INSTITUTE
OF INTERNATIONAL STUDIES
Faculty of Social Sciences
Charles University

Eliška Ullrichová, October 11, 2024

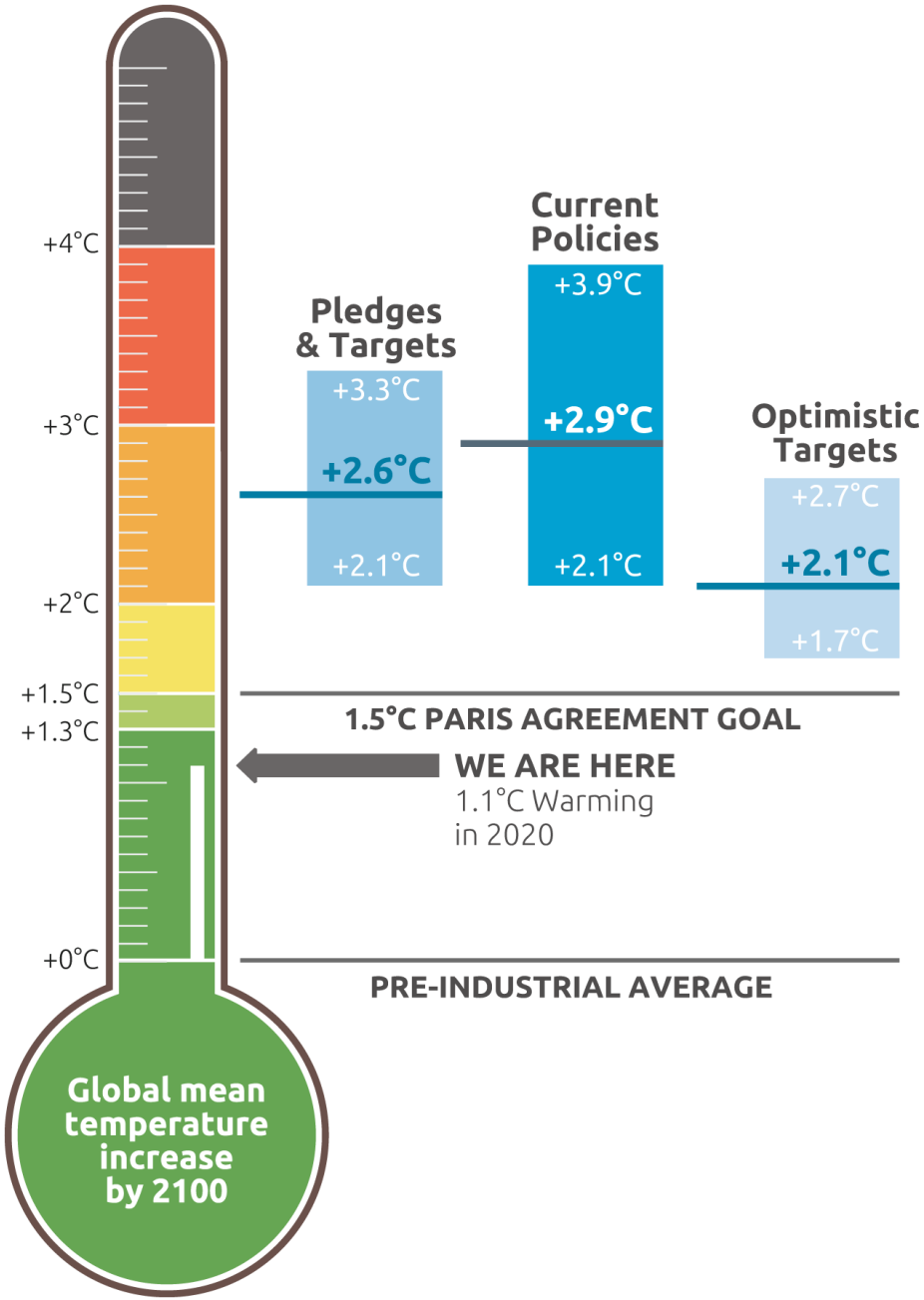
Green Politics of the European Union/Europe

DEPARTMENT OF EUROPEAN STUDIES
Institute of International Studies
Faculty of Social Sciences CUNI

DEPARTMENT OF GERMAN
AND AUSTRIAN STUDIES
Institute of International Studies
Faculty of Social Sciences CUNI

DEPARTMENT OF GERMAN
AND AUSTRIAN STUDIES
Institute of International Studies
Faculty of Social Sciences CUNI

DEPARTMENT OF NORTH
AMERICAN STUDIES
Institute of International Studies
Faculty of Social Sciences CUNI

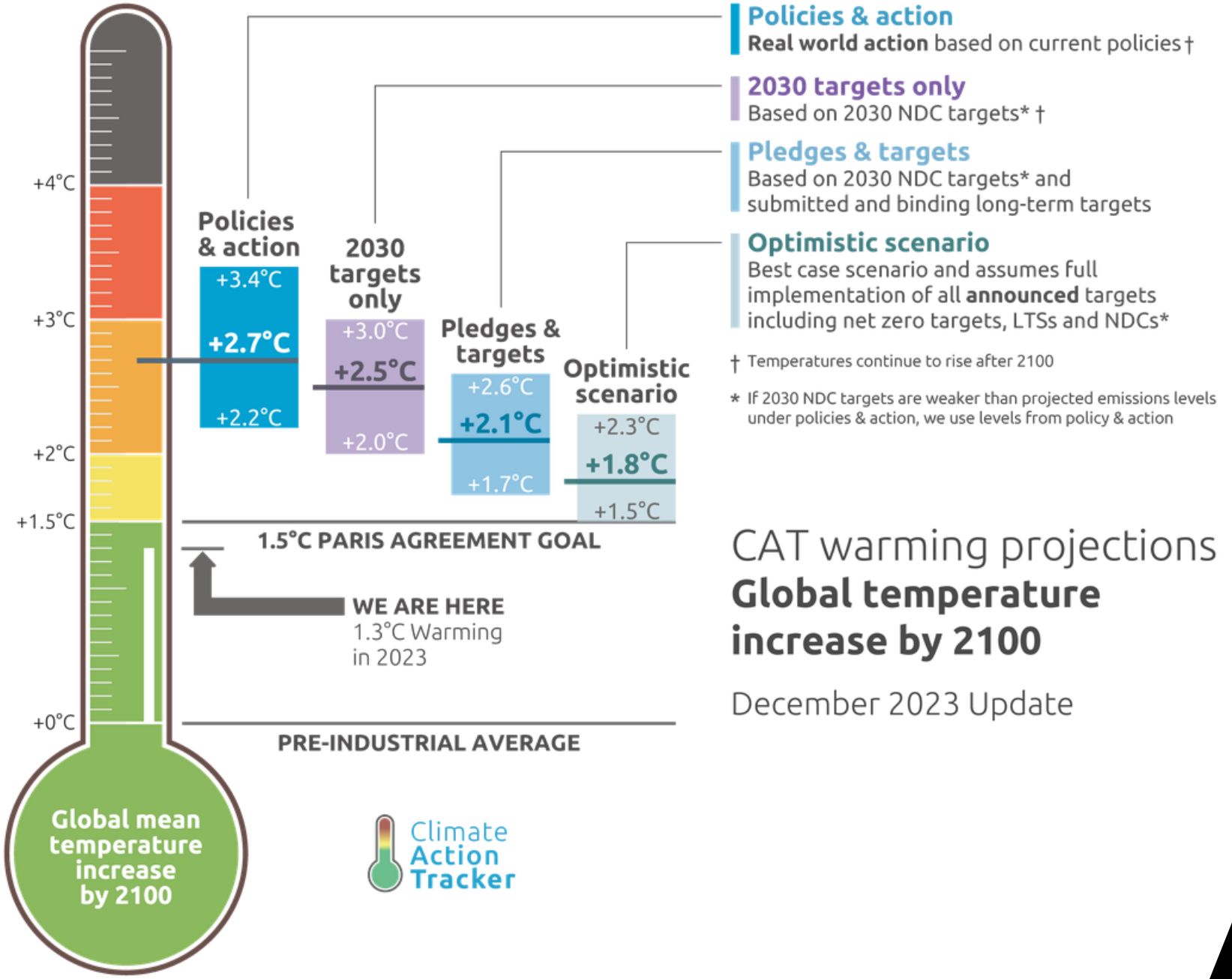


Climate Action Tracker

CAT warming projections
Global temperature increase by 2100

December 2020 Update

Source: Climate Action Tracker



CAT warming projections
Global temperature increase by 2100

December 2023 Update

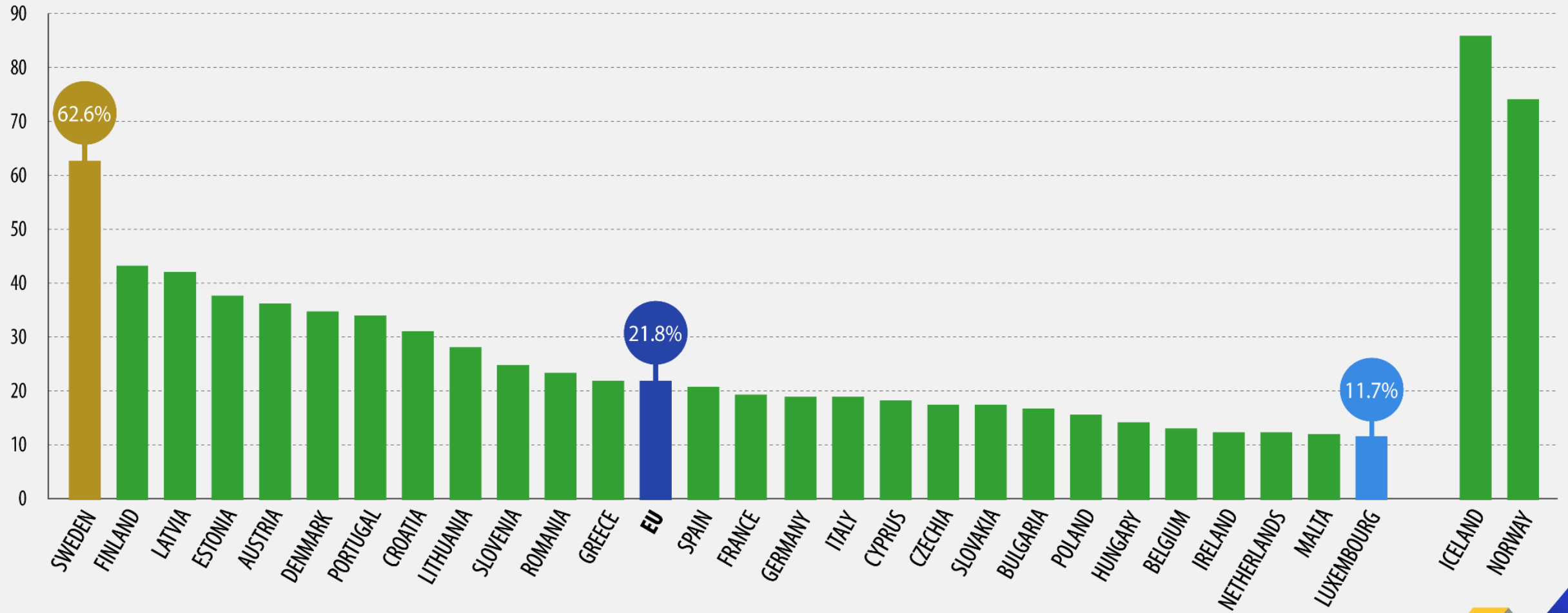
Source: Climate Action Tracker

2020 Climate Goals

- reducing greenhouse gas emissions by 20 %
- increasing the share of renewable energy to 20 %
- making improvement in energy efficiency by 20 %

Overall share of energy from renewable sources in the EU, 2021

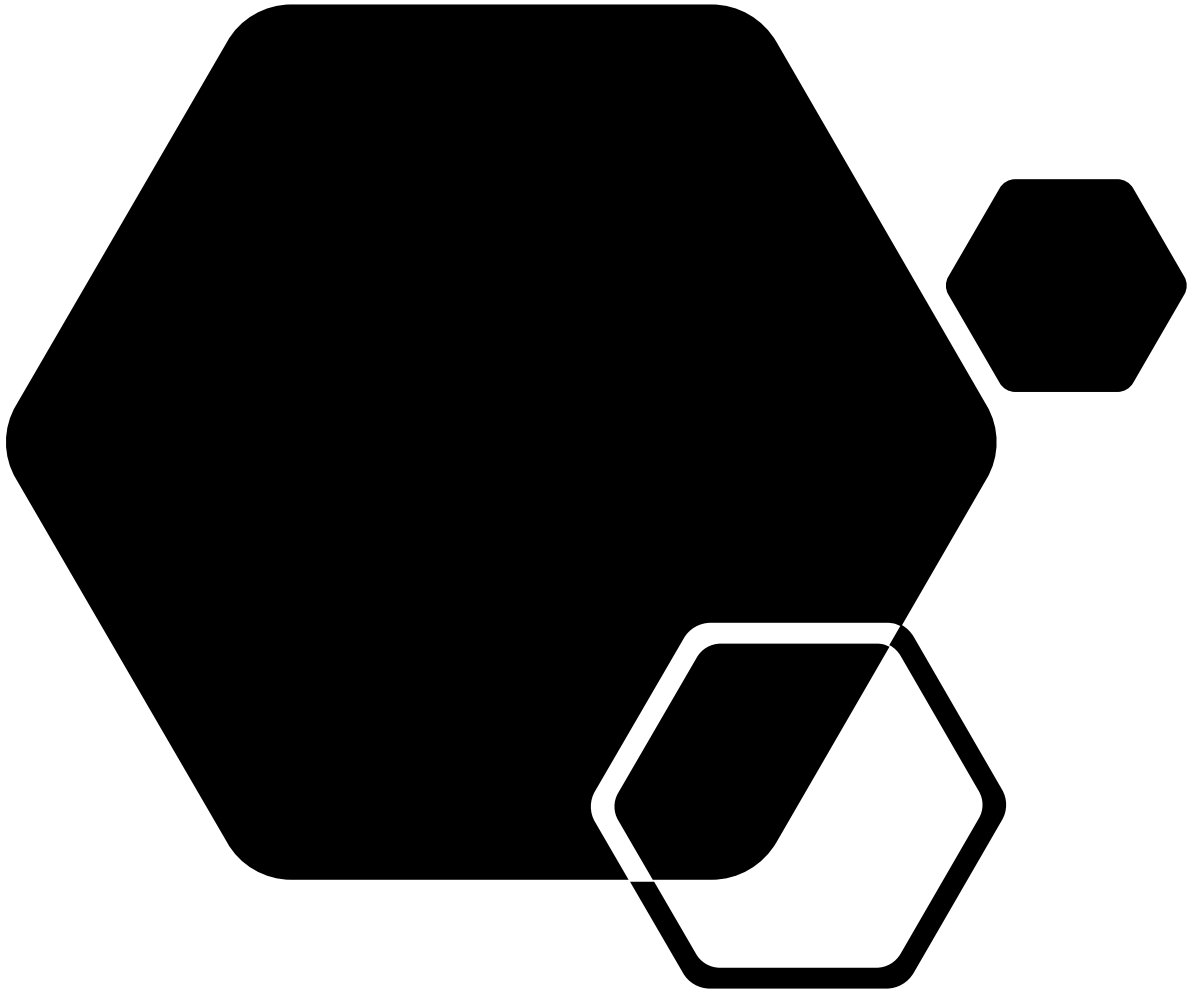
(% by country)



2030 Climate Goals

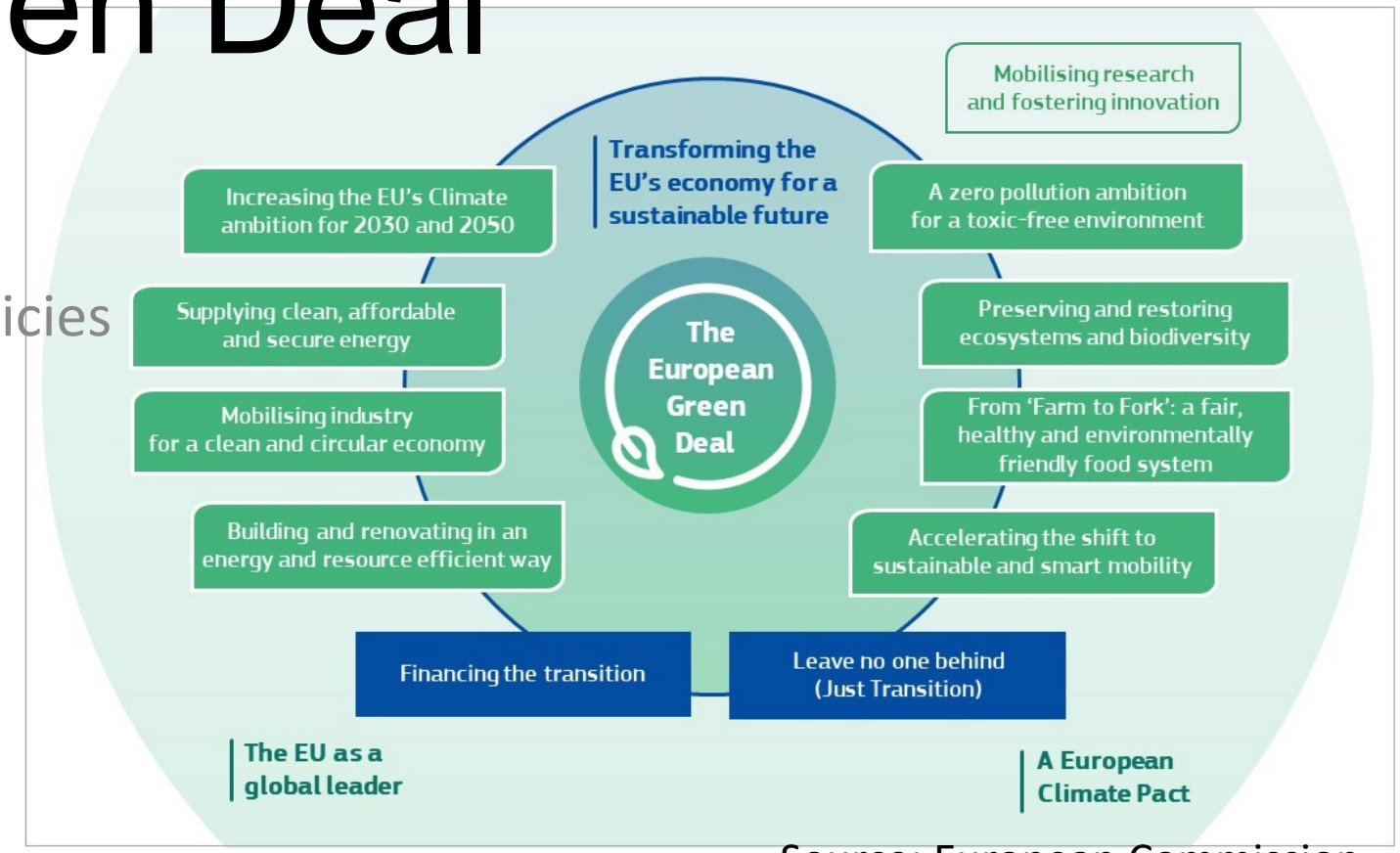
- reducing greenhouse gas emissions at least by **at least 50% and towards 55%**
- increasing the share of renewable energy to 32 %
- making improvement in energy efficiency by 32,5 %

Climate neutrality

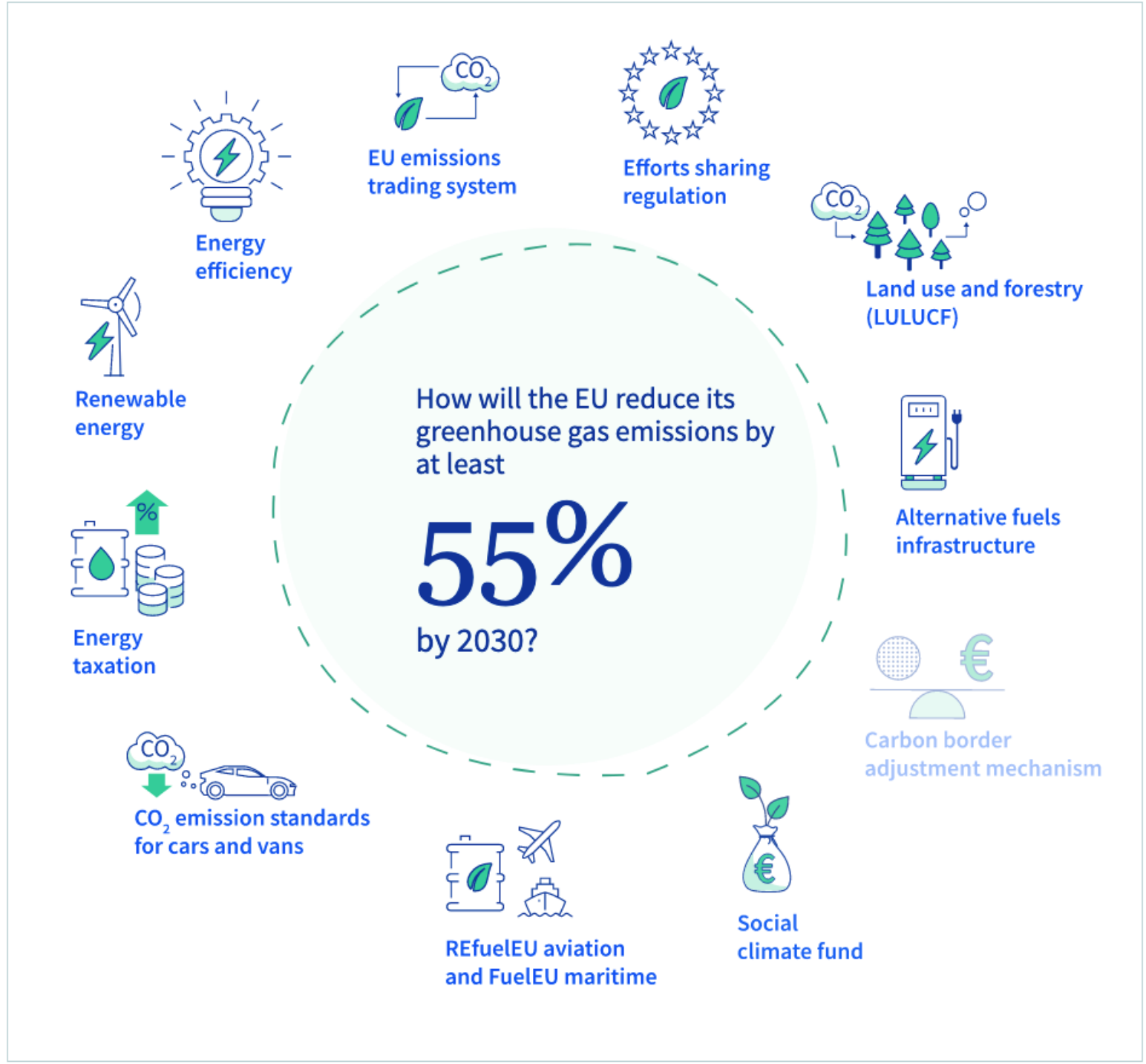


European Green Deal

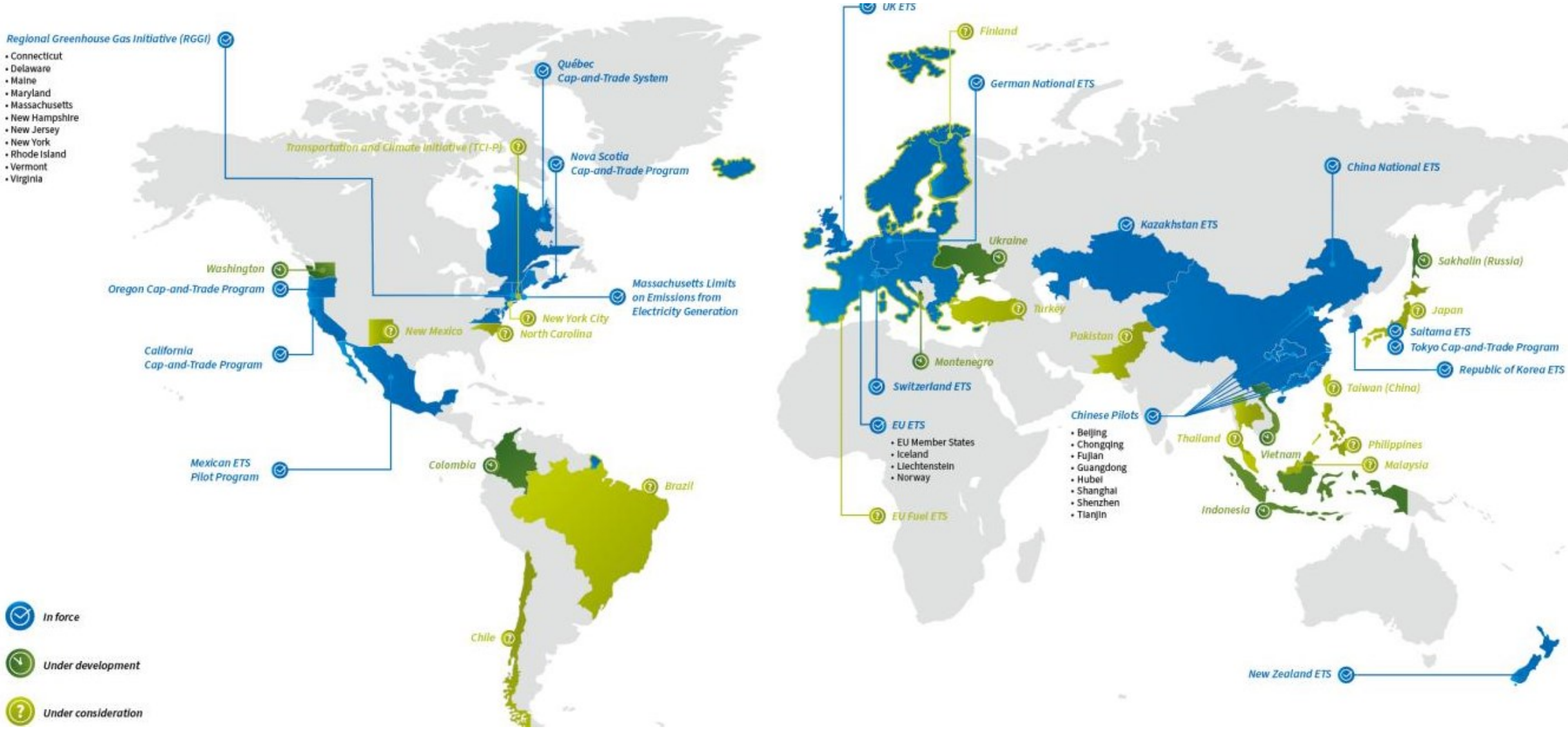
- „emitting less, absorbing more“
- extention of existing climate policies
- European Climate Pact
- Just Transition Mechanism
- global action



Source: European Commission

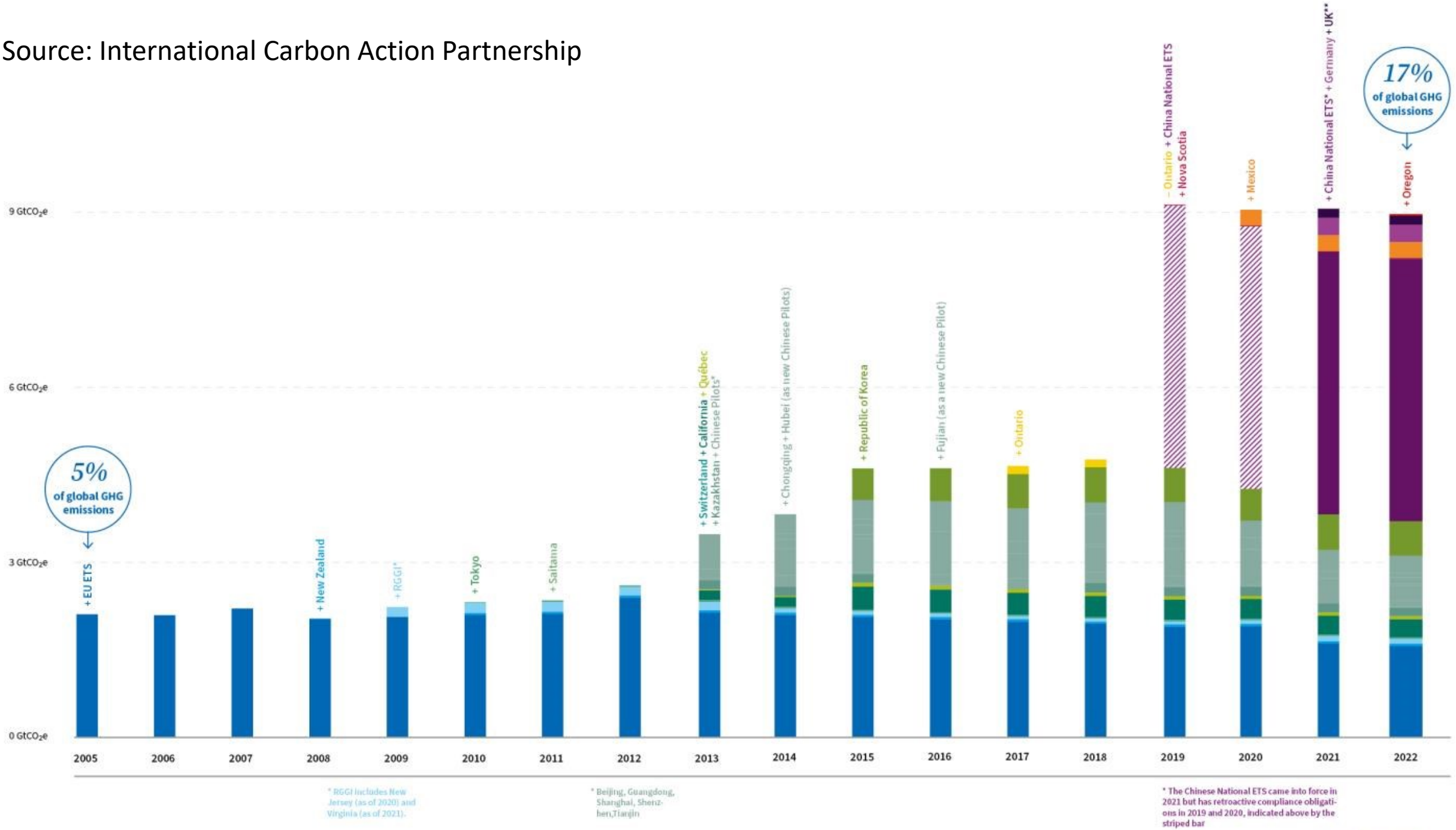


Source: European Council

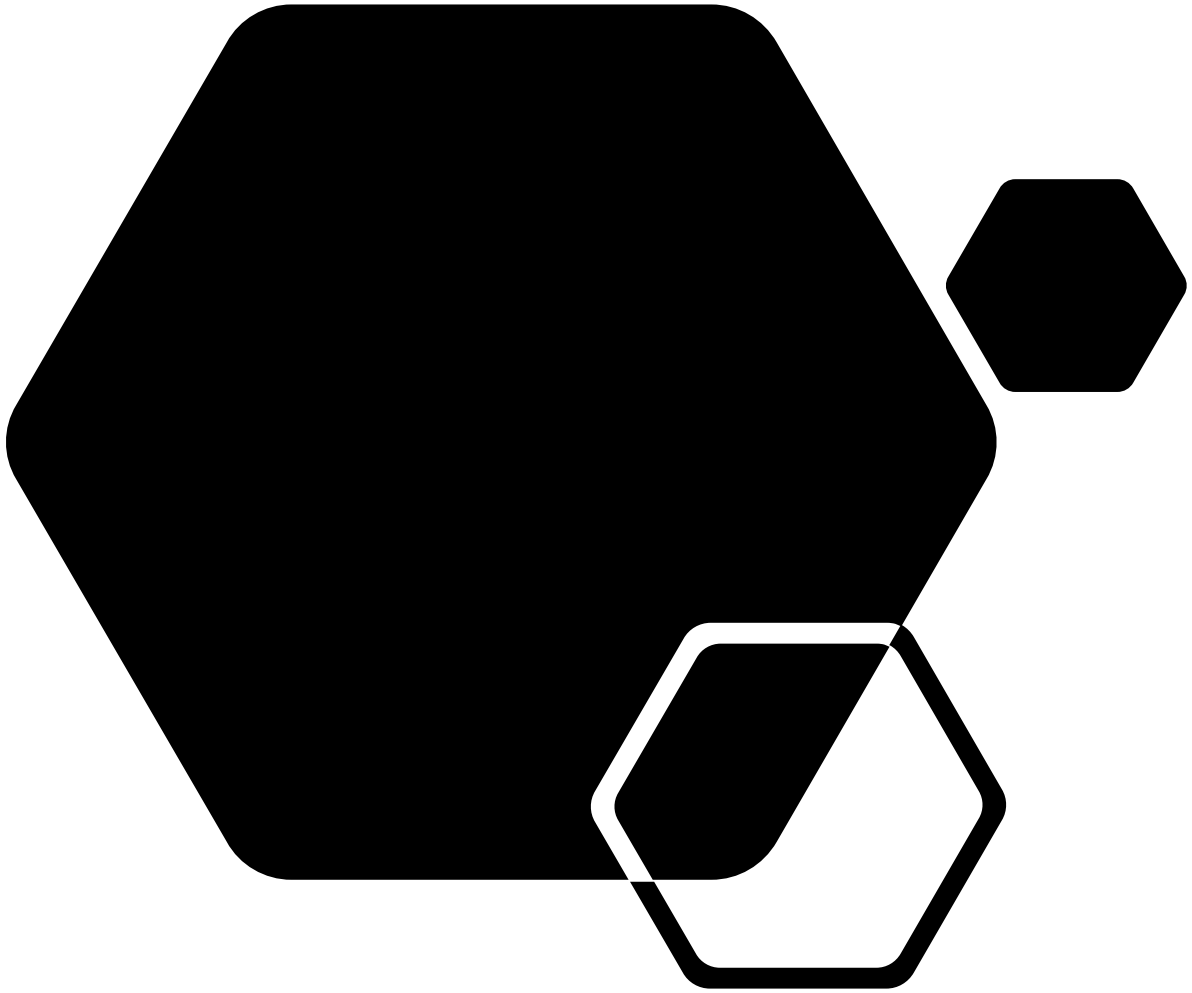


Source: International Carbon Action Partnership

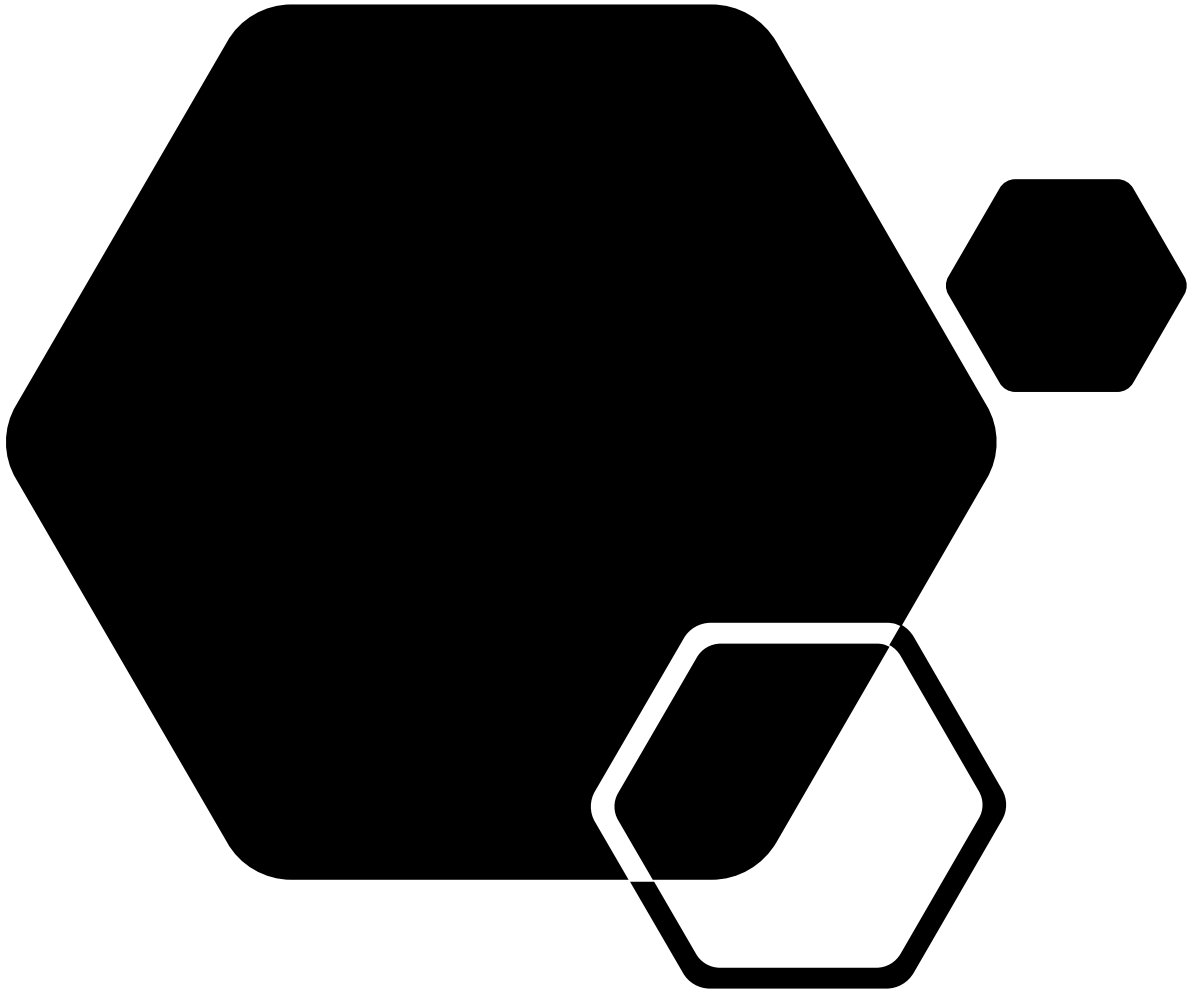
Source: International Carbon Action Partnership



Policy integration

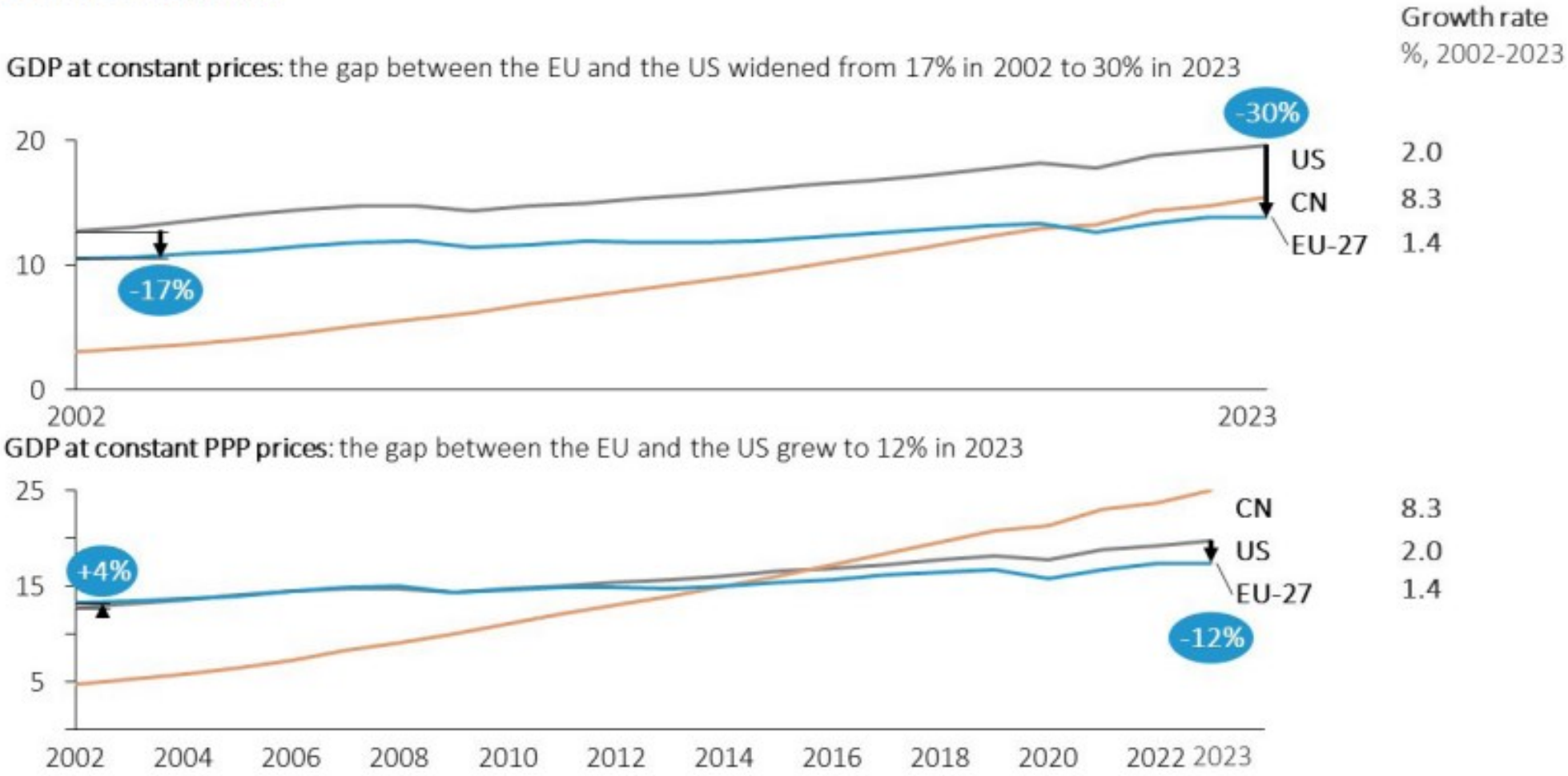


Competitiveness and/vs. climate policy



GDP evolution

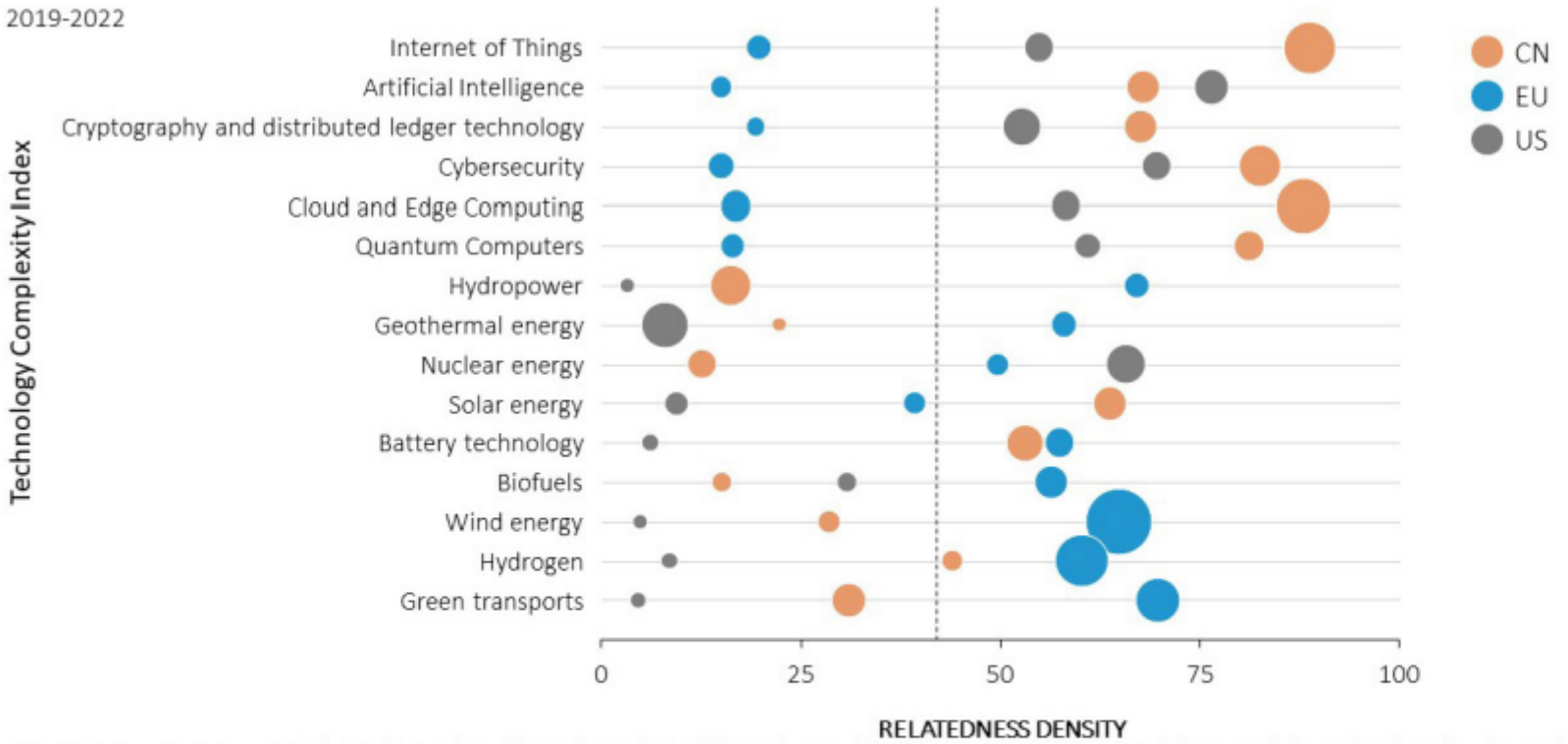
2015 reference levels, in EUR trillion



Source: OECD, 2024.

Source: [Draghi, 2024]

The EU's position in complex (digital and green) technologies



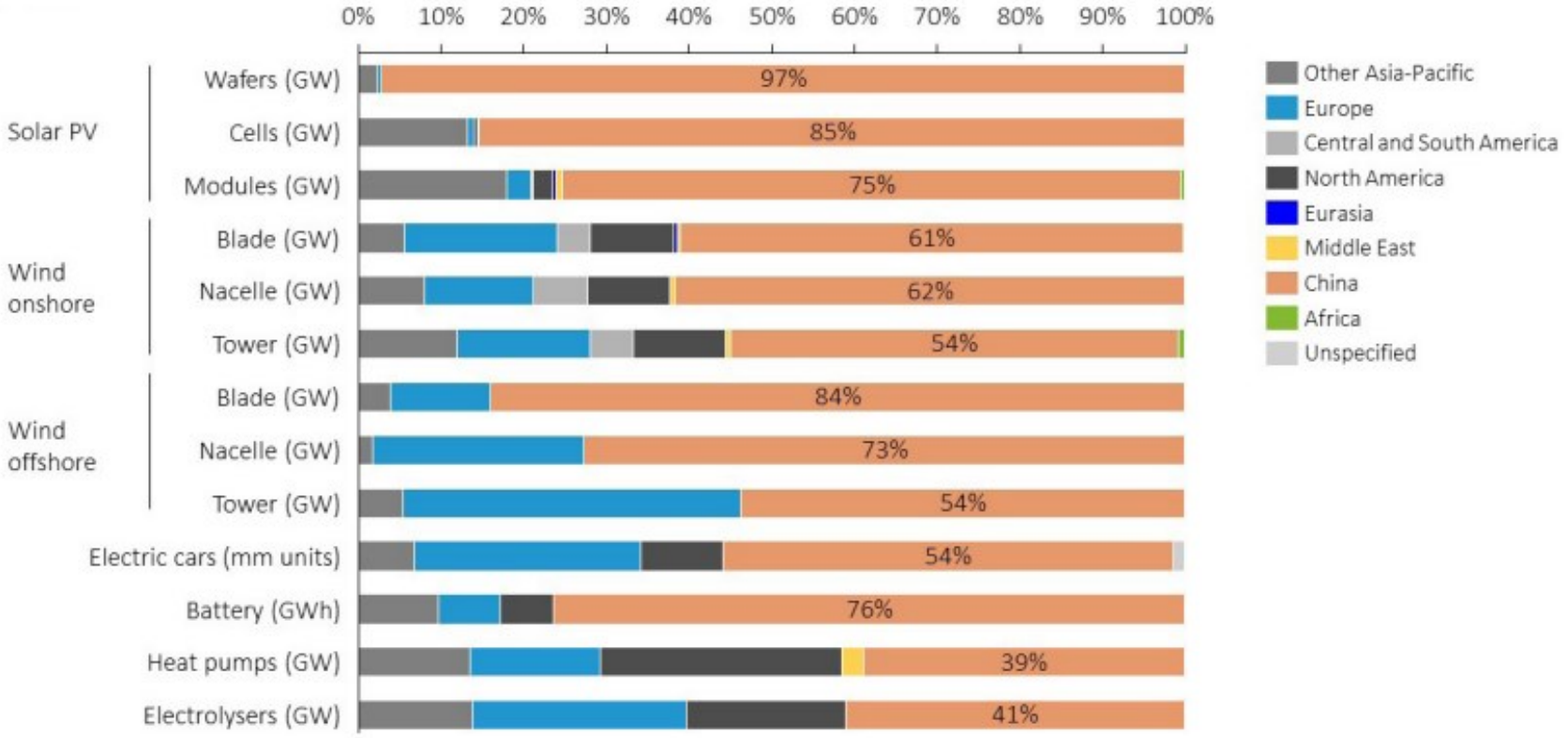
Notes: The results are based on an analysis of patent data to understand the complexity and potential for specialisation in different technology areas. On the y-axis, technologies are ranked according to how advanced or complex they are, with scores ranging between 0 (less complex) and 100 (more complex). The x-axis (showing the relatedness density) represents how easily a country can build comparative advantage in a particular technology, depending on how closely related it is to other technologies the country is already strong in. The size of the bubbles shows how much each country has already specialised in a technology, using a measure of "revealed comparative advantage"(RCA), which reflects their competitive strenght in that field.

Source: European Commission, DG RTD.

Source: Draghi, 2024

Clean technology manufacturing capacity by region

%, 2021

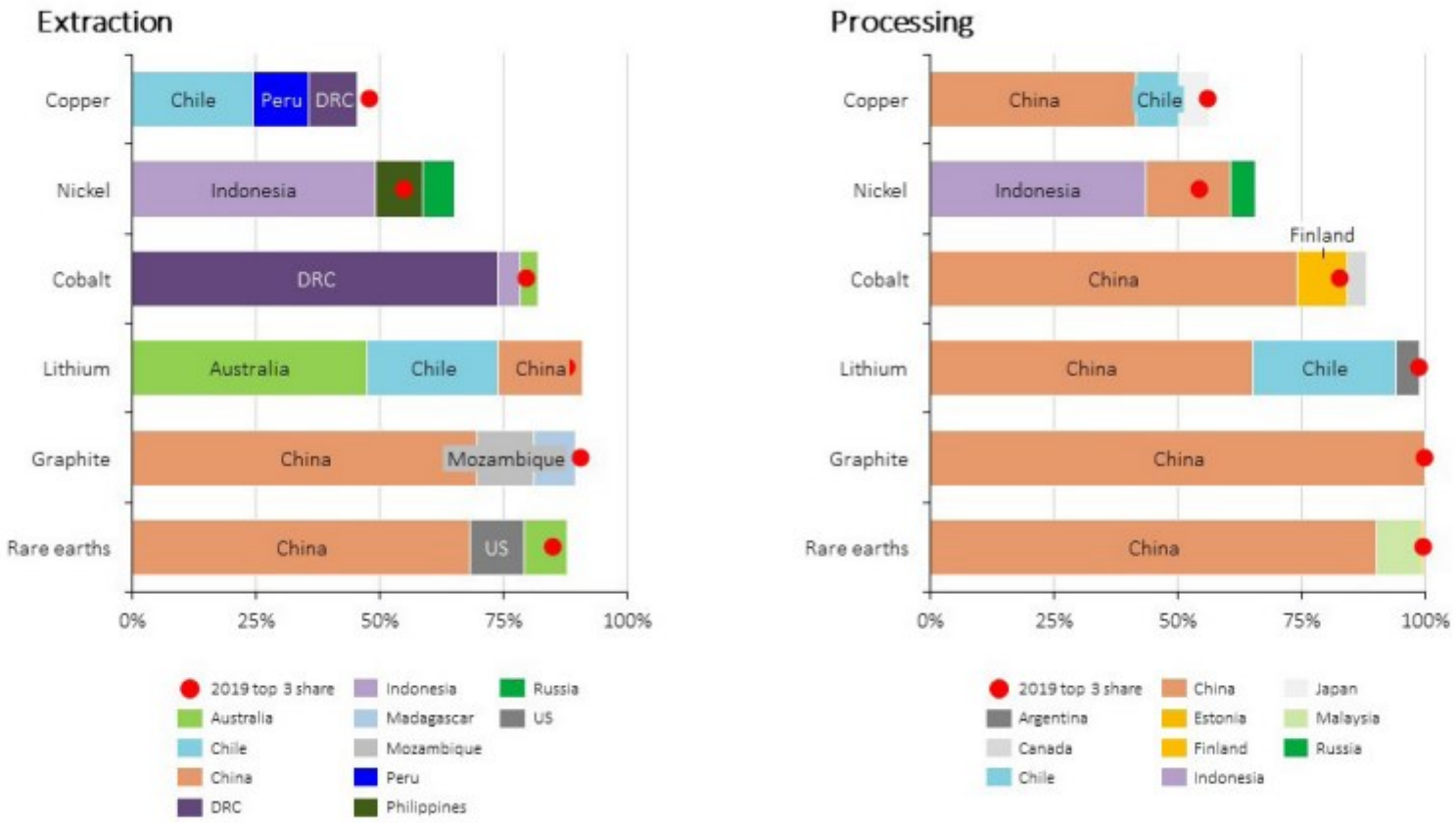


Source: European Commission, 2024. Based on IEA, Bruegel.

Source: Draghi, 2024

Concentration of the extraction and processing of critical resources

Share of top-three producing countries in total production of selected resources and minerals, 2022

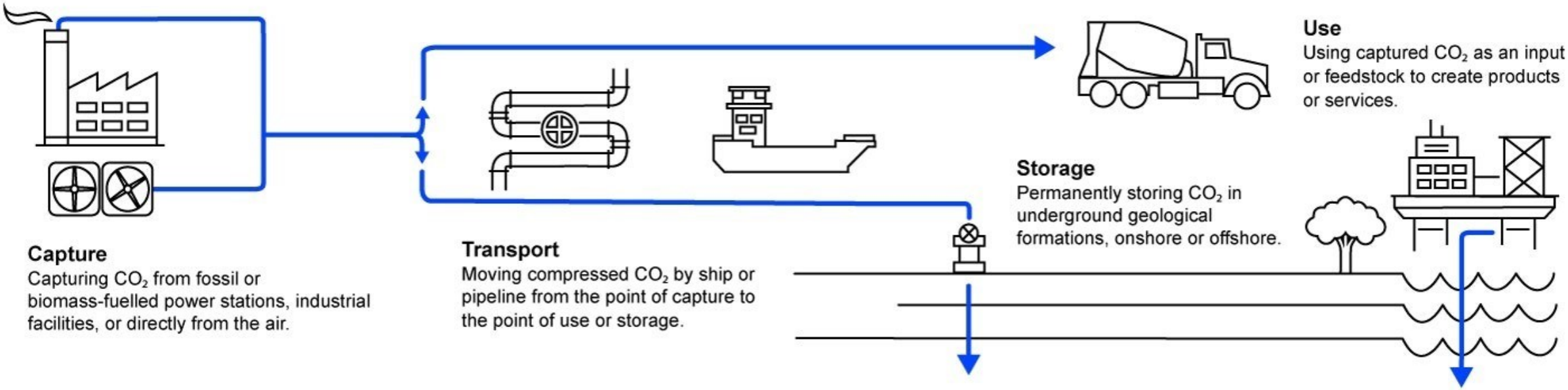


Source: IEA. Based on S&P Global, USGS, Mineral Commodity Summaries and Wood Mackenzie, 2024.

Source: [Draghi, 2024]

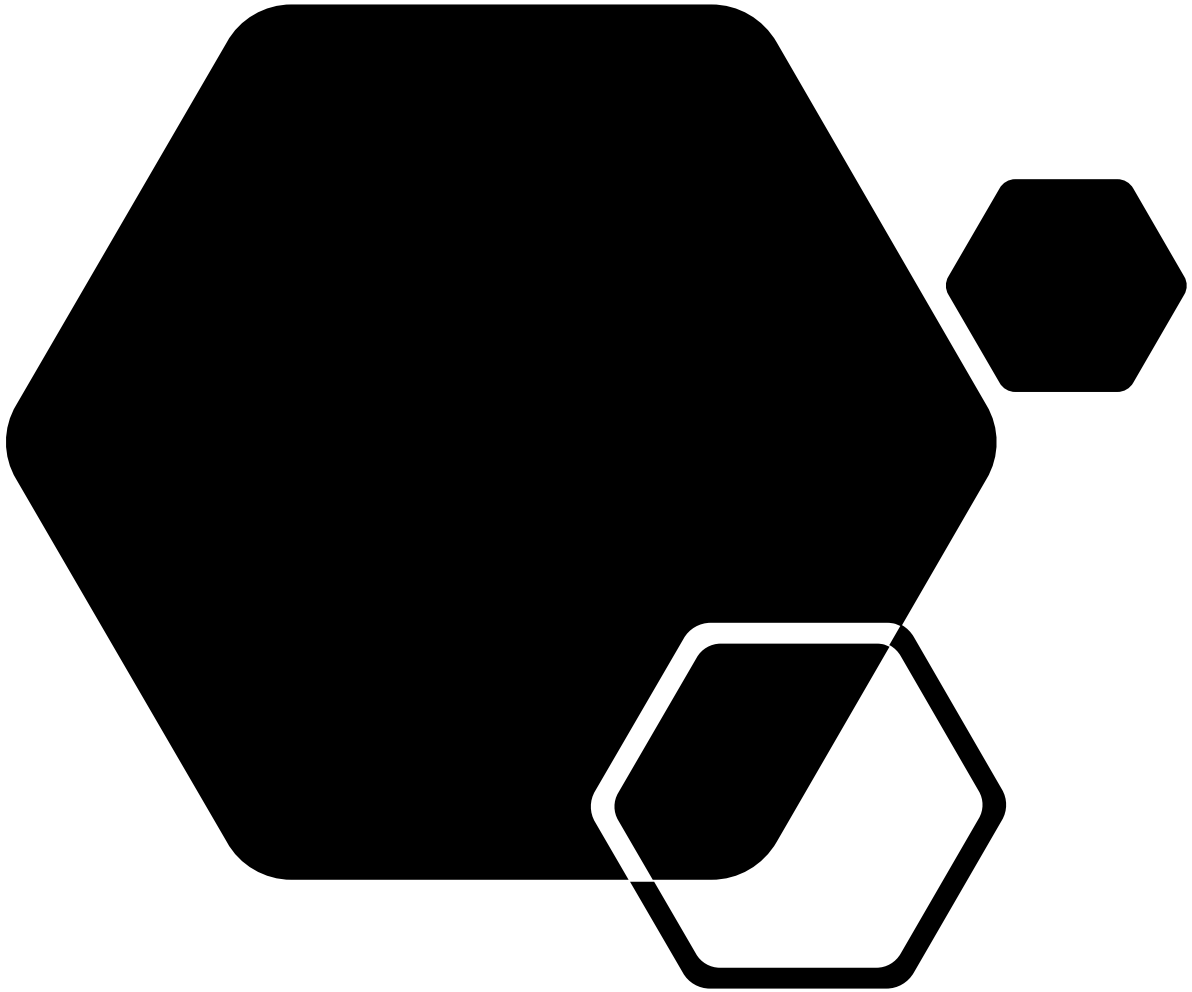
Green transition

- €175 - €290 billion of additional investment per year (2018)
- €350 billion (2021)
- €620 billion (2023)
- EU budget (2023): approx. €168 billion in actual spending



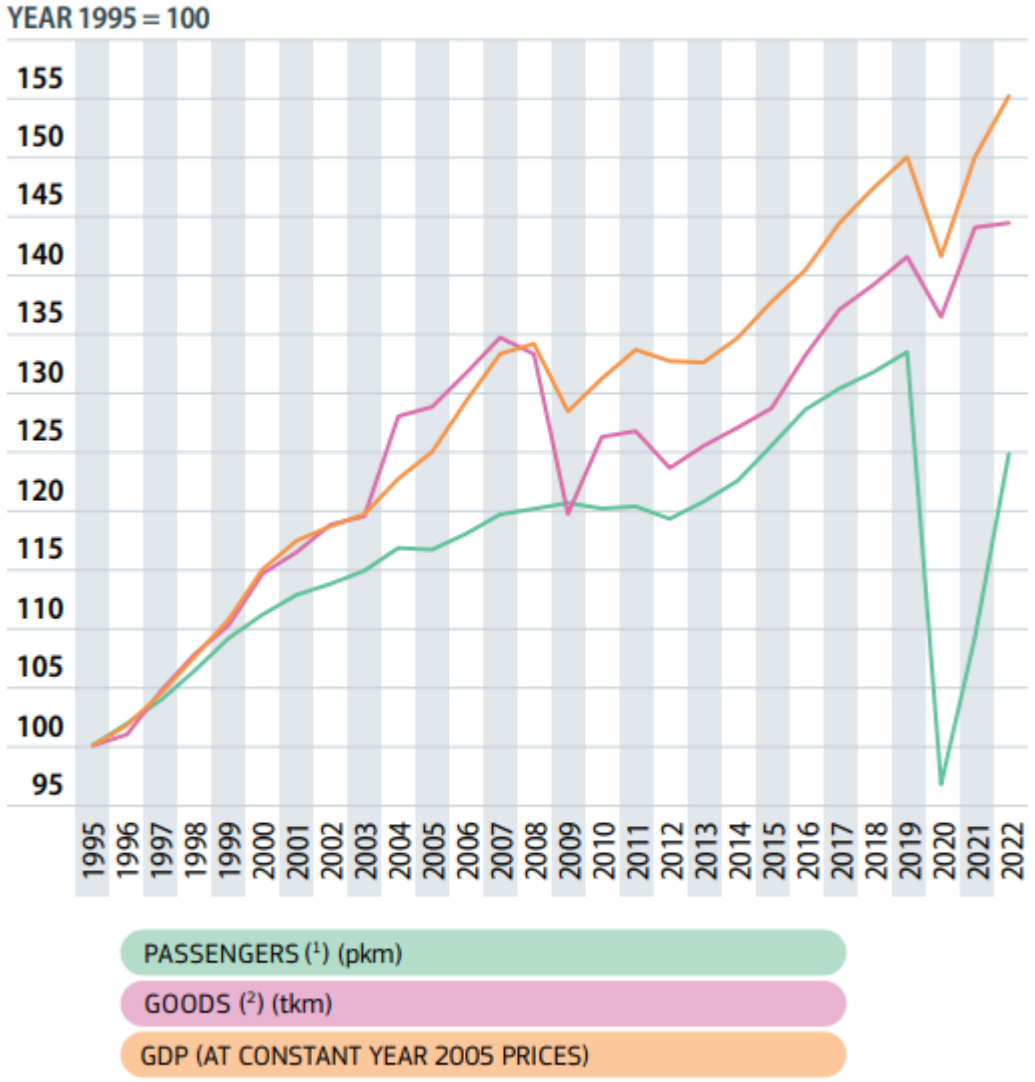
Source: European Commission

Reduction of GHGEs



Transport growth – EU-27 2.1.2

PASSENGERS, GOODS, GDP 1995–2022



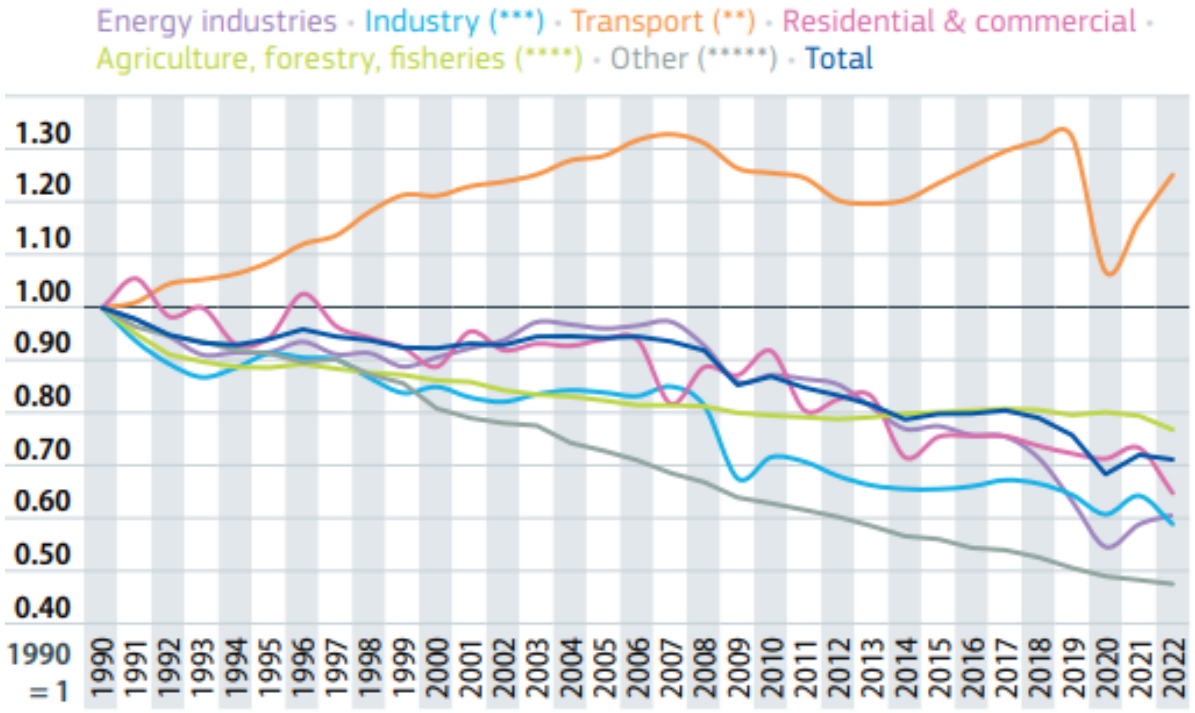
NB: (1) Passenger cars, powered two-wheelers, buses & coaches, tram & metro, railways, intra-EU air, intra-EU sea.
(2) Road, rail, inland waterways, oil pipelines, intra-EU air, intra-EU sea.

Source: EC Pocketbook 2024

ANNUAL GROWTH RATES EU-27

	1995–2022 p.a.	2000–2022 p.a.	2021–2022
GDP at year 2005 prices and exchange rates	1.6%	1.4%	3.5%
Passenger transport (pkm)	0.8%	0.5%	14.4%
Freight transport (tkm)	1.4%	1.1%	0.3%

Source: EC Pocketbook 2024



NB: (*) Excluding LULUCF (land use, land-use change and forestry) emissions and international maritime, including international aviation and indirect CO_2.

(**) Excluding international maritime (international traffic departing from the EU), including international aviation.

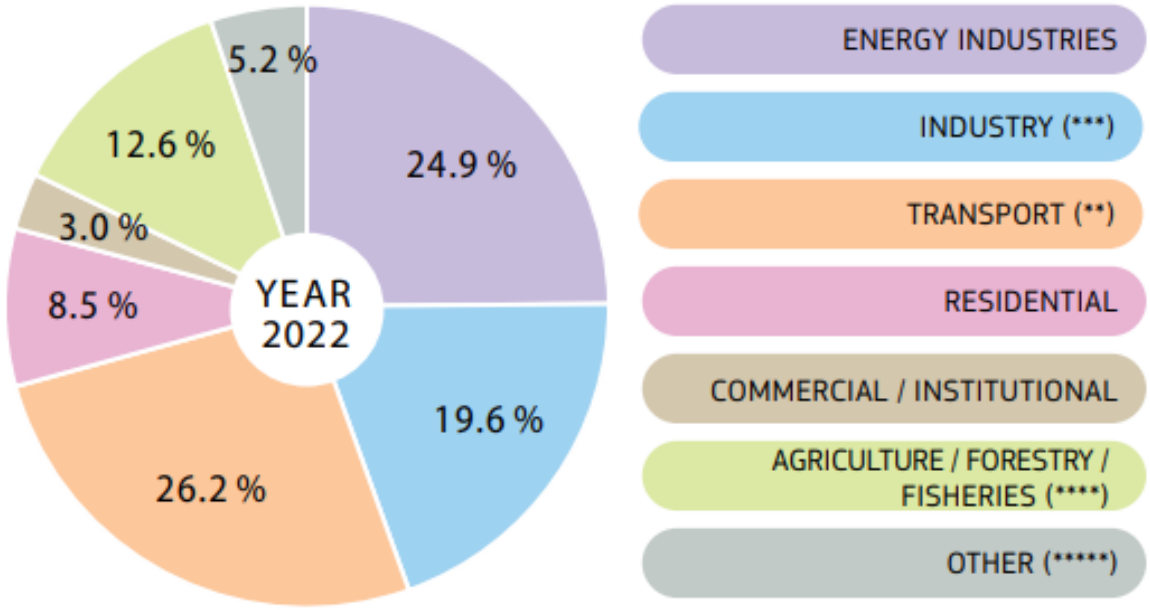
(***) Emissions from manufacturing and construction, industrial processes and product use.

(****) Emissions from fuel combustion and other emissions from agriculture.

(*****) Emissions from fuel combustion in other (not elsewhere specified), fugitive emissions from fuels, waste, indirect CO_2 and other.

Source: EC Pocketbook 2024

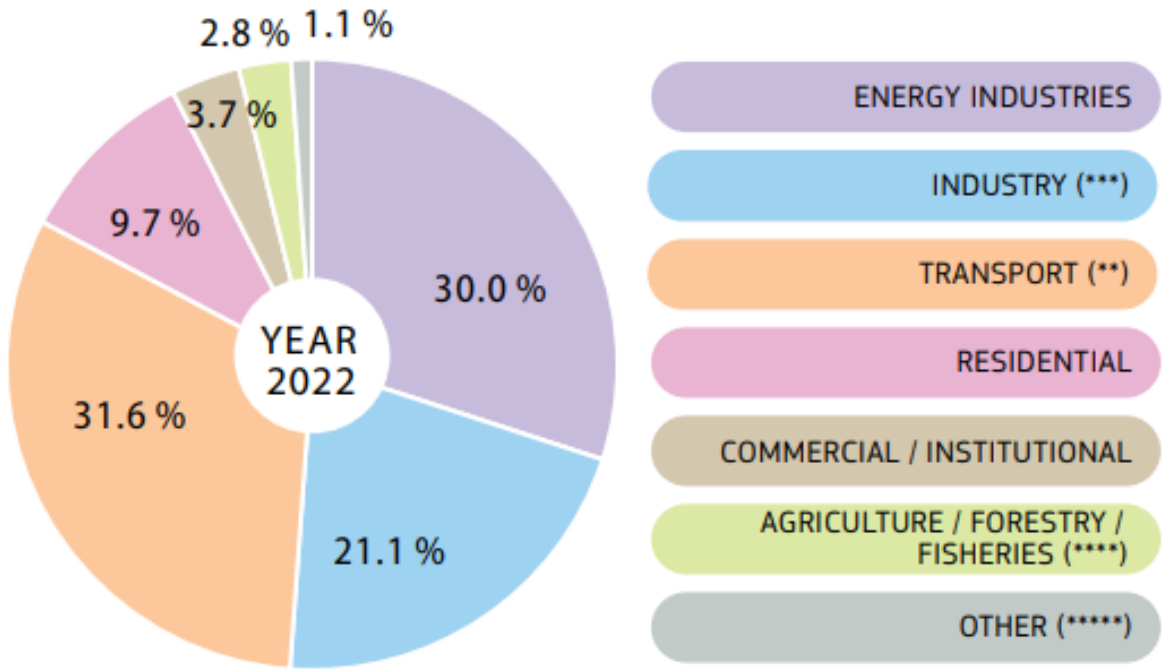
GHG emissions (*) EU-27 – BY SECTOR
(MILLION TONNES CO_2 EQUIVALENT)



NB: (*) Excluding LULUCF (land use, land-use change and forestry) emissions and international maritime, including international aviation and indirect CO_2.
(**) Excluding international maritime (international traffic departing from the EU), including international aviation.
(***) Emissions from manufacturing and construction, industrial processes and product use.
(****) Emissions from fuel combustion and other emissions from agriculture.
(*****) Emissions from fuel combustion in other (not elsewhere specified), fugitive emissions from fuels, waste, indirect CO_2 and other.

Source: EC Pocketbook 2024

CO_2 emissions (*) EU-27
BY SECTOR (MILLION TONNES)



NB:
(*) Excluding LULUCF (land use, land-use change and forestry) emissions and international maritime, including international aviation and indirect CO_2.
(**) Excluding international maritime (international traffic departing from the EU), including international aviation.
(***) Emissions from manufacturing and construction, industrial processes and product use.
(****) Emissions from fuel combustion and other emissions from agriculture.
(*****) Emissions from other (not elsewhere specified), fugitive emissions from fuels, waste, indirect CO_2 and other.

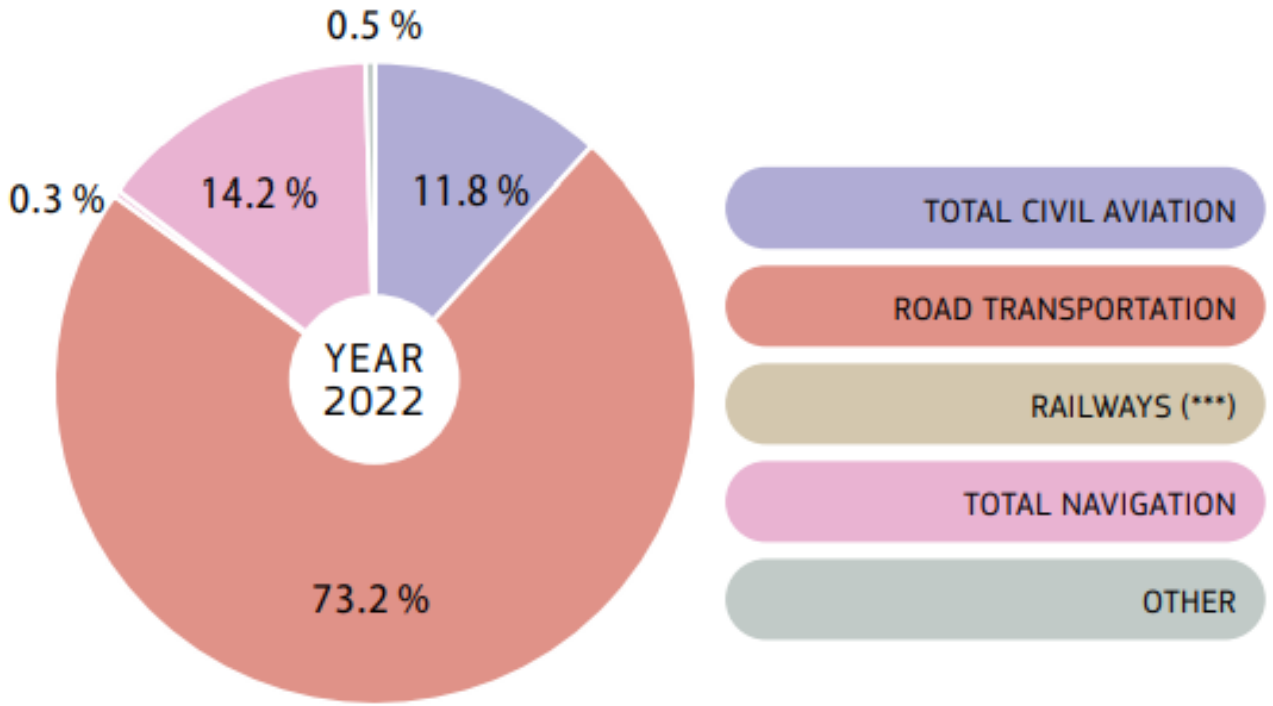
Source: EC Pocketbook 2024

INCLUDING INTERNATIONAL BUNKERS

	TOTAL CIVIL AVIATION	Civil aviation (domestic) (*)	International bunkers – Aviation	ROAD TRANSPORTATION	RAILWAYS (***)	TOTAL NAVIGATION	Navigation (domestic) (*)	International bunkers – Maritime transport	OTHER TRANSPORTATION (****)	TOTAL TRANSPORT (*****)	TOTAL EMISSIONS (**)
1990	8.0	1.4	6.6	74.8	1.5	14.9	2.6	12.3	0.7	16.5	100
1995	8.8	1.4	7.4	75.6	1.1	13.8	2.3	11.5	0.7	18.9	100
2000	10.1	1.7	8.5	73.8	0.8	14.6	1.9	12.7	0.7	21.7	100
2005	10.3	1.5	8.8	72.4	0.6	15.9	1.8	14.1	0.8	22.8	100
2010	10.9	1.5	9.4	71.9	0.5	16.0	1.8	14.2	0.6	24.1	100
2015	11.8	1.3	10.5	73.5	0.4	13.8	1.5	12.3	0.5	25.4	100
2020	7.1	0.9	6.2	76.6	0.4	15.4	1.9	13.5	0.5	25.9	100
2021	8.2	1.0	7.2	76.3	0.4	14.7	1.7	13.0	0.5	26.7	100
2022	11.8	1.3	10.5	73.2	0.3	14.2	1.7	12.5	0.5	28.9	100

NB: (*) Excluding international bunkers (international traffic departing from the EU).
(**) Including international bunkers and indirect CO_2 but excluding LULUCF (land use, land-use change and forestry).
(***) Excluding indirect emissions from electricity consumption.
(****) Combustion emissions from all remaining transport activities including pipeline transportation, ground activities in airports and harbours, and off-road activities.
(*****) Total transport share in total emissions.

Source: EC Pocketbook 2024



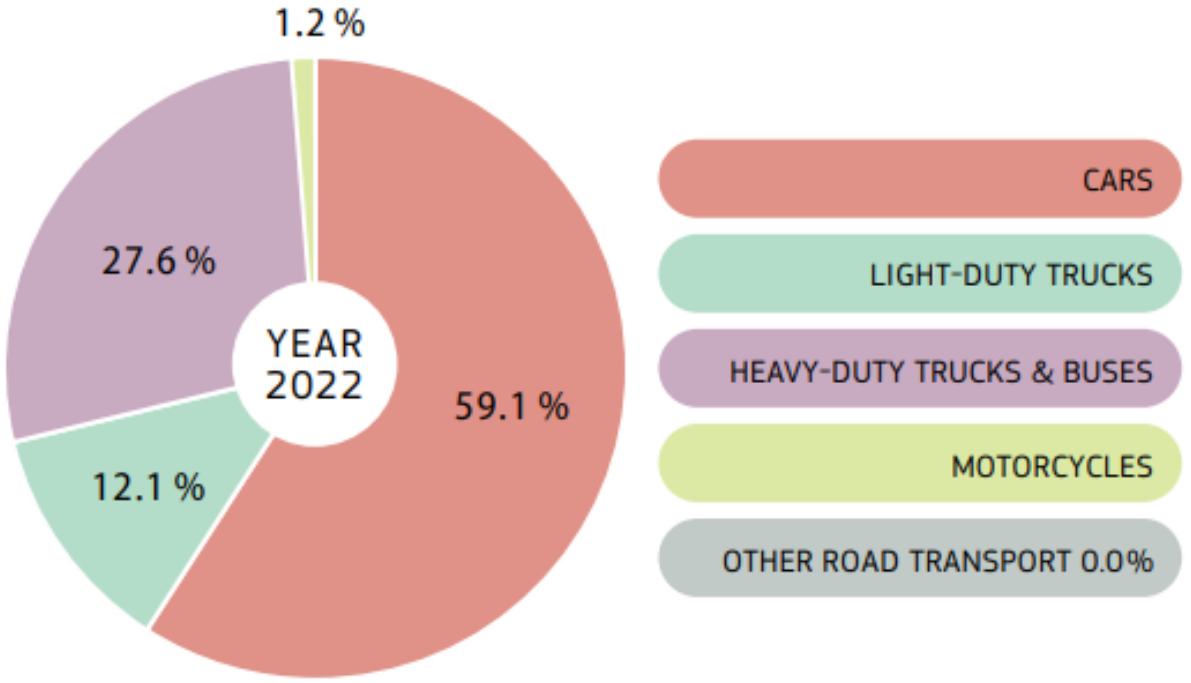
GHG emissions from road transport 3.2.7

EU-27 – BY TRANSPORT MEAN

(SHARES %)

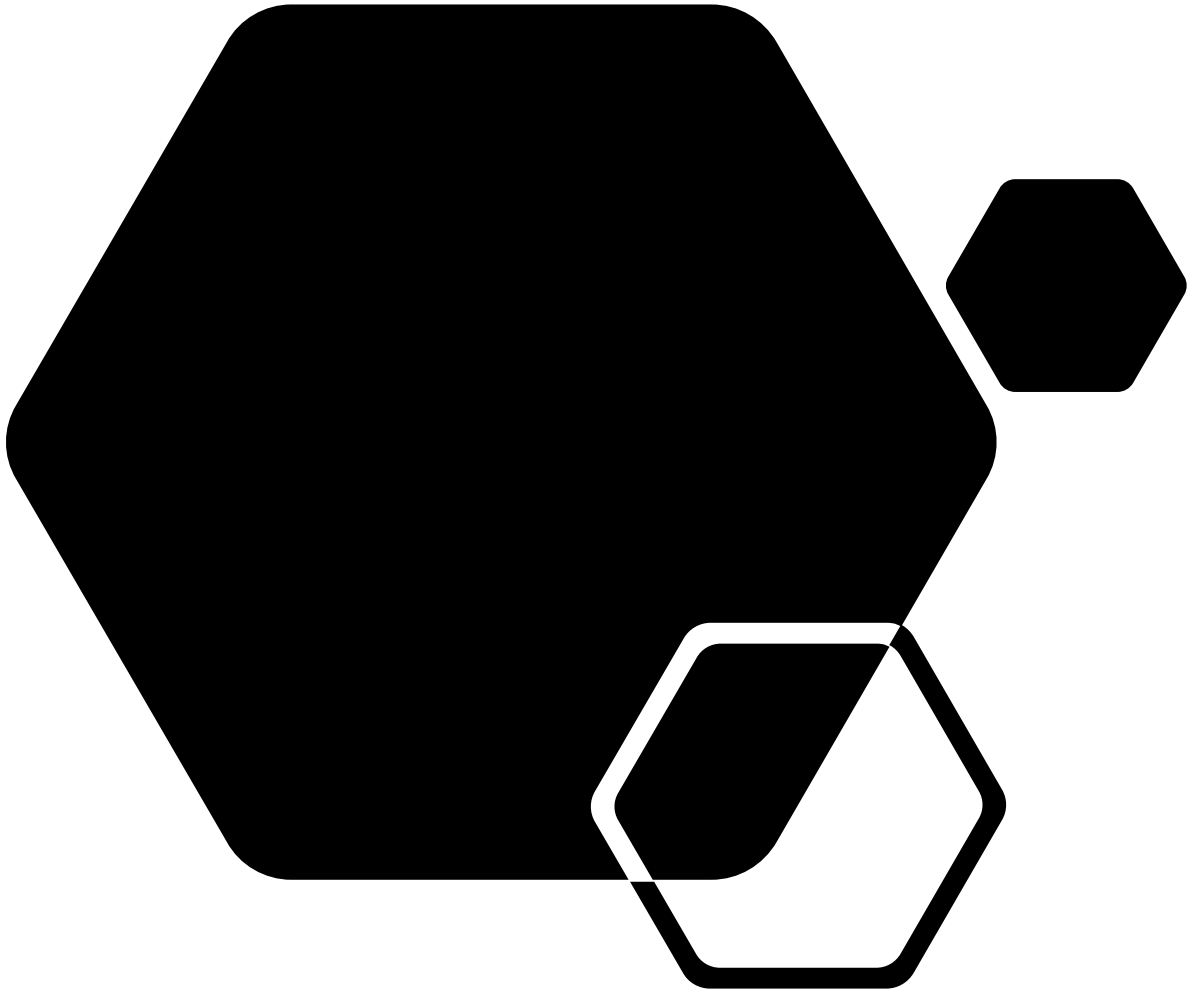
	ROAD TRANSPORTATION	Cars	Light-duty trucks	Heavy-duty trucks and buses	Motorcycles	Other road transportation	TOTAL TRANSPORT (***)	TOTAL EMISSIONS (**)
1990	74.8	46.9	7.2	19.6	1.0	0.0	16.5	100
1995	75.6	47.2	7.7	19.6	1.1	0.0	18.9	100
2000	73.8	45.2	8.1	19.5	1.1	0.0	21.7	100
2005	72.4	43.8	8.5	19.1	1.0	0.0	22.8	100
2010	71.9	43.9	8.2	18.8	1.0	0.0	24.1	100
2015	73.5	45.5	8.2	18.7	1.0	0.0	25.4	100
2020	76.6	44.9	8.8	21.9	0.9	0.0	25.9	100
2021	76.3	44.6	9.1	21.7	0.9	0.0	26.7	100
2022	73.2	43.3	8.8	20.2	0.9	0.0	28.9	100

NB: (**) Including international bunkers and indirect CO_2 but excluding LULUCF (land use, land-use change and forestry).
(***) Total transport share in total emissions.



Source: EC Pocketbook 2024

Carbon leakage



Thank you for your attention!

INSTITUTE
OF INTERNATIONAL STUDIES
Faculty of Social Sciences
Charles University

eliska.ullrichova@fsv.cuni.cz