



# Sharing of experience on INDCs

25th August, Mexico City

Marianne Ramlau

Advisor

Danish Energy Agency

- part of the Danish Ministry of Energy, Utilities and Climate

# Agenda

- Overview of submitted INDCs
  - Which countries and share of global emissions
  - Analysis of emissions gap in 2030
  - Potential and measures to reduce emissions gap in 2030
- EU's INDC target for 2030
  - Targets as per EU's 'Climate and Energy Package'
  - EU's INDC target for 2030
  - Implementing the common target from the INDC
  - Denmark's commitments to the EU and national targets
- Final remarks and conclusions

# Overview of submitted INDCs

- 28 countries and the European Union have submitted an INDC
- These accounted for more than half of global GHG-emissions in 2010

<b>Europe</b>	<b>Middel East and Africa</b>	<b>Asia</b>
Switzerland EU Norway Russia Liechtenstein Andorra Serbia Iceland Monaco Republic of Macedonia	Gabon Morocco Ethiopia Kenya Benin Djibouti Democratic Republic of Congo	China Republic of Korea Singapore Japan
<b>Latin America and the Caribbean</b>	<b>North America</b>	<b>Oceania</b>
Mexico Trinidad and Tobago Dominican Republic	United States of America Canada	New Zealand Marshall Islands Australia

# Overview of submitted INDCs

## Prognosis on upcoming submissions

- August: 18
- September: 33
- October: 17
- November: 6
- December: 1

*(source: New Climate Institute – Progress of INDC preparation)*

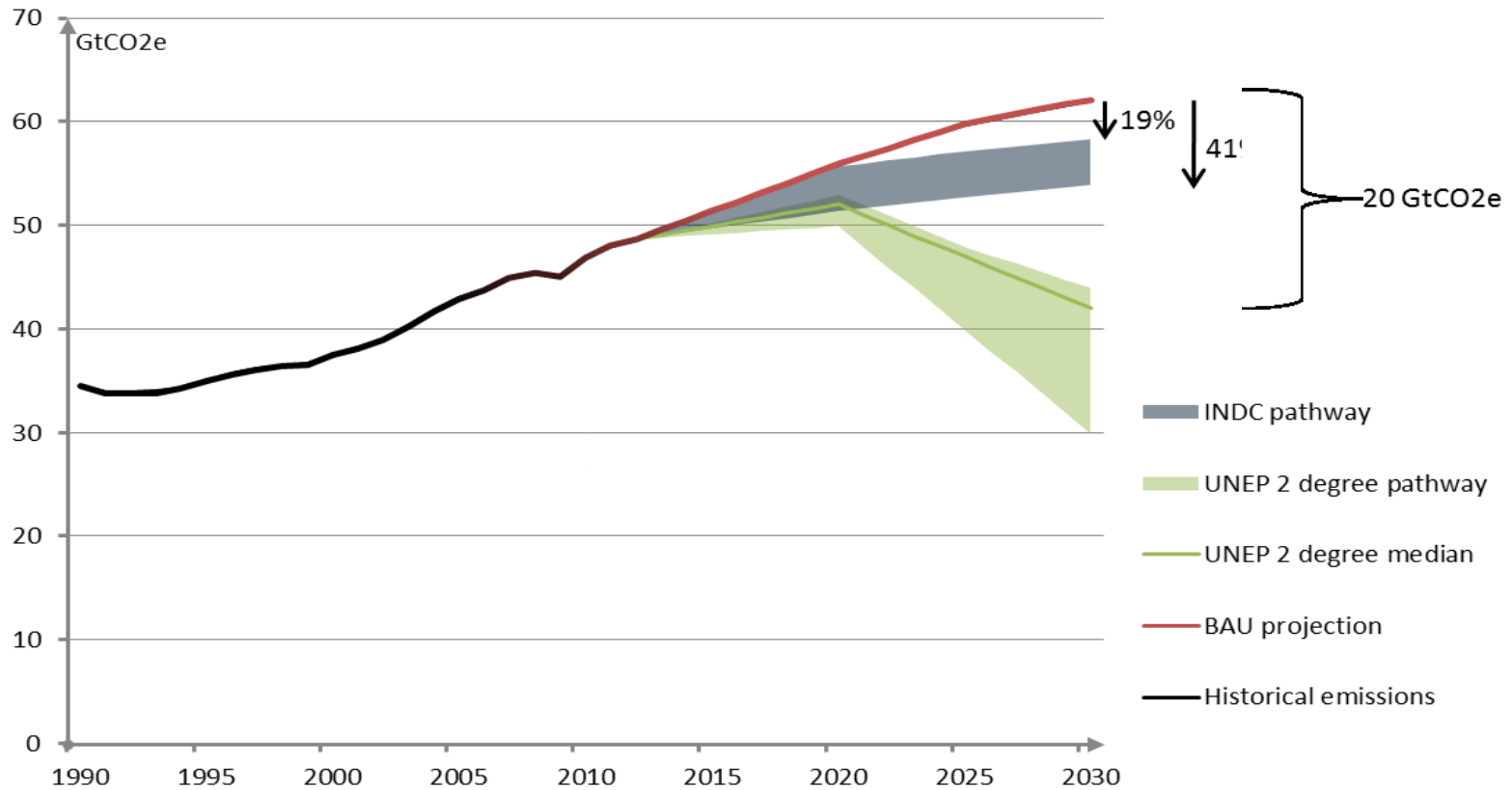
- Call for the remaining countries to submit in due time to have the most comprehensive picture of global commitments ready for the COP in Paris

# Analysis of emissions gap in 2030

## Model used: **COMPARE.**

- A global carbon market model to analyze international climate change agreements.
- Based on the principle of cost-effectiveness.
- Input data:
  - Marginal abatement cost curves (MACCs). Include emissions from CO<sub>2</sub>, non-CO<sub>2</sub> and LULUCF sources (models: POLES, TIMER & IMAGE, G4M & GLOBIOM).
  - GDP historical values: World Bank. GDP growth rates (current: IMF (April 2013) and long-term: Centre for Prospective Studies and International Information (June 2013)).
  - Population growth rates (UNDP's medium fertility scenario, 2012 revision).
  - Baseline emissions from MACCs are calibrated to IEA's Current Policy Scenario (IEA World Energy Outlook 2013).

# Analysis of emissions gap in 2030



The INDCs close 19-41 pct. of the emissions gap in 2030.

Around 55 per cent of global emissions in 2010 are covered by the INDCs so far.

# Analysis of emissions gap in 2030

Comparing emissions per capita before and with INDC target (2010 vs. 2030):

Country	GHG per capita in 2010 (tCO <sub>2</sub> e/cap)	GHG per capita in 2030 (tCO <sub>2</sub> e/cap)
<b>China</b>	7.0	11-12.3
<b>United States</b>	19.1	10.4-11.1
<b>EU28</b>	8.8	6.2
<b>Canada</b>	22.7	13.6
<b>Mexico</b>	6.2	4.7-5.8

# Potential to reduce emissions gap

Hypothetical analysis: emissions gap **is** closed in 2030.

Which sectors contain the cost-efficient reduction potentials?

Most important sectors (pct. of gap closed):

- Power (37 pct.)
- Industry (30 pct.)
- LULUCF (15 pct.)
  - Deforestation very important!



# EU's INDC target for 2030

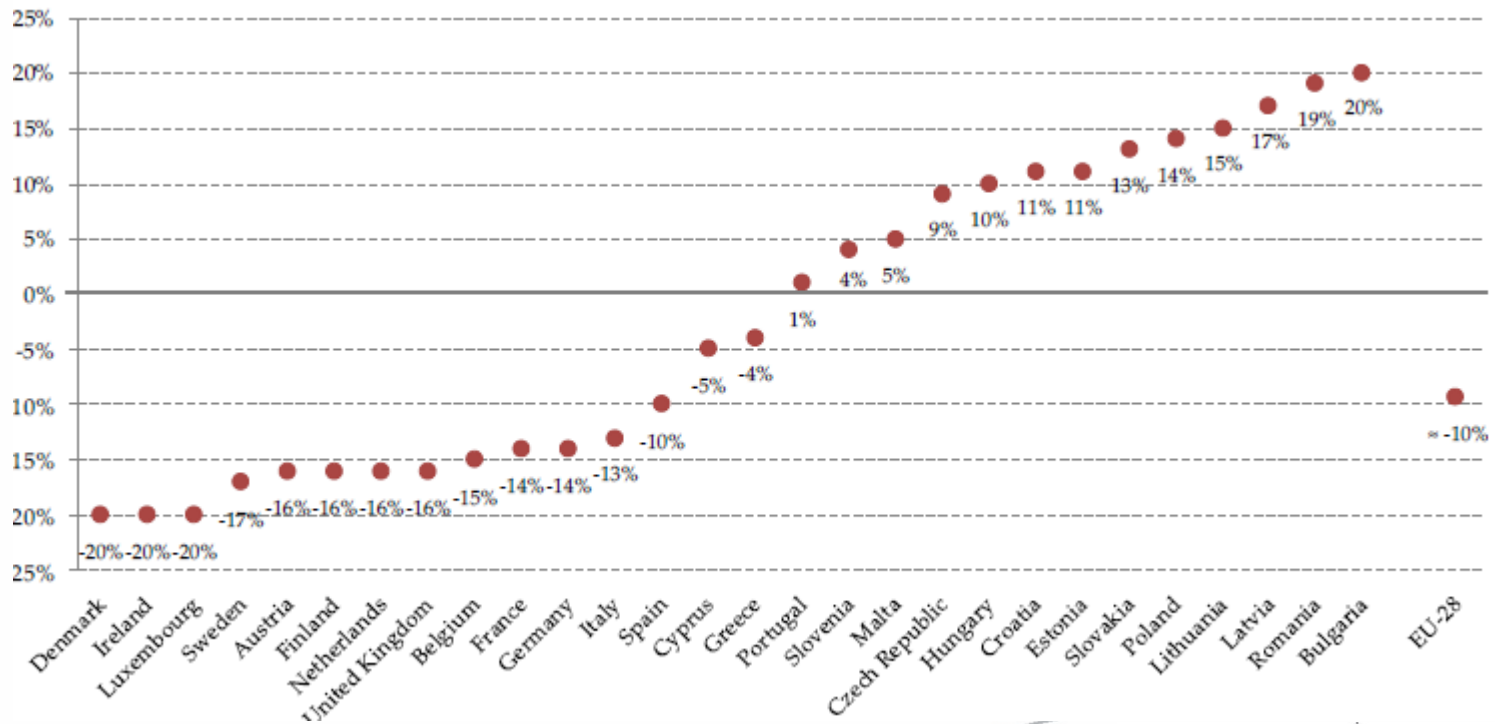
# EU targets "Climate and Energy Package" (2008)

- Binding target of 20% GHG emissions reductions in 2020 compared to 1990
- Binding target of 20% of total gross final energy consumption in the EU from renewables in 2020 (national targets for individual member states), and at least 10% renewables in land transport
- Non-binding target of 20% energy savings in 2020 through energy efficiency improvements

# Targets as per EU's 'Climate and Energy Package' (2008)

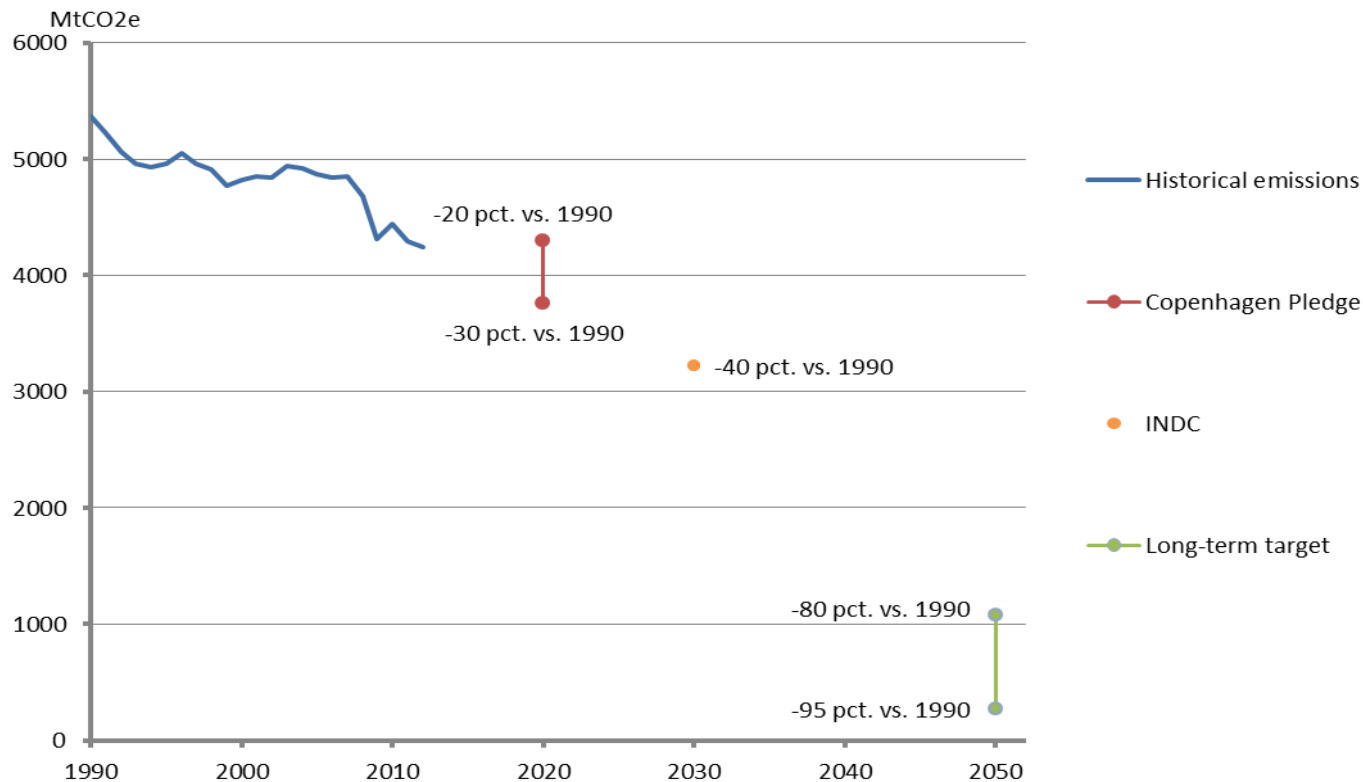
Binding target of 20% GHG emissions reductions in 2020 compared to 1990:

- EU ETS (emissions trading scheme) puts an EU-wide cap on 2020-emissions at 21% below 2005-emissions
- Individual Member States 2020 targets for non-ETS sectors, set relative to 2005-emissions. Aggregate target for the EU(28): 10%



# EU's INDC target for 2030

- Binding target of at least 40 pct. domestic reduction in GHG emissions by 2030 compared to 1990.



# Implementing the common target of the INDC

- The European Commission has the initiative for implementing the INDC.
  - The Commission puts forward legislative proposals.
  - Proposals are negotiated with member states and the European Parliament until an agreement is reached.
- Outstanding issues on the INDC:
  - Agreement on ETS (proposal is presented by now)
  - Agreement on burden sharing for non-ETS (proposal expected to be presented in 2016)

## Commitments and national targets by Denmark

<b>DK's EU commitment for 2020</b>	<b>National energy policy agreement (2012)</b>	<b>Projected compliance</b>
Non-ETS sectors, 20% reduction of 2005-level		Target for non-ETS sectors expected to be met (domestic GHG emissions projected to be reduced by 37% relative to 1990/95 incl. LULUCF)
30% RE share of final energy demand	35%	38%
10% RE share in transport		10.7%
	50% of electricity demand from wind power	51%
<b>Targets for the long term</b>		
<b>European Union</b>	<b>Danish government</b>	<b>Danish Climate Law</b>
EU non-binding target of 85-90% reduction in 2050 compared with 1990	Denmark should become independent from fossil fuel in 2050	Development towards low carbon economy

# Final remarks and conclusions

## INDC process:

- It is very important to elaborate up front information in INDC submissions!
- Great uncertainty in aggregate INDC gap assessment.
- More action and ambition is needed – but it is possible to achieve the 2 degree pathway. Large potentials in power, industry and LULUCF sectors.
- Delayed action increases mitigation costs.
- INDCs are not the last step

Thank you for your attention!

You are very welcome to contact  
[sdo@ens.dk](mailto:sdo@ens.dk) or [swa@ens.dk](mailto:swa@ens.dk).