

# GLOBAL WARMING

Ilona Jančářová  
2019

---

---

---

---

---

---

---

---

## GREENHOUSE EFFECT



---

---

---

---

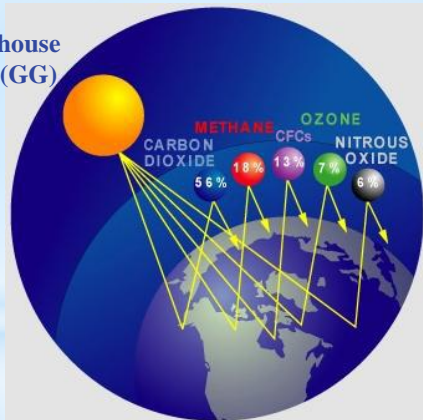
---

---

---

---

### Greenhouse Gases (GG)



---

---

---

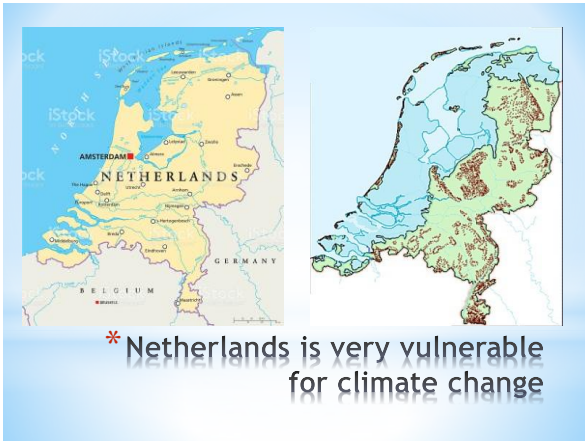
---

---

---

---

---




---

---

---

---

---

---

---

---

### INTERNATIONAL BACKGROUND

- **CONVENTION ON CLIMATE CHANGE**  
(Rio de Janeiro 1992)
- **Kyoto Protocol 1997** - 5% reductions (2005 - 2012)

↓

- European - wide GG emission reduction target: 8% during the period 2008 - 2012 comparing to 1990 levels
- (burden sharing for EU MS) →

---

---

---

---

---

---

---

---

### INTERNATIONAL BACKGROUND

**Doha Amendment 2012**

- new obligations for MS in Annex I for the 2nd period (2013-2020)
  - 18% reductions
- revision of the list of GG

**COP 21- Paris 2015**

- new global **Climate Change Convention**
- new obligations for the period 2020 ....
- voluntary national reductions – EU 40% → 2030

---

---

---

---

---

---

---

---

## Implementing the Kyoto Protocol in the EU

GG reduction target:

- Emission trading (ET)
- Joint implementation of obligation to reduce GG emissions (JI)
- Clean Development Mechanisms (CDM)

---

---

---

---

---

---


---

---

## EU LEGISLATION ON CLIMATE CHANGE

1. Legislation on emission reductions
2. Legislation on energy efficiency
3. Legislation on renewable sources of energy

  
Energy and climate package:

- 20% GG abatement target
  - 20% renewable energy target
  - 20% energy efficiency target
-  by 2020

---

---

---

---

---

---

---

---

## 20% GG emission reductions target

The Climate and Energy package sets for the Union a 20 % GHG emission reduction target by 2020 compared to 1990. This effort has been divided between the sectors covered by:

- a) Emission Trading System ('ETS')
  - b) non-ETS sectors under the Effort Sharing Decision (ESD 2006/944).
- ETS provides an EU-wide cap
  - ESD sets annual emission allocations in the non-ETS sector for each Member State.

---

---

---

---

---

---

---

---

## The emissions trading system (EU ETS) (2013-2020)

- „Cap and Trade“ principle → a cap is set on the total amount of certain GG that can be emitted by installations covered by the EU ETS system: CO<sub>2</sub>, N<sub>2</sub>O, PFCs
- A single, EU-wide cap on emissions (absolute quantity of GG which may be emitted in the EU) applies in place of the previous system of national caps
  - The cap is reduced over time, total emissions will fall
  - In 2020, emissions from sectors covered by the system will be 21% lower than in 2005.
  - In 2030, under the Paris commitment, they would be at least 40% lower.

---

---

---

---

---

---

---

---

## EU ETS (2013-2020)

- **Emission allowance** = the right to emit one tonne of carbon dioxide (CO<sub>2</sub>) or the equivalent amount of two more powerful greenhouse gases, nitrous oxide (N<sub>2</sub>O) and perfluorocarbons (PFCs)
- **Emission allowances** - free allocation  
- auctioning
- Companies can trade these allowances with one another as they need.

---

---

---

---

---

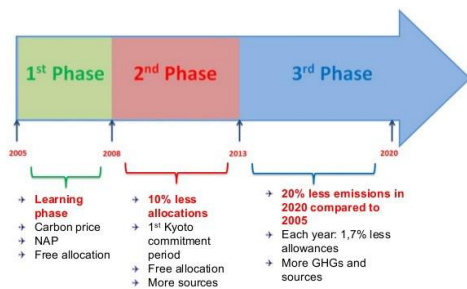
---

---

---

EU-ETS time line

Cranfield UNIVERSITY



18

<http://www.cranfield.ac.uk>

---

---

---

---

---

---

---

---

# NON EU ETS sectors

## Effort Sharing Decision

- for most sectors not included in the EU ETS, such as transport, buildings, agriculture and waste.
- establishes binding annual greenhouse gas emission targets for Member States for the period 2013–2020
- reduction by non-ETS sectors of -10% compared to 2005 that is then shared out between EU Member States

---

---

---

---

---

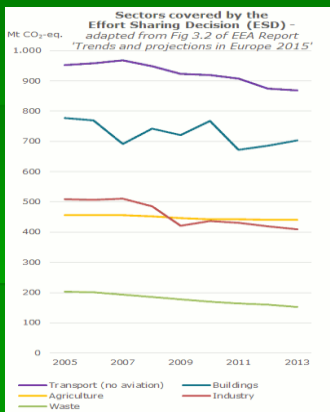
---

---

---

---

---




---

---

---

---

---

---

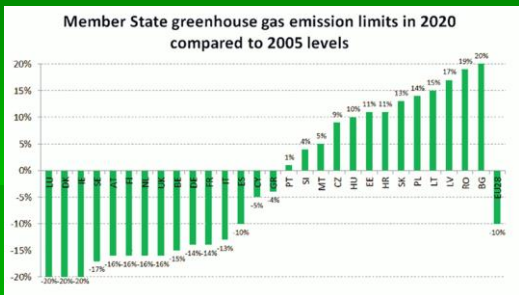
---

---

---

---

## NON EU ETS NATIONAL AND EU WIDE EMISSION TARGETS by 2020




---

---

---

---

---

---

---

---

---

---

## 2020 target ....

The EU is on track to meet the 20% target for 2020:

- EU emissions were reduced by 23% between 1990 and 2016, while the economy grew by 53% over the same period.
- EU emissions decreased by 0.7% in 2016, while GDP grew by 1.9%.

([https://ec.europa.eu/clima/policies/ets\\_en](https://ec.europa.eu/clima/policies/ets_en))

---

---

---

---

---

---

---

---

## Key EU targets for 2030

A policy framework for climate and energy in the period from 2020 to 2030:

- At least 40% cut in greenhouse gas emissions compared with 1990
- At least 32% of total energy consumption from renewable energy
- At least 32.5% increase in energy efficiency

[https://ec.europa.eu/clima/citizens/eu\\_en](https://ec.europa.eu/clima/citizens/eu_en)

---

---

---

---

---

---

---

---

## Long-term goal

[https://ec.europa.eu/clima/citizens/eu\\_en](https://ec.europa.eu/clima/citizens/eu_en)

- By 2050, the EU aims to cut its emissions substantially – by 80-95% compared to 1990 levels as part of the efforts required by developed countries as a group.
- Turning Europe into a highly energy efficient and low-carbon economy will also boost the economy, create jobs and strengthen Europe's competitiveness.

---

---

---

---

---

---

---

---

## The EU ETS legislation

- Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community as amended
- Commission Regulation (EU) No 1031/2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC
- other implementing legislation

---

---

---

---


---

---

---

---

## Energy and climate package - renewables

- 20% renewable energy target to be attained in 2020
  - Directive 2009/28/EC on the promotion of the use of energy from renewable sources
- 
- target to be reached by 2020 for the EU is a share of 20% energy from renewable sources in gross final consumption of energy.
  - each MS has its own 2020 binding target
- Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources (target 32% of energy from RS)
  - Date of transposition: 30/06/2021

---

---

---

---

---


---

---

---

## Energy and climate package - energy efficiency

Directive 2012/27/EU on energy efficiency as amended

- 
- To enhance cost-effective improvements in energy efficiency. (32% target by 2030)
  - Applies to companies involved in the distribution and sale of energy and final consumers of energy. It does not apply to companies subject to the EU ETS (ET Directive)

---

---

---

---

---

---

---

---

## Energy and climate package - energy efficiency

Directive 2010/31/EU on the energy performance of buildings → 2018/44



- Calculation of energy efficiency
- Minimum energy efficiency requirements
- Energy performance certificate

---

---

---

---

---

---

---

---

## Energy and climate package - carbon storage

- Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide



- 3 phases – capture, transportation, permanent storage

---

---

---

---

---

---

---

---

## Literature:

Jančářová, Ilona: Legal Aspects of Global Warming. **Amsterdam Law Forum**, Amsterdam : Vrije Universiteit Amsterdam Library, 2/2010, 2, od s. 51-60, 10 s. ISSN 1876-8156. 2010. [URL](#)  
VOMÁČKA, Vojtěch a Ilona JANČÁŘOVÁ. Transboundary Impact Assessment from the Central European Perspective. *Czech Yearbook of International Law*, Huntington USA: Juris Publishing, Inc., 2012, roč. 3, č. 2012, s. 19-37. ISSN 2157-2976.

[https://ec.europa.eu/clima/citizens/eu\\_en](https://ec.europa.eu/clima/citizens/eu_en)  
[https://ec.europa.eu/clima/policies/ets\\_en](https://ec.europa.eu/clima/policies/ets_en)



---

---

---

---

---

---

---

---