



Het Europese Klimaat en Energiebeleid voor 2030

Hoe de EU het Akkoord van Parijs implementeert

Flux50 seminarie
19 December 2018

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EUI Firenze/KU Leuven/Europese Commissie

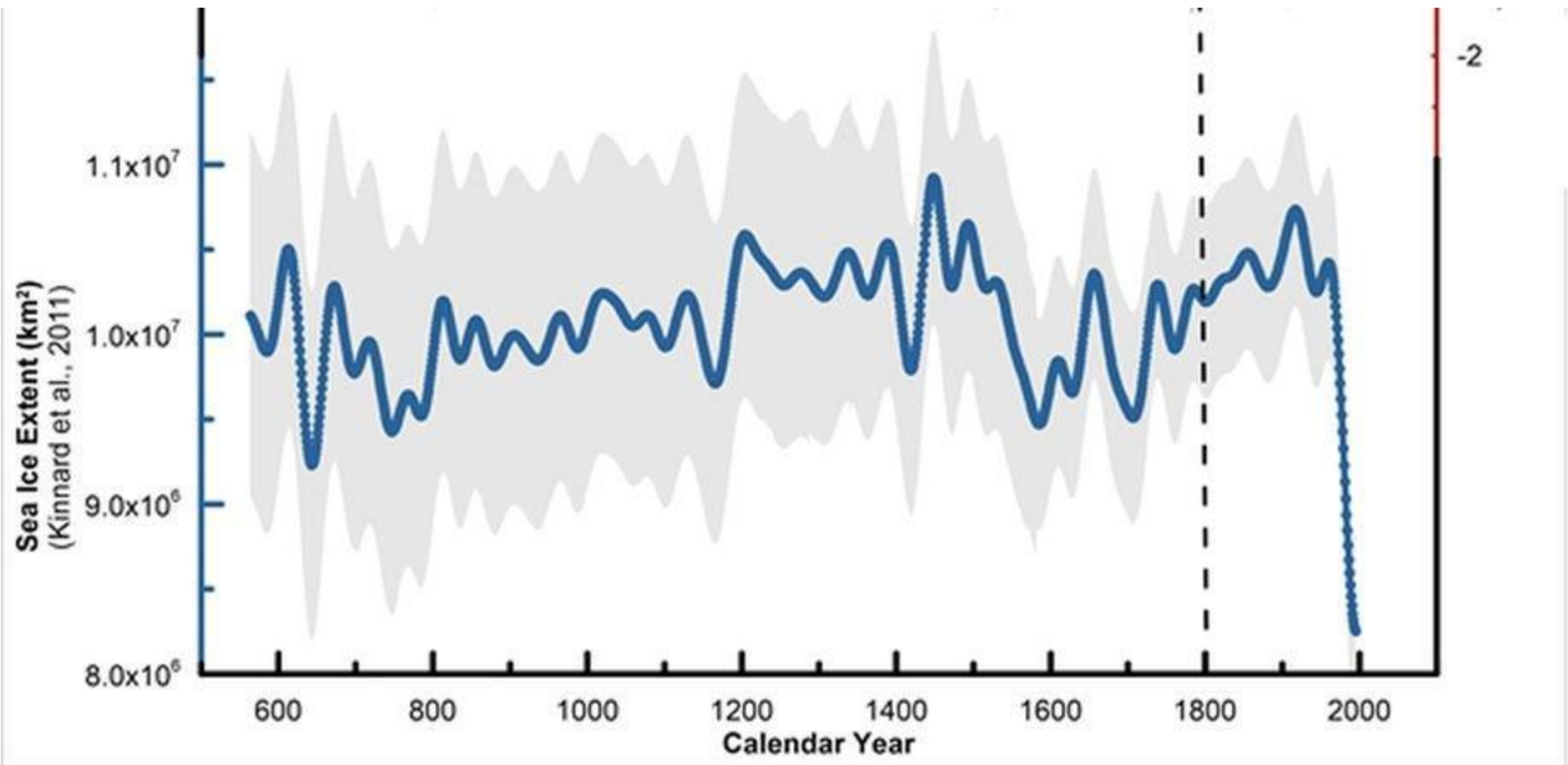


IPCC – De wetenschappelijke consensus

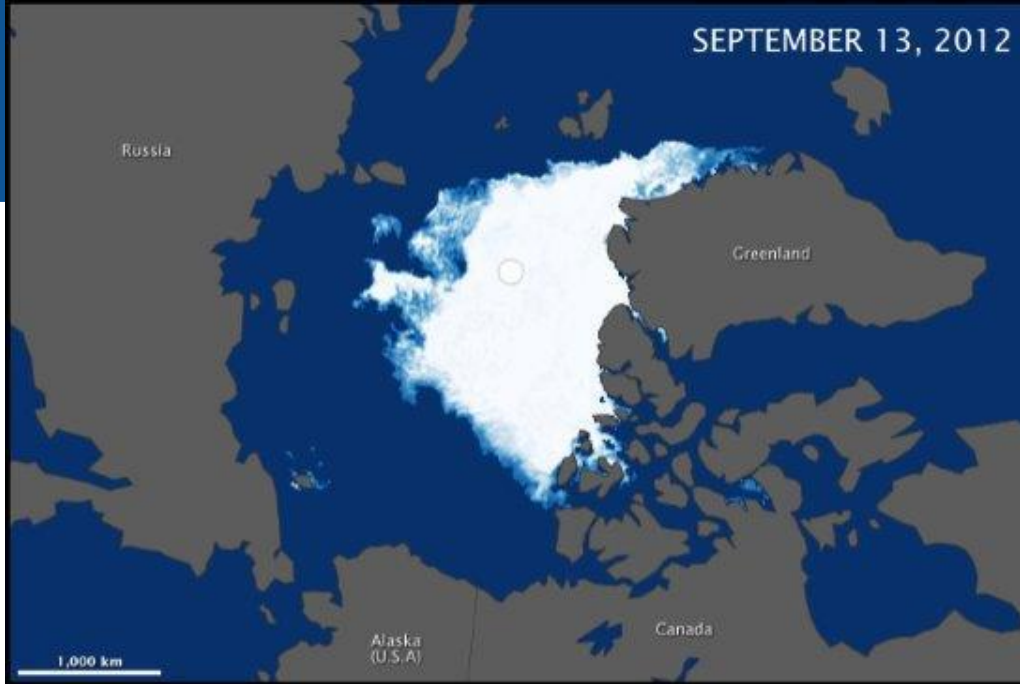
(5th Assessment 2013, 1.5°C Report 2018)

- **Warming of the climate systems is unequivocal and observed changes are unprecedented on scales of decades to millennia.**
- **Human influence on the climate system is clear.**
- **Continued emissions of greenhouse gases will cause further warming and changes to the atmosphere, land and oceans in all regions of the globe.**
- **Limit climate change to 2°C compared to pre-industrial level**

Sea Ice Extent - Arctic



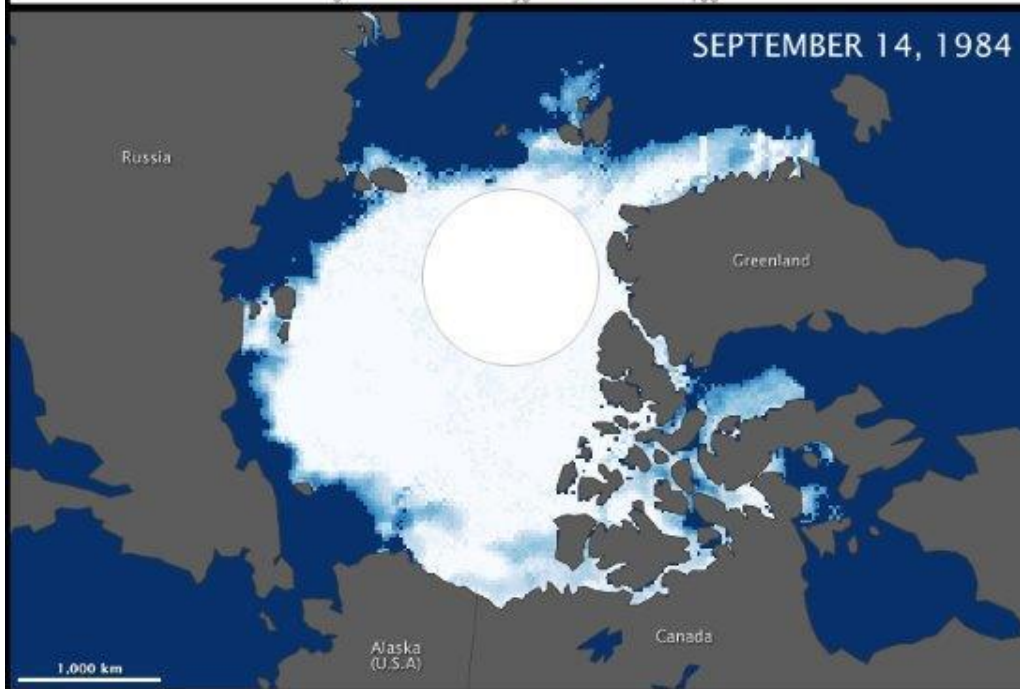
SEPTEMBER 13, 2012



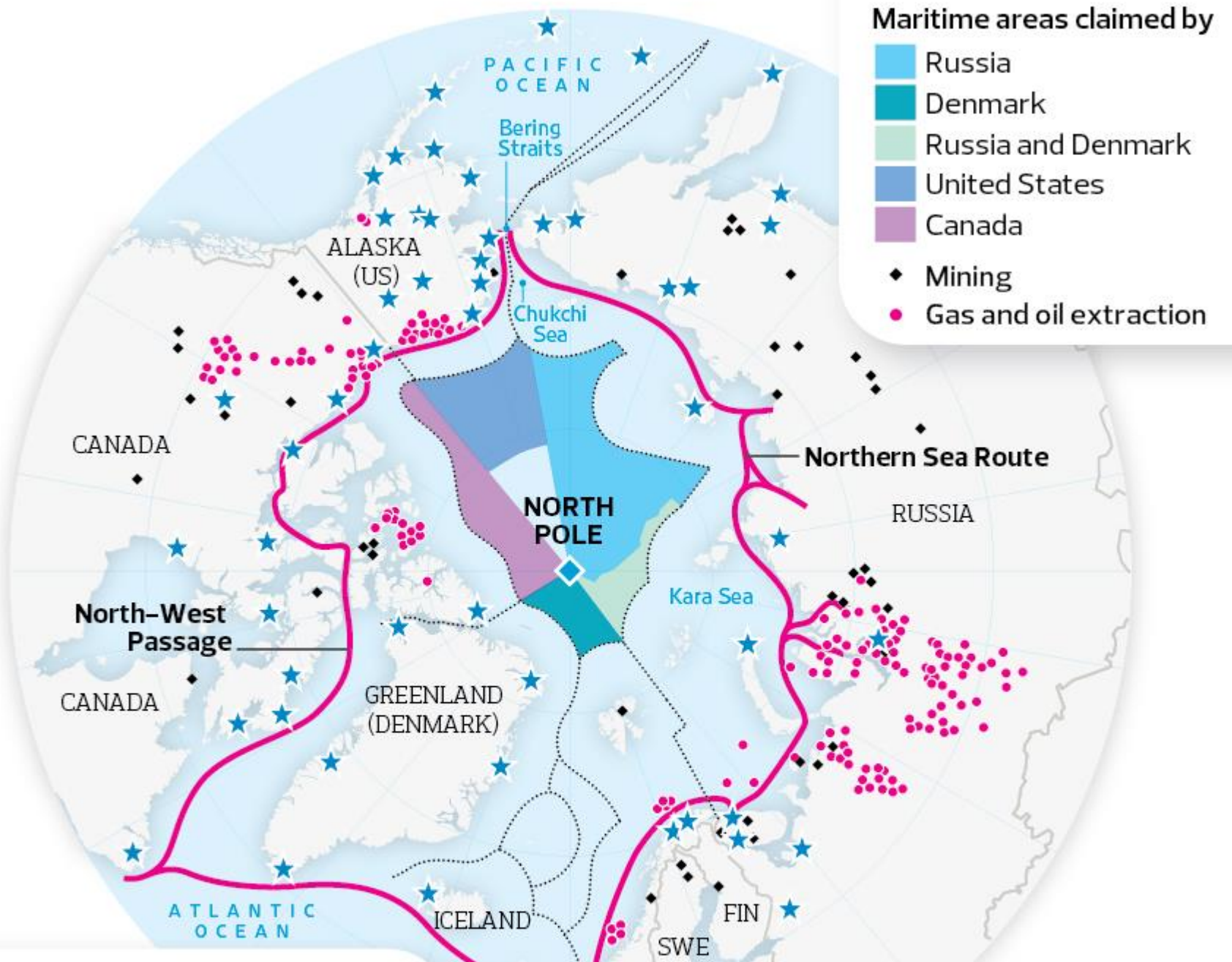
Sea Ice Concentration (percent)

0 50 100

SEPTEMBER 14, 1984



OPENING UP THE FAR NORTH



Global governance

- **1992 – Rio 'World Summit'**

UNFCCC – UN Framework Convention on Climate Change

- **1997 – Kyoto Protocol**

12% of global emissions

Divide developed / developing countries

- **2015 – Paris Agreement**

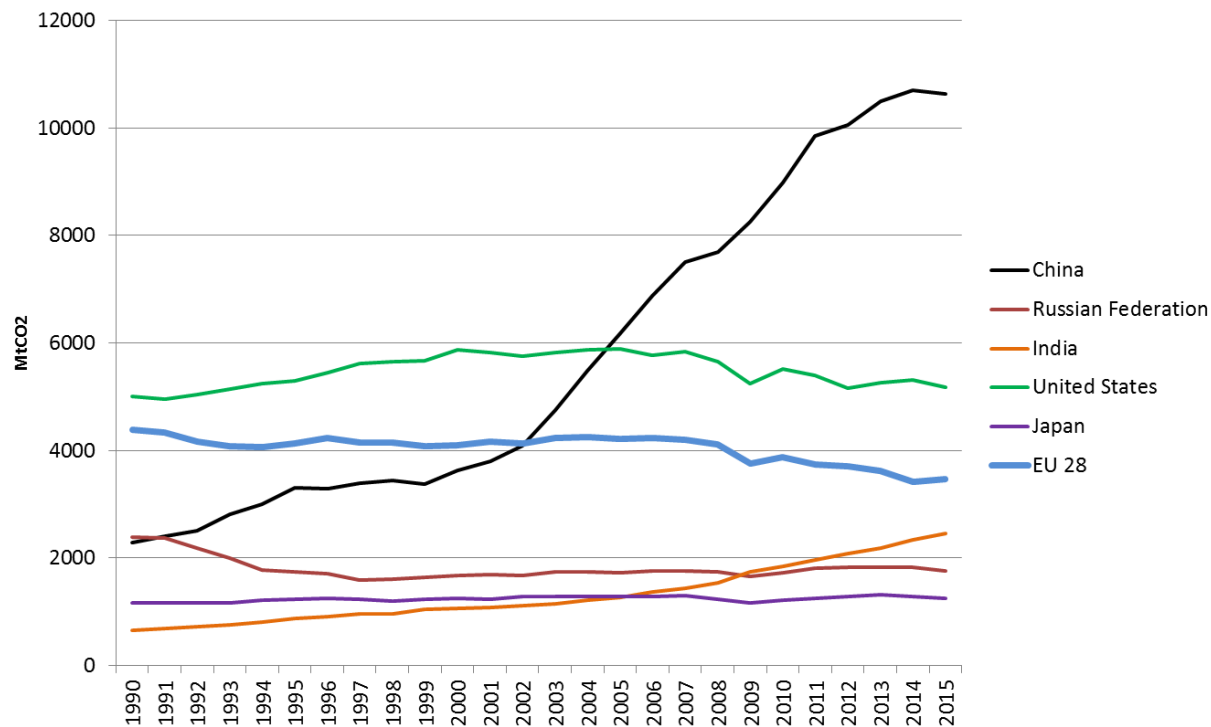
98% of global emissions (+/- 80% without US as of 2020?)

Goal: max 2° global warming

Recognition that the world has changed

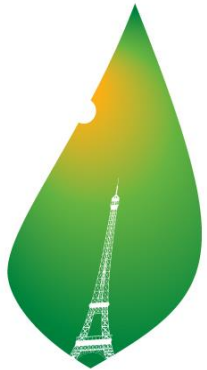
Between 'top down' and 'bottom up' ?

Emissions of major economies, 1990-2015



(Source: historical emissions data: inventories data to the UNFCCC (http://unfccc.int/national_reports/))

The Paris Agreement



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

- **Long-term target based on IPCC:**
 - "well below 2C"
- **Universal participation:**
 - Developed and developing countries
- **Transparency and accountability**
 - Robust common rules
- **5 yearly reviews**
- **International support** for low carbon, climate resilient sustainable development



COP 24 Katowice

- **Rulebook adopted**

major delivery on transparency, without bifurcation
environmental integrity, eg forestry credits

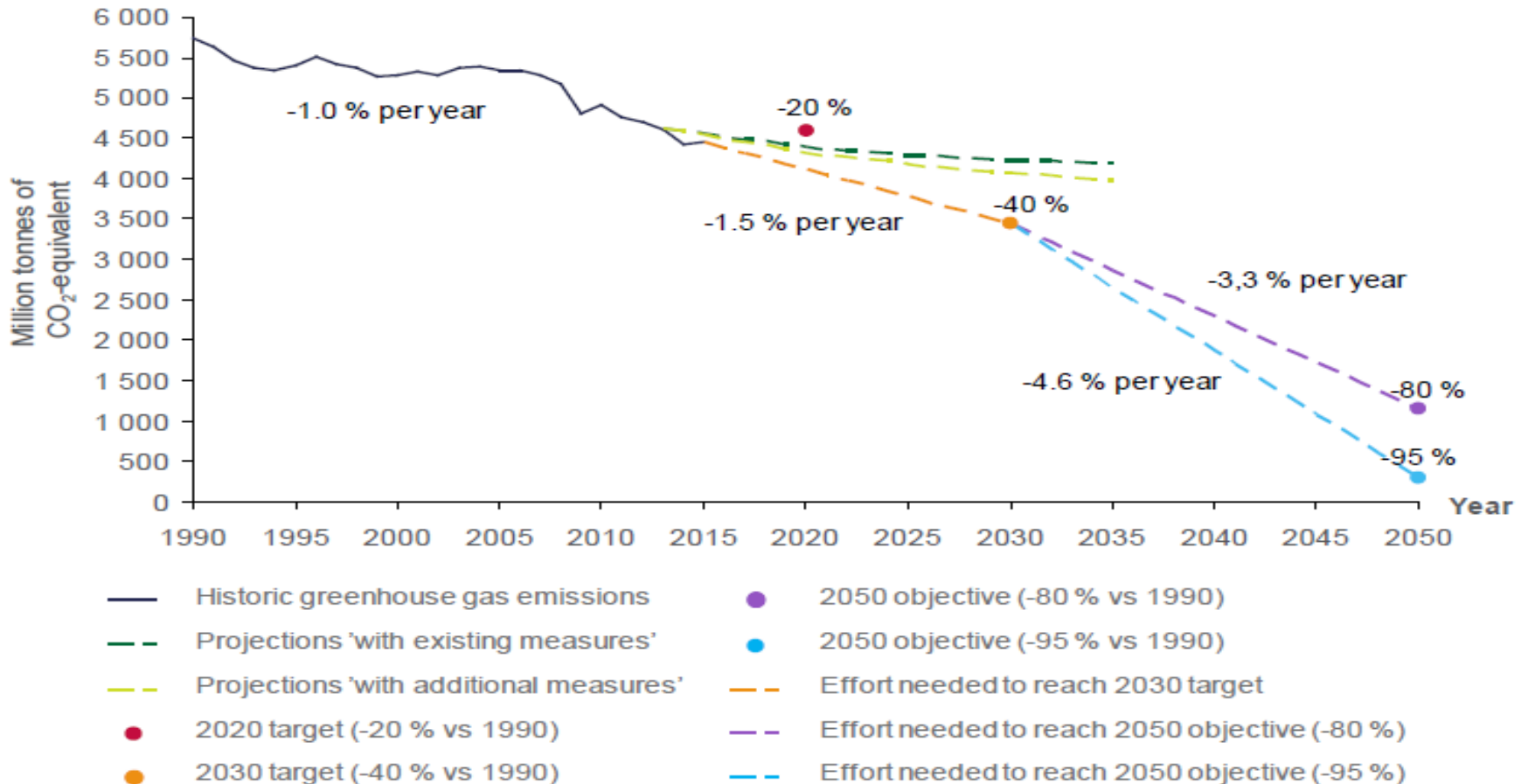
- **Multilateralism still works**

despite Trump and others
consensus among 190+ Parties!

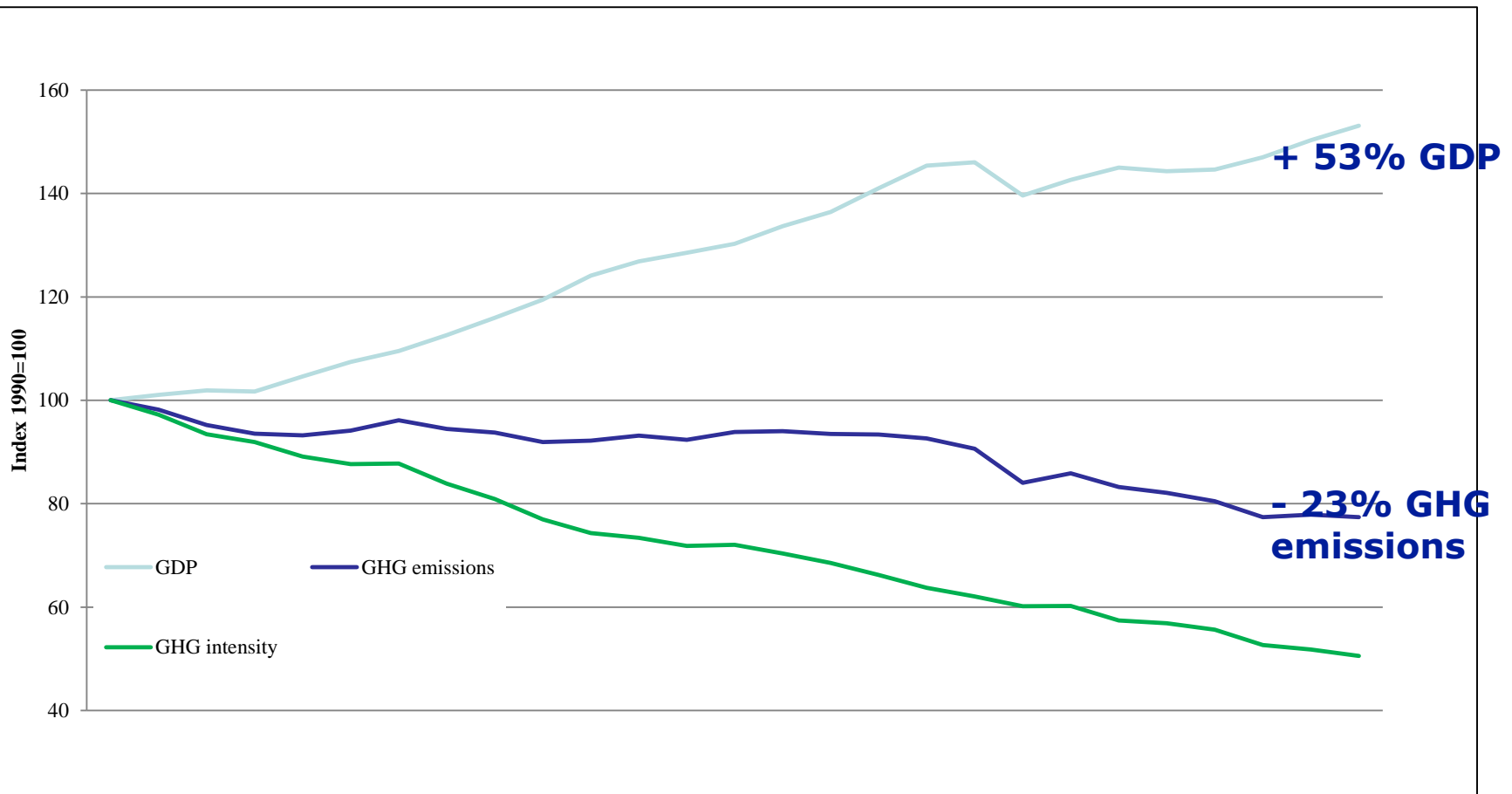
- **Confirmation of Paris Goals**

new goals not on the agenda, start of a process

2005-2030: het ombuigen van de trend in de uitstoot van broeikas gassen in de EU



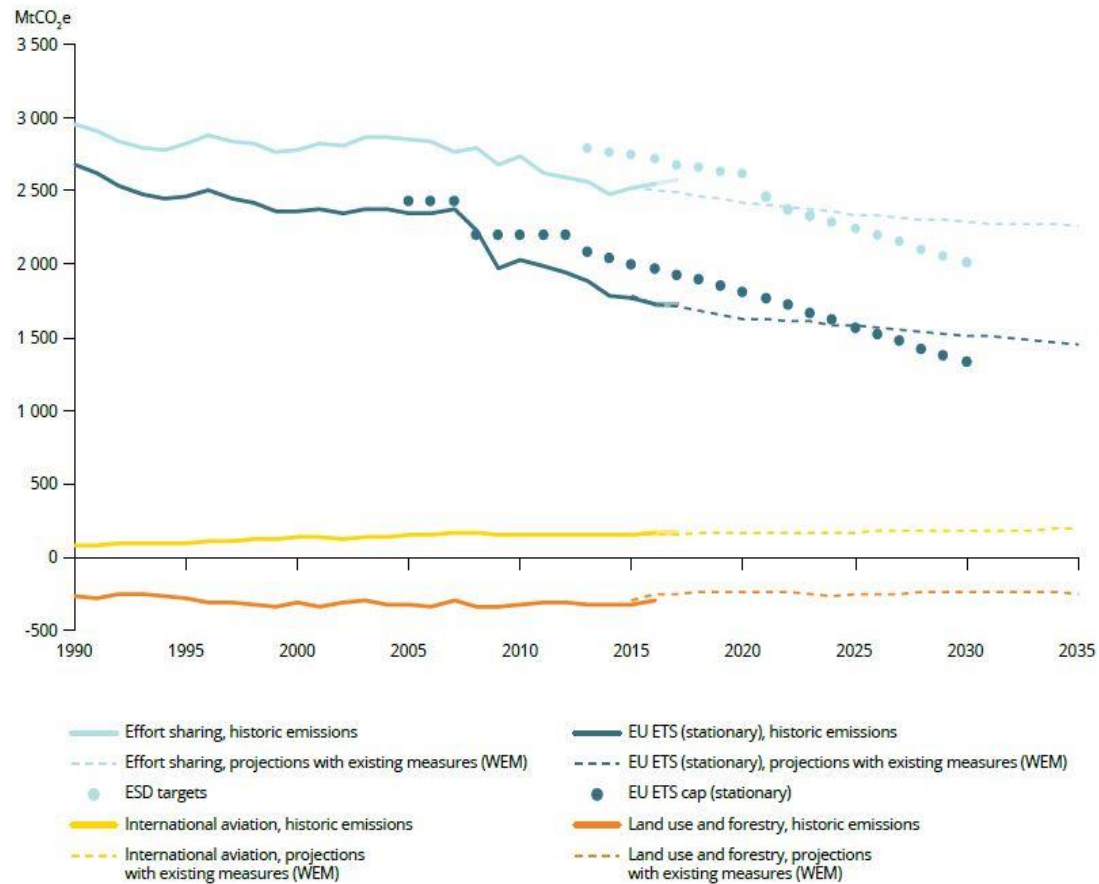
EU: ontkoppelen van groei en uitstoot (1990-2016)



Source: European Commission based on data compiled by EEA



Figure 2.2 Effort Sharing, ETS, LULUCF and aviation emission trends and projections, 1990-2035



Notes: Net removals from LULUCF correspond to reported values to the UNFCCC, which differ from values relevant to Kyoto Protocol and LULUCF Regulation commitments. The aggregated Effort Sharing targets for the period 2021-2030 are based on adopted legislation and absolute values are estimated based on latest available data.

The WEM scenario reflects existing policies and measures.

Sources: EC, 2015a; EEA, 2018b, 2018c, 2018i, 2018a, 2018f; EU, 2017a, 2013a, 2009d.

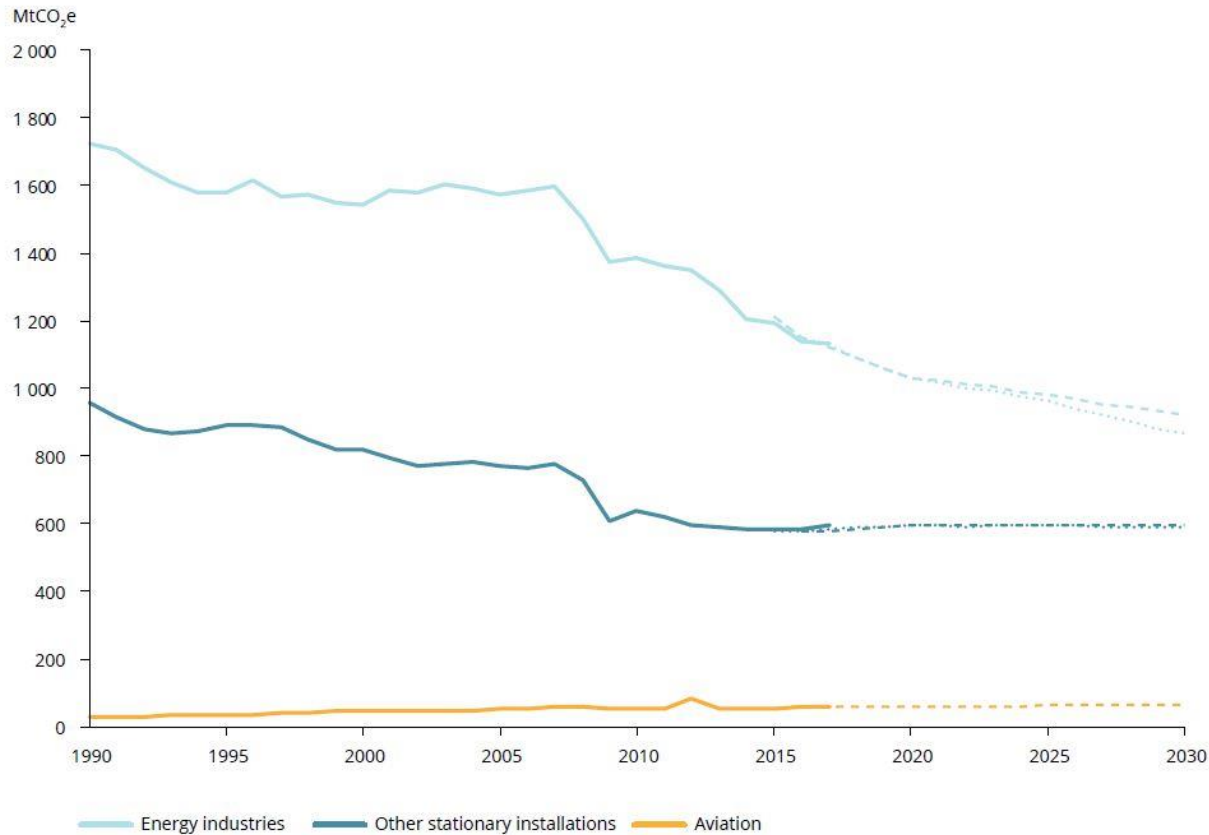
De EU zet een prijs op CO₂ (ETS)



Source: ICE



Figure 2.3 Greenhouse gas emission trends and projections under the scope of the EU ETS, 1990-2030

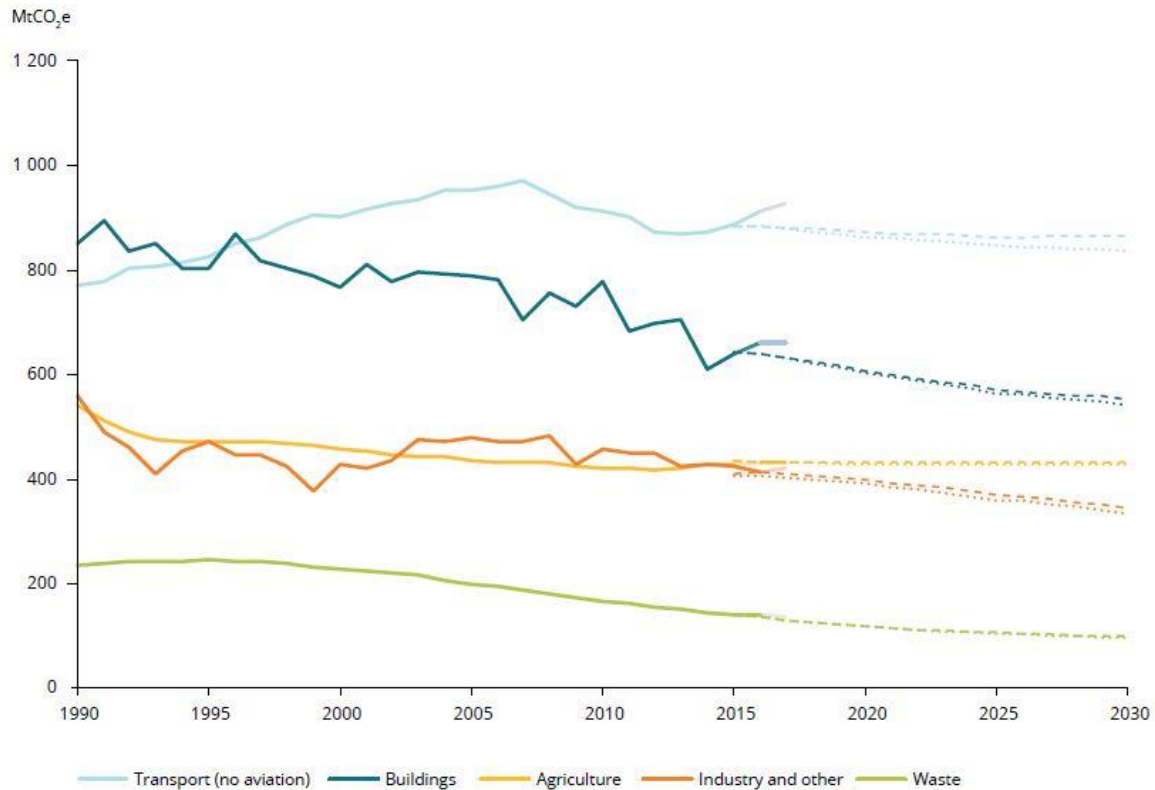


Notes: Solid lines represent historical GHG emissions (available for the period 1990-2017). Dashed lines represent projections for the scenario with existing measures (WEM). Dotted lines represent projections for the scenario with additional measures (WAM). The EU ETS GHG emissions presented were estimated based on the attribution of GHG emissions, reported by source categories in national GHG inventories and national projections, to EU ETS sectors and/or Effort Sharing sectors.

Sources: EEA, 2018a, 2018f, 2018b, 2018c.



Figure 2.4 Greenhouse gas emission trends and projections under the scope of the ESD, 1990-2030

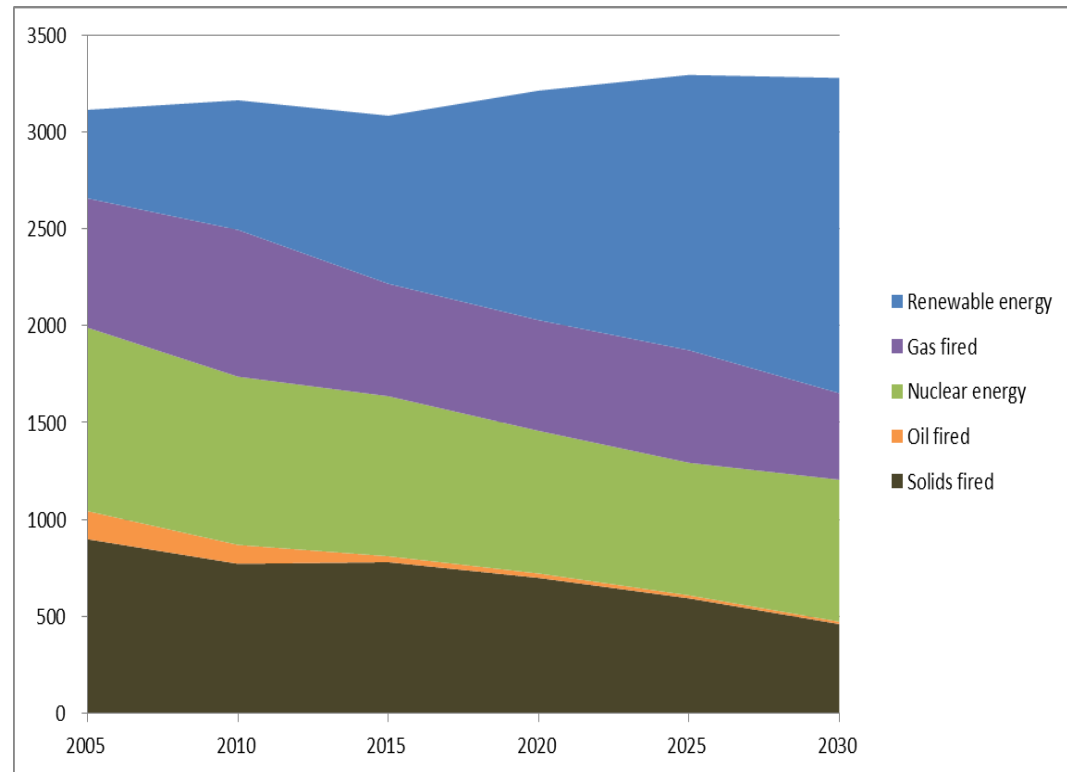


Notes: Solid lines represent historical GHG emissions (available for the period 1990-2016). Dashed lines represent projections for the scenario with existing measures (WEM). Dotted lines represent projections for the scenario with additional measures (WAM). The Effort Sharing sector emissions presented are estimated based on the attribution of GHG emissions, reported by source categories in national GHG inventories and national projections, to EU ETS sectors and/or Effort Sharing sectors. The sector here summarised as 'industry and other' aggregates emissions of energy supply, manufacturing, industrial processes and product use (GHG inventory source categories 1.A.1, 1.A.2, 1.B, 1.C and 2), which are not covered under the EU ETS.

Sources: EEA, 2018a, 2018f, 2018i, 2018c, 2018b, based on Member States' submissions.

De Europese electriciteits mix verandert grondig

- Significant development of renewable energy (mostly solar and wind), reaching up to 50% share
- Decline of electricity generation from solid fuels
- Gas-fired generation decreases until 2020, but increases thereafter



EU power generation (net) by fuel (Twh)

Source: PRIMES modelling, NTUA, E3M-Lab



Lessen van de EU als beleids lab voor de wereld

- **1. Alle neuzen in dezelfde richting**
 - Wereldwijd: Parijs Akkoord
 - Cruciale rol van Europese Raad (EU Staats en Regeringsleiders)
- **2. Geleidelijke invoering**
 - Starten, bijsturen, en aanscherpen, maar vooral aanhouden
- **3. Iedereen betrekken in het beleid**
 - Ook de energie-intensieve bedrijven, zoals staal, non-ferro, cement en chemie
 - Ook de steenkool rijke gebieden, zoals Polen
- **4. Een prijs op CO2 stuurt efficiëntie aan**
 - Lage kosten opties eerst
- **5. Innovatie is centraal voor de lange termijn**
 - Hernieuwbare energie/energie efficiëntie
 - Waterstof, CCS, biochemie, ...