



Certifying soil carbon removals

A soil-focussed assessment of the proposal for the European Framework for Carbon Removal Certification

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Scrubbing the Skies Webinar

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Introduction, objective

- ▶ **Introduce proposal** by European Commission on a framework for carbon removal certification
- ▶ **Highlight and discuss risks** related to certifying soil carbon removals
- ▶ **Context of our work:** Joint research project by Öko-Institut and Ecologic Institute für German Environment Agency (“Nature-based solutions: market-based instruments to support climate-friendly soil management”)
 - ▶ Paper on potentials of nature-based solutions ([Reise et al. 2022](#))
 - ▶ Paper and factsheets on role of soils in climate mitigation ([Freluh-Larsen et al. 2022](#))
 - ▶ Paper assessing the proposed EU Framework for carbon removal certification ([McDonald et al. 2023](#))
 - ▶ Upcoming paper on challenges related to funding climate-friendly soil management (Siemons et al. 2023)

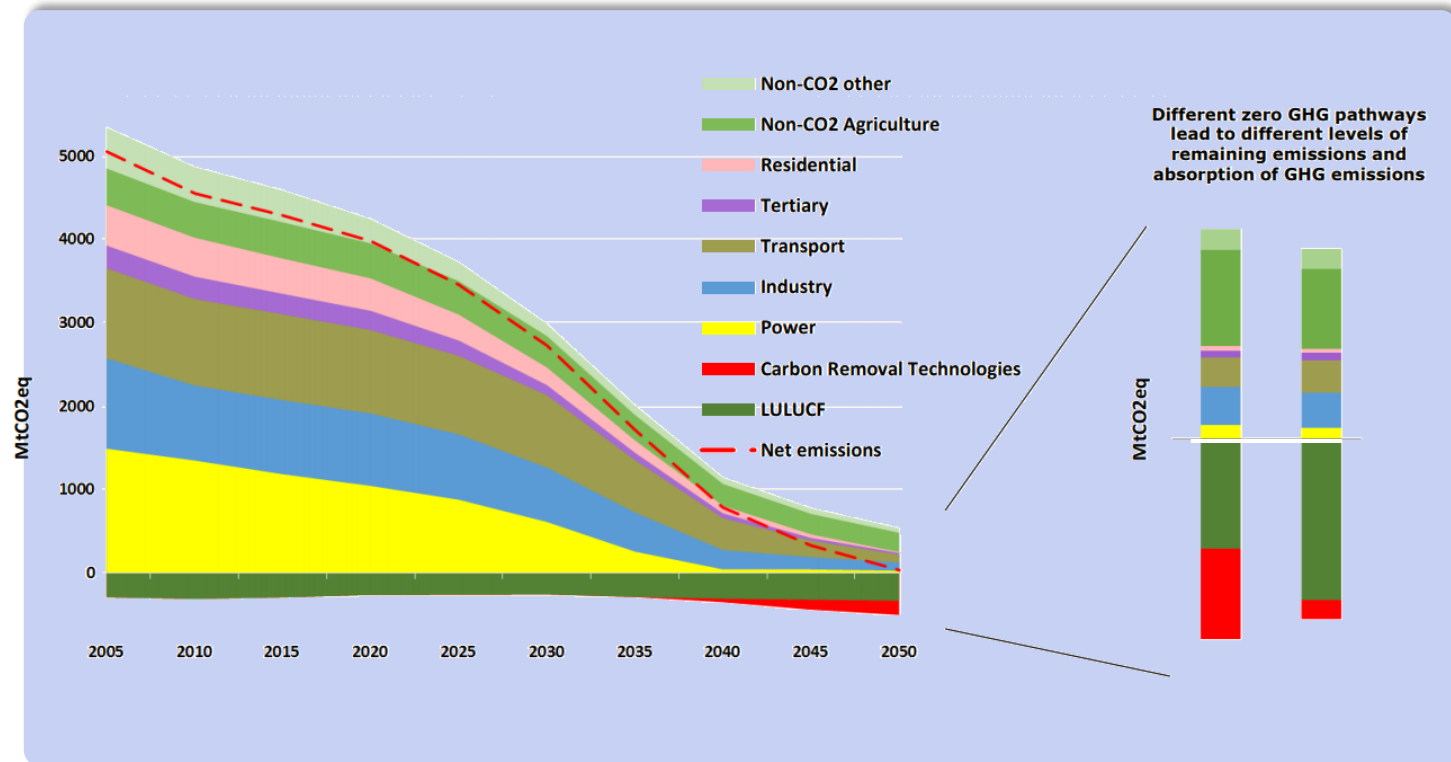
EU policy context

Overarching climate targets

- ▶ Paris agreement: limit to 1.5°C
- ▶ EU Climate Law: net zero GHGs by 2050 (in 2021)

Need for carbon removals

- ▶ Short-term: need increased removals to meet 1.5°C
- ▶ Medium and long-term: Need removals with **biogenic storage** and in **geological storage** to achieve net zero



Source: Clean planet for all, 2018

EU policy context cont.

- ▶ **Emissions are pretty well-covered**
 - ▶ (Emissions trading scheme covers large emitters; Effort Sharing Regulation covers non-ETS sector emissions)
 - ▶ And emissions are falling
- ▶ **Removals: a gap**
 - ▶ There are country and EU targets for nature-based solutions (in the LULUCF regulation).
 - ▶ But lack of incentives for *individual action* on removals with **biogenic storage**.
 - ▶ And lack of policy incentives for **removals with geologic storage**.
- ▶ **Growth of private (voluntary carbon) markets for removals:** unregulated, variable quality



EU Carbon Removals Certification Framework (proposal)

- ▶ **Objective:** Increase removals through certification -> by improving and streamlining the certification of removals, supporting market development (trust, transparency) and other uses
- ▶ **Removals scope:** Biogenic carbon pools (carbon farming), geologic carbon pools ('technical' removals), carbon storage products
- ▶ **'Use' of certified removals:** Not specified: currently, policy focuses on supply of removals, not demand – this is an issue; we focus on riskiest use: offsets.

1. Develop removals criteria and methods

- ▶ Establishes Q.U.A.L.I.T.Y criteria for removals (Q.Uantification, A.dditionality and b.aselines, L.ong-term storage, s.ustainability)
- ▶ Empowers EU Commission to develop removals methodologies

2. Governance

- ▶ Establishes removals certification methodologies
- ▶ for recognising compliance of removals with Q.U.A.L.I.T.Y criteria (certification)
- ▶ for Commission recognition of private and public certification schemes

Under development:

- Commission proposal currently being discussed by **EU legislative bodies** (Parliament and EU Council of Ministers)
- **Expert Group** to independently develop methodologies

Soils removals

Mitigation potential: Currently, soils are a net source of emissions 64Mt CO₂e/year

Could be a net remover: 71 - 115Mt CO₂e (16-26% of annual EU agricultural emissions)

Soil removal actions: land use change measures (e.g., agroforestry); management change through agronomic measures on croplands and grasslands (e.g., cover crops, grassland management, reduced soil compaction...)

Challenges for certification

- ▶ Tricky and costly to measure mitigation impact or account for leakage (**Quantification**)
- ▶ Hard to assess additionality (**Additionality**)
- ▶ Risk of reversals – non-permanence (**Long-lasting?**)
- ▶ Soils important for multiple societal objectives, e.g. biodiversity - climate-friendly measures can pose risks (**Sustainability**)

Carbon Removal Certification Mechanism aims to address each of these challenges – but a number of issues.



Quantification

Challenges

- ▶ related to measurement: high heterogeneity of soils, sampling costly
- ▶ related to modelling: slow soil carbon sequestration rates, limited individual soil carbon data, setting robust baselines and accounting for leakage is tricky

Overestimating soil carbon removals undermines effectiveness of funding/environmental integrity of funding mechanism if usable for offsetting

Weaknesses of proposed COM approach

- ▶ No reference to principle of conservativeness
- ▶ Proposed methodology for setting baselines (standard performance of comparable activities) risks to dilute ambition
- ▶ Mixing of carbon removals and emission reductions

Additionality

Challenges

- ▶ Proving the counterfactual
- ▶ Consideration of existing policies and incentives (EU Common Agriculture Policy)
- ▶ Complex interplay of stakeholders and factors in the land sector

Non-additionality undermines effectiveness of funding/integrity of funding mechanism if usable for offsetting

Weaknesses of proposed COM approach

- ▶ Standardised baseline related to standard performance of comparable activities → risk of adverse selection
- ▶ Individual additionality assessments in case of project-specific baselines → details lacking

Permanence

Challenges

- ▶ Tenure rights, reluctance to pass on burdens to future generations → long-term carbon storage in soils cannot be guaranteed (while mitigation activities need to be permanently sustained to preserve soil stocks)

Non-permanence undermines effectiveness of funding/integrity of funding mechanism if usable for offsetting

Weaknesses of proposed COM approach

- ▶ No obligation to ensure long-term storage (not precisely defined)
- ▶ For temporary certificates, no mechanism for replacing expired certificates (risk if used for offsetting)
- ▶ Liability mechanisms proposed for carbon farming have pitfalls
- ▶ Certification of activities that store carbon for very short time periods not legally excluded

Sustainability

Challenges

- ▶ Climate-friendly soil management actions have broader impacts – not just mitigation, also e.g. adaptation, biodiversity, water use/quality, farmer incomes, ...
- ▶ Climate-friendly soil management must (also) deliver sustainable development benefits

Not accounting for environmental/social impacts risks to cause environmental/social harm and misses chance to realise wider positive impacts

Weaknesses of proposed COM approach

- ▶ Proposed sustainability criteria are vague and have no regulatory effect
- ▶ Net-positive sustainability impact is not required → higher level of ambition needed for minimum sustainability requirements
- ▶ Social impacts and human health are not explicitly considered; toxic effects are missing in criteria
- ▶ Quantitative monitoring of impacts and stakeholder involvement not required

Concluding comments

- ▶ Clarify uses of removal units from the CRCF – exclude offsetting!
- ▶ Instead of carbon crediting:
 - ▶ Funding for nature: Provide financial support to good practices by farmers and landowners that deliver multiple environmental, social and economic benefits
 - ▶ Use action-based payments as incentives, use results-based payments for contribution claims
 - ▶ Gradually strengthen regulation: prohibit or tax unsustainable practices
 - ▶ Use CRCF certificates as labels for high quality removals (under the condition that the criteria will be strengthened)
- ▶ We're interested to hear other views: What are experiences from other countries with funding or crediting carbon farming?

Thanks! Any more Questions?

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