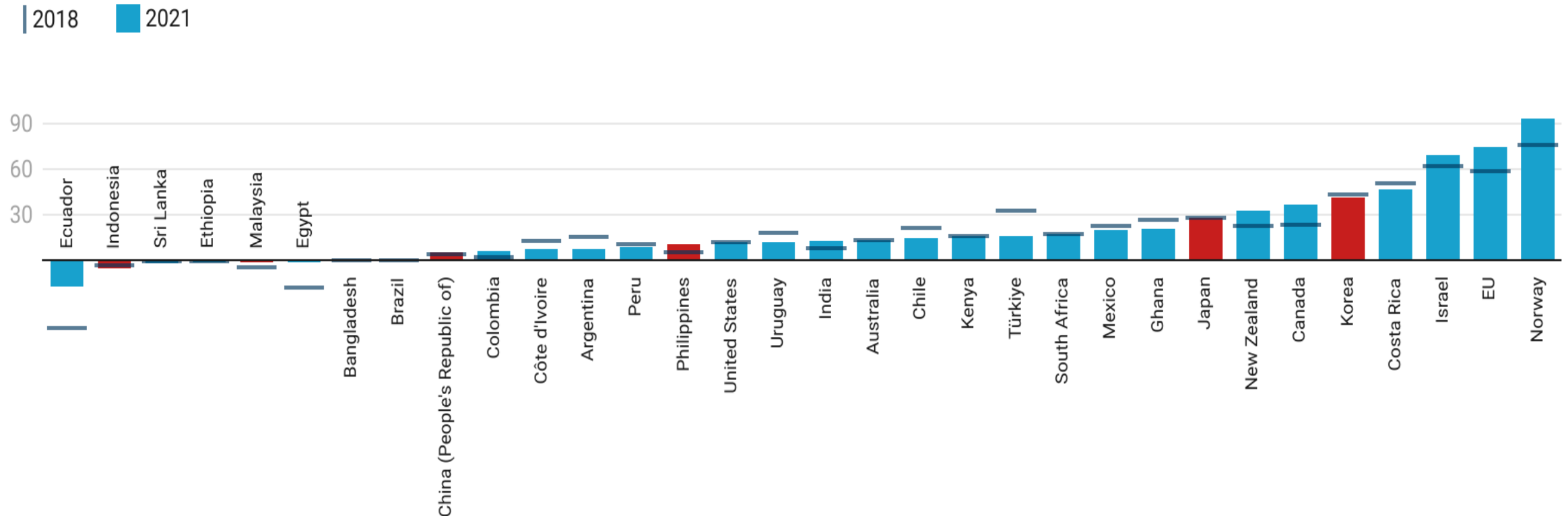
Share of GHG emissions subject to a positive Net ECR price, in %, 2021





Divergence in carbon prices grew between 2018 & 2021

Average net effective carbon rate, by country, EUR/tCO_{2e}



Note: Effective carbon prices are averaged across all GHG emissions, excluding LUCF of the countries, including those emissions that are not covered by any carbon pricing instrument. 2021 Fossil fuel subsidy estimates (component of Net ECR) are based on data for 2020. All rates expressed in real 2021 EUR using the latest available OECD exchange rate and inflation data; change can thus be affected by inflation and exchange rate fluctuations. Prices are rounded to the nearest eurocent.

Source OECD (2022), OECD Series on Carbon Pricing and Energy Taxation. Pricing greenhouse gas emissions: turning climate targets into climate action.



Carbon pricing developments since 2021 in the Asia-Pacific

- **Australia:** Australia's Safeguard Mechanism has been reformed, effectively transforming it, in July 2023, into an ETS which covers 28% of the country's emissions
- **China:** China is preparing to expand coverage of its national ETS beyond power generation, to include sectors such as aluminum in 2024
- **Indonesia:** Indonesia initiated the first phase of its ETS in 2023, which includes 99 electric plants that make up about 80% of the country's generating capacity, and in time, the ETS is expected to function as a hybrid "cap-tax-and-trade" system, operating concurrently with a carbon tax (projected introduction: 2025)
- **Japan:** Japan has seen voluntary participation from over 500 companies in a new ETS that started in 2023 and is expected transition to a mandatory ETS in 2026



The need to go beyond net effective carbon rates

Net ECRs are useful, but they provide a partial picture of climate policy packages

- **Some pricing instruments are out of scope**
 - Focus on pricing instruments that impact marginal and not average prices
 - e.g., sales taxes or VAT are not included
- **Indirect market-based instruments are not included**
 - e.g., subsidies and many tax incentives for green investment are not included
- **Non-market-based instruments are not covered**
 - e.g., regulations and standards are not included



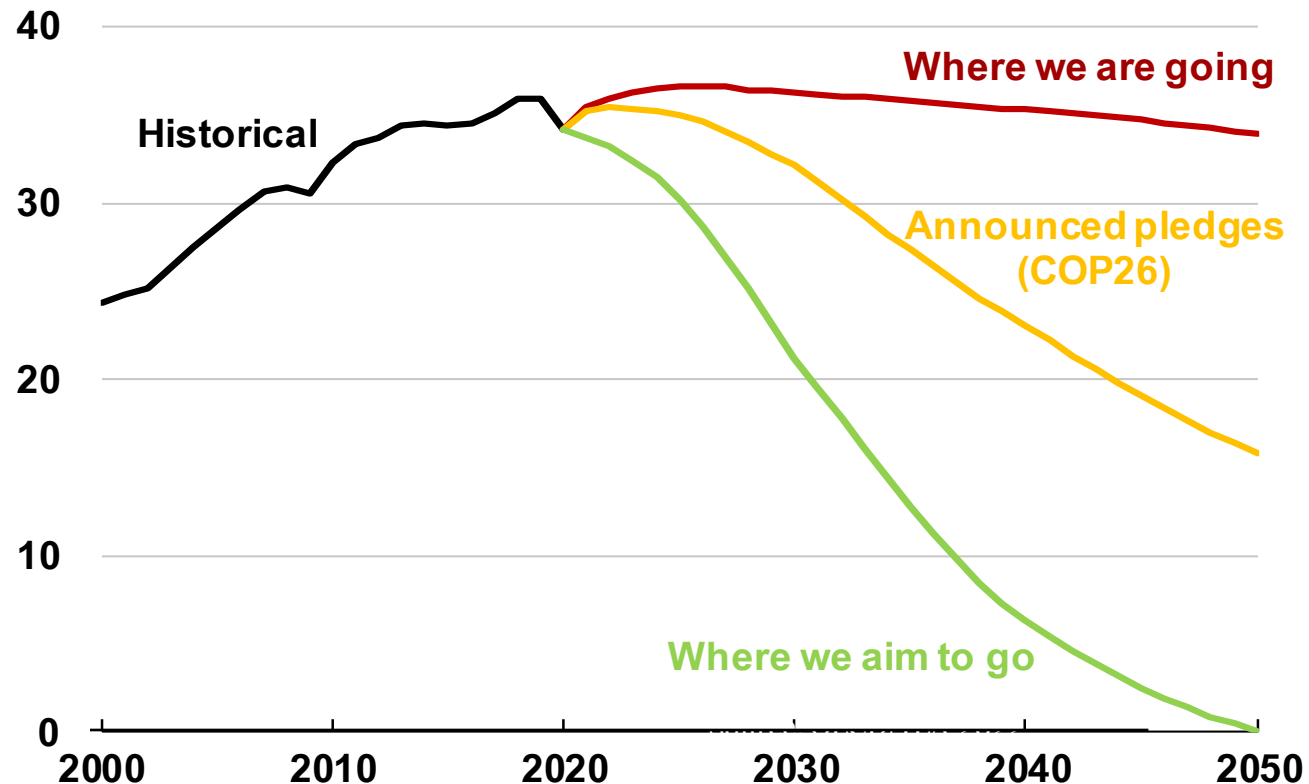
INCLUSIVE FORUM ON CARBON MITIGATION APPROACHES (IFCMA)



Urgent action is needed to achieve net zero emissions

The climate challenge

Global CO₂ emissions, gigatonnes



To date, there is no **global, comprehensive and systematic** stocktake of climate change mitigation policies and **systematic estimates** of their effects on emissions are also lacking



Why launch the IFCMA?

- Historically, OECD indicators have focussed on **policies that price greenhouse gas (GHG) emissions**
- **Carbon pricing is an effective tool** for reducing GHG emissions, **but it is not the only policy instrument** used by countries
- The OECD has long recognised that net zero emissions targets will not be met without **policy packages that include a range of mitigation policies**
- **Broader approaches are needed to ensure that the widest range of mitigation policies of countries can be measured**
- **The IFCMA aims to do this**, drawing on the OECD's pricing policy experience



Key objectives of the IFCMA

The Inclusive Forum on Carbon Mitigation Approaches (IFCMA) is designed to help optimise the global impact of emission reduction efforts in countries around the world by:

Facilitating data and information sharing	Enabling evidence-based mutual learning and mutual understanding	Providing a platform for inclusive multilateral dialogue
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Bringing countries and policy communities together

- **IFCMA brings together a diverse range of countries, on an equal footing basis to:**
 - Take stock of mitigation policies and map them to their emissions base
 - Estimate the impacts of mitigation policies on emissions
 - Explore methodologies for computing carbon intensity of goods and sectors
- Connects representatives from **three key policy communities** (environment, tax, and structural economic policy)
- **IFCMA is not intended as a forum to rank country policies**



Technical work under the IFCMA

Secretariat working with delegates and country-experts to deliver robust technical work

Stocktaking & mapping of policies

- **A systematic stocktake of mitigation policies based on a standardised typology**
- **Map policies to their emissions base** to identify the share of GHG emissions they cover
- **Support** work under the **UNFCCC / Paris Agreement** with improved comparability of policies

Estimating the impacts of policies on emissions

- **Estimate the effects of policies on emissions with a consistent methodological approach**
- **Couple detailed sectoral models with economy-wide models** to develop robust estimates
- **Exchange expertise** on modelling approaches and build capacity
- **Systematically review evidence on the effects of mitigation policies on emissions**

Exploring methodologies for computing carbon intensity of goods and sectors

- **Survey carbon intensity measurement methodologies** using sector, installation and product-level data
- **Review challenges** faced by firms in collecting and verifying supply chain data
- **Consider the role of governments** in supporting measurement & use of carbon intensity metrics



Why is IFCMA stocktaking and mapping of policy instruments needed?

- Previous OECD work on **ECRs** has provided a useful picture of the **state of play on carbon pricing**
- But to understand and value the diverse mitigation approaches of countries, **identification and measurement of policies beyond GHG emissions pricing is needed**
- Comparable and consistent data on **economic, regulatory and other policies** beyond carbon pricing is less developed



IFCMA's Carbon Intensity workstream

Governments

Developing and measuring the impact of climate policies

Firms

Managing the carbon intensity of production and communicating to investors and consumers

Households

Guiding the carbon intensity of consumption

- Standalone IFCMA workstream on assessing **carbon intensity metrics and methodology**
- **Scoping note**, [Towards more accurate, timely, and granular product-level carbon intensity metrics](#) released February 2024 with full report and supplementary papers forthcoming



Use of IFCMA deliverables

- IFCMA will produce **comprehensive, harmonised** and **systematic country specific data**
 - Data collection **led by Secretariat in coordination with country-experts** and building as much as possible on existing sources to **avoid duplication**. All country specific data will be subject to the relevant **country's review and validation**.
- **IFCMA outputs will support countries in various ways, enabling them to:**

Learn from other countries' experiences

- The IFCMA database will offer countries a **centralised reference of global mitigation strategies**, enabling them to design informed policies based on successful policies to fit their objectives and circumstances

Support UNFCCC processes

- Harmonised & systematic data produced by IFCMA can be used by countries to **support the Enhanced Transparency Framework, Global Stocktake, Mitigation Work Programme,** and other efforts

Track progress on national mitigation goals

- Data on estimated impact of policies on emissions can be used by countries to **assess progress against their own goals and inform domestic policy debates**



ANNEX



Relevance of policy instruments beyond GHG pricing

Instrument category	Instrument type	Instrument sub-type
Economic instruments	Subsidies	Subsidies for low-carbon technologies or behaviour Subsidies harmful for climate (incl. fossil fuel subsidies) Feebates
	Taxes	Carbon taxes*, including options for offset Tax incentives (corporate and personal income taxes, value added taxes) Other taxes* (and related incentives)
	Trading systems	Emission trading systems*, including options for offset Tradable certificates
Regulatory instruments	Performance standards	GHG emissions standards Energy efficiency standards Building codes
	Technology standards	Bans and phase-outs Renewable energy portfolio standards Low-carbon fuel/ feedstock standards Building codes
	Other regulatory policies	E.g., market access regulations, regulatory approvals, administrative orders
Other instruments	Government investment and consumption	Public investment in climate RD&D (e.g. as grants) Public infrastructure investment Public governance (incl. public procurement, appraisal and evaluation rules)
	Information instruments	Labelling Education/training Reporting requirements & audits
	Voluntary approaches	Voluntary energy and/or emission reduction targets Voluntary emissions trading systems Other voluntary programmes

Note: *Within *economic instruments*, three policy instruments (emission trading systems, carbon taxes, and fossil fuel excise tax instruments (within *Other taxes and tariffs*)) are price-based policy instruments. Feebates are both treated as a tax and a subsidy, but for simplicity shown under subsidies