

# Key data supporting climate policy in Europe

## Training Seminar on Climate Change: Focus on Data

# The European Environment Agency

- The EU body dedicated to providing timely, targeted, relevant and reliable information on the environment
- To help the EU and member countries make informed decisions about improving the environment
- 33 members + collaborating countries



# Outline

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1. International and EU climate policy
2. Which data are relevant to national climate policy?
3. Tracking national action on climate change mitigation and adaptation
4. Key sources of data and information on climate change

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# 1. International and EU climate policy

# 1992: first concerted action on climate change

- The UN Framework Convention on Climate Change
  - recognised the global issue that climate change represents
  - set out first steps and efforts to address it
  - introduced the principle of ‘Common But Differentiated Responsibilities’
  - Developed countries should monitor and report their greenhouse gas emissions (by source) and removals (by sink)
  - National policies and measures to reduce greenhouse gas emissions

# 1997: first quantitative objectives on emissions

- The Kyoto Protocol
  - Greenhouse gas targets for developed countries, to be reached during the first commitment period 2008-2012
  - Robust rules to monitor and report emissions and action from developed countries
  - Review process of individual efforts, linked to compliance
  - No obligations for developing countries

# 2015: The Paris Agreement

- **Mitigation: reducing emissions**
  - keep global average temperature increase to well below 2°C, with the aim to achieve 1.5°C
  - National climate action plans (INDCs) still insufficient
- **Adaptation**
  - strengthen societies' ability to **deal with the impacts** of climate change
  - continued and enhanced international **support** for adaptation **to developing countries**
- **Transparency and global stocktake**
  - come together every 5 years to **set more ambitious targets** as required by science
  - **report** to each other and the public on how well they are doing to implement their targets
  - track progress towards the long-term goal through a robust **transparency and accountability** system

# Other key elements of the Paris Agreement

- **Loss and damage**
  - importance of averting, minimising and addressing **loss and damage** associated with the adverse effects of climate change
  - need to **cooperate** and enhance the **understanding, action and support** in different areas such as early warning systems, emergency preparedness and risk insurance
- **Role of cities, regions and local authorities**
  - role of non-Party stakeholders in addressing climate change: cities, subnational authorities, civil society, private sector, etc.
- **Support**
  - support to climate action in developing countries by the EU and other developed countries
  - Collective goal to mobilise USD 100 billion per year by 2020 and extend this until 2025

# EU's responses to meet int'l commitments

- Mechanism to monitor greenhouse gas emissions
  - Commission Decisions (1993, 2004), Regulation (2013)
  - Current provisions to be covered by the Energy Union Governance Regulation
- Successive European Climate Change Programmes
- Policy portfolio to reduce emissions in various emitting sectors
- 'Domestic' targets consistent with internationally agreed commitments:
  - Collective achievement of Kyoto targets (2008-2012): burden-sharing agreement
  - Combining energy and climate targets: '20-20-20' targets for 2020
  - Integrating climate and energy dimensions in an 'Energy Union' strategy for 2030

# The main pillars of EU climate policy (mitigation)

- One instrument to cover large sources and aviation:
  - the EU Emissions Trading System (ETS)
  - mainly large industrial facilities
  - about 40% of EU emissions
  - one single cap at EU level
  - not covered by national targets
- One 'effort sharing' to cover other sources
  - differentiated national targets
  - various sources: buildings, transport, agriculture, waste management, small industries
  - Land use, land-use change and forestry included in post 2020 framework
  - Compliance with annual targets checked annually

# Questions 1

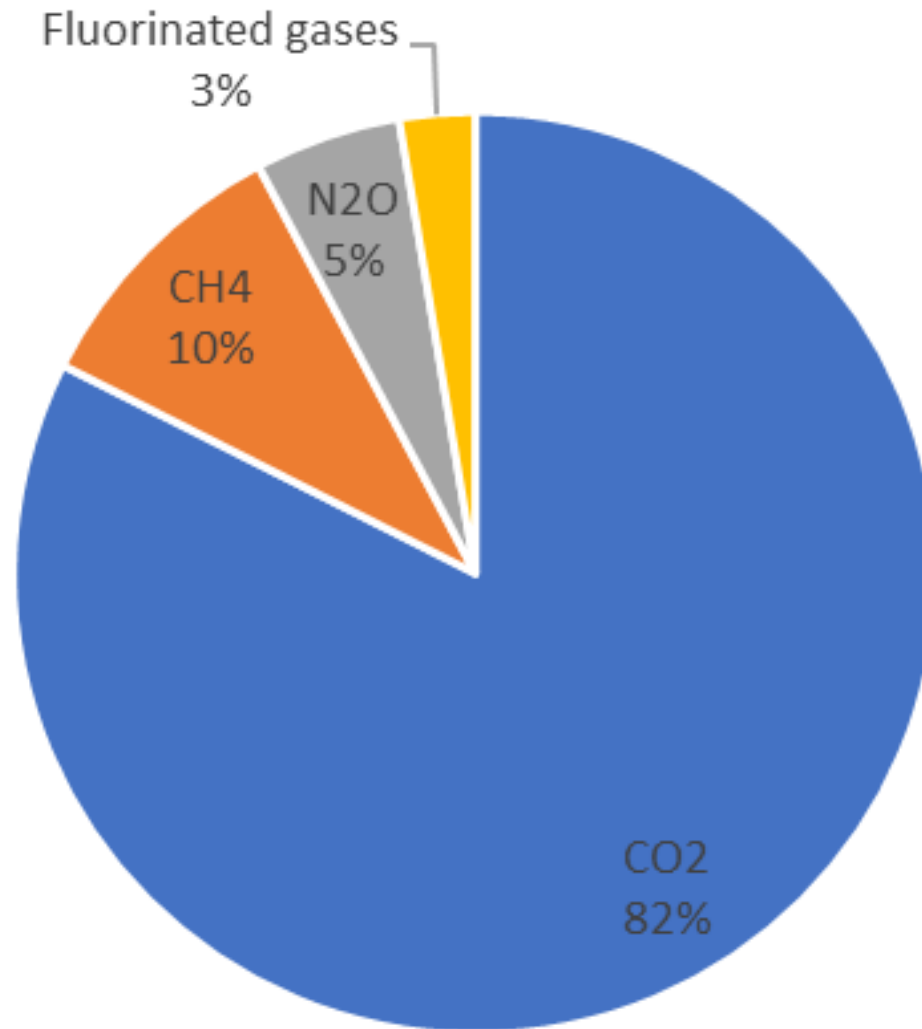
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- What type of audits on climate change have been undertaken in your country?
- How do these audits relate to the achievement of national, EU or international commitments?

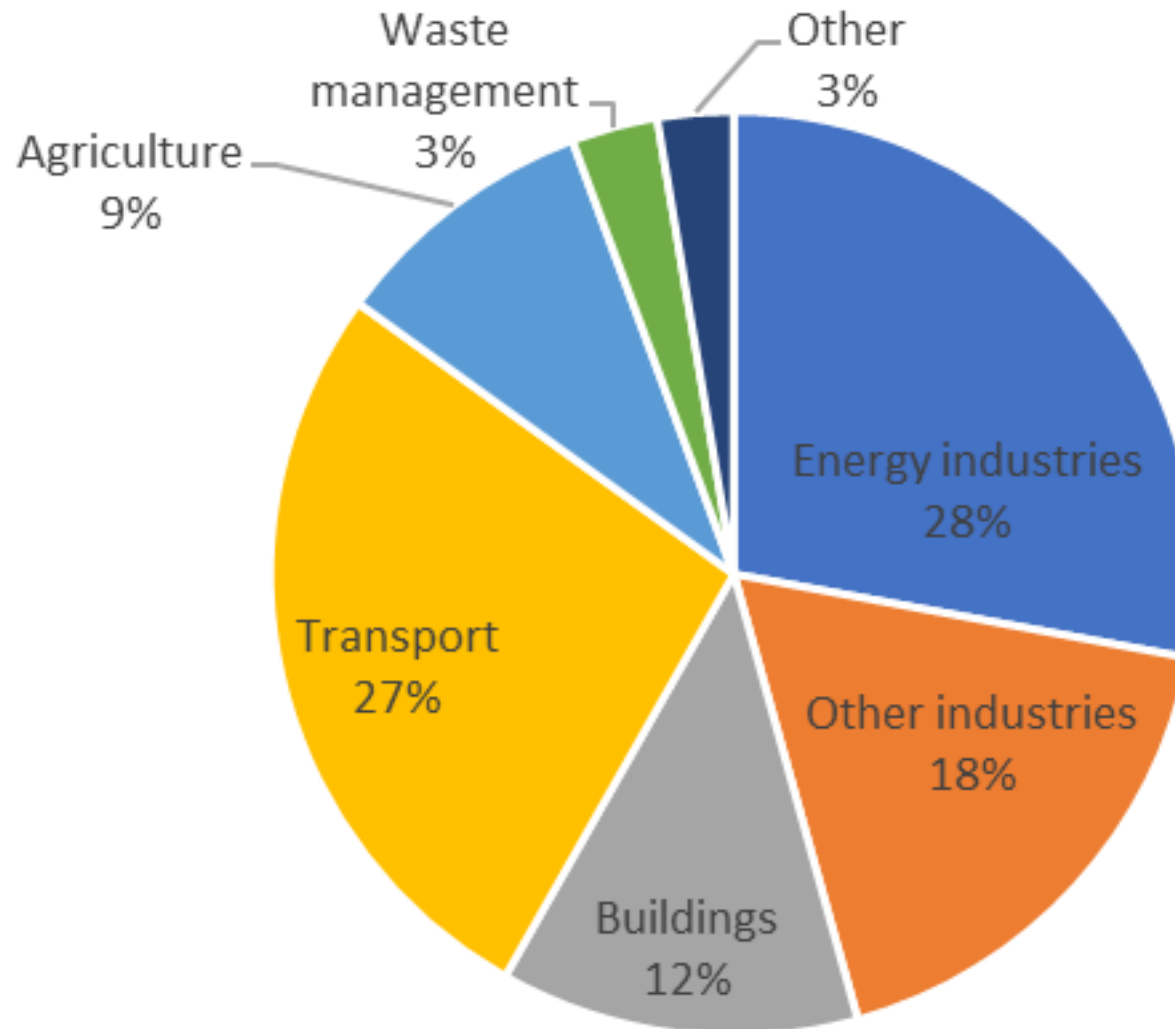
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## **2. Which data are relevant to national climate policy?**

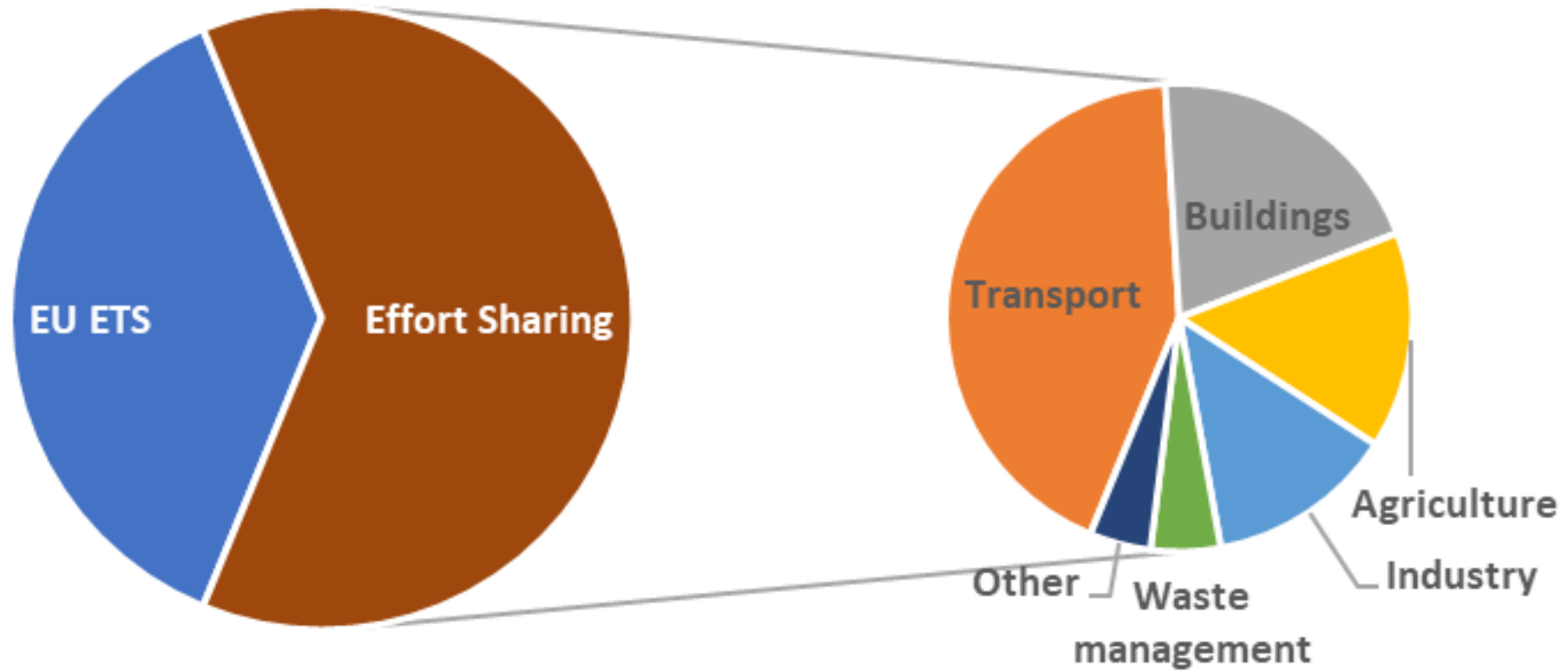
# Carbon dioxide is not the only greenhouse gas



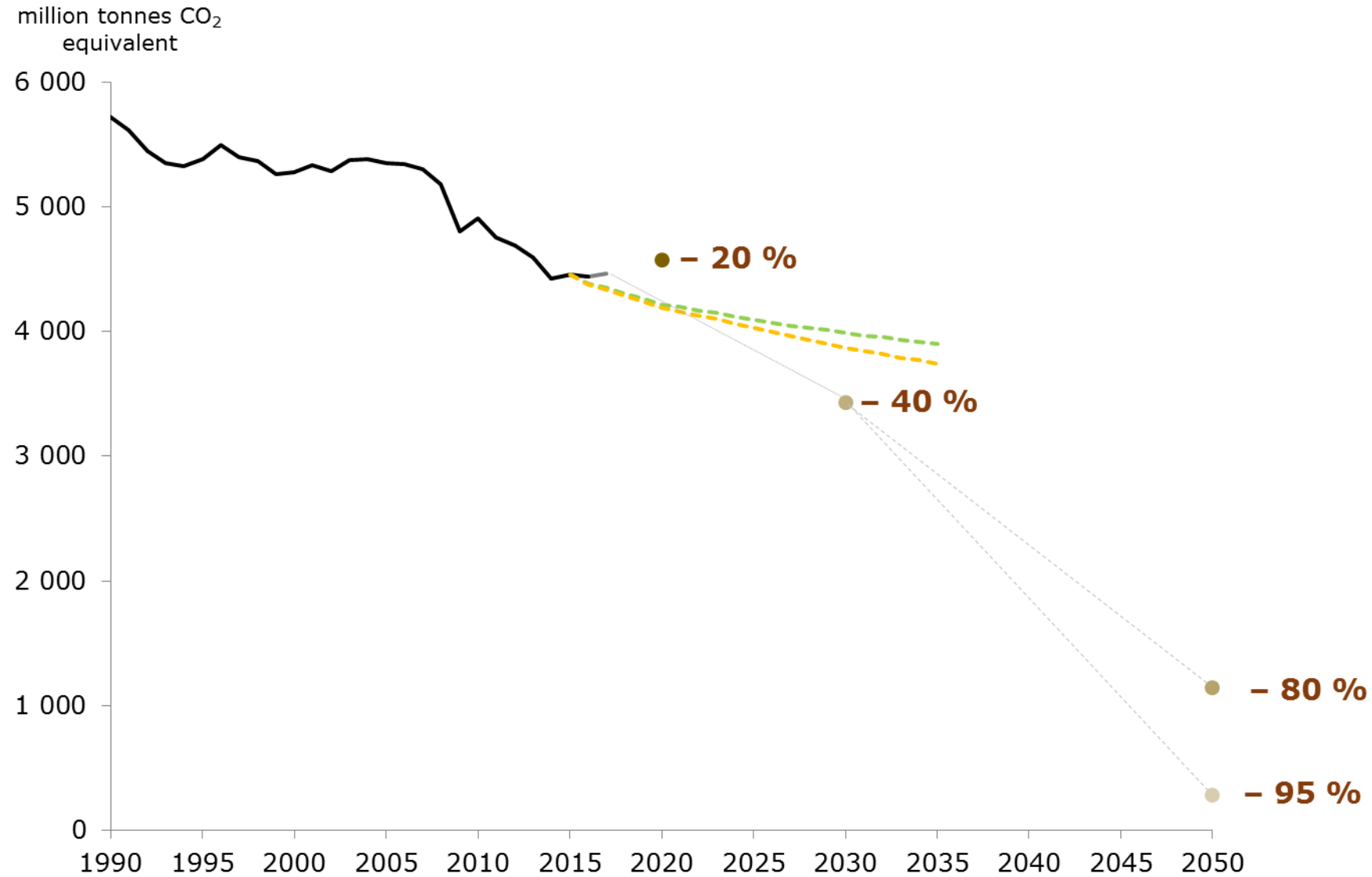
# 80% greenhouse gas emissions are energy-related



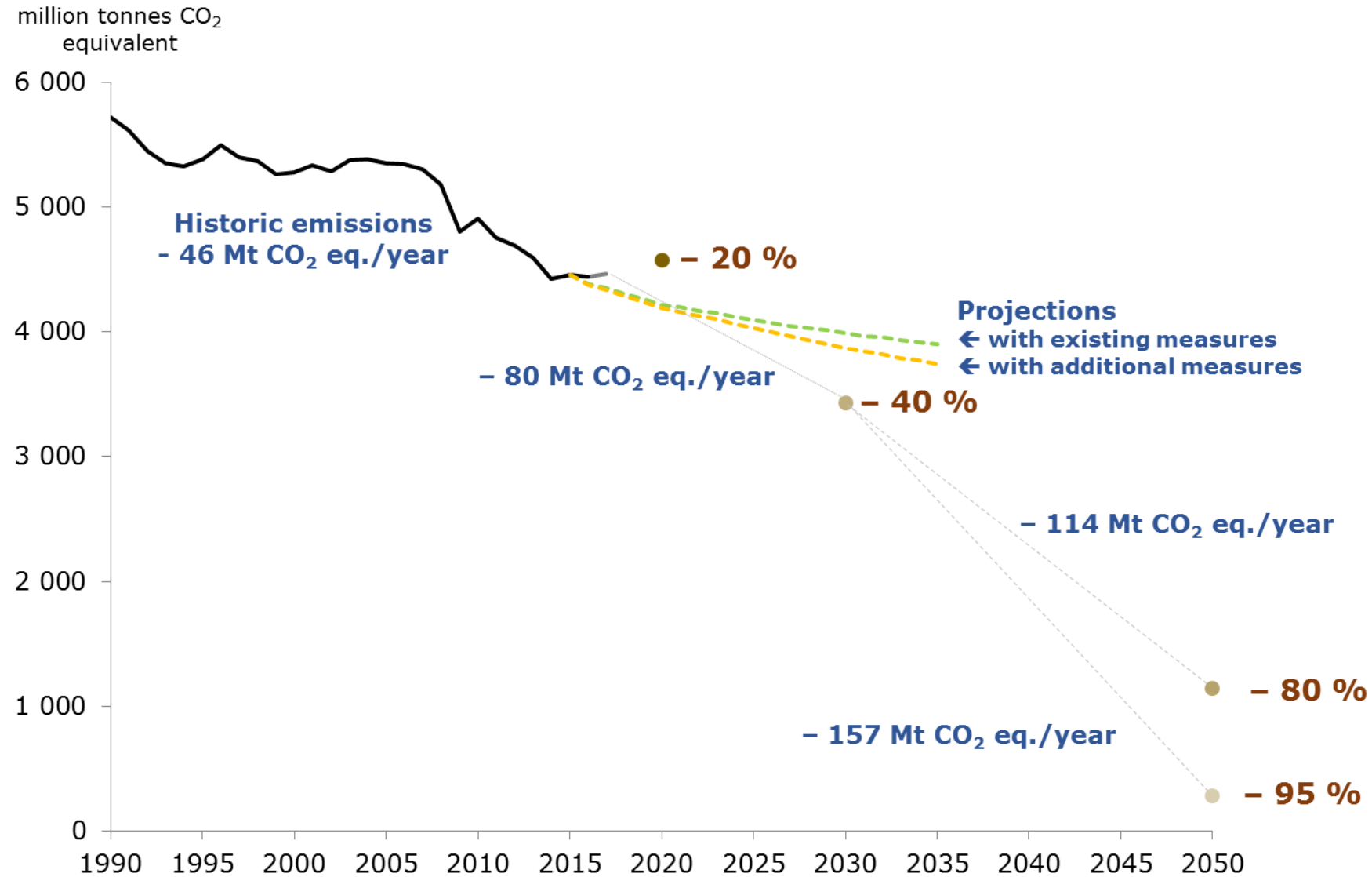
# A (more) policy-relevant split of sectoral emissions



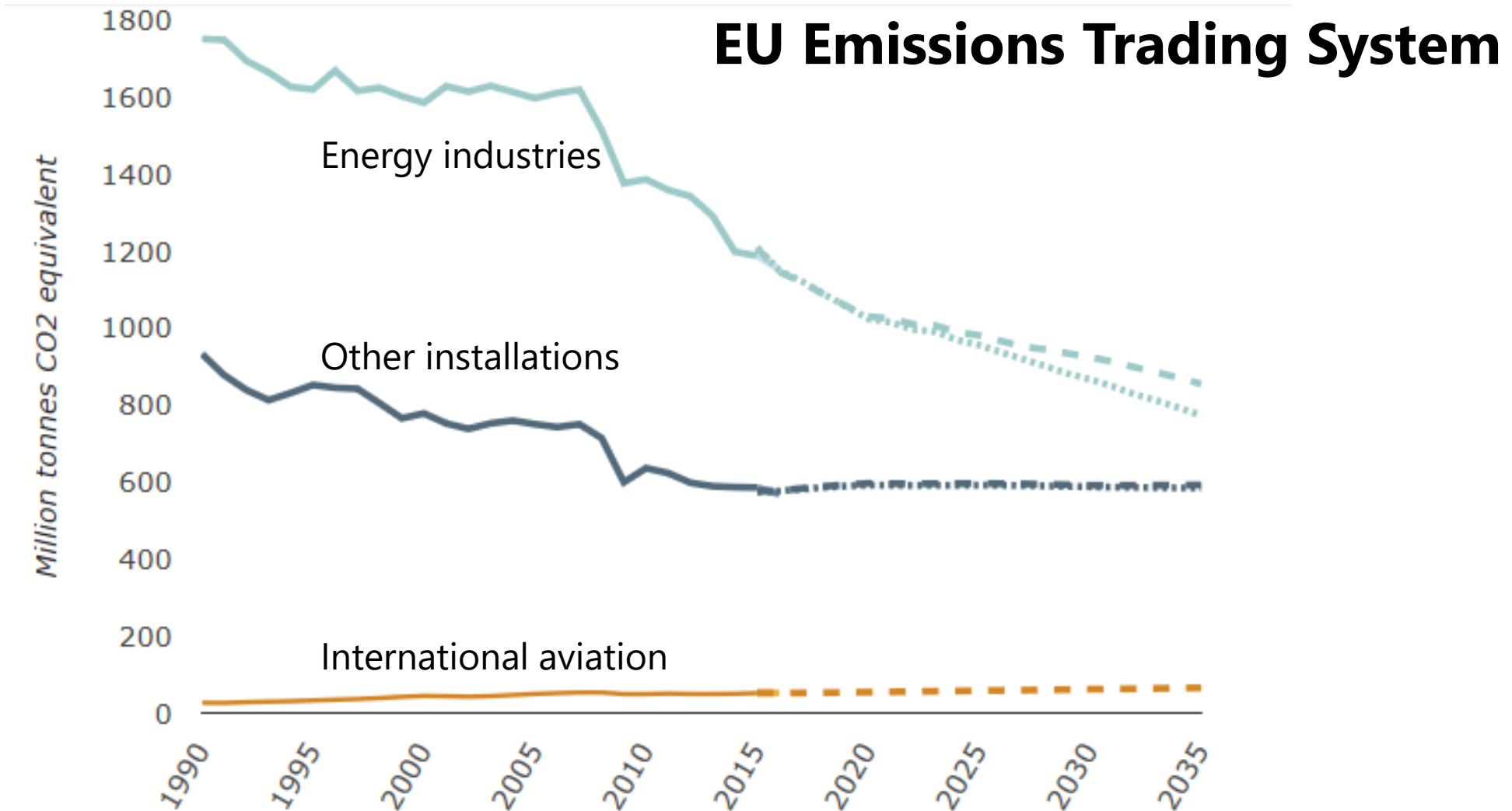
# The long-term challenge: accelerate emission reductions



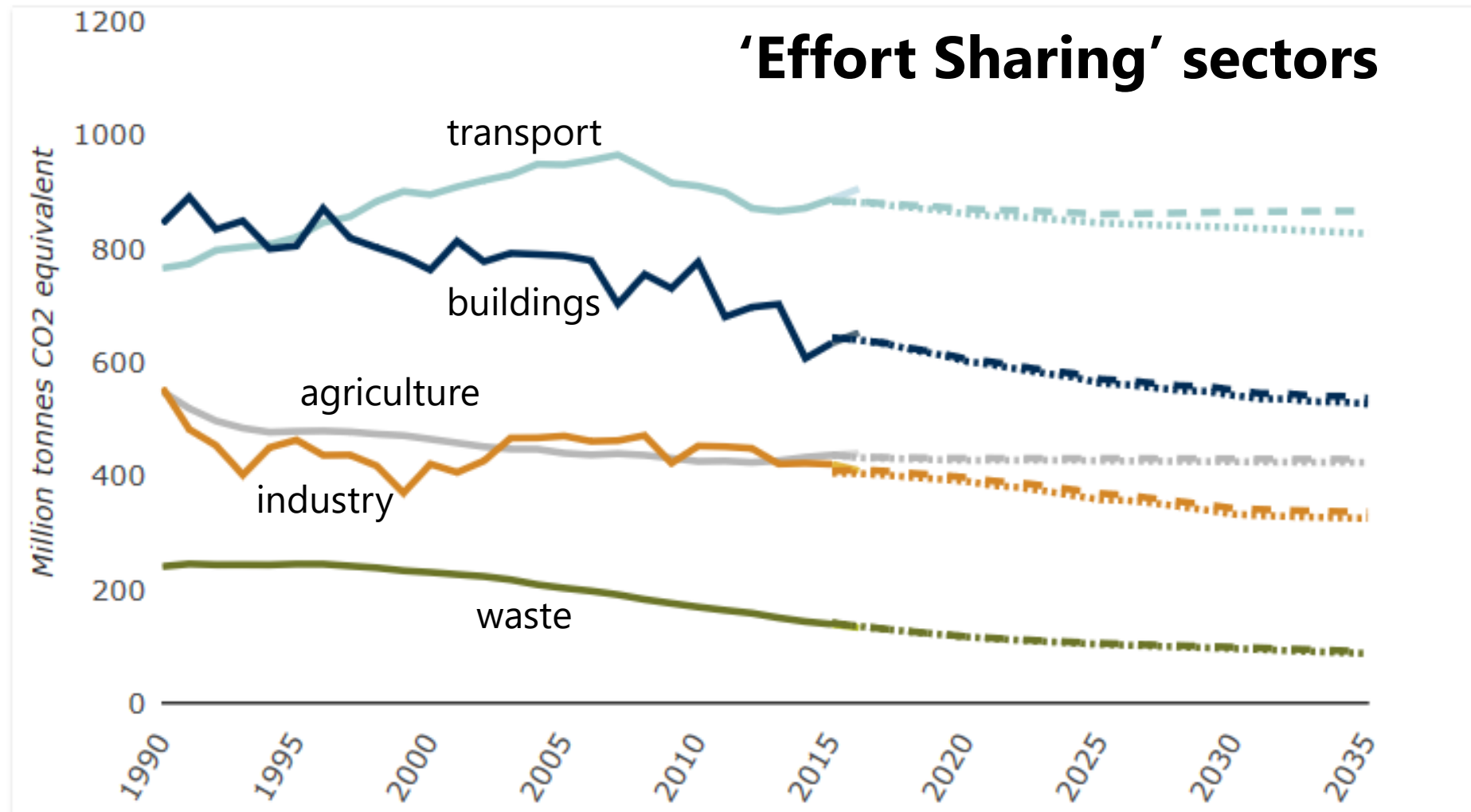
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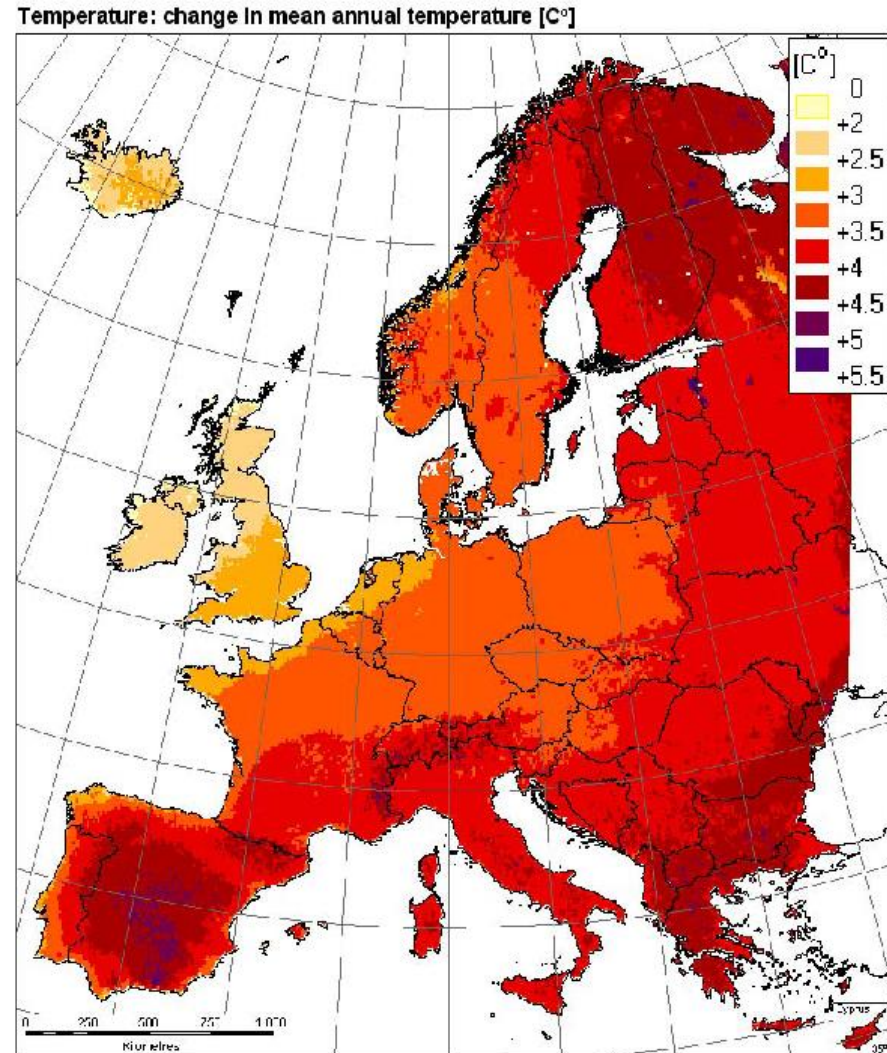
# Industrial emissions decrease (mostly power sector)



# Transport emissions are the most problematic

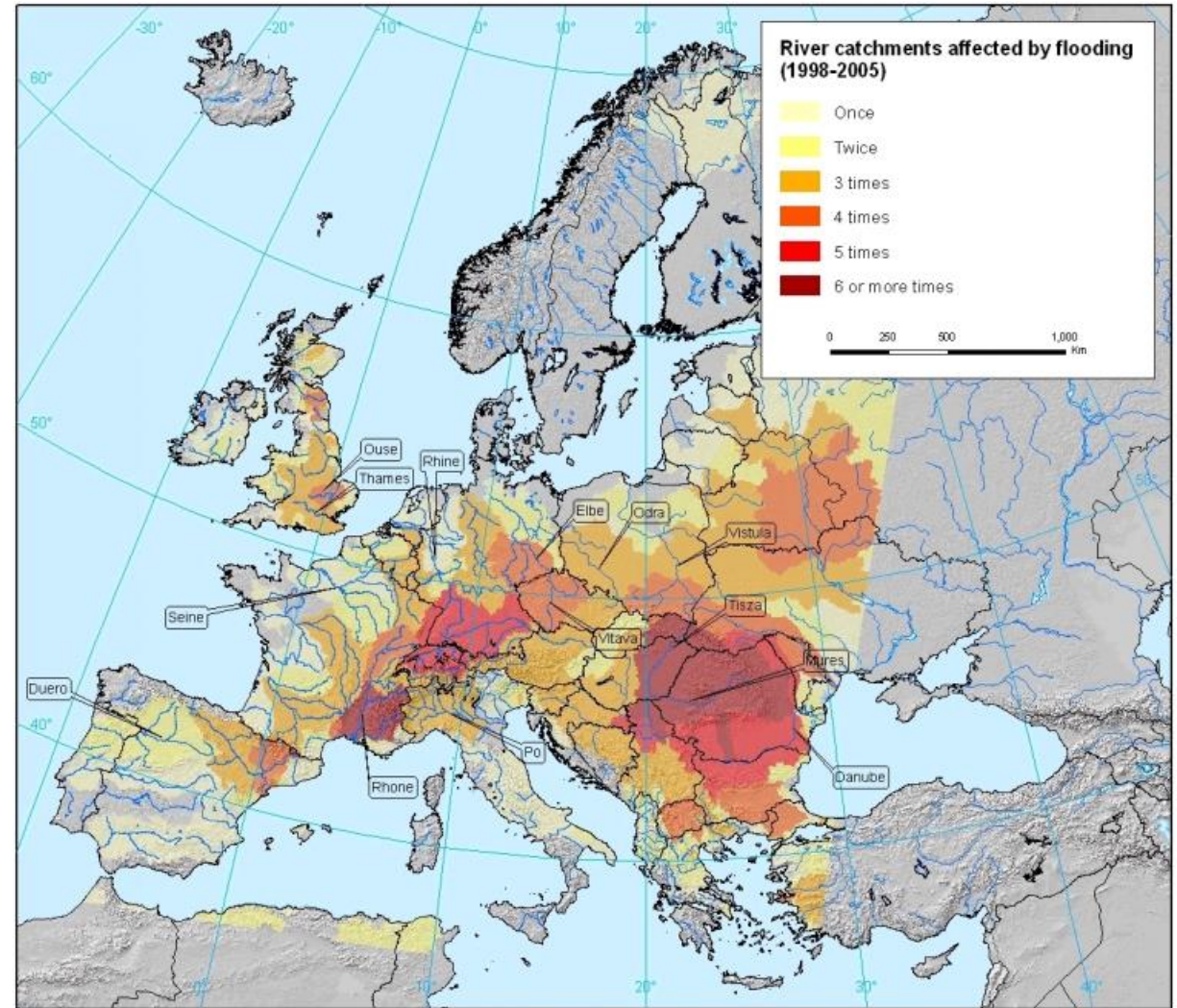


# Climate impacts: projected temperature increases



# Climate impacts: river flooding

- About 100 (river) floods (1998-2005):
  - more than 700 fatalities
  - a million people affected
  - 25 billion EUR in insured economic losses



# Questions 2

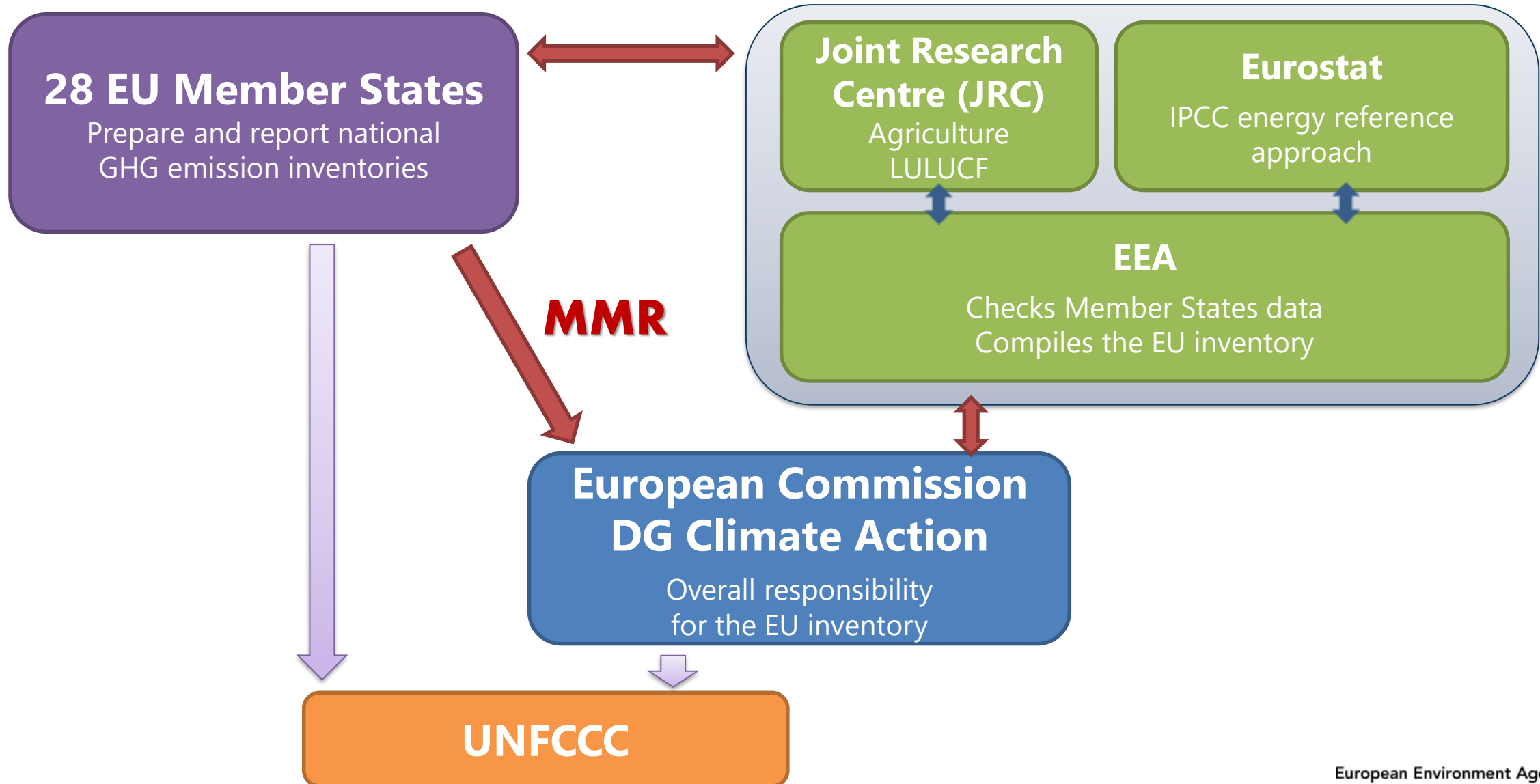
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- Which factors affect emissions and emission trends:
  - Why do emissions differ from one country to another in a given year?
  - Why do emission trends differ from one country to another over time?
- What are the main factors of vulnerability to the impacts of climate change?

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# **3. Tracking national action on climate change mitigation and adaptation**

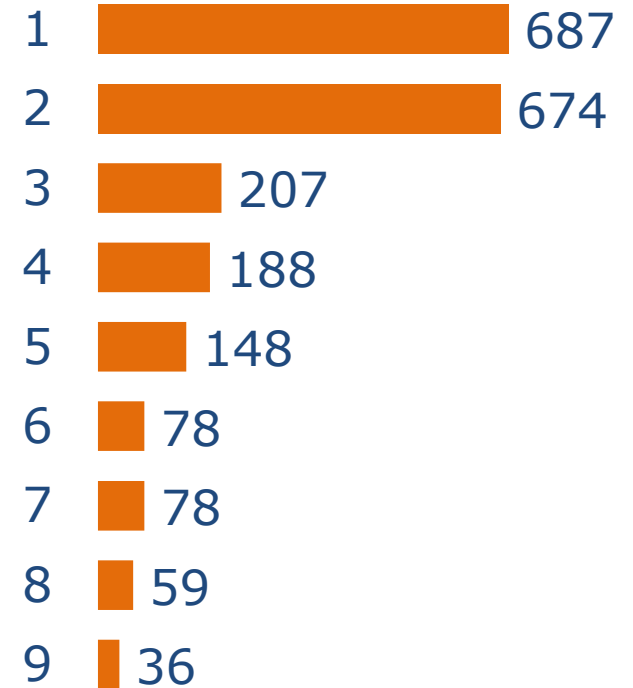
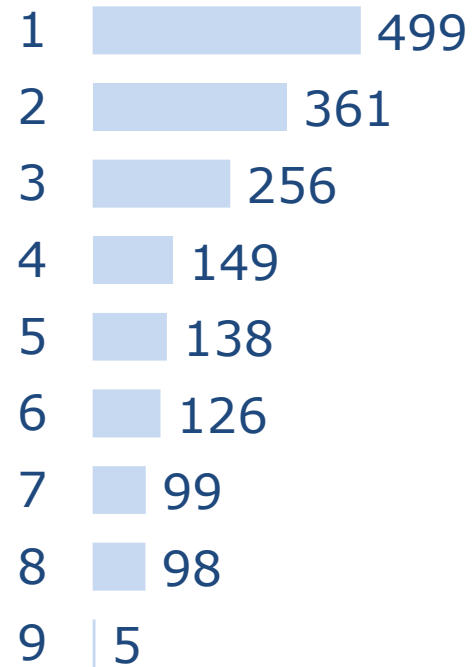
# Monitoring GHG emissions: EU/national systems



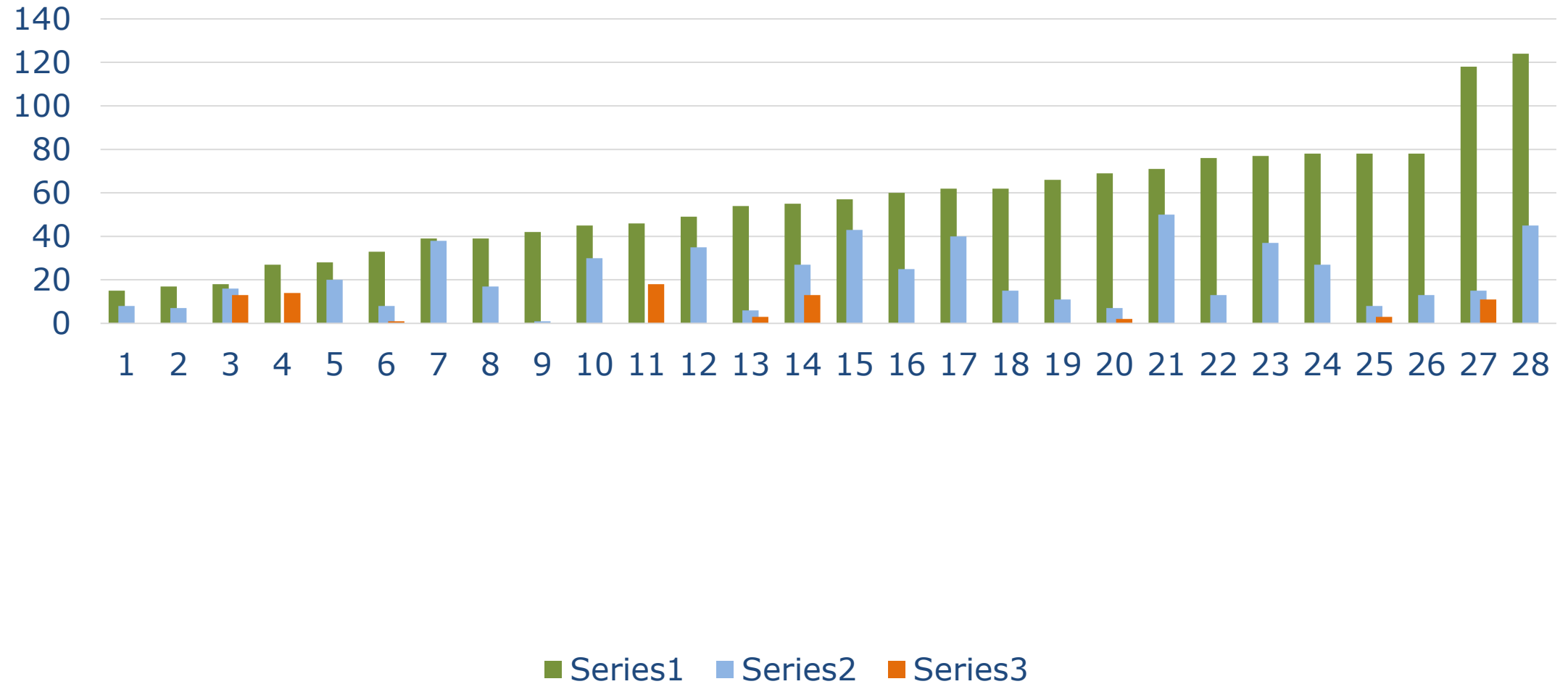
# Several pieces of relevant EU legislation

- Monitoring Mechanism
- EU ETS
- Renewable energy
- Energy Efficiency
- Energy performance of buildings
- CO2 emissions from cars and vans
- Fluorinated gases
- LULUCF
- Eco-design
- Energy Union Governance
- Common Agricultural Policy

# Reported national measures target energy consump.



# Scarce reporting on policy effects, in particular *ex-post*



# Questions 3

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- Do you know where to find information about the relevant climate change policies in your country?
- Are you aware of existing institutional arrangements to ensure the regular production of greenhouse gas inventories?
- What is the practice for evaluating policies in your country?
- Does your country have a long term climate strategy? an adaptation strategy?
- Has your country identified capital needs to finance its climate action plan?

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# **4. Key sources of data and information on climate change**

# Greenhouse gas emissions

<https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>

## EEA greenhouse gas - data viewer

Page — Last modified 20 Aug 2018 — 1 min read

Topics: Climate change mitigation

Data viewer on greenhouse gas emissions and removals, sent by countries to UNFCCC and the EU Greenhouse Gas Monitoring Mechanism (EU Member States).

Predefined views:

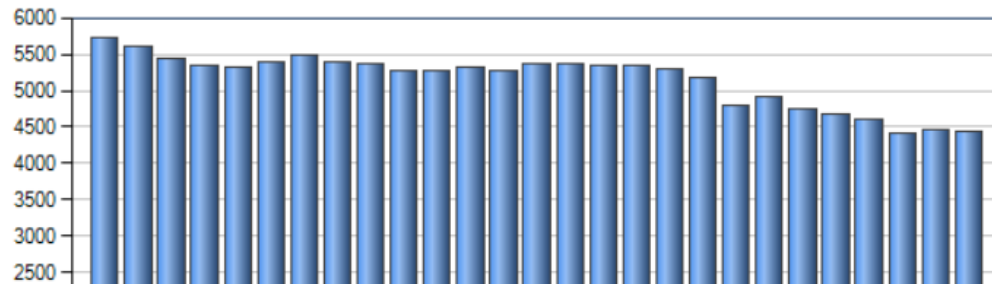
Total GHG emissions in EU28 (Convention), 19

Slicer :

Greenhouse gas : All greenhouse gases - (CO2 equivalent)

Chart

Grid



Series :


Measures

Geographic entity

Emission unit





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  - SHARES (Renewables)
  - Energy flow diagrams
  - Visualisations
  - Publications
- ▲ Methodology
  - Annual
  - Monthly
  - Prices
  - Cooperation

- Energy (t\_nrg)
  - Energy statistics - main indicators (t\_nrg\_indic)
    - ZIP Market share of the largest generator in the electricity market (ten00119)  
    - ZIP Share of renewable energy in gross final energy consumption (t2020\_31)  
  - Energy statistics - quantities (t\_nrg\_quant)
    - ZIP Primary production of energy by resource (ten00076) 
    - ZIP Primary production of renewable energy by type (ten00081) 
    - ZIP Total gross electricity generation (ten00087) 
    - ZIP Electricity consumption by industry, transport activities and households/services (GWH) (ten00094) 
    - ZIP Final energy consumption by product (ten00095) 
    - ZIP Final energy consumption in households by fuel (t2020\_rk210)  
    - ZIP Energy productivity (t2020\_rd310)  
  - Energy statistics - prices (t\_nrg\_price)
  - Sustainable Development indicators Goal 7 - Affordable and clean energy (t\_nrg\_sdg\_07)

# EU policies: European Commission

https://ec.europa.eu/clima/index\_en



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# National policies and measures: EEA, OECD

## EEA database on climate change mitigation policies and measures in Europe

This database contains a number of policies and measures (PaM) implemented, adopted or planned by European countries to reduce greenhouse gas (GHG) emissions. These PaMs have been reported by Member States under the European Union (EU) Monitoring Mechanism Regulation (MMR) in 2017. The search engine gives access to detailed information for each of the PaMs (or groups of PaMs). Member States report main characteristics of the PaMs, such as their description, objective, type, status, sectors affected, related Union Policy, entities responsible for their implementation, implementation period, etc. Where available, Member States also reported quantitative information on the GHG emissions savings achieved by PaMs (or groups of PaMs), both ex post (retrospectively) and ex ante (anticipated savings), as well as the projected and realised costs and benefits of the reported PaMs. Clicking on the 'Name of policy or measure' opens the PaM national report.

To facilitate reporting by Member States, the EEA has developed an online reporting questionnaire available via [ReportNet](#) and 'Guidelines for reporting on policies and measures by Member States under Regulation (EU) No 525/2013 (EU Monitoring Mechanism Regulation)', available at: <http://cdr.eionet.europa.eu/help/mmr>

The reported data are quality checked by the EEA and its European Topic Centre for Air Pollution and Climate Change Mitigation (ETC/ACM).

Search term

Current filters

Reset filters

Sector(s) affected (Match: all) Type of policy instrument (Match: all)

Transport

Economic

Results 1 – 10 of 162

Download TSV | Download CSV

Country	ID of policy or measure	Name of policy or measure	Single policy or measure, or group of measures	Policies or measures included in the group	Type of policy instrument	Status of implementation	Policy impacting EU ETS, ESD or LULUCF emissions	Sector(s) affected	Objective(s)
Austria	6	<a href="#">Increase the share of clean energy sources in road transport</a>	Single	Single PaM	Economic, Regulatory	Implemented	ESD	Transport	Transport: Low carbon fu cars
Austria	7	<a href="#">Increase fuel efficiency in road transport</a>	Single	Single PaM	Economic, Fiscal, Information, Regulatory	Implemented	ESD	Transport	Transport: Improved behaviour, Transport: Eff improvements of vehicle
Austria	8	<a href="#">Modal shift to environmentally friendly transport modes</a>	Single	Single PaM	Economic, Information	Implemented	ESD	Transport	Transport: Modal shift to transport or non-motoriz transport

**Country** <

**Single policy or measure, or group of...** <

**Type of policy instrument** v

Count	Value ↓↑	Match all v
162	Economic	<input checked="" type="checkbox"/>
8	Education	<input type="checkbox"/>
24	Fiscal	<input type="checkbox"/>
29	Information	<input type="checkbox"/>
9	Other	<input type="checkbox"/>
26	Planning	<input type="checkbox"/>
54	Regulatory	<input type="checkbox"/>
5	Research	<input type="checkbox"/>
8	Voluntary	<input type="checkbox"/>

**Status of implementation** <

**Policy impacting EU ETS, ESD or LUL...** <

**Sector(s) affected** v

Count	Value ↓↑	Match all v
1	Agriculture	<input type="checkbox"/>
4	Cross-cutting	<input type="checkbox"/>
19	Energy consumption	<input type="checkbox"/>

# Analysis of progress towards targets

EEA Report | No 17/2017

## Trends and projections in Europe 2017 Tracking progress towards Europe's climate and energy targets

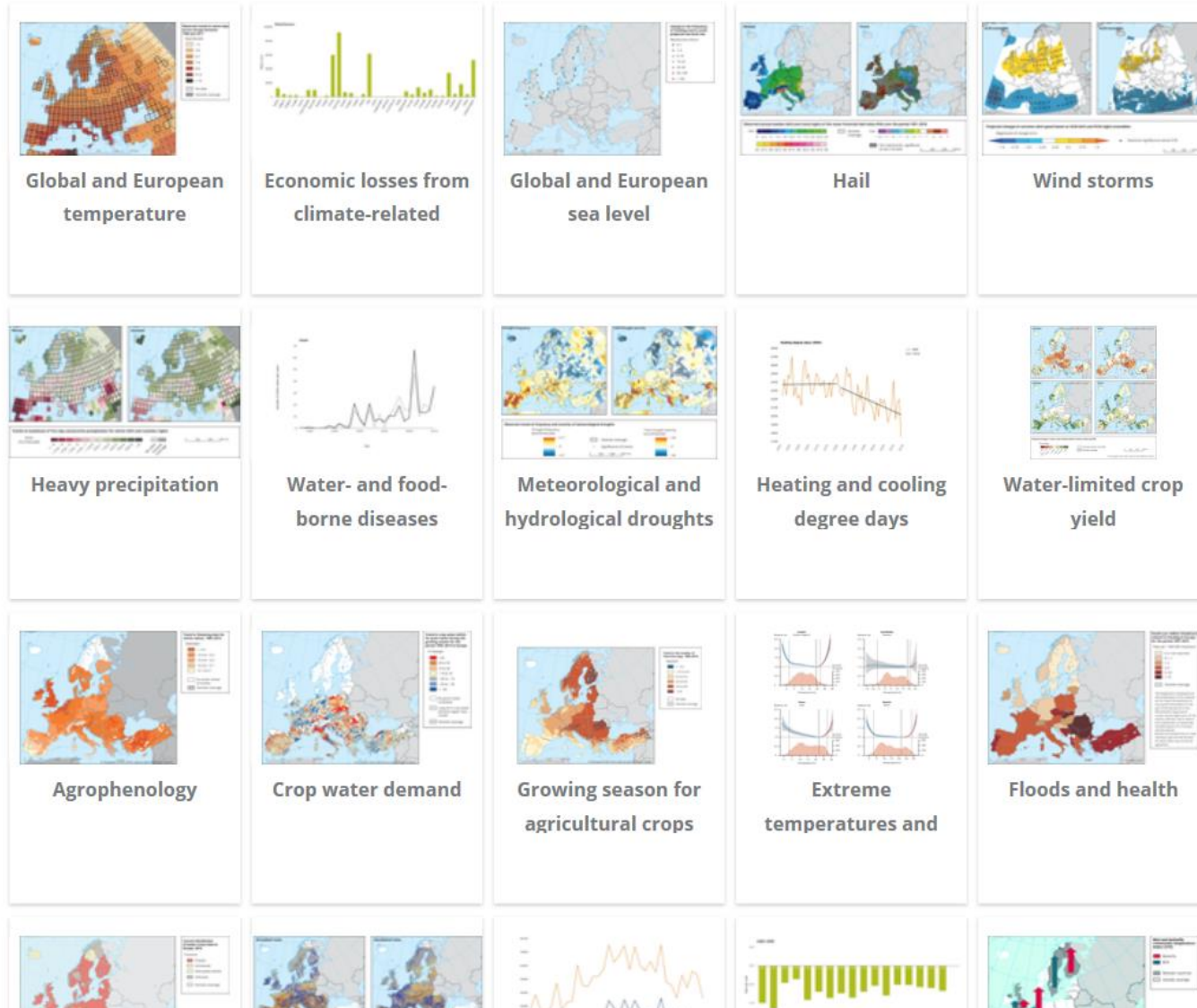
ISSN 1977-8449



# Indicators on climate change adaptation


[1] 2

next 13 items »



# Information on national action on climate adaptation

<https://climate-adapt.eea.europa.eu/>



Climate-ADAPT - Sharing adaptation information across Europe  
**European Climate Adaptation Platform**


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### Navigating on Climate-ADAPT

Sharing adaptation information across Europe - guide to the European Climate Adaptation Platform




### Climate-ADAPT quick guidance

Do you need help to find the information you want on the knowledge platform - Climate-ADAPT? Help is at hand! Use this new guide to learn how. The guide is focused around 6 different user groups and sets out navigation 'tips' that link to areas of the site that are particularly relevant for that user. The user groups covered are

- New users, National or Regional users
- Transnational users
- Resilience for Sectors
- Researchers
- City users

→ A quick guide to find the information you want, for different user groups


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- » 18 Sep 2018, Survey on Climate Services and User Needs launched
- » 13 Sep 2018, ECCA 2019: Call for abstracts
- » 16 Aug 2018, Europe needs coastal adaptation measures to avoid catastrophic flooding by the




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- » 12 Dec 2018, Foresight workshop: facing the future of Europe's climate – EU governance and climate risks at a crossroads




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- » Updated Country page of Bulgaria
- » Urban Adaptation Support Tool

European Environment Agency 

# Auditing national action on climate change

- Is my country delivering on its climate commitments?
  - Monitoring of national greenhouse gas emissions
  - Tracking progress towards EU and int'l climate commitments
  - The right policy mix
  - Tracking the implementation of its policies
  - Monitoring policy effects (policy evaluation in the policy cycle)
  - Climate strategy coherent with other policy areas (energy, agriculture, transport)