

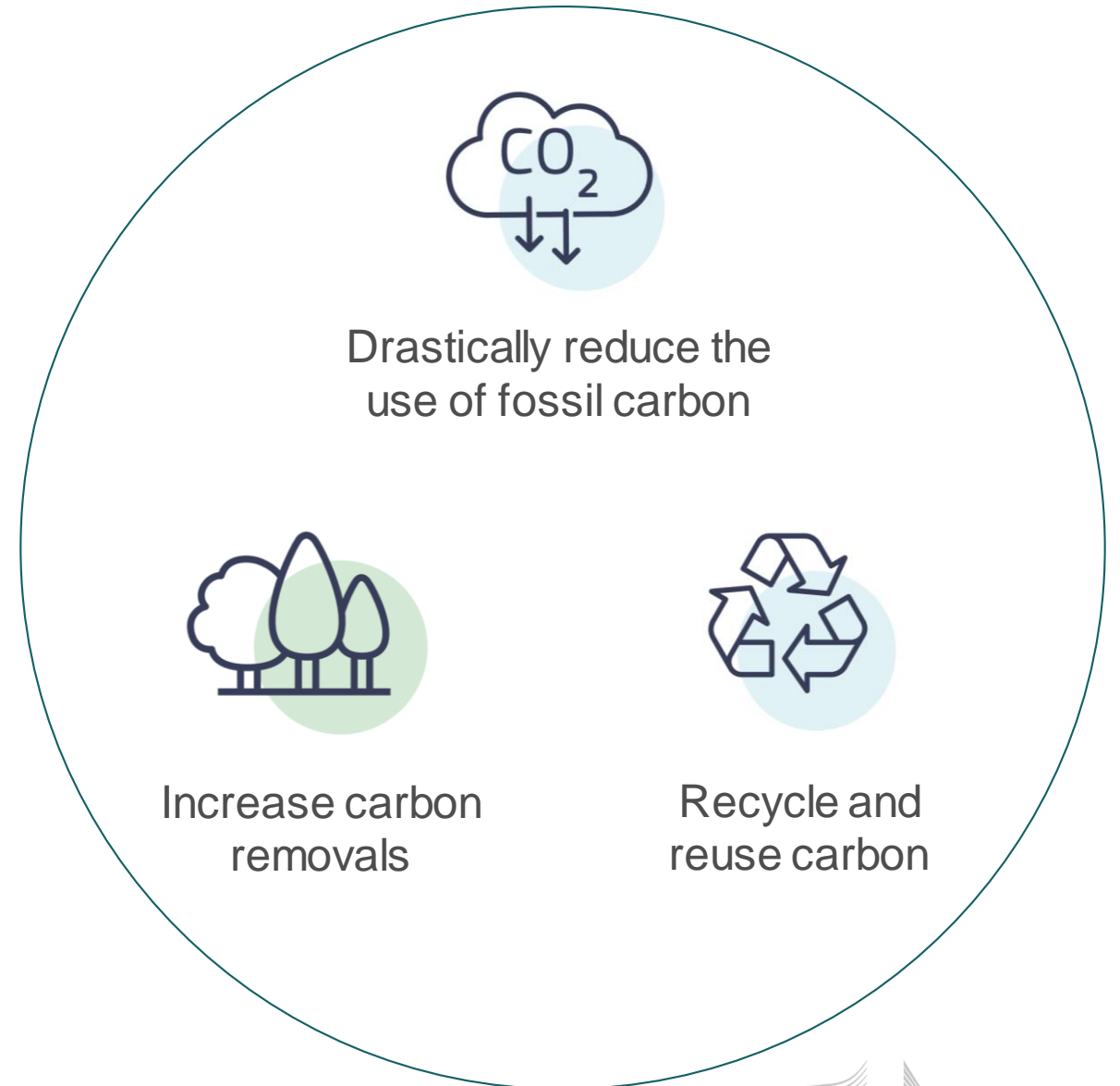


Sustainable Carbon Cycles

EEESC Hearing on sustainable carbon cycles - 21.02.22

Sustainable carbon cycles

To achieve **climate neutrality** at the latest by 2050 and **negative emissions** thereafter, the EU needs to increase carbon removals and establish **sustainable carbon cycles**.





Brussels, 15.12.2021
COM(2021) 800 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT AND THE COUNCIL**

Sustainable Carbon Cycles

{SWD(2021) 450 final} - {SWD(2021) 451 final}

Published 15 December 2021:

**Communication
Sustainable Carbon Cycles**

**Staff Working Document #1
Technical assessment for 2050
Climate Neutrality**

**Staff Working Document #2
Carbon Farming**

Carbon farming



A **green business model** rewarding land managers for improved land management practices, resulting in carbon sequestration in ecosystems and reducing the release of carbon to the atmosphere.

Benefits of carbon farming:



Increased carbon removals



Additional income for land managers



More biodiversity and nature



Increased climate resilience of farm and forest land

Carbon farming - examples



Afforestation and reforestation
according to ecological principles



Targeted conversion of **cropland to fallow**, or of set-aside areas to **permanent grassland**



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**



Blue carbon: coastal wetlands, regenerative aquaculture, marine permaculture

Upscaling carbon farming

Barriers to carbon farming initiatives:

Financial burden (cost of management practices, uncertainty about revenues)

Uncertainty or lack of public trust in the **reliability** of voluntary carbon markets

Concerns around **environmental integrity, additionality** or **permanence**

Unavailability, complexity or high costs of **monitoring, reporting and verification systems**

Insufficiently tailored **training and advisory services**



Technical Guidance Handbook:
“Setting up and implementing result-based
carbon farming mechanisms in the EU”
<https://europa.eu/!VW49yw>

Upscaling carbon farming

Public funding opportunities :

Common Agricultural Policy

- Support to carbon farming practices through eco-schemes or rural development measures (e.g. Commission [list of potential agricultural practices](#))
- EIP-AGRI and new AKIS, supports cooperation and testing of new approaches
- Advisory services, knowledge exchange, training
- Limitations: land eligible to CAP, timeframe, administrative burdens for a robust MRV for carbon credits.

LIFE Programme

- Pilot projects (e.g. three new projects on better monitoring tools)

Cohesion Policy

- Investments into e.g. restoration and conservation of peatland (also Just Transition Fund)
- Cooperation across regions (INTERREG)

State Aid

- Aid for agri-environmental-climate commitments, investments, advisory services, R&D, cooperation
- Result-based carbon farming schemes, incentive payments for forest ecosystem services

Carbon farming

Challenges

By 2028:

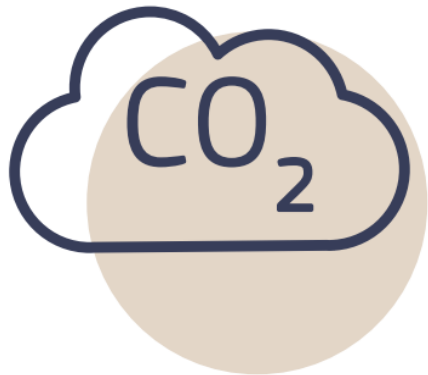
- Access to verified emission and removal data for all land managers

By 2030:

- Contribute to reaching LULUCF target of 310 Mt CO₂eq net removals



Industrial capture, use, transport, and storage of carbon



*In addition to decarbonising its energy system, the EU will also need to **rethink its sourcing of carbon** as feedstock for industrial processes.*

Creating an internal market for the sustainable capture, use, and storage of CO₂:



Replace energy-intensive materials (cement, steel...) with **bio-based materials** which store carbon



Transform CO₂ from a **waste product** to a resource, and use it to produce materials, chemicals and fuels

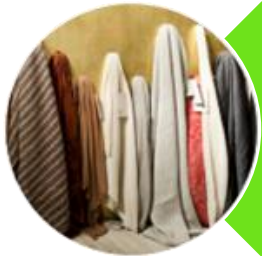


Remove carbon **from the atmosphere**

Sustainable bioeconomy - examples



Bioenergy with carbon capture and storage (BECCS) e.g. Stockholm Exergi's project financed by EU Innovation Fund



Fibre crops (applications: clothes, cosmetics, particle boards, bio-composites, bio-plastics...)



Use of **wood-based construction products** and other carbon-storing building materials

Industrial capture, use and storage - examples



Direct Air Capture, which is eligible for the EU ETS Innovation Fund



Carbon capture and use to produce materials, chemicals and fuels



Carbon capture and storage to mitigate residual emissions and deliver carbon removals

Sustainable capture, use, transport, and storage of carbon

Challenges

By 2028:

- All CO₂ captured, transported, used and stored should be reported and accounted

By 2030:

- 20% of non-fossil carbon used in chemicals and plastics
- 5Mt of industrial carbon removals



Next step:

A regulatory framework for the certification of carbon removals

Conference on Sustainable Carbon Cycles (31 Jan 2022)

Call for Evidence* open until 2 May 2022

Legislative proposal (Q4 2022)

Set **robust requirements** for transparent measurement, monitoring, reporting and verification of the carbon removed from the atmosphere

Ensure a high level of **environmental integrity** and biodiversity protection

Enhance the **uptake** of market-based carbon removal solutions, give prospects to carbon farming and industrial projects that **invest** in carbon removals

Establish an effective **governance framework** for effective, cost-efficient and transparent implementation

Involve **stakeholders** (Call for evidence, conference, expert group)

* Inception Impact Assessment open for feedback; Open Public Consultation.

Links

- Call for Evidence on Carbon Removal Certification [Certification of carbon removals – EU rules \(europa.eu\)](#)
- Watch the recording of the Conference on Sustainable Carbon Cycles, 31 January 2021 [Sustainable Carbon Cycles Conference - About \(b2match.io\)](#)
- Our [webpage](#) and our [press release](#) on the Sustainable Carbon Cycles communication
- Our webpage on [Carbon Farming \(europa.eu\)](#)
- Commission list of potential eco-schemes <https://europa.eu/!yb74nC>
- Study on Carbon Farming: <https://data.europa.eu/doi/10.2834/594818>
- Study on Wood in construction: <https://dx.doi.org/10.2834/421958>
- Legislative proposal on a new Regulation for Land use, forestry, and agriculture [Delivering the European Green Deal | Climate Action \(europa.eu\)](#)

Thank you



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Slide “Sustainable bioeconomy – examples”: picture BECCS, source: <https://www.stockholmexergi.se>; picture timber in construction, source: <https://www.build-in-wood.eu> ; picture fiber crops, source: <http://news.europeanflax.com/>

