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Enhancing NDCs 3.0: The Role of Carbon Markets in Emission Reductions and Removals

12 November 2024 from 11:30-13:00 AZT @ UNFCCC Side-Event

Chair: Prof. Simone Borghesi, EUI, Uni of Siena & EAERE

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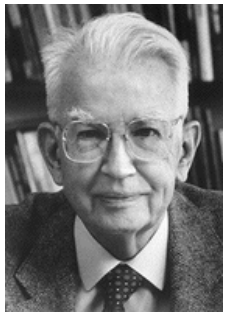
Collaborative Observatory for Assessment of the EU ETS



- **Duration**: 01 Jan. 2023 - 31 Dec. 2025
- **Budget**: € 1.358.490 (EU cofunding: 60%)
- **Objective**: Support EU and national policymakers in implementing & developing the EU ETS, including its integration with other carbon markets.
- **Ambition**: create an established global observatory of carbon markets at EUI
  - https://lifecoase.eui.eu

LIFE COASE is co-financed by the EU LIFE Programme of the European Commission

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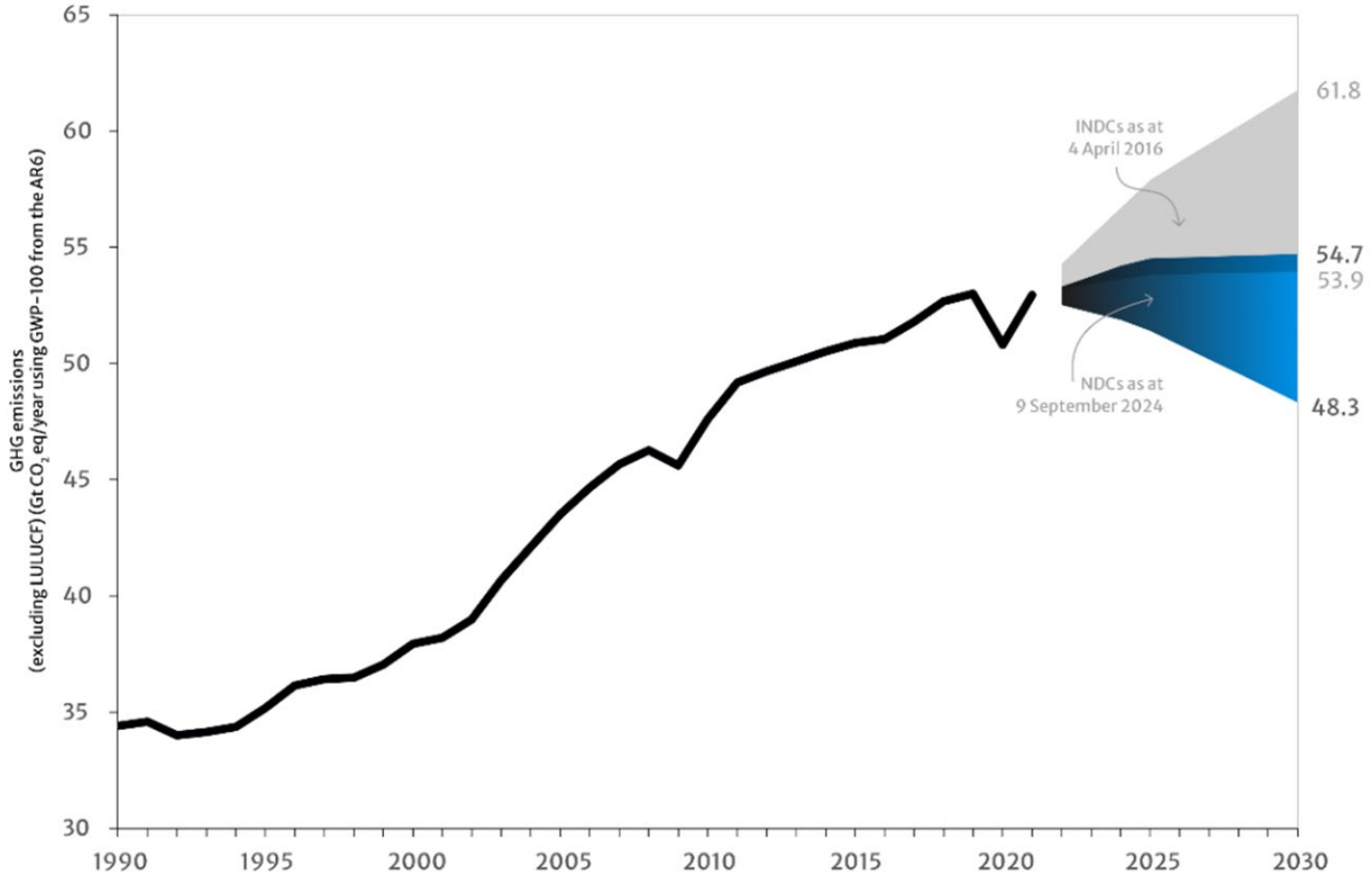
Introduction

If current NDCs are fully implemented:

- Emissions peak before 2030.
- In 2030, emissions will be 49.8% higher than in 1990.

NDC targets depend on conditional elements (increased finance, technology transfer, cooperation, carbon sink capacities, etc.).

Projected range and progression of emission levels according to nationally determined contributions



Source: UNFCCC (2024), NDC Synthesis Report

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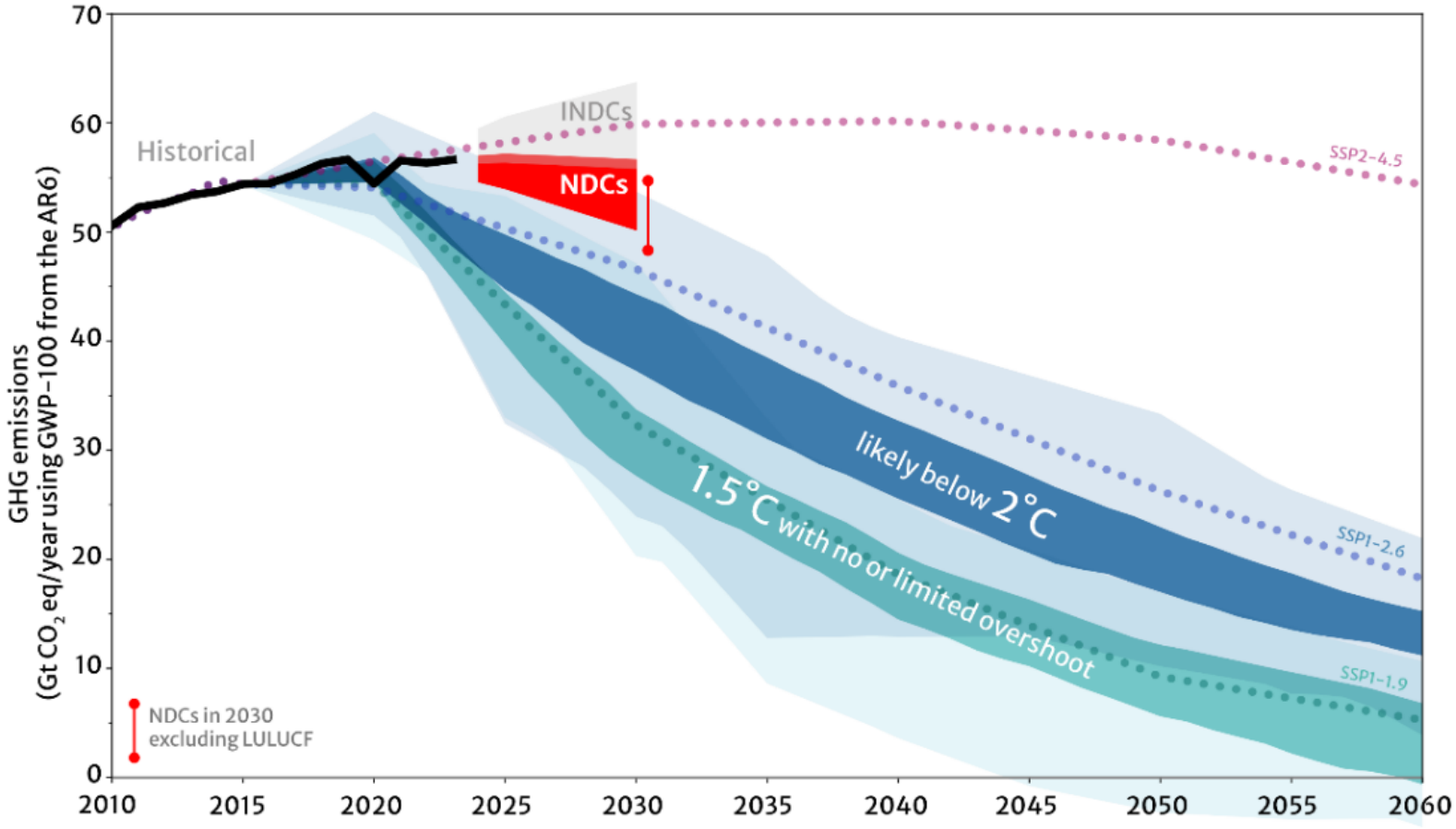
Current NDCs are insufficient to reach the goals of the Paris Agreement.

Countries need to drastically update the level of ambition and control their emission trajectories.

Comparison of scenarios assessed in the Intergovernmental Panel on Climate Change Sixth Assessment Report with projected total and per capita global emissions according to nationally determined contributions



Source: UNFCCC (2024), NDC Synthesis Report

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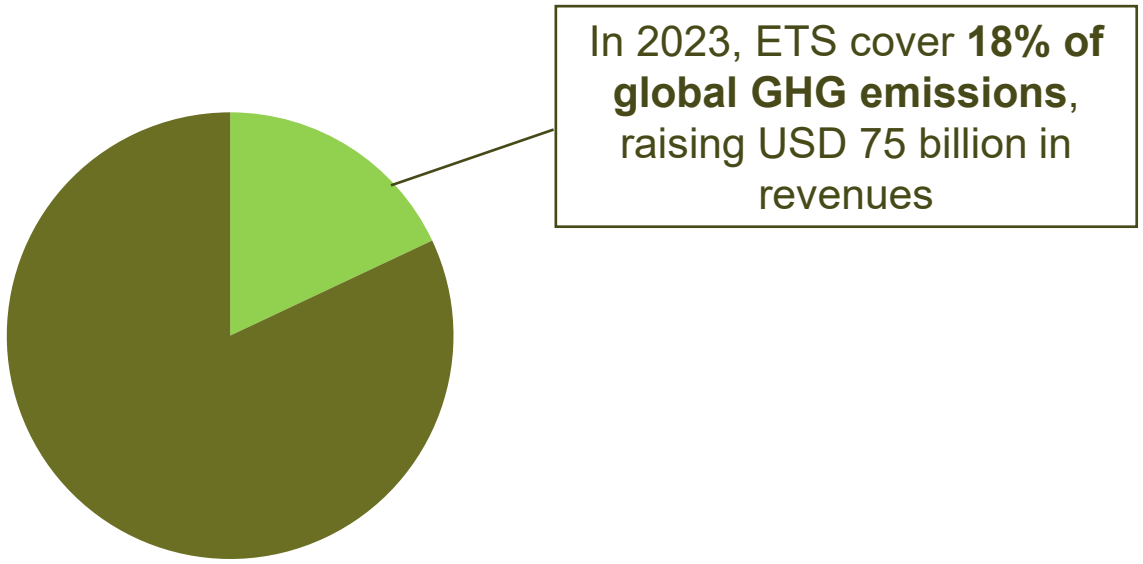
The potential of carbon markets

ETS are increasingly important climate polices. **How can they raise ambition?**

- **Domestically**: (1) *Policy stringency,* (2) *Policy mix considerations,* (3) *Expansion to new sectors,* (4) *Integration of carbon removals.*
- **Internationally**: (1) *Expansion to emerging and developing economies,* (2) *Cooperative approaches.*



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1. Policy stringency (in the EU ETS)

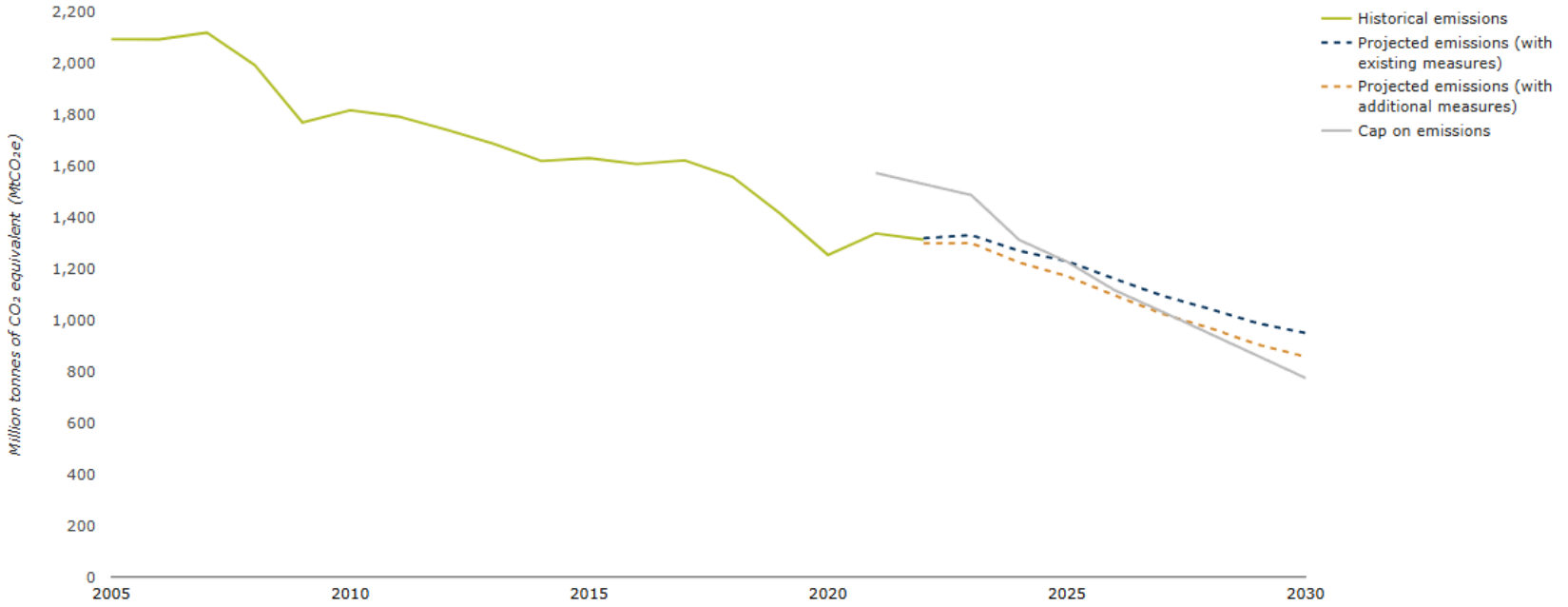
Recent reforms to <u>increase stringency</u>:

- **Cap** to zero by around 2040.
- Higher intake rate and invalidation of allowances in the **MSR**.
- Transition from free allocation to **CBAM**.

<u>Barriers to further reforms</u>:

- Resulting **high carbon prices** raise concerns over competitiveness and policy acceptability.

Figure 1. Historical and projected emissions from stationary installations covered by the EU Emissions Trading System in the European Economic Area



Source: EEA (2023). Greenhouse gas emissions under the EU Emissions Trading System

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Policy mix considerations (in the EU ETS)

1. Need for ETS complementary policies:

- A high carbon price is necessary to fully internalise GHG emission externalities.
- Rather than lowering ambition in the ETS, complementary policies at EU and national level are needed to ensure competitiveness and fairness (R&D, technology infrastructure, SCF).

2. Need for better understanding of interaction effects:

- Overlapping policies produce interactions that lead to different economic outcomes *(NZCMPD policy brief).*
- Interaction effects between the EU ETS, ETS2 and ESR should be further explored to ensure effectiveness.

3. Need for streamlined emission reduction incentives:

- Firms' innovation expenditures are positively correlated with perceptions on the consistency of the policy mix (Rogge and Schleich, 2018).
- Counterproductive regulation, such as current energy taxation and subsidies, should be streamlined to reinforce climate goals.

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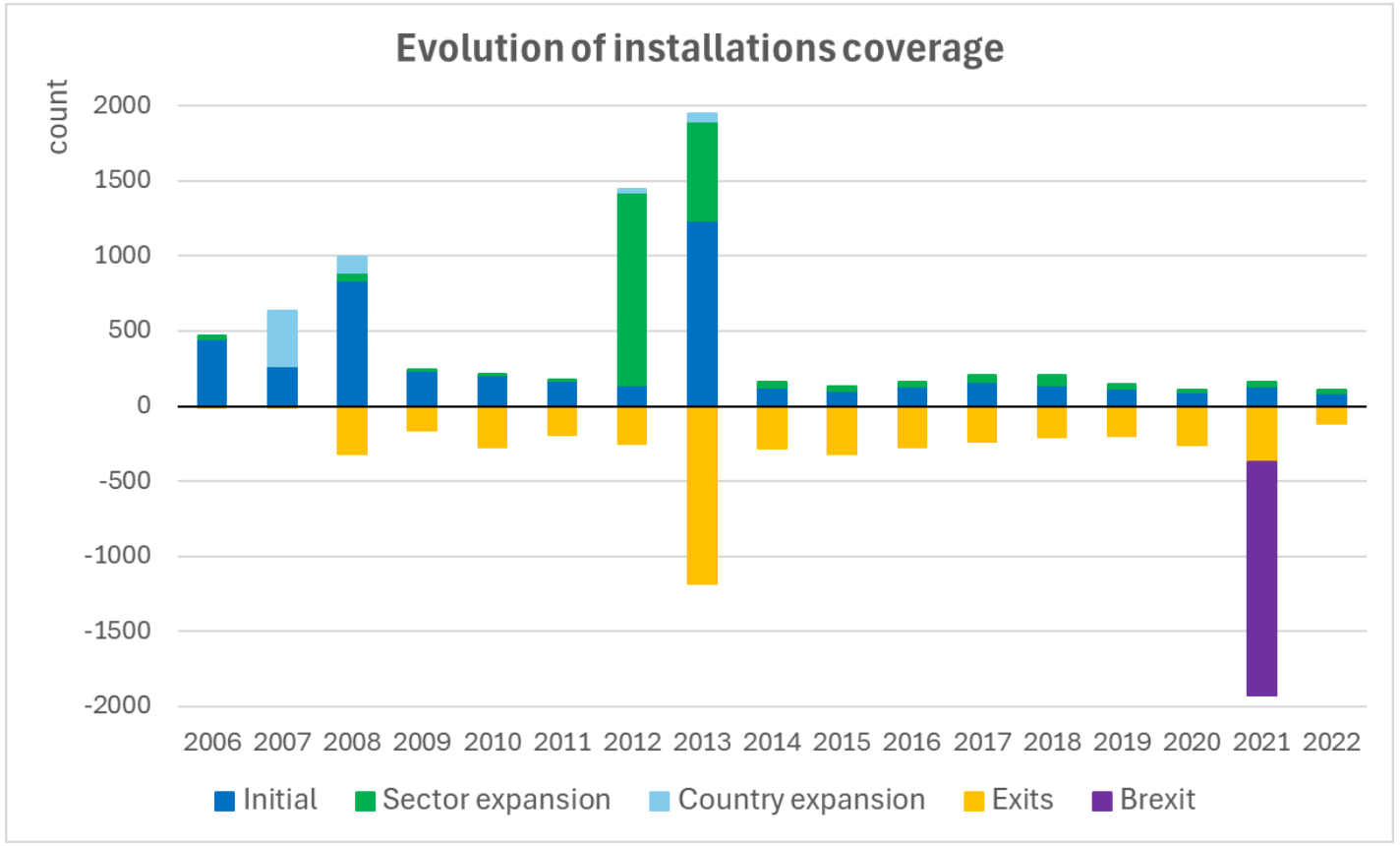
EU ETS expansion to new sectors

EU ETS can expand to additional countries and sectors.

Largest sector expansion since 2005 to buildings and transport sectors via separate EU ETS2.

Efficiency considerations suggest merging of ETS1 and ETS2 to reach a uniform allowance price.

In practice, administrative burden, adverse competitiveness effects, and initial "teething problems" justify separate system in the first stage.



Source: EUI (2024), EU Emissions Trading System Installations Entries and Exits

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EU ETS Expansion to Agriculture

Is the EU ETS the right policy instrument to reduce emissions in stagnating **agri-food sector**?

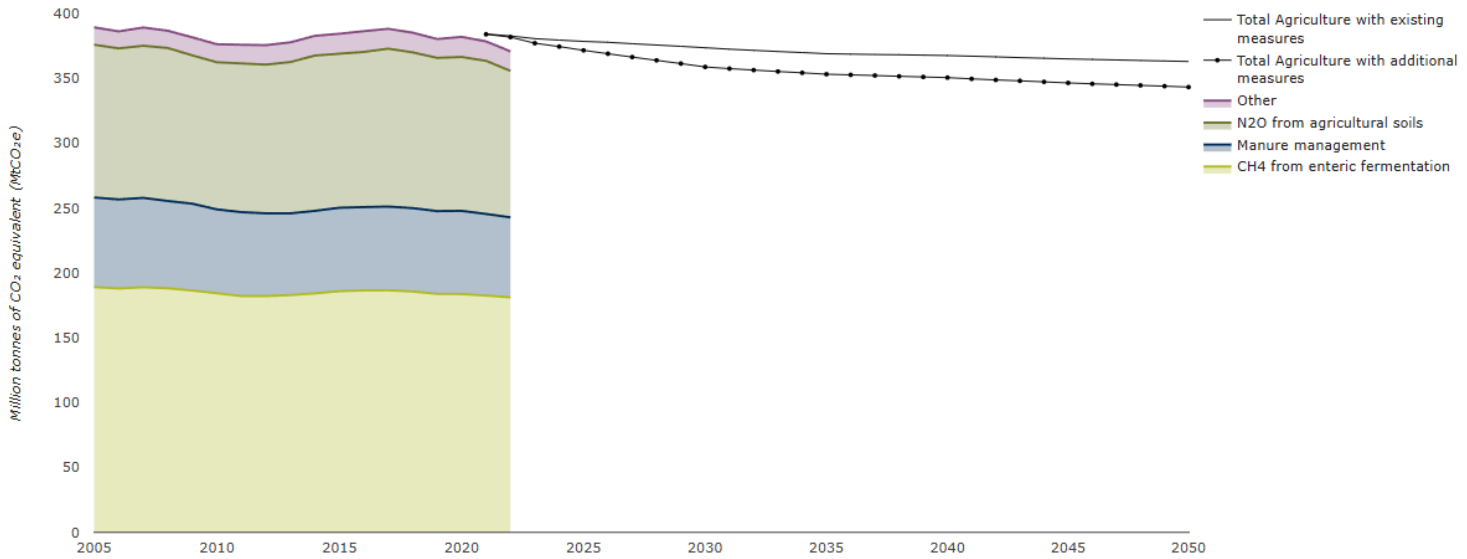
Hurdels include:

Data availability, feasibility and high costs of MRV

Public acceptability

Any measure needs to consider the whole value chain and ensure stakeholder involvement.

Figure 1. EU agricultural emissions by source and projected emissions



Source: EEA (2023). Greenhouse gas emissions from agriculture in Europe.

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Integrating carbon removals

State-of-play:

- NZ ETS: allowances can be generated by non-government actors in the forestry sector
- UK ETS: the UK signalled its intention to include engineered removals in the ETS in the future
- The EU is also considering the option of including engineered removals in the EU ETS


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POLICY BRIEF

LIFE COASE – Collaborative Observatory for the Assessment of the EU ETS

State-of-play in international carbon markets in 2024

Highlights

- Compliance carbon markets continue to be at the core of global climate mitigation efforts and raised a record USD 74 billion in revenues in 2023. In 2024, 36 Emission Trading Systems (ETSs) are in force, covering approximately 18% of global emissions. In addition, 22 ETSs are being developed or considered. Japan, Canada, Brazil, India, and Türkiye, for example, are taking important steps towards launching new ETSs.
- Major compliance markets underwent significant reforms in the past year to align them with climate- or carbon-neutrality commitments or to cover new emitters. Sector expansion and possible integration of removals are two emerging themes in key systems.
- Article 6 of the Paris Agreement establishes different market mechanisms that countries can use to cooperate in achieving their climate targets by trading emission reductions or removals with each other.

Issue 2024/15

Authors

Baran Doda, Adelphi; Theresa Wildgrube, Adelphi; Simone Borghesi, EUI; Albert Ferrari, EUI; Lea Heinrich, EUI;

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Some academic studies suggest that integrating CDR into the ETS could support emissions reduction and removal.

- Architecture is already in place.
- Could alleviate liquidity challenges.

But many concerns remain:

- Mitigation deterrence (regardless of the instrument).
- Impact of CDR integration on ETS integrity.
- Anticipated price discrepancy between the EU ETS and the CDR costs.
- Liability requirements in case of a reversal.

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Sources: IPCC AR6 WGIIII; LIFE COASE 2024

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Policy Recommendations:

- Moving from net targets to **3 targets** for gross GHG reductions, land-based sequestration, and permanent CDR to avoid mitigation deterrence.

- Establishing an **independent body** to ensure the quantity and quality of CDR in circulation, warrants further exploration.

- **Assessing alternatives** or complementary options under consideration, including CDR purchase obligation for specific activities and public procurement.

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Sources: IPCC AR6 WGIIII; LIFE COASE 2024

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Conclusion

There are still many ways to step up NDC targets with carbon pricing.

Domestically, (the EU) ETS can

- Further increase **policy stringency.**
- Increase the efficiency of the overall **policy mix.**
- Expand to **new sectors** (even, if any extension should be assessed carefully).
- Integrate **carbon removals** to incentivise deployment of removal technologies (while ensuring that mitigation remains the priority).

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Thank you!

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