Why monitor climate actions and policies?

IPAC
OECD
BETTER POLICIES FOR BETTER LIVES

Following the Paris Agreement, countries have increased their climate ambition by committing to nationally determined contributions and increasingly adopting net-zero targets. While countries made some progress in the implementation of these targets, more needs to be to reduce GHG emissions.

To achieve climate targets, policymakers need evidence-based guidance on which policy approaches work under which conditions. Monitoring climate actions and policies allows countries to explore best practices and enable peer-learning. However, there are major gaps in monitoring countries' climate actions to date.

The Climate Actions and Policies Measurement Framework (CAPMF) aims to fill this gap. It is the most comprehensive structured and harmonised climate-mitigation policy database. It was developed by the OECD under the International Programme for Action on Climate (IPAC) as part of a broader effort to develop indicators to support country progress towards net-zero greenhouse gas. The CAPMF allows policy makers to identify policy areas that are not yet covered or where policy stringency could be improved to achieve climate targets.

KEY MESSAGES

- Countries have strengthened their climate action between 2010 and 2020, but more is needed to meet the Paris Agreement goals.

- Countries use a wide array of policy mixes to achieve their climate targets. There is no one-size-fits-all policy approach.

- Countries with stronger climate action are associated with larger emissions reductions.

Climate Actions and Policies Measurement Framework

Sectoral policies			Cross-sectoral policies	International policies
Sector	**Market-based instruments**	**Non-market based instruments**	**GHG emission targets** • Net-zero target (e.g. year, coverage, legal status) • NDC target (e.g. coverage of sectors and GHG)	**International co-operation** • Participation in key international climate treaties • Participation in international climate initiatives (e.g. Climate and Clean Air Coalition) • Participation in international emissions pricing from aviation (e.g. CORSIA) or shipping
Electricity	• **Carbon pricing** (ETS, carbon and fuel taxes, FFS reform or removal) • **RES support** (FiT, auctions, RPS)	• **Bans and phase outs** of coal power plants • **Air pollution standards** coal plants • **Planning for renewables**		
Transport	• **Carbon pricing** • **Congestion charge**	• **Fuel economy standards** • **Energy labels** • **Bans and phase outs of ICE** • **Public rail investment** • **Motorway speed limits**	**Public RD&D expenditure** • 6 categories (e.g. energy efficiency, renewables, nuclear, hydrogen, CCS)	
Buildings	• **Carbon pricing** • **Financing mechanisms for EE** (e.g. preferential loans for retrofits)	• **MEPS appliances** • **Energy labels** appliances • **Building energy codes** • **Bans and phase outs** of fossil-based heating	**Fossil fuel production policies** • FFS reform for fossil fuel production • Bans and phase outs of fossil fuel extraction • Policies to reduce fugitive methane emissions (e.g. restriction on flaring)	**International public finance** • Banning export credits for unabated coal plants • Banning public finance of fossil fuels abroad
Industry	• **Carbon pricing** • **Financing mechanisms for EE**	• **MEPS industrial motors** • **Energy efficiency** mandates	**Climate governance** • Independent climate advisory body	**GHG emissions data and reporting** • GHG emissions reporting and accounting • UNFCCC evaluation of Biennial (Update) Reports • Submission of key UNFCCC documents (e.g. National Communications, GHG Inventory)

Note: ETS: Emissions trading system; FFS: Fossil fuel support; FiT: Feed-in-tariff; RPS: Renewable Portfolio Standard; EE: Energy efficiency; ICE: Internal combustion engine; MEPS: Minimum energy performance standard.

Work in 2023/2024 will extend the framework towards agriculture; land-use, land-use change and forestry; and climate finance.

OECD Indicators on climate actions and policies

CROSS-COUNTRY IPAC ANALYSIS

Countries strengthened their climate action between 2010-2020

Between 2010-2020, countries increased both the number of policies adopted and the policy stringency.[1] In 2020, the number of adopted policies per country varied between 13 in Peru and 46 in France (out of 56). Similarly, the average policy stringency of adopted policies varied between 4.5 to 7.6 (on a scale from 0-10). This suggests that countries still have room to expand their climate policy action to accelerate emissions reduction.

**Policy adoption and policy stringency: IPAC average 2010, 2015, 2020**
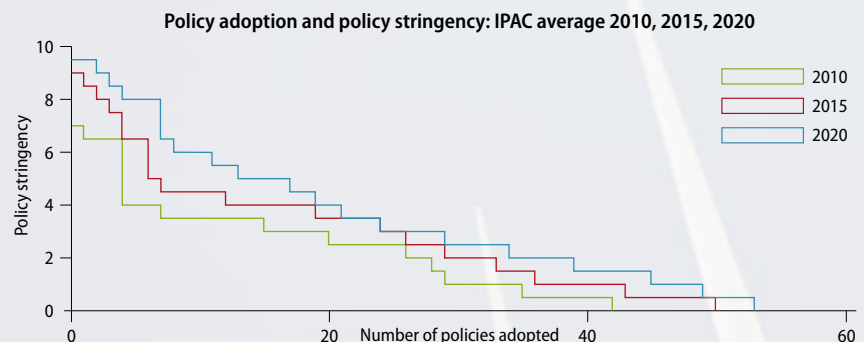
Policy mixes vary across time and across countries, but market-based policies have been increasingly adopted

Over the last 20 years countries have changed their climate policy mix. Market-based policy instruments have increasingly been adopted by countries. In the early 2000s they represented less than 30% of adopted policy instruments, but now contribute to almost 50%.
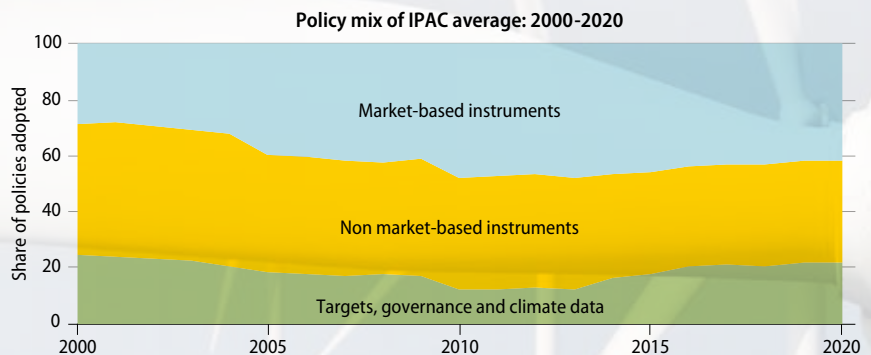
Countries use very diverse policy mixes to reduce emissions. Some countries (e.g. Portugal), primarily rely on market-based policies such as carbon pricing or feed-in-tariffs for renewable energy. Others (e.g. Costa Rica) emphasise non-market based instruments, such as minimum energy performance standards and bans or phase outs of fossil fuel equipment or infrastructure. These differences reflect the complex interactions of multiple factors, including legal traditions, climate ambition, political constraints, and social preferences.

Policy mix of IPAC average: 2000-2020

Policy mix of selected countries in 2020
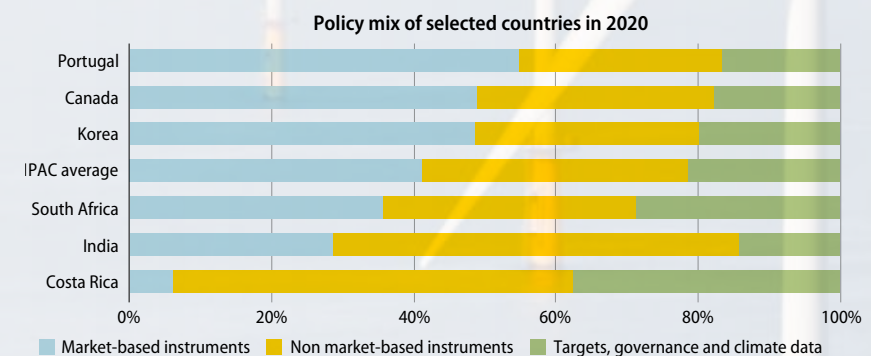
Countries with stronger climate action are associated with steeper emissions reductions

Countries with an above-average number of adopted policies and above-average policy stringency were most successful in reducing their total GHG emissions as well as their GHG emissions intensity and GHG emissions per capita between 2015-2019.[2]

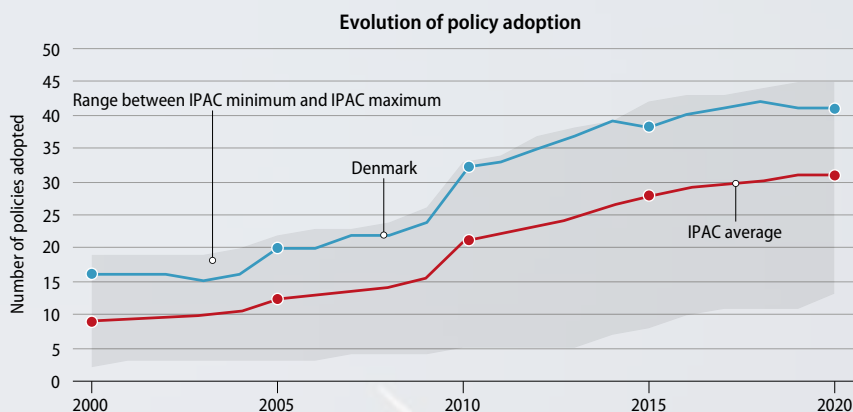**GHG emissions reductions 2015-2019**

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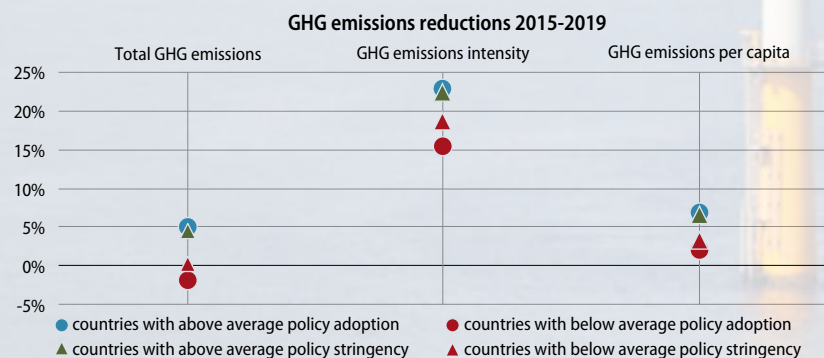
1. Policy stringency is defined as the degree to which climate actions and policies incentivise or enable GHG emissions mitigation at home or abroad.
2. Policy coverage and policy stringency do not necessarily imply effectiveness in reducing GHG emissions, which is why the results of the CAPMF should be interpreted with care.

SELECTED COUNTRY-LEVEL ANALYSIS

Policy adoption in DENMARK expanded between 2000-2020

The CAPMF provides country-specific information on policy adoption that can show the evolution of the number of policies adopted. For example, Denmark expanded its policy toolkit between 2000-2020 and is well above the IPAC average. While Denmark was close to the IPAC country with the highest number of adopted policies until 2015, the gap to that country increased after 2015.

Evolution of policy adoption

Number of policies adopted

Range between IPAC minimum and IPAC maximum

Denmark

IPAC average

2000 2005 2010 2015 2020

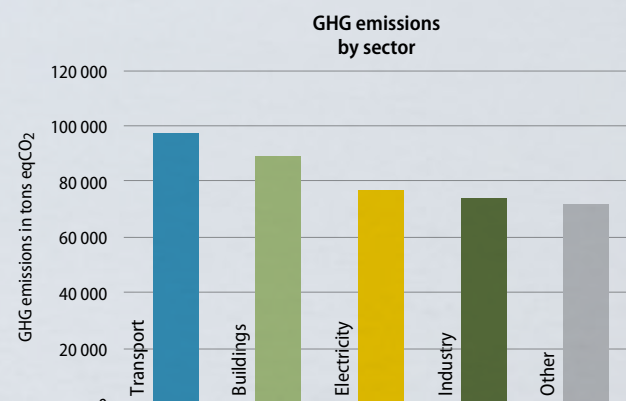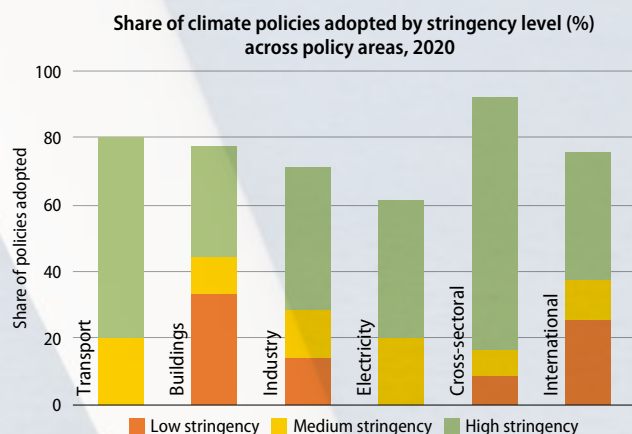## CANADA'S policy adoption varied across time and across areas

The granular data of the CAPMF can show countries' policy landscape by sector and policy area over time. For example, Canada expanded its policy adoption in all areas between 2010-2020. The biggest increase in climate action was observed in 2015-2020, notably in sectoral policies.

Electricity

International

Industry

Cross-sectoral

Buildings

Transport

2010
2015
2020
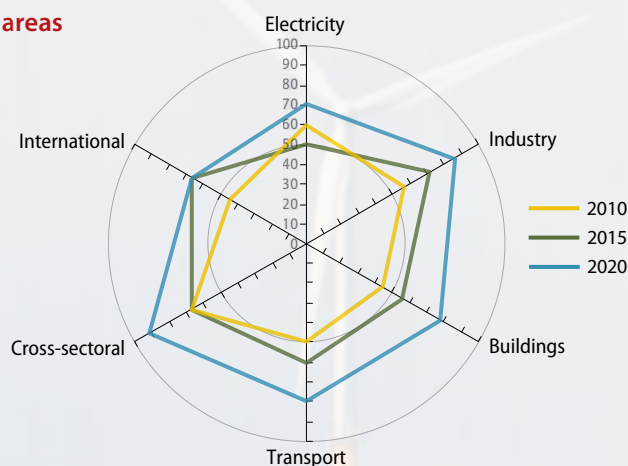
Climate policies in the UNITED KINGDOM are well-aligned with its emissions profile, but more could be done

In 2020, the United Kingdom had a well-balanced policy approach, implementing stringent policies in all measured areas. The highest policy adoption rates were observed in the transport and buildings sectors. These are also the sectors with the highest emissions share in 2020, suggesting a good policy alignment. The CAPMF can also help identify areas where climate action could be strengthened.

The data shows that the United Kingdom could still expand its climate action in those sectors to further reduce emissions. In the transport sector, for example, the United Kingdom could consider to adopt explicit carbon pricing policies and has not yet implemented a policy to phase out passenger cars with internal combustion engines.

Share of climate policies adopted by stringency level (%) across policy areas, 2020

Share of policies adopted

Transport
Buildings
Industry
Electricity
Cross-sectoral
International

Low stringency   Medium stringency   High stringency

GHG emissions by sector

GHG emissions in tons eqCO$_2$

Transport
Buildings
Electricity
Industry
Other

The new OECD Climate Actions and Policies Measurement Framework

The CAPMF includes climate mitigation actions and policies coherent with UNFCCC and IPCC frameworks. It is the most comprehensive, harmonised climate policy database to support countries to implement their NDCs and enable analysis on policy effectiveness. It covers:

- **BROAD RANGE OF POLICIES:** 128 policy variables, grouped into 56 policy instruments and other climate actions

- **COUNTRY COVERAGE:** 51 countries and EU27, accounting for 85% of global greenhouse gas (GHG) emissions (see below)

- **TIME SERIES:** 2000-2020 time-period

All data will be made publicly available. Policymakers and practitioners can explore the data and the policy insights in our forthcoming data visualisation tool.

Climate policy adoption (0-56) and stringency (0-10) by country, 2020
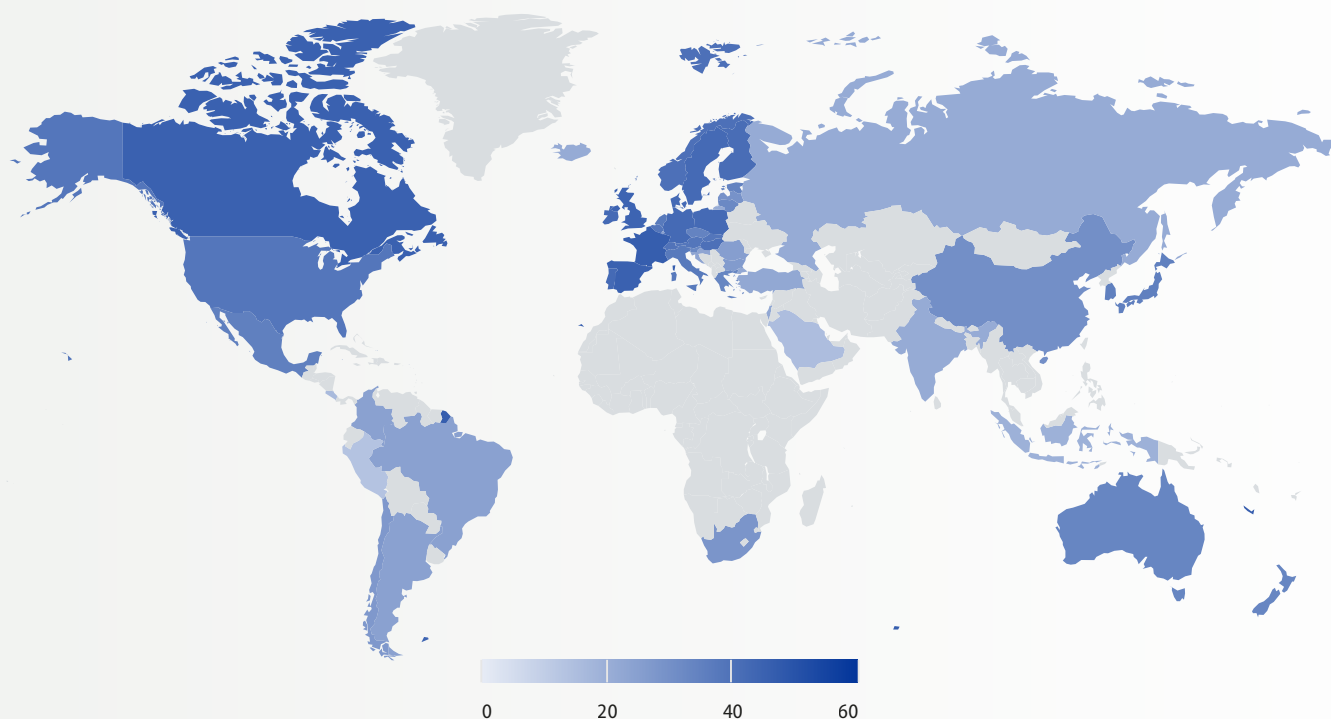
This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

FURTHER READING

Nachtigall, D., Lutz, L., Cárdenas Rodríguez, M., Haščič, I., and R. Pizarro (2022), "The climate actions and policies measurement framework: A structured and harmonised climate policy database to monitor countries' mitigation action", *OECD Environment Working Papers,* No. 203, OECD Publishing, Paris https://doi.org/10.1787/2caa60ce-en.

http://www.oecd.org/climate-action/ipac

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