



Climate policy and energy systems

Pavel Zámyslický

Department of Energy and Climate Protection

pavel.zamyslicky@mzp.cz

Ministry of the Environment
of the Czech Republic

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Vrsovicka 65, 100 10 Prague 10
Czech Republic

www.mzp.cz



The International level



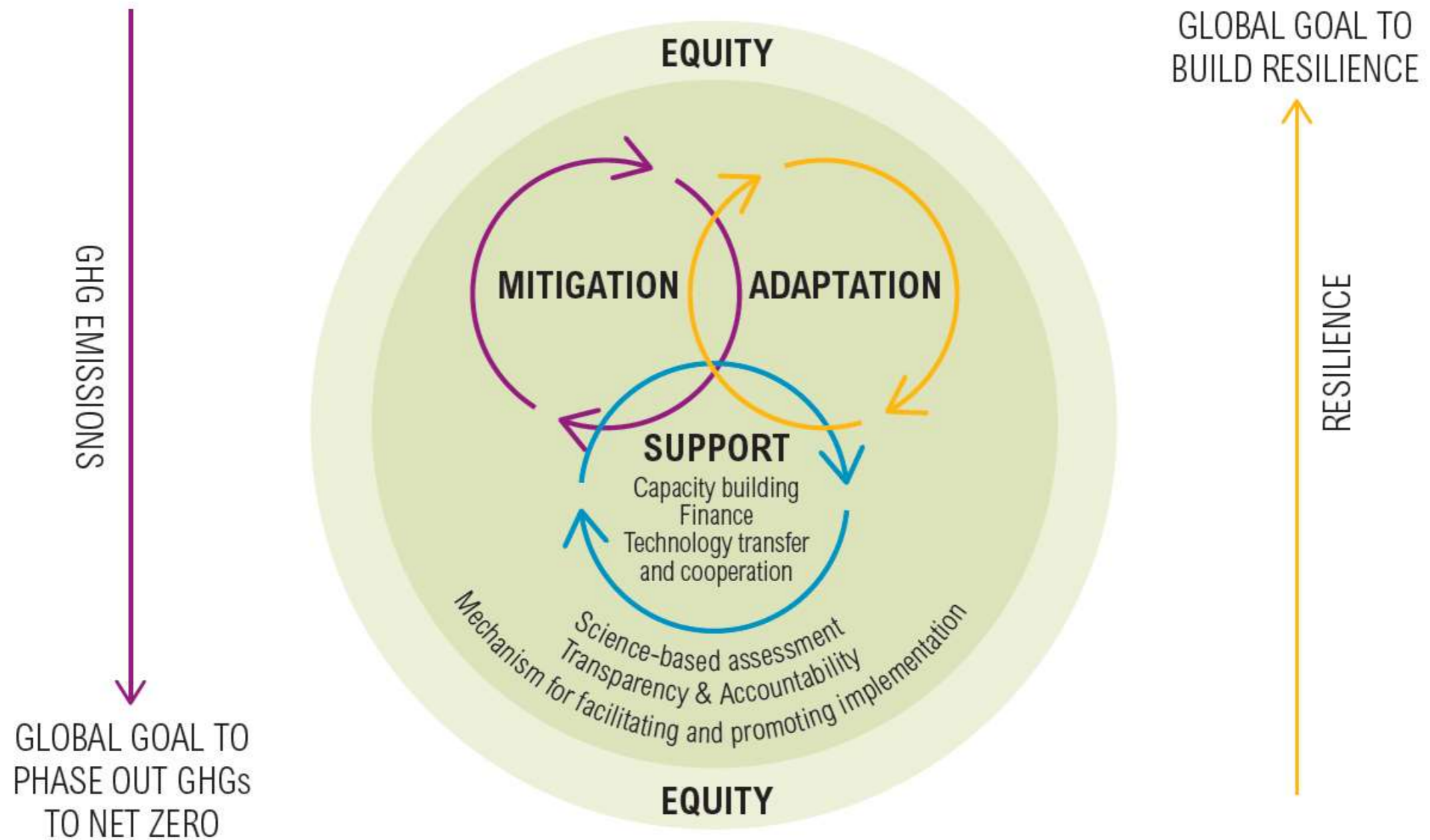
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Core Components of the 2015 Paris Agreement: Driving Continuous Improvement Toward Long-Term Goals

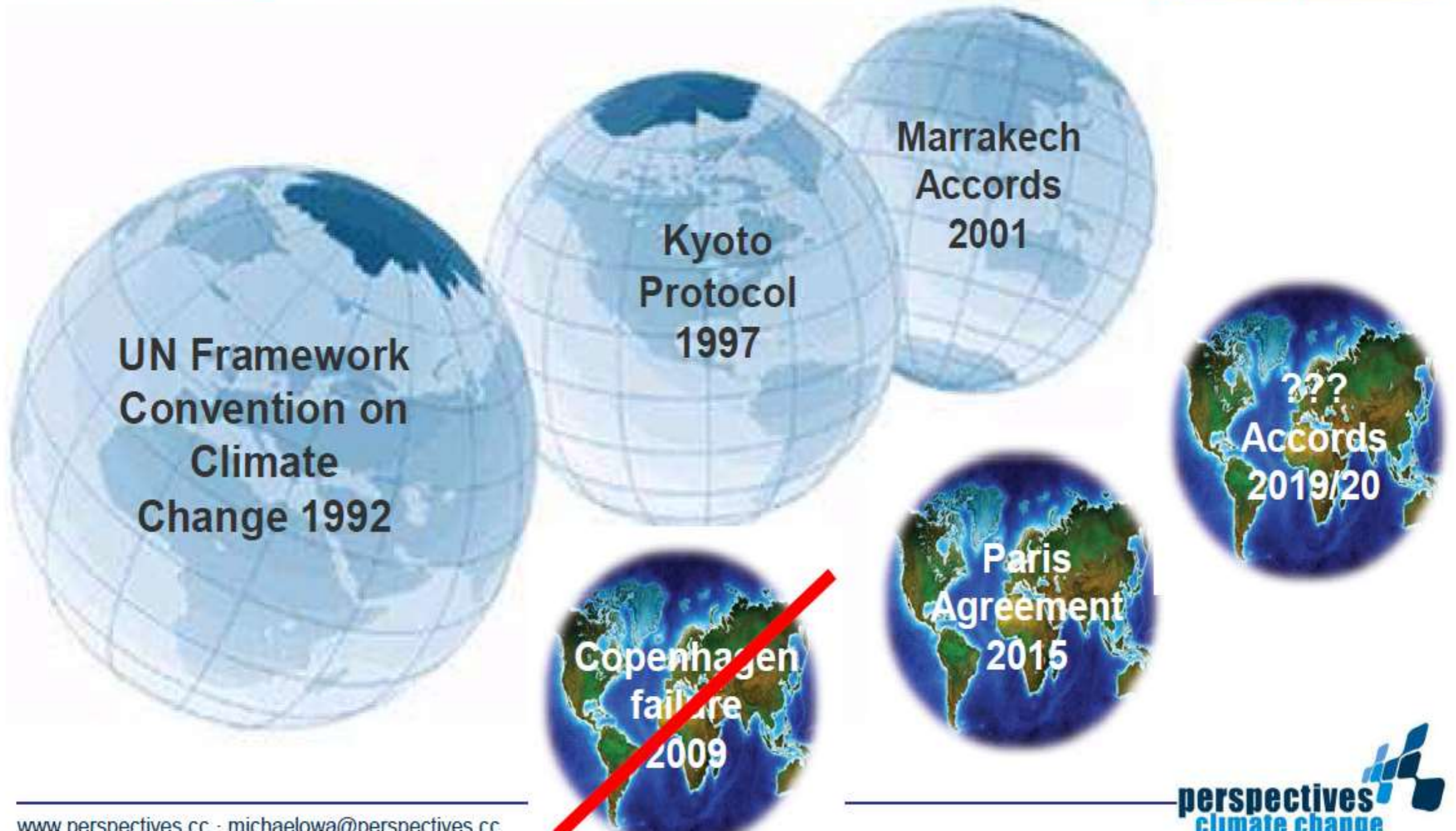


Zdroj: World Resource Institute

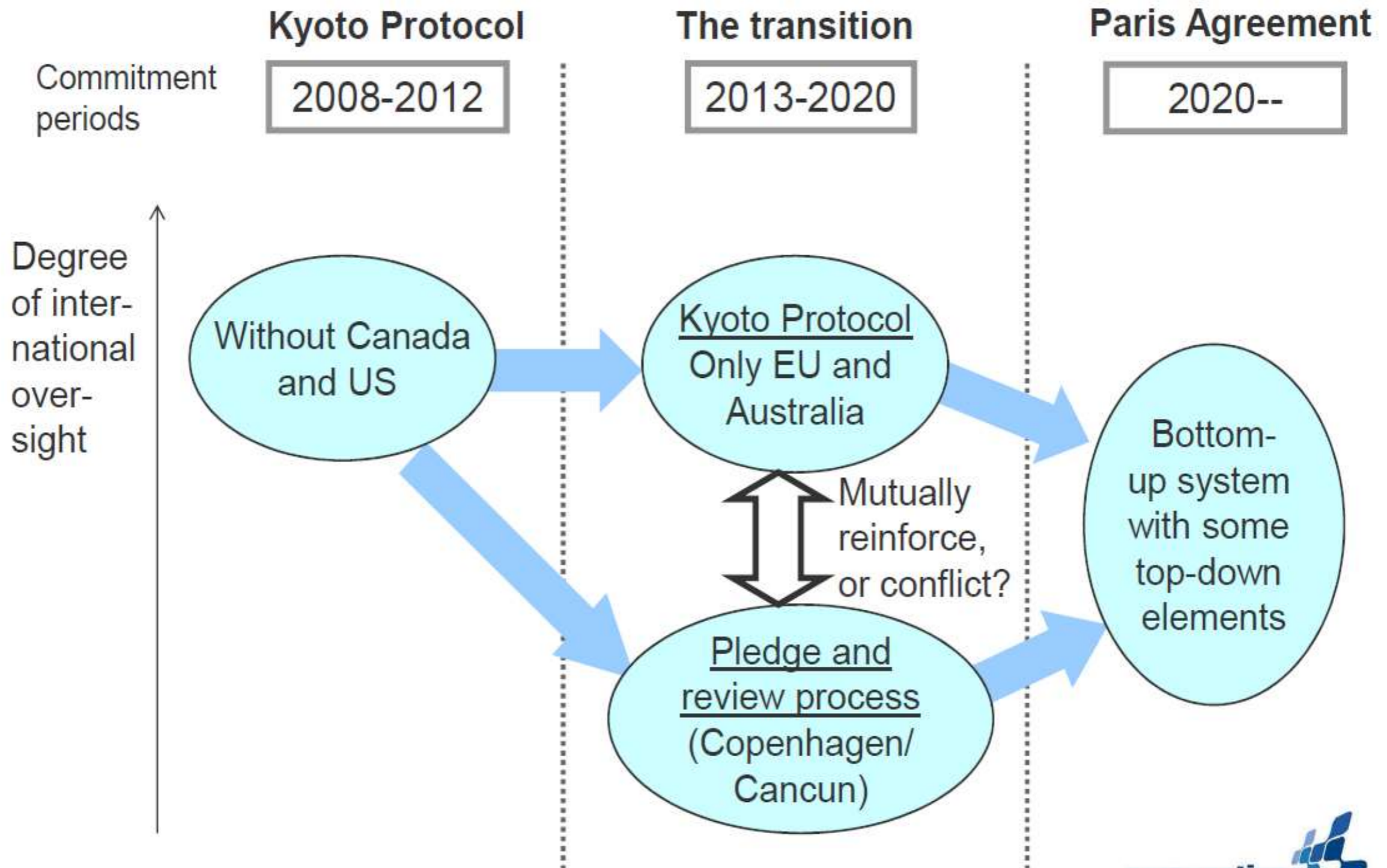




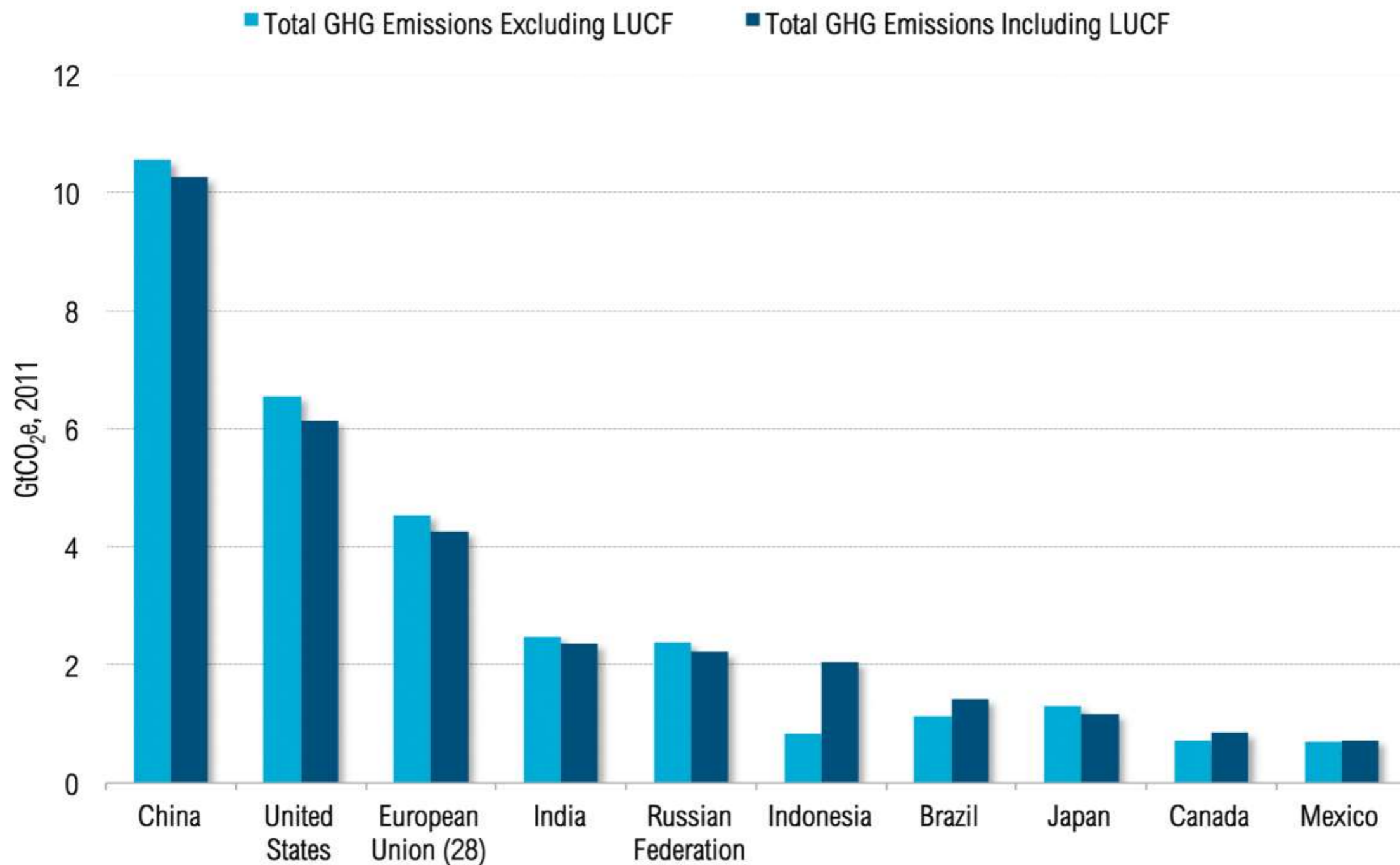
Key milestones of the international climate regime



From a top-down to a bottom-up regime



Top 10 Emitters



<http://bit.ly/11SMpjA>

 WORLD RESOURCES INSTITUTE

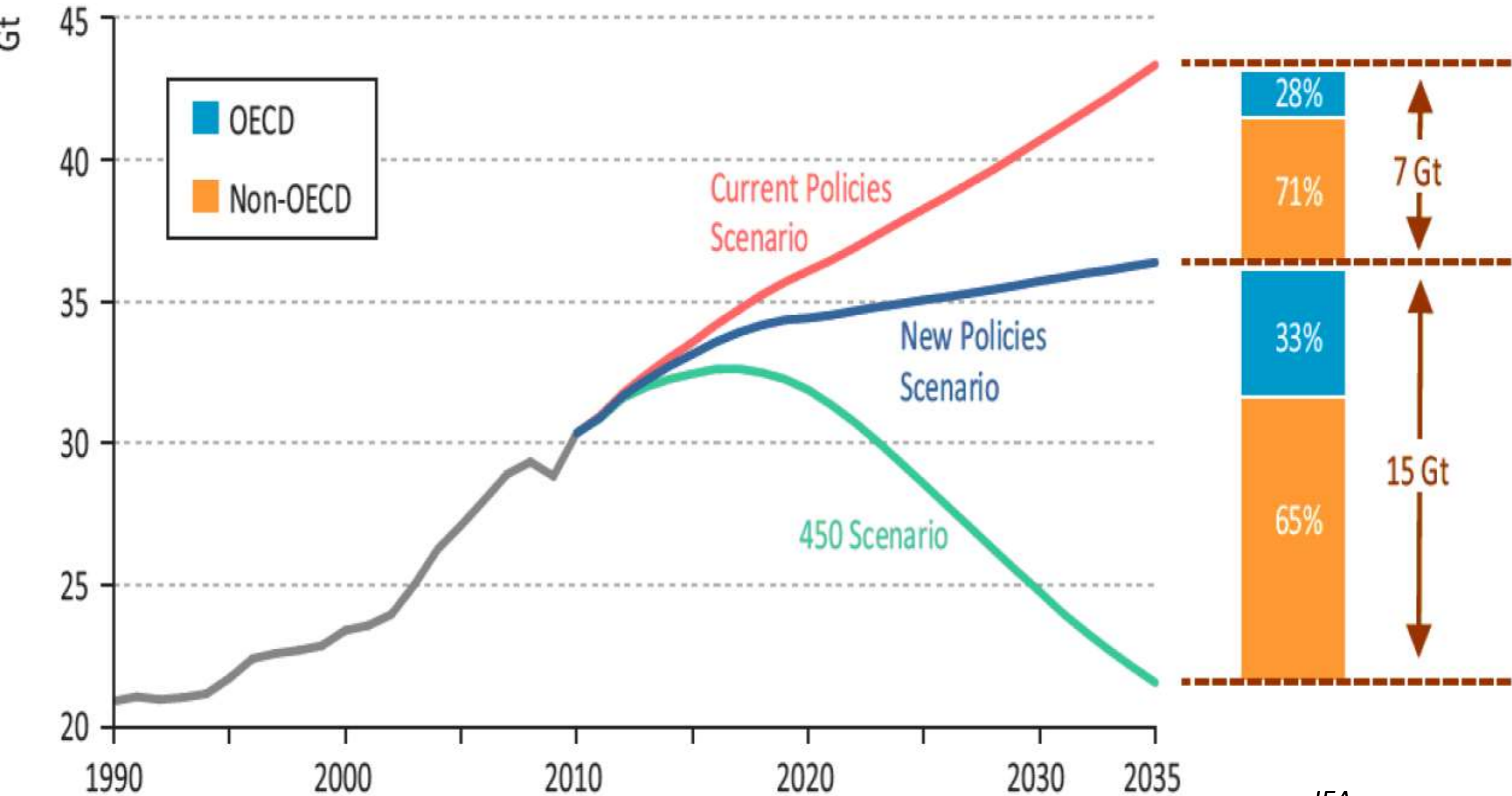
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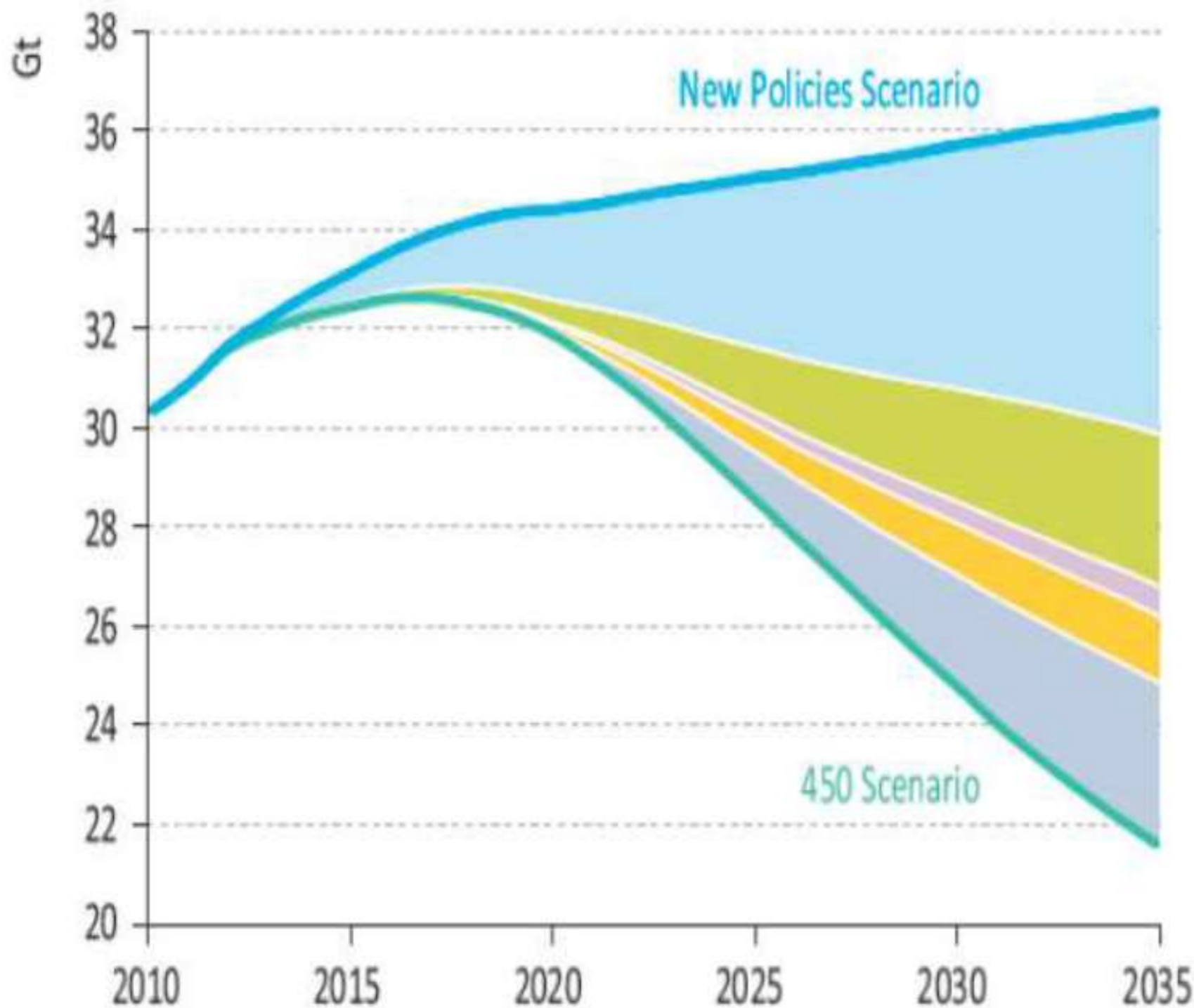
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2 vs 3,6 °C



GHG - Global Level



	Abatement	
	2020	2035
Efficiency	72%	44%
Renewables	17%	21%
Biofuels	2%	4%
Nuclear	5%	9%
CCS	3%	22%
Total (Gt CO₂)	2.5	14.8



Paris Agreement <https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>

- PA was approved by all Parties (almost 200), including the world biggest emitters of GHG such as China, USA, RF and India – historical moment of international negotiations under UNFCCC
- Legally binding Agreement involving all Parties
- The goal of carbon neutrality in accordance with IPCC in second half of the century
- The 5-year cycle of (Global Stocktake) examination of the commitments and increasing ambitions
- Transparency and robust emission accounting
- Enhanced importance of long-term planning and support for developing countries
- Large number of accompanying initiatives, for instance, G7 „pledge to end fossil fuel subsidies by 2025“

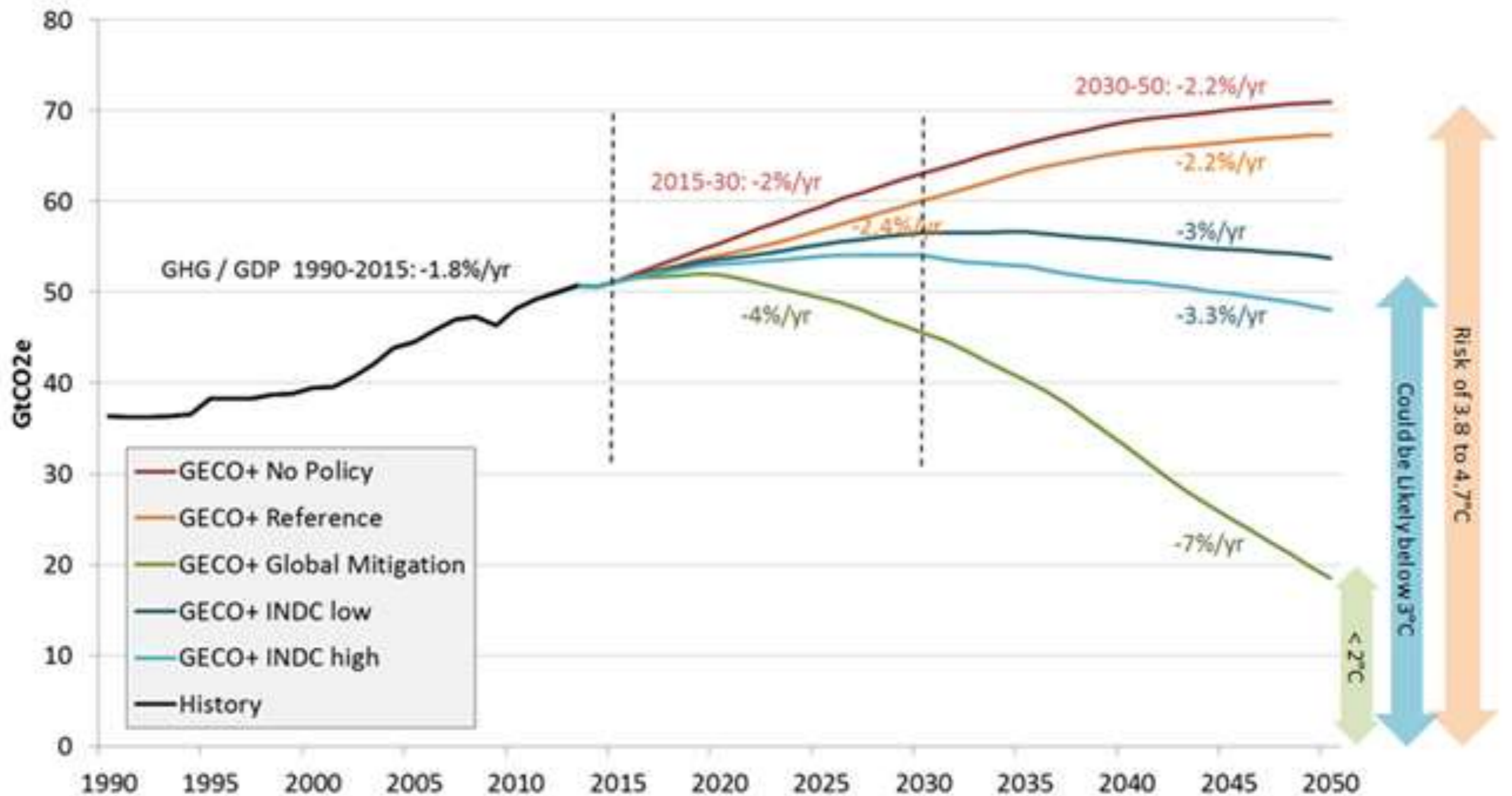


Ambitious Agreement

- Keeping the increase in the global average temperature to well below **2°C** above pre-industrial levels and to pursue efforts to limit the temperature increase to **1,5°C** above pre-industrial levels
- The global emissions should reach the peak as soon as possible and by the end of century should be close to zero (emissions=sinks)
- More than **188** Parties submitted their Intended Nationally Determined Contributions (INDCs) which cover almost **96 %** global emissions.
- Every five years a process of global stocktake will take place which will assess a collective progress towards the long-term goals (stocktake) starting in 2018 and will serve to enhance the national ambitions
- PA deals also with adaptation, finance (USD 100 bn. goal), Technology transfer and Capacity building.



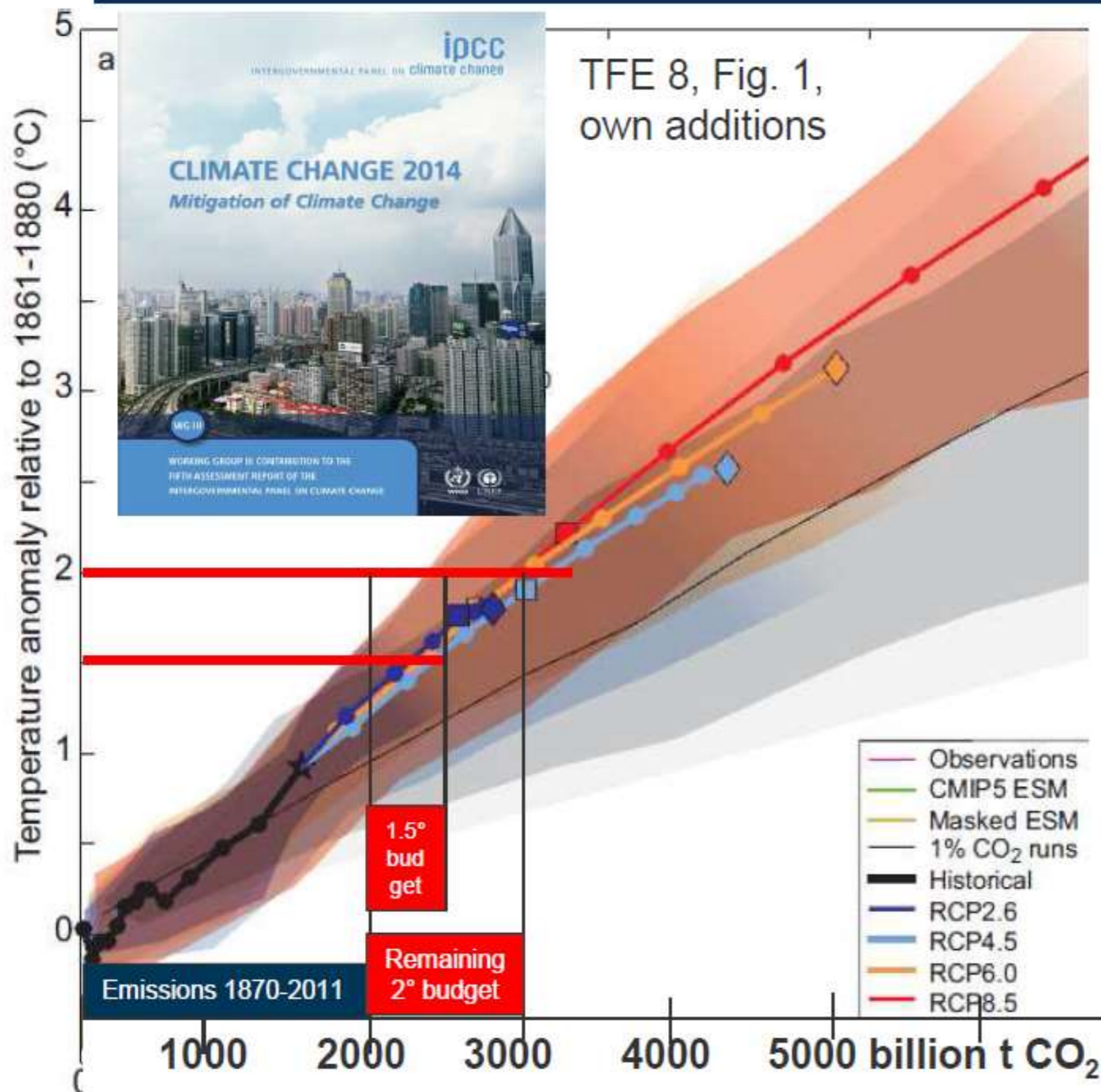
Impact of INDCs on the global emissions



Source: EC-JRC

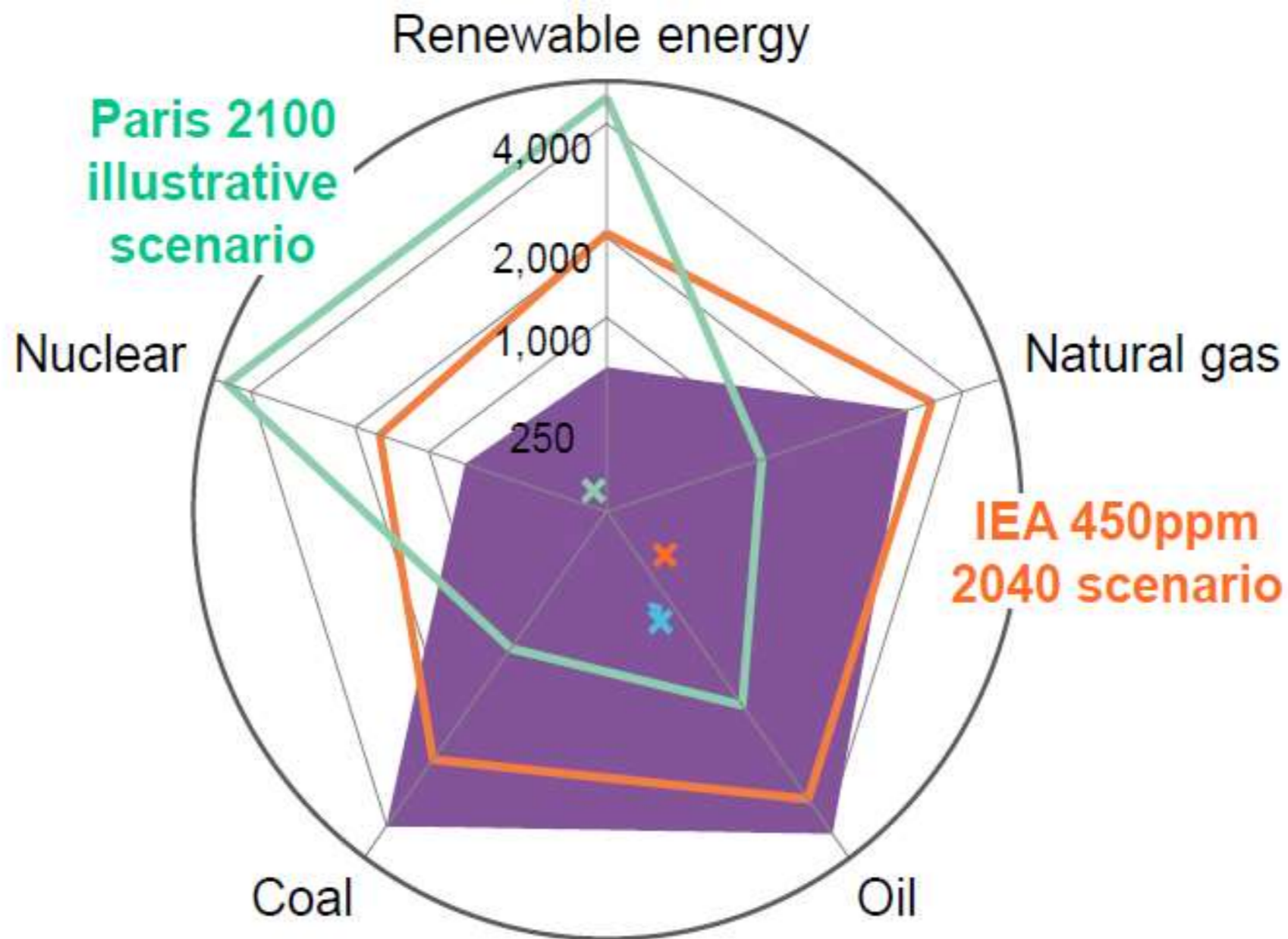


The mitigation challenge of the 1.5°C-2°C target



- Remaining emissions budget to reach
 - 2°C target is 1000-1200 billion t CO₂
 - 1.5°C target is 500-600 billion t CO₂
- Current annual global emissions are ~ 50 billion t
- Only 20-25 years left at current rate for 2°C, a decade for 1.5°C!
- Massive challenge for decarbonization

Impact on the global energy mix (Mtoe)



Note: BNEF adjusted IEA NPS forecast using its own electricity generation and EV demand forecast. Renewables total excludes bioenergy.

Source: Bloomberg New Energy Finance, IEA

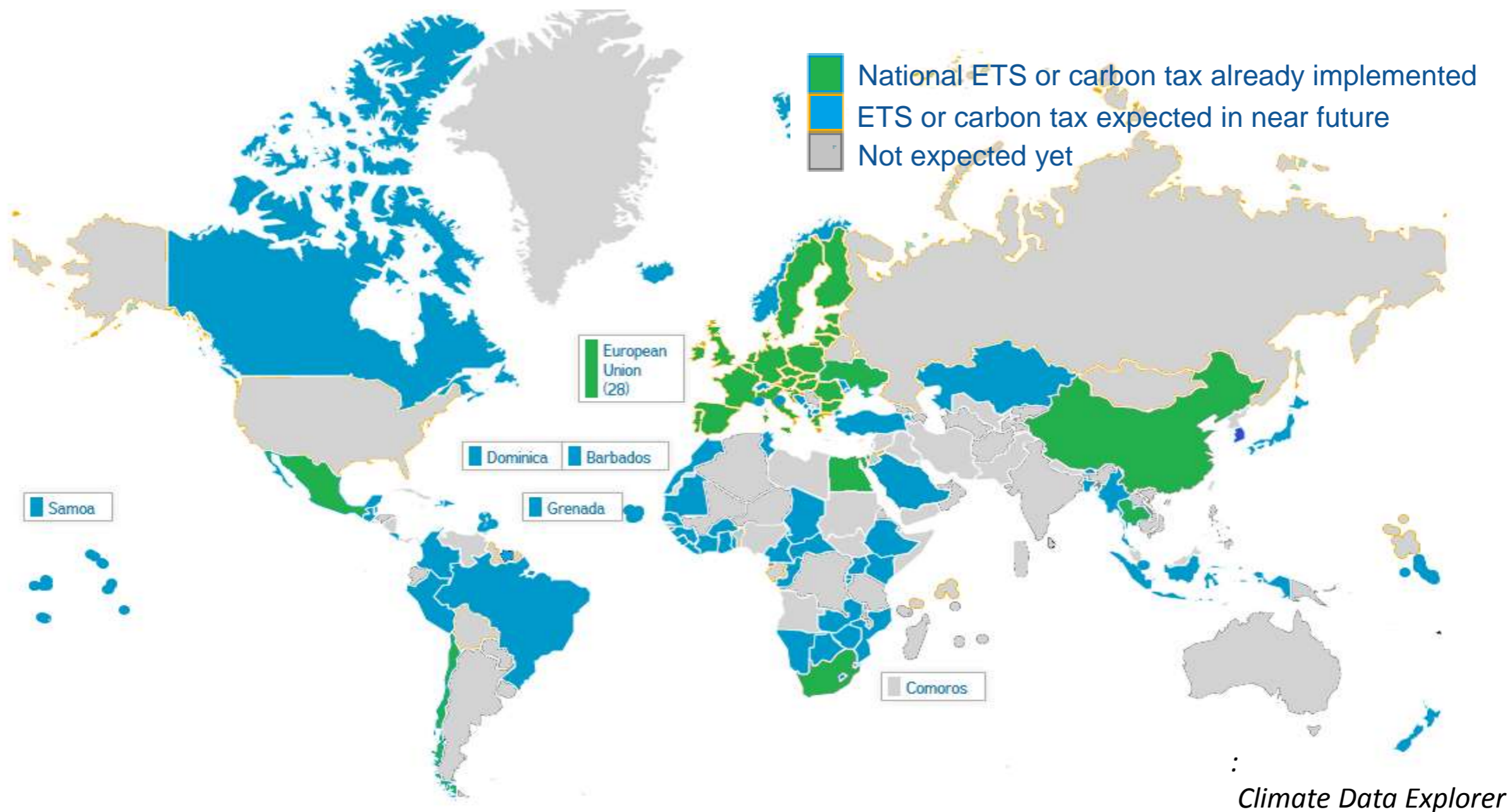
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INDCs and carbon pricing



Climate Data Explorer

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Other important aspects of the Agreement

- The Parties should formulate their long-term low carbon development strategies (2050) by 2020 and shall engage in adaptation planning process – incl. CZ and EU
- Established a global goal on adaptation – reducing vulnerability, strengthening resilience and cooperative approach – sharing lesson learns and support for the world's poorest countries
- Mentions explicitly the emissions trading scheme as cost-effective manner of reducing GHG
- Compliance Committee for enforcement to be established
- Enter into force trigger – at least **55** Parties in total with at least **55%** share in the total global GHG – current situation:
<http://unfccc.int/2860.php>



Other important aspects of the Agreement

- 22/04/16 – The Signing of the Agreement by representatives of 180 countries (New York, Minister of the Environment of the Czech Republic on behalf the CZ) – ratification
- Already **100** parties have ratified (**69,5%** share in global GHG emissions) incl. China, USA and EU
- On 4 November the Paris Agreement entered into force
- 1st CMA is taking place in Morocco (COP22) / 7-18 November 2016



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EU level



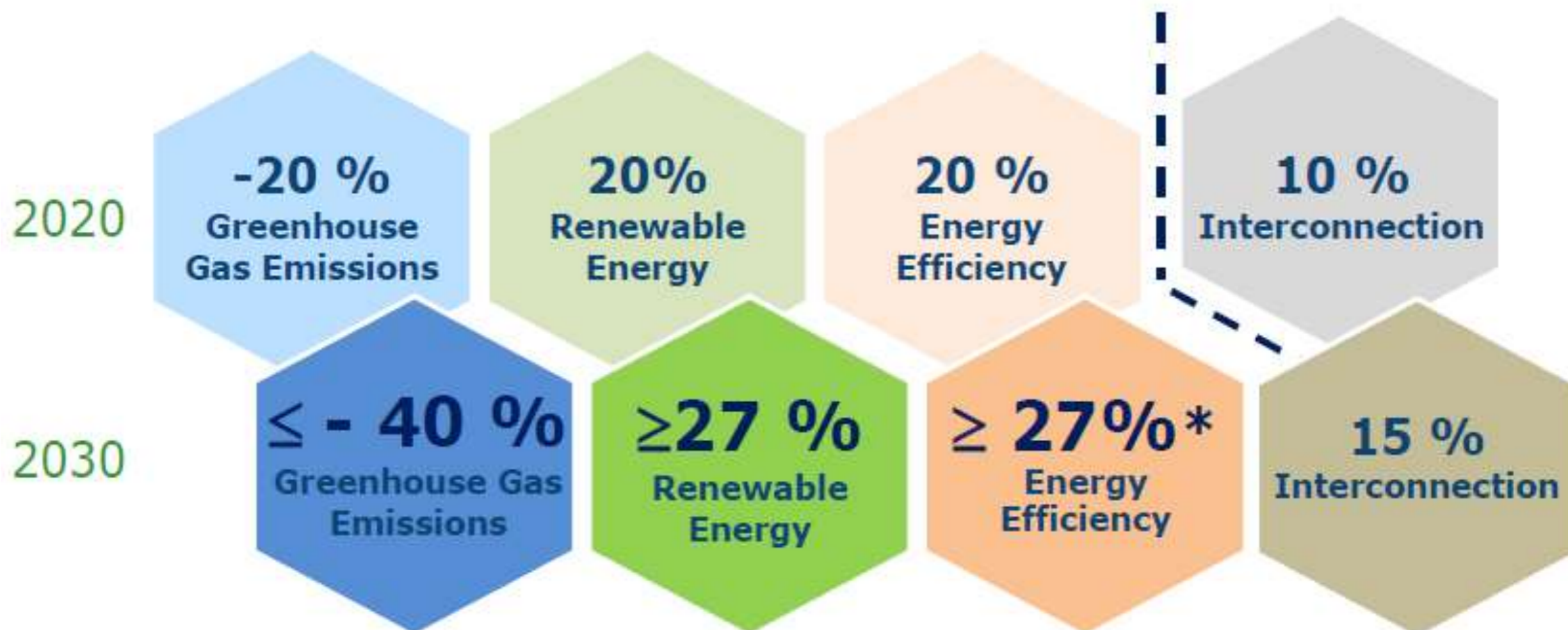
Energy Union is not only about energy



- 1) Energy Security, solidarity and trust
- 2) A fully integrated Internal Energy Market
- 3) Modernization of energy demand
- 4) Decarbonization of the EU energy mix
- 5) Research and innovations



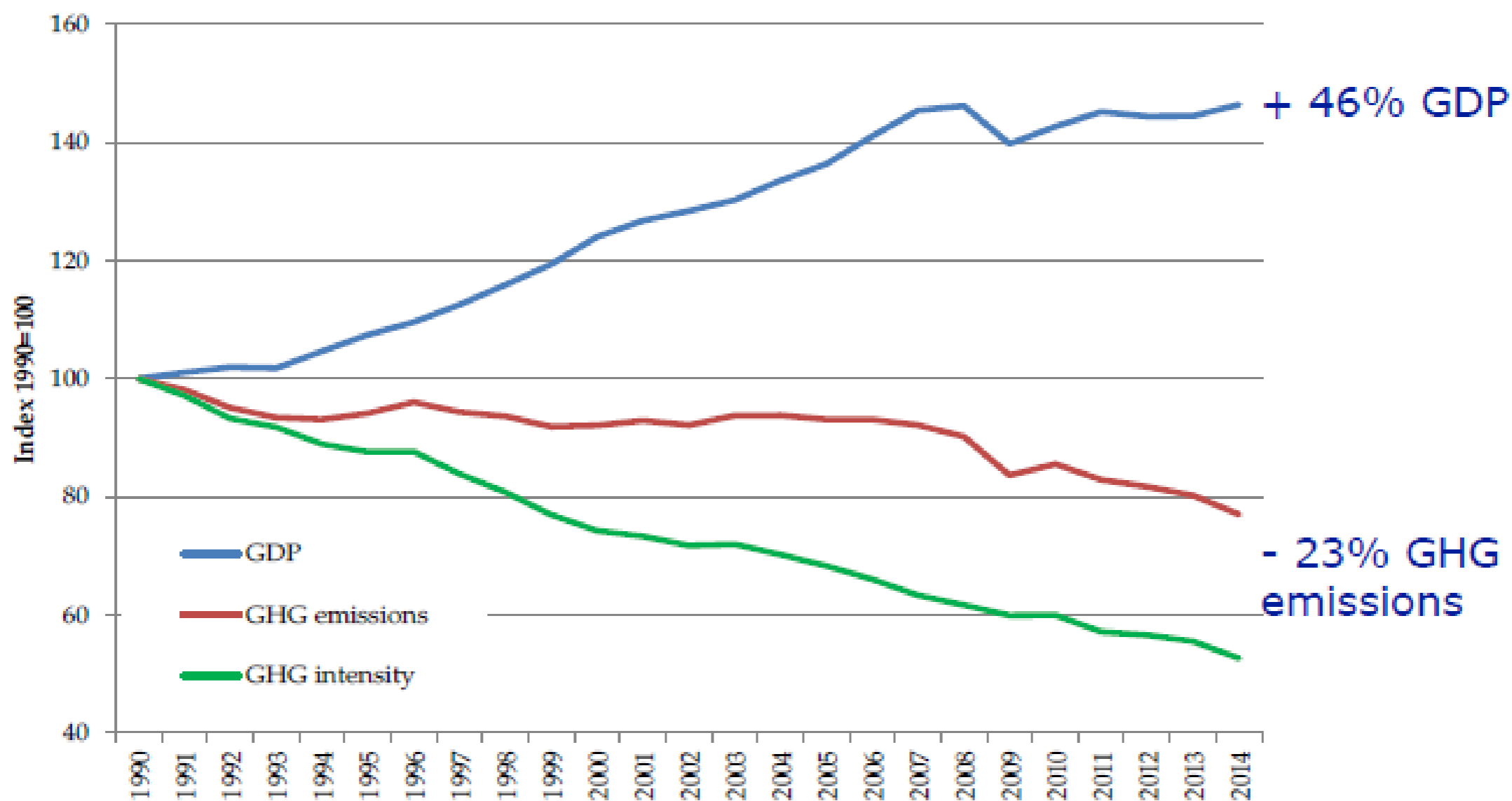
2030 EU Framework for Climate and Energy



* To be reviewed by 2020, having in mind an EU level of 30%



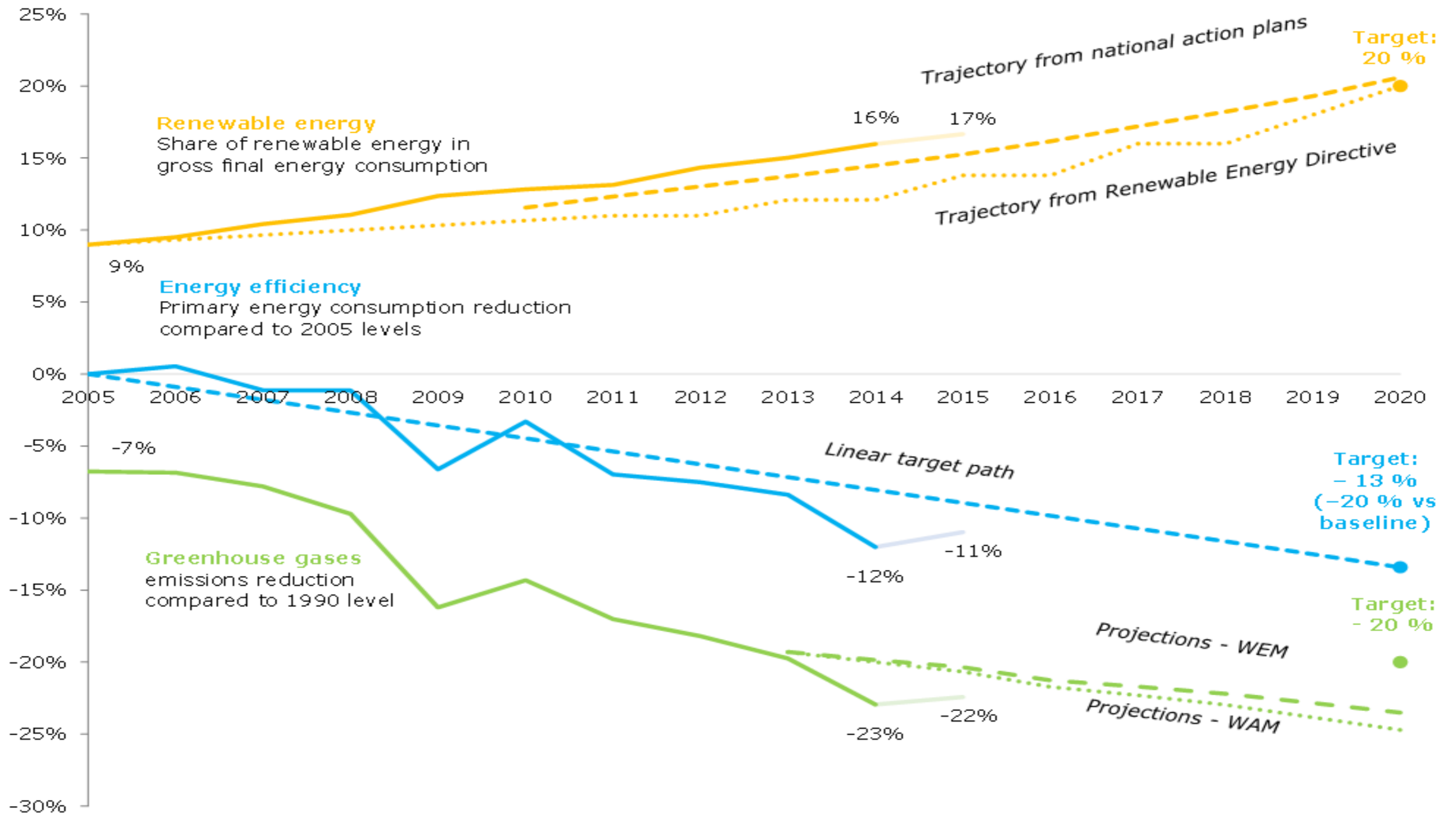
EU : Decoupling growth from emissions



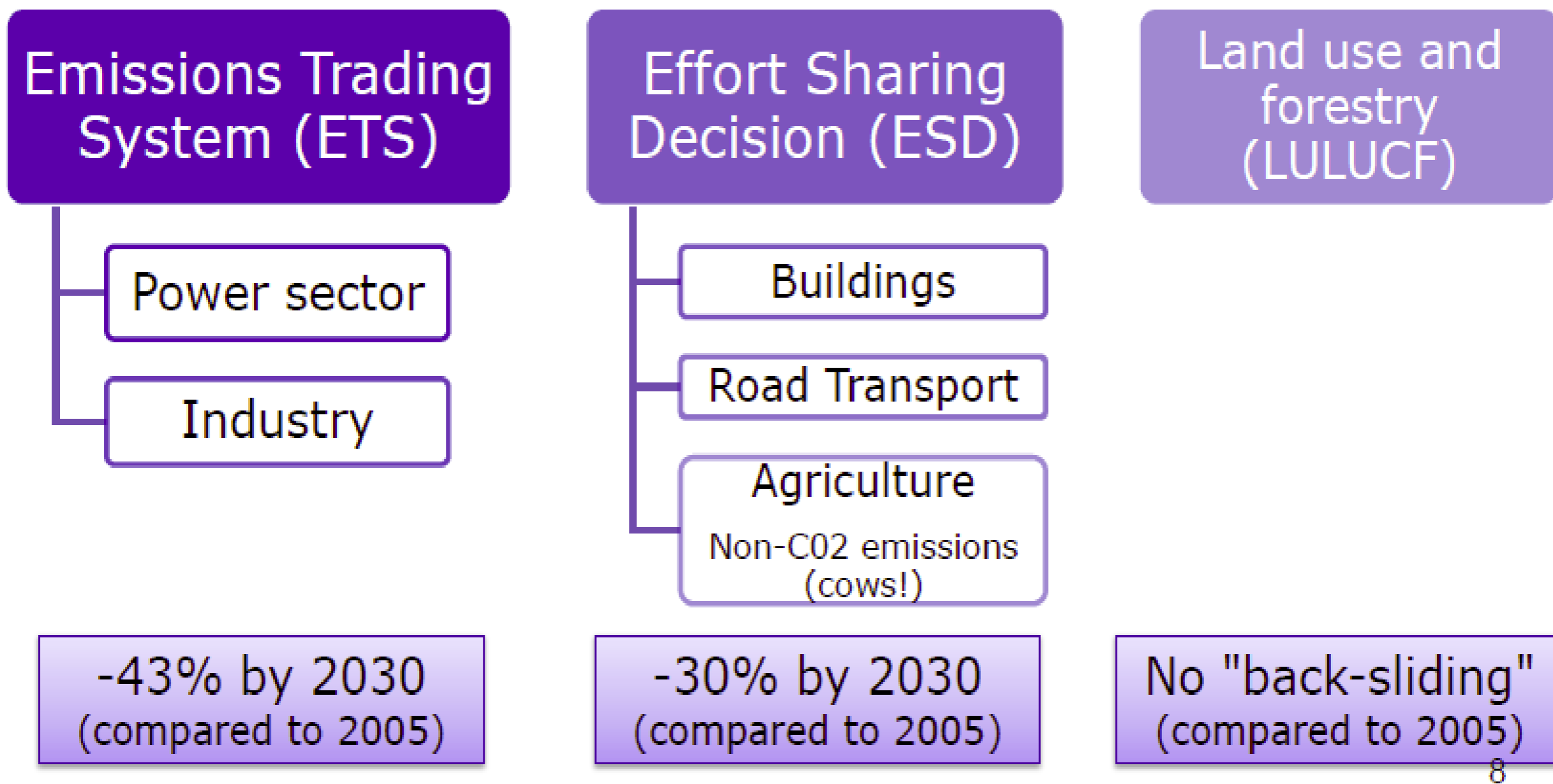
Source: European Commission based on data compiled by EEA



Compliance CEP 2020



Implementation of EU's Paris commitment: at least 40% emissions reduction by 2030 (compared to 1990)



What remains to be resolved (on EU level)

- To decide on all important legislative GHG elements (EU ETS, non/ETS (ESR) and LULUCF valid after 2020, 5-year revision cycle to be included according to PA
- To resolve how all important parts of energy legislation will look like (EC Winter Package includes revision of EE and RE directives and proposals on market design and energy and climate plans)
- Future integrated energy and climate plans to be key element for future setting of MS (EE and RE contributions) to the EU 2030 overall targets. Higher level of coordination and cooperation needed (MS). Key question „what if“ unresolved yet
- Update of long-term/low-carbon EU climate and energy roadmaps to be scheduled in context of 1,5°C IPCC Report (2018)



Time for your questions...

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