



Evaluating climate policy in the European Union

7th EEEN Annual Conference
22 November 2018

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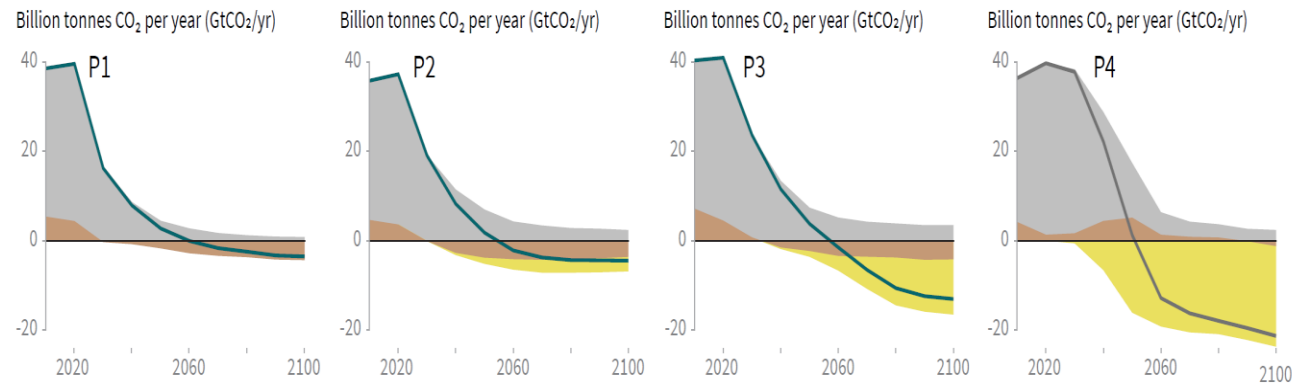
Outline

- *Paris Agreement challenge*
- *Evolving policy response*
- *Evidence-based policy making: Some pertinent questions*
- *Current state of affairs on ex-post evaluations*
- *Next steps and opportunities*

Paris Agreement challenge: Staying below 1.5°C means global net zero CO₂ emissions by 2050

Breakdown of contributions to global net CO₂ emissions in four illustrative model pathways

● Fossil fuel and industry ● AFOLU ● BECCS



P1: A scenario in which social, business, and technological innovations result in lower energy demand up to 2050 while living standards rise, especially in the global South. A down-sized energy system enables rapid decarbonisation of energy supply. Afforestation is the only CDR option considered; neither fossil fuels with CCS nor BECCS are used.

P2: A scenario with a broad focus on sustainability including energy intensity, human development, economic convergence and international cooperation, as well as shifts towards sustainable and healthy consumption patterns, low-carbon technology innovation, and well-managed land systems with limited societal acceptability for BECCS.

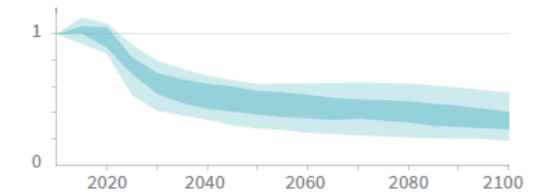
P3: A middle-of-the-road scenario in which societal as well as technological development follows historical patterns. Emissions reductions are mainly achieved by changing the way in which energy and products are produced, and to a lesser degree by reductions in demand.

P4: A resource and energy-intensive scenario in which economic growth and globalization lead to widespread adoption of greenhouse-gas intensive lifestyles, including high demand for transportation fuels and livestock products. Emissions reductions are mainly achieved through technological means, making strong use of CDR through the deployment of BECCS.

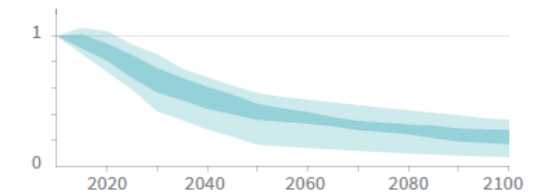
Non-CO₂ emissions relative to 2010

Emissions of non-CO₂ forcers are also reduced or limited in pathways limiting global warming to 1.5°C with **no or limited overshoot**, but they do not reach zero globally.

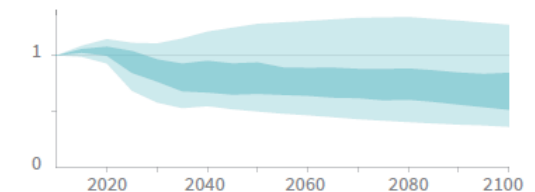
Methane emissions



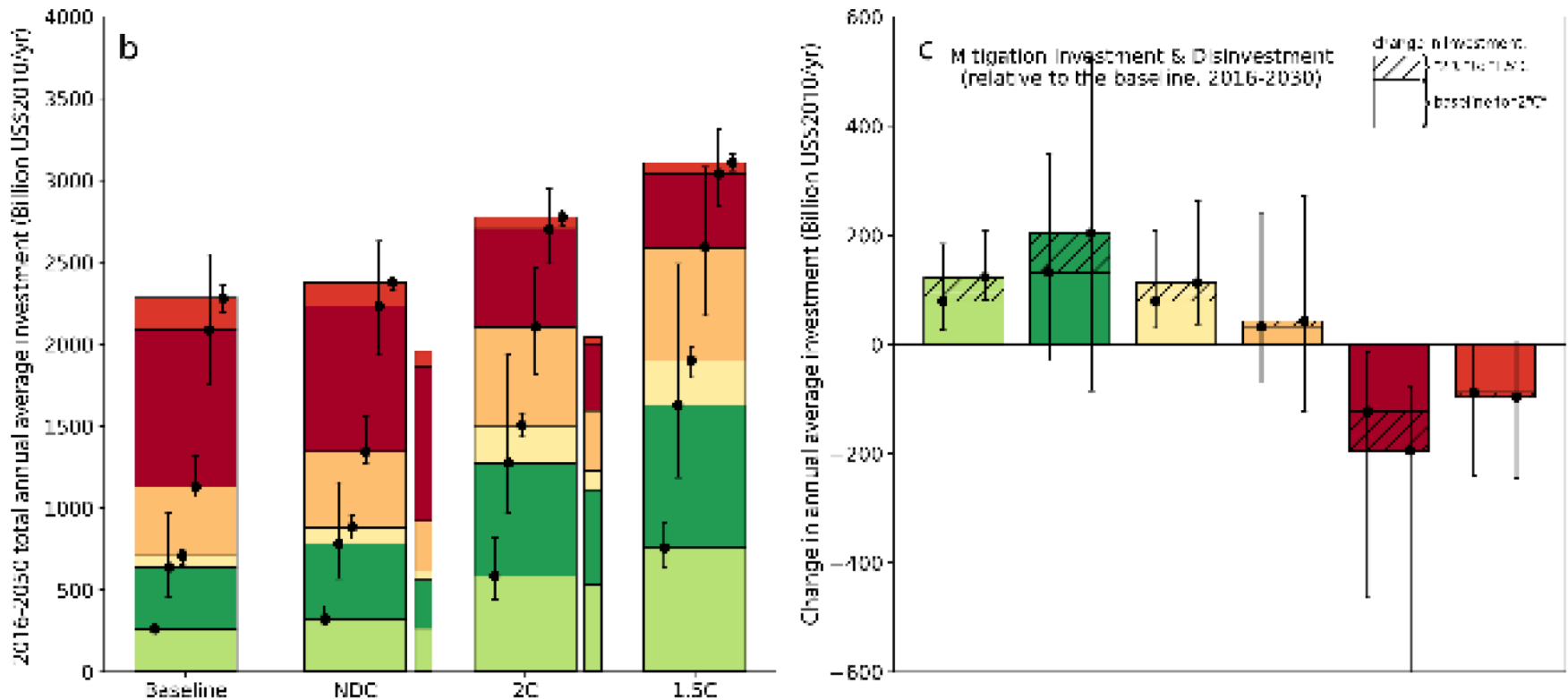
Black carbon emissions



Nitrous oxide emissions

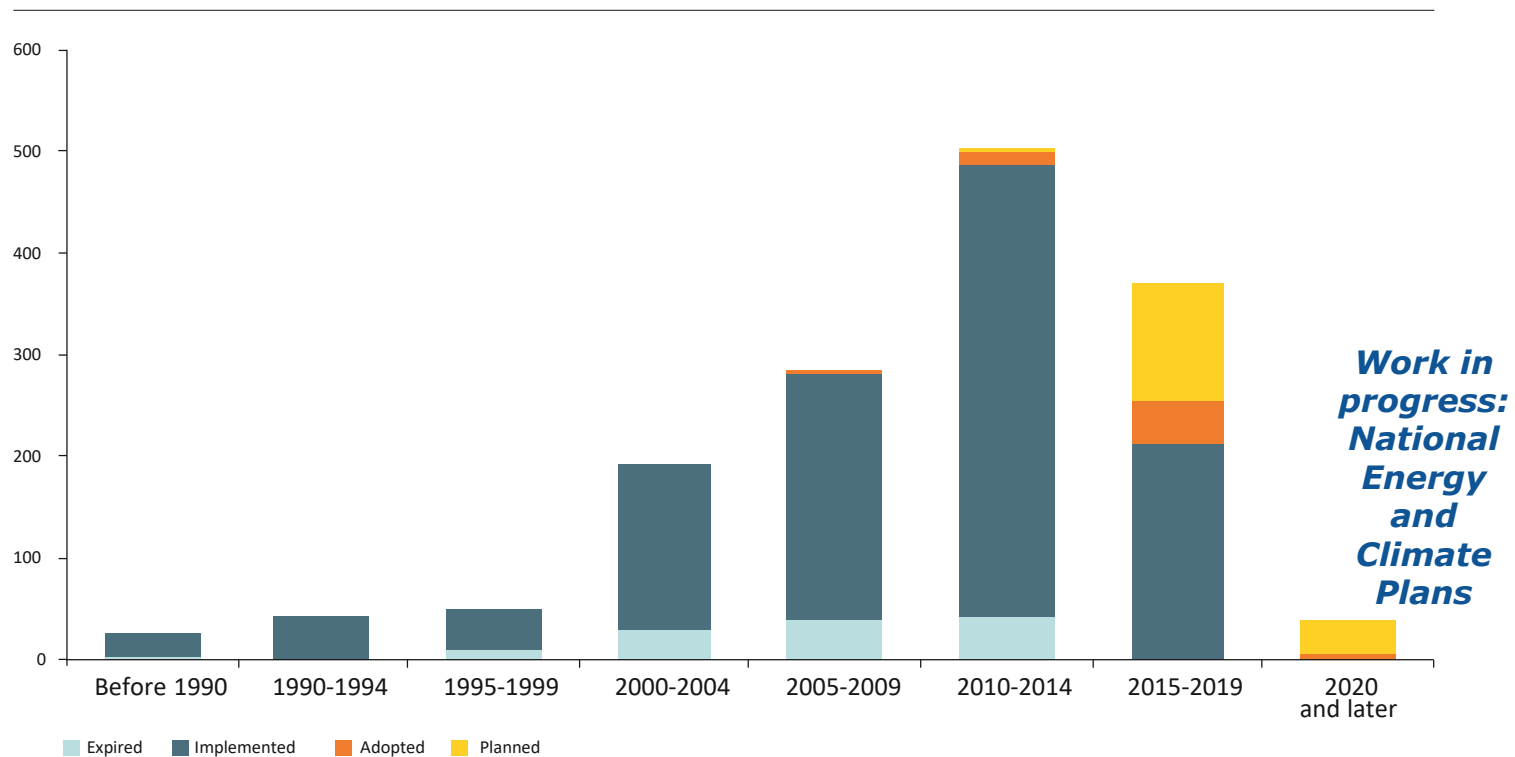


Paris Agreement challenge: Deep transformation of global energy investments, 2016 - 2050



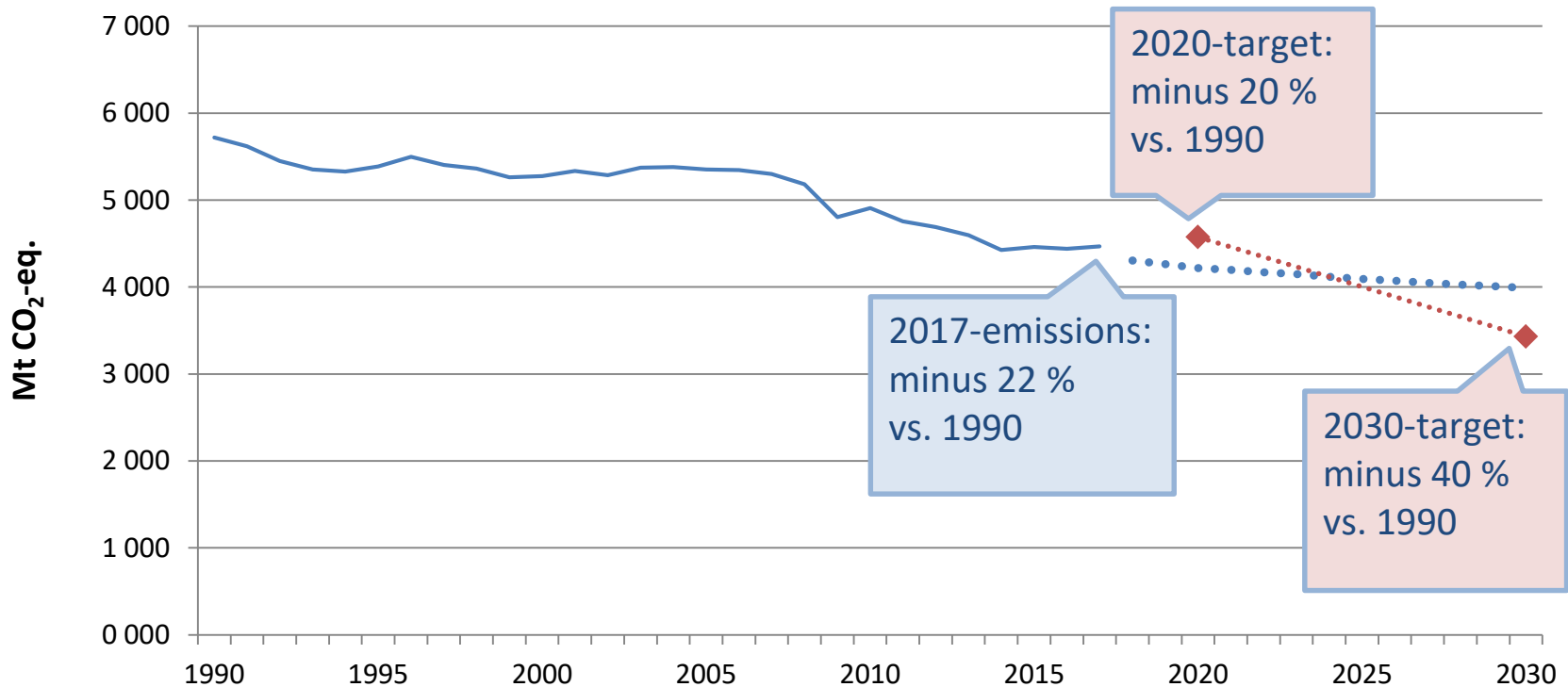
Source: IPCC Special Report on 1.5 degrees, Technical Summary, 2018

Deep transformation requires pro-active climate policies: Evolving number of climate policies in the EU since 1990



Source: EEA

Evolution of EU greenhouse gas emissions since 1990



- Total EU greenhouse gas emissions (historical)
- Total EU greenhouse gas emissions (projection with existing measures)
- ◆ 2020 and 2030 targets

Evidence-based policy making: Asking some pertinent questions

- Do climate policies effectively reduce GHG emissions?
- What are the impacts of other factors, e.g. GDP growth, energy prices, population growth?
- How do climate policies interact with each other or with other policies (e.g. fossil fuel subsidies)?
- Do climate policies achieve their emission reduction objectives
 - **cost-efficiently?**
 - **fairly?**
 - **in a environmentally sound manner?**
- What co-benefits do climate policies achieve (e.g. innovation, air quality, energy security, jobs, competitiveness?)

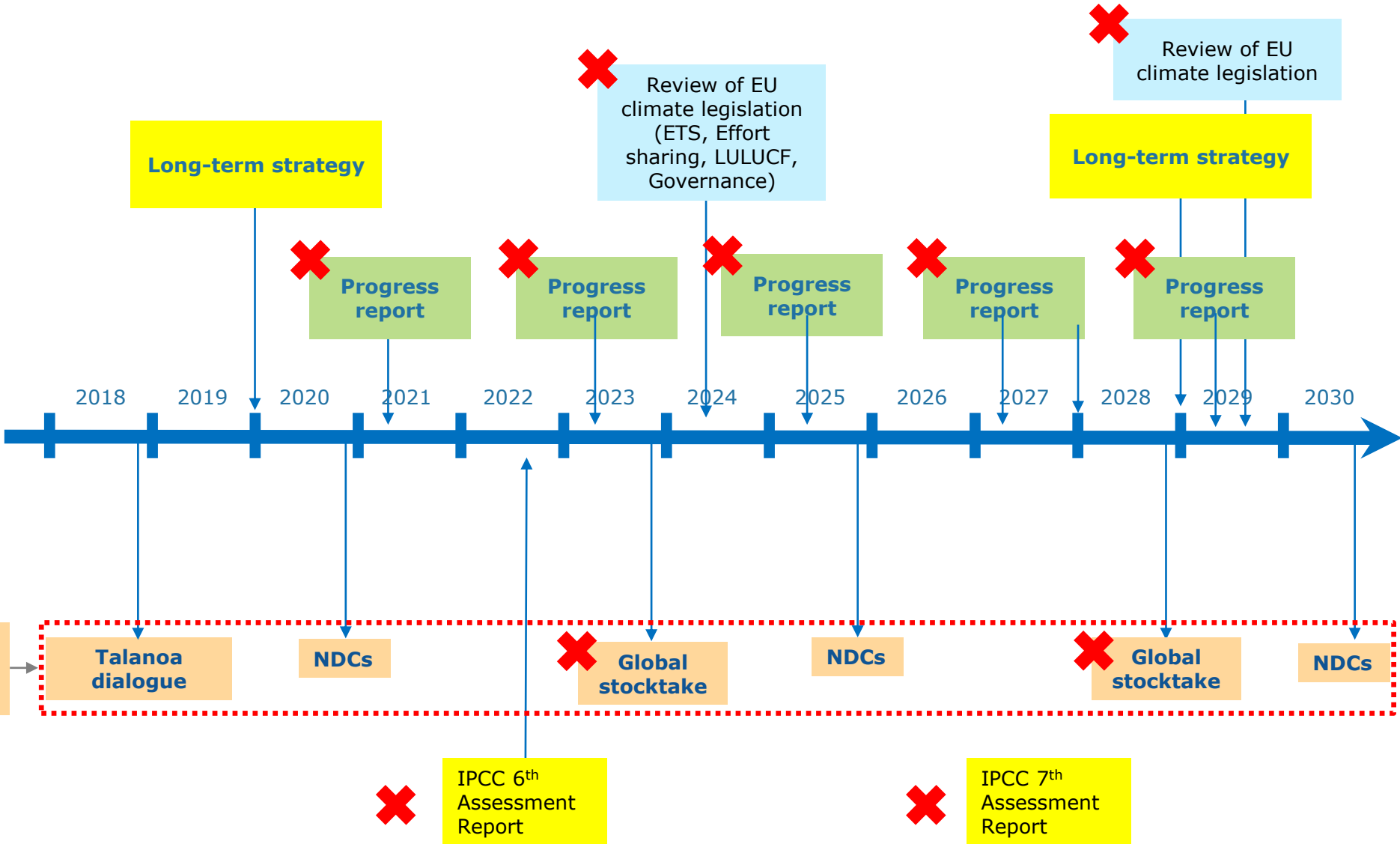
Ex-post assessments and evaluations of climate policies

- Some examples of recent EU climate policy evaluations: *Effort Sharing Decision (2016)*, *Evaluation of Fuel Quality Directive (2017)*, *Adaptation strategy (2018)*
- Annual assessments of progress (e.g. annual progress report, European Semester, State of the Energy Union)
- Ongoing audit of EU monitoring and reporting system for GHG emissions and climate policies
- Regular international multilateral assessments and reviews (e.g. UNFCCC, IEA, OECD)
- Case studies evaluating selected national policies
- EU research project on evaluations of climate policies in Member States

How to get to better ex-post evaluations of climate policies?

- Support academia, research bodies, policy think tanks to improve quantitative methodologies for ex-post climate policy evaluation
- Knowledge sharing activities on ex-post policy evaluations
- Capacity building support for ex-post evaluation
- Engage internationally (e.g. bilateral climate cooperation, CCXG, UNFCCC)

OPPORTUNITIES IN THE PARIS & EU POLICY CYCLES





Thank you!

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