



EU Regulation on the certification of permanent carbon removals, **carbon farming** and carbon storage in products (CRCF Regulation)

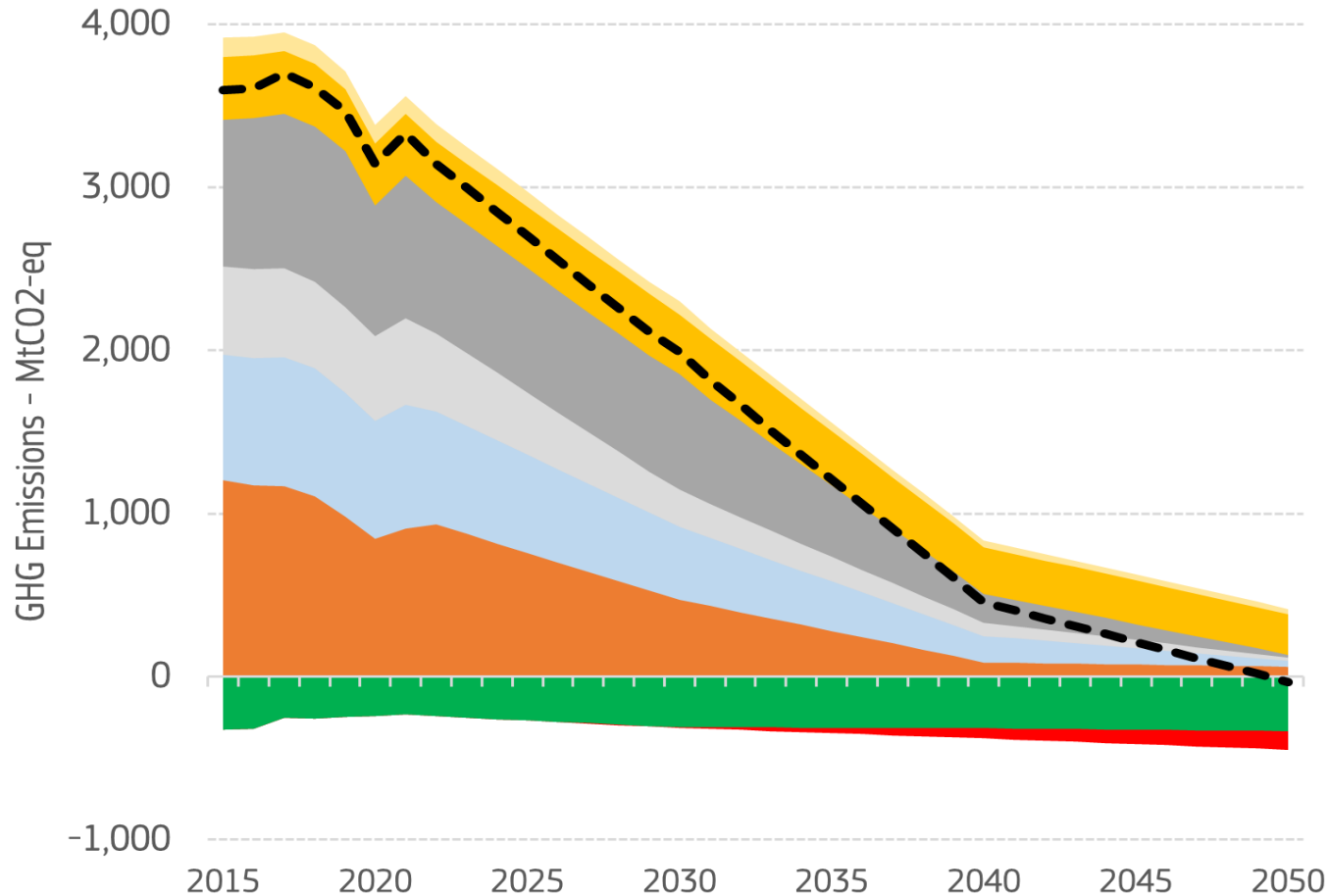
LIFE Soils Platform

Frida SUND FALKEVIK, 10th April 2024

DG CLIMA Unit C3: Land economy and carbon removals

Towards climate neutrality

Historical and projected sectoral greenhouse gas emissions in the period 2015-2050

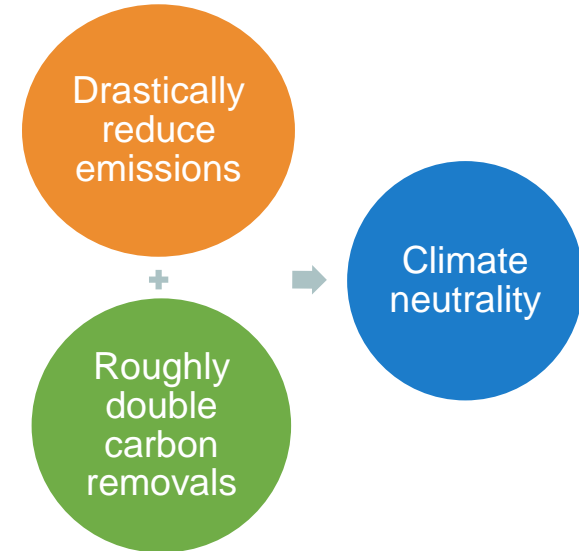


*Excluding non-BECCS industrial removals

**Including bioenergy with carbon capture and storage (BECCS)

LULUCF
310Mt by
2030

- Industrial removals
- LULUCF
- Waste
- Agriculture
- Transport
- Buildings
- Industry*
- Energy Supply**
- Net GHG emissions



Rationale for the CRCF Regulation

3 KEY PROBLEMS

- Many stakeholders **do not trust** voluntary carbon removal certification
- It is difficult to **assess and compare** the quality of different carbon removals
- Carbon removal operators face **Monitoring, Reporting, Verification (MRV) barriers**



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Investor group bans carbon removal from CO2 reduction plans

Reuters

LONDON, Jan 31 (Reuters) - An investor group committed to climate change and controlling \$11 trillion in assets has banned members from counting carbon removal schemes towards their emissions reduction targets before 2030, amid increasing scrutiny of the fast-growing market for carbon offsets.

Key elements of the CRCF Regulation

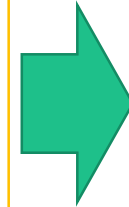
Two main pillars

Quality criteria for EU-based activities

- Quantification
- Additionality
- Long-term storage
- Sustainability

Certification rules

- Third party verification
- Certification schemes + bodies
- CRCF registry



EU certification methodologies

Operationalising the quality criteria for the different carbon removal activities



PERMANENT
CARBON
REMOVALS



CARBON
FARMING



CARBON
STORAGE IN
PRODUCTS

Commission to be advised by the
EU Expert Group on Carbon Removals

Carbon farming (examples)

LULUCF
310Mt by
2030



Use of **conservation tillage, catch crops, cover crops** and increasing **landscape features**



Agroforestry and other forms of mixed farming



Restoration, rewetting and conservation of **peatlands and wetlands**



Precision farming and more efficient use of fertilizers

By 31 July 2026, the Commission should review the inclusion of **livestock emissions** in the scope of the Regulation



Forest Management and Reforestation according to ecological principles

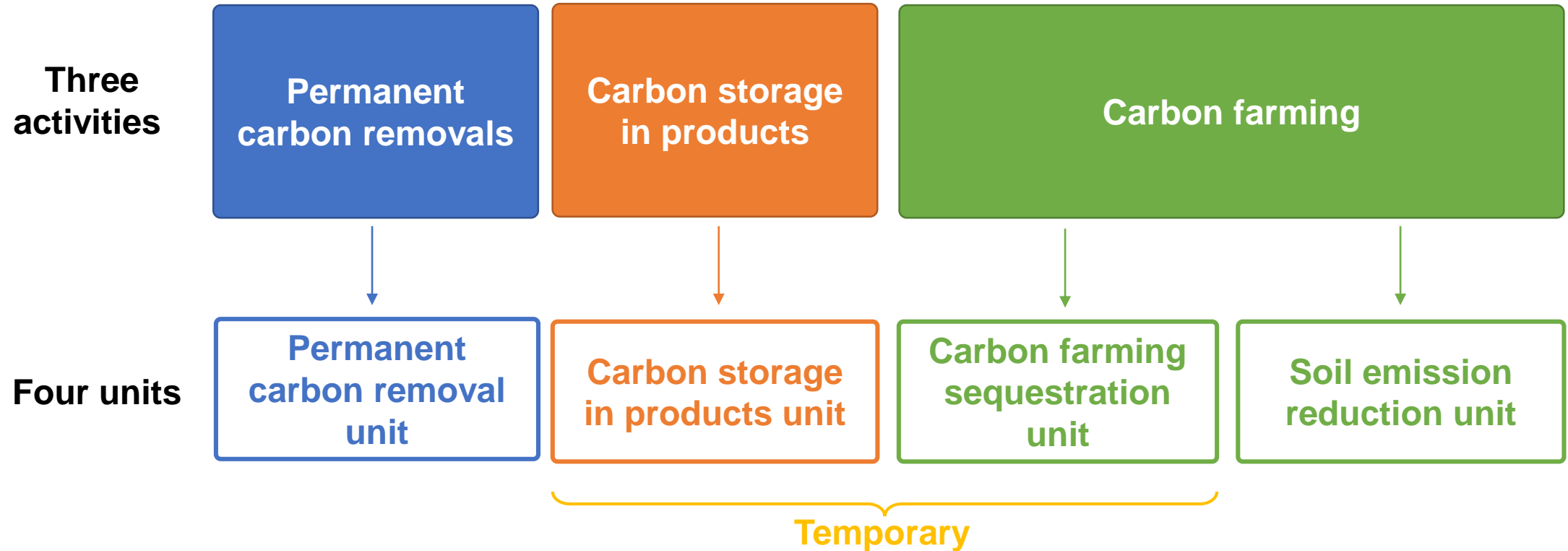


Blue carbon: coastal wetlands

SML

FML

Overall CRCF architecture



EU certification methodologies

The EU quality criteria will be operationalized through **EU certification methodologies** to be adopted by means of [delegated acts](#), with the assistance of [an Expert Group on carbon removals](#)

Quantification

- Scope, duration, monitoring periods
- Baseline calculation and update
- Total carbon removals / emission reductions
- Associated GHG emissions

Additionality

- Additionality tests in case of activity-specific baseline

Durability

- Monitoring rules
- Liability mechanisms

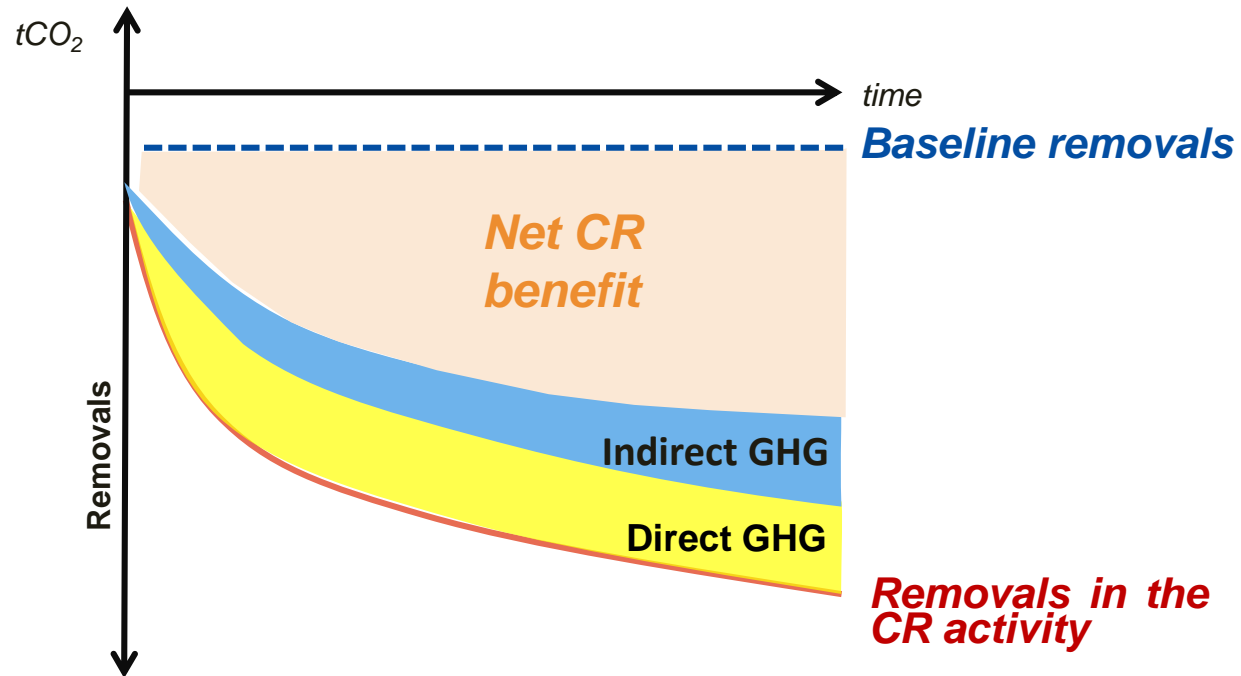
Sustainability

- Minimum sustainability requirements
- Monitoring and reporting of co-benefits

Quantification (measurement)

$$\text{Net CR benefit} = \text{CR baseline} - \text{CR activity} - \text{GHG associated} > 0$$

Illustrative
example



Key feature

- ✓ EU certification methodologies to set out **standardised baselines (SB)**
- ✓ **SB** should reflect the performance of similar operators in comparable regulatory, economic, and environmental circumstances
- ✓ If SB not available, the EU methodologies will include formula to calculate **activity specific baselines**

Quantification (2)

Net carbon benefit formula – Carbon farming

A carbon farming activity shall provide a **temporary net carbon removal benefit** or a **net soil emission reduction benefit**, which shall be quantified using the following formulas:

$$\text{Temporary net carbon removal benefit} = \text{CR}_{\text{baseline}} - \text{CR}_{\text{total}} - \text{GHG}_{\text{associated}} > 0,$$

where:

- (a) $\text{CR}_{\text{baseline}}$ is the carbon removal under the baseline,
- (b) CR_{total} is the total carbon removal of the activity,
- (c) $\text{GHG}_{\text{associated}}$ is the increase in direct and indirect greenhouse gas emissions, over the entire lifecycle of the activity which are due to its implementation, including indirect land use change, calculated, where applicable, in accordance with protocols set forth in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and any further refinement.

$$\text{Net soil emission reduction benefit} = \text{LSE}_{\text{baseline}} - \text{LSE}_{\text{total}} + \text{ASE}_{\text{baseline}} - \text{ASE}_{\text{total}} - \text{GHG}_{\text{associated}} > 0$$

where:

- (a) $\text{LSE}_{\text{baseline}}$ are the LULUCF soil emissions under the baseline;
- (b) $\text{LSE}_{\text{total}}$ are the total LULUCF soil emissions of the activity;
- (c) $\text{ASE}_{\text{baseline}}$ are the agricultural soil emissions under the baseline;
- (d) $\text{ASE}_{\text{total}}$ are the total agricultural soil emissions of the activity;
- (g) $\text{GHG}_{\text{associated}}$ is the increase in direct and indirect greenhouse gas emissions, over the entire lifecycle of the activity which are due to its implementation, including indirect land use change, calculated, where applicable, in accordance with protocols set forth in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and any further refinement.

Monitoring and quantification

Monitoring

Monitoring shall be based on an **appropriate combination of on-site measurements with remote sensing or modelling** according to the rules set out in the certification methodology

With regard to carbon farming activities, where feasible, gather data based on the use of **Tier 3 methodologies** in accordance with the 2006 IPCC guidelines and compatible with national GHG inventories

Quantification

Quantify in a relevant, conservative, accurate, complete, consistent, comparable and transparent manner, in accordance with the latest available scientific evidence.

Account for uncertainties in a conservative manner

Additionality

Two types of additionality shall be demonstrated:

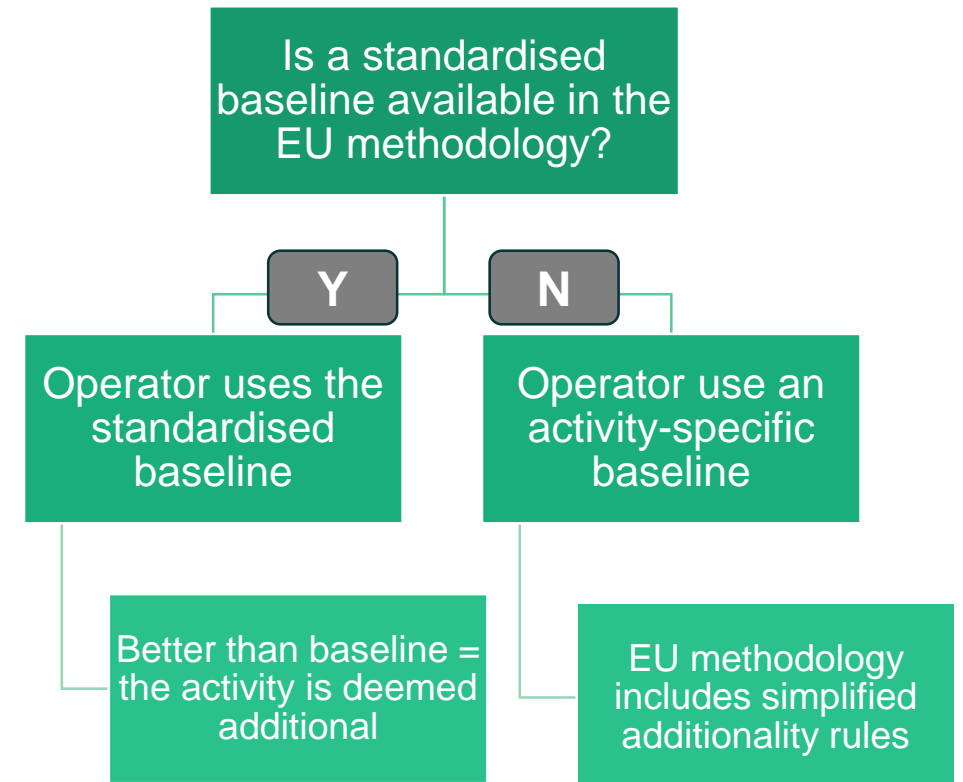
- **Regulatory additionality**

The activity goes **beyond Union and national statutory requirements** at the level of an individual operator;

- **Financial additionality**

The **incentive effect** of the certification is needed for the activity to become financially viable.

Simplified compliance



Sustainability (1)

Mandatory sustainability requirements

- An activity shall not significantly harm the broader **sustainability objectives**
- Compliance with minimum sustainability requirements, consistent (as appropriate) with the Taxonomy Regulation **DNSH technical screening criteria**



a) Climate change mitigation beyond net carbon removal benefit and net soil emission reduction benefit

b) Climate change adaptation

c) Sustainable use and protection of water and marine resources

d) Transition to a circular economy (incl. use of sustainably sourced bio-based materials)

e) Pollution prevention and control

f) Protection and restoration of biodiversity and ecosystems including soil health, as well as avoidance of land degradation

Sustainability (2)

Voluntary co-benefits

- An activity may generate other sustainability co-benefits
- Reporting rules will be defined in the **certification methodologies**
- Those rules should **incentivise as much as possible** the generation of co-benefits (e.g. premium)

Biodiversity co-benefits for carbon farming

- **Carbon farming needs to deliver biodiversity co-benefits**
- Possible use of positive lists to limit administrative burden

Durability (1)

An operator or group of operators shall demonstrate that an activity stores the carbon permanently or aims to store the carbon over the long-term. To this end, they shall be:

-
- subject to **rules to monitor and mitigate** any identified risks of reversal
 - **liable for any reversal** of the carbon captured and stored by an activity

Monitoring rules and liability mechanisms

- **Permanent carbon removals:** Be consistent with the rules and obligations set out in the CCS Directive (2009/31/EC)
- **Carbon permanently chemically bound in products:** Be consistent with the rules pursuant to Article 12(3b) of the EU ETS Directive (2003/87/EC)
- **Carbon farming** and **carbon storage in products:** TBD in certification methodologies

Durability (2)

- **New feature: Temporary carbon removal units**
 - temporary certified units have an expiry date corresponding to the end of the monitoring period
 - if the monitoring period is not renewed or permanent storage is not demonstrated, the units expire, as the stored carbon is considered released back to the atmosphere.
- **Advantages**
 - ✓ Recognize the non-permanence of carbon removals from carbon farming and carbon storage of products
 - ✓ More realistic commitments for operators, lower barriers to uptake
 - ✓ Incentivize durability through prolongation of the monitoring period

Conclusions

The **CRCF Regulation**:

- ❑ aims to speed-up the deployment of **high-quality carbon removals and soil emission reductions** in the EU, while fighting greenwashing and creating trust
- ❑ establishes the first **EU-wide voluntary certification framework** for permanent carbon removals, carbon farming and carbon storage in products
- ❑ sets out **four quality criteria** and the **rules for third-party verification and Union registry**
- ❑ mandates the Commission, assisted by an Expert Group, to develop tailored **EU certification methodologies** for different types of carbon removals activities
- ❑ enables the **access to private and public financing** of carbon removals
- ❑ represents the pre-condition for any possible **future integration** of carbon removals in the post-2030 EU climate policy framework

EC Expert Group on carbon removals

https://climate.ec.europa.eu/eu-action/sustainable-carbon-cycles/expert-group-carbon-removals_en

15-17 April: Meeting on expert group



Agenda:

- Presentation of CRCF Regulation
- Review of verification and certification rules
- Technical assessment of certification options for permanent CR + carbon farming + storage in products

2024 work programme

15-17 April
Expert Group meeting

May-June
Focus group meetings

- Recommendations for certification methodologies

September
Meeting on verification rules

October
Expert Group meeting

- Discussion of draft methodologies

More information:

- CRCF Regulation provisional agreement: [Item9-Provisionalagreement-CFCR_2022-0394COD_EN.pdf \(europa.eu\)](#)
- Press release: [EU-wide certification scheme for carbon removals \(europa.eu\)](#)
- DG CLIMA carbon removal certification page: [Carbon Removal Certification - European Commission \(europa.eu\)](#)
- Expert Group on Carbon Removals: https://climate.ec.europa.eu/eu-action/sustainable-carbon-cycles/expert-group-carbon-removals_en

Thank you!

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