



Sustainable Carbon Cycles

DG CLIMA

CDG HORTICULTURE, OLIVES AND SPIRITS

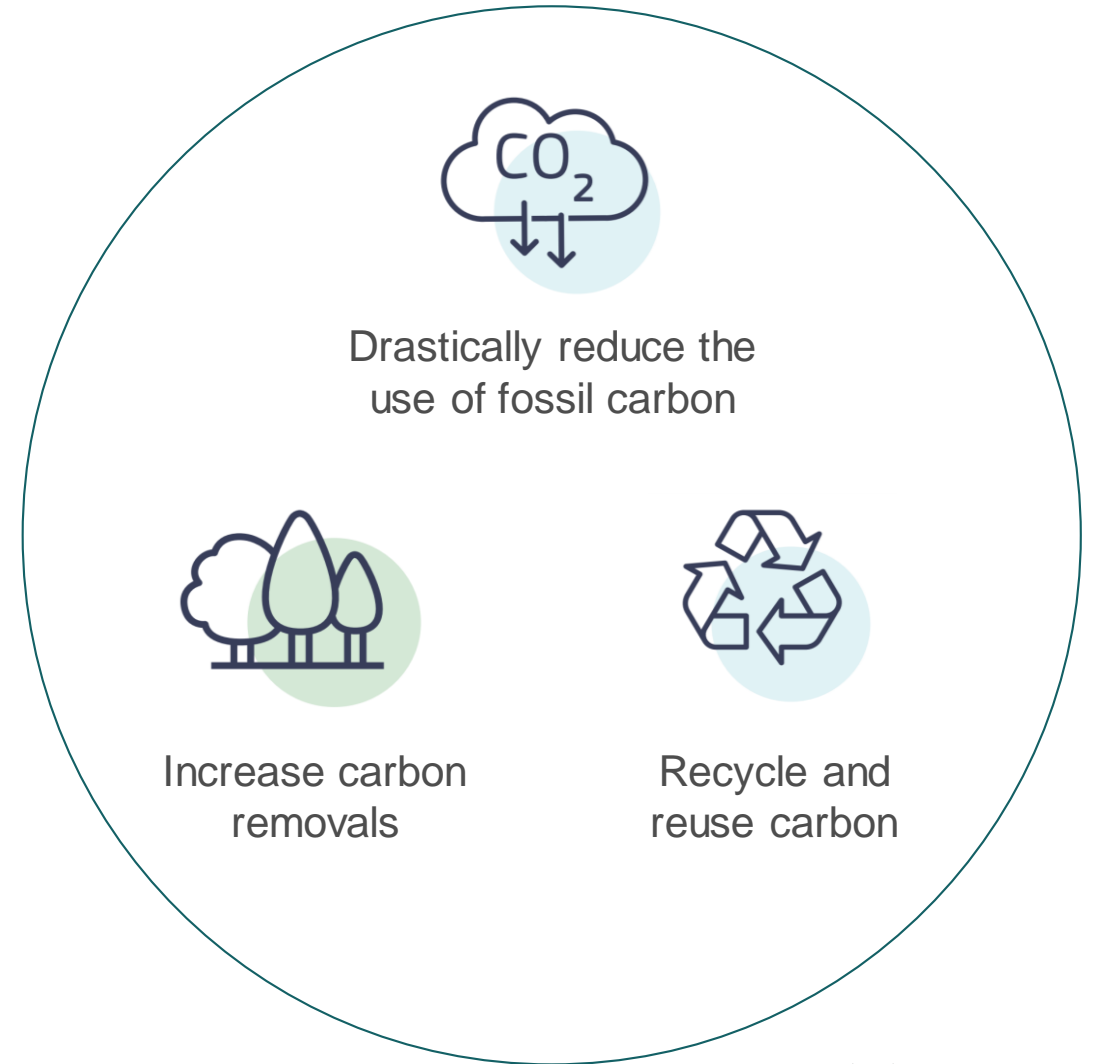
8th April 2022

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**.

Dual opportunity for the **agriculture sector**:

- New business around carbon **sequestration**
- New value chains offering long-term carbon **storage** in bio-based products





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

Sustainable Carbon Cycles

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

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**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:

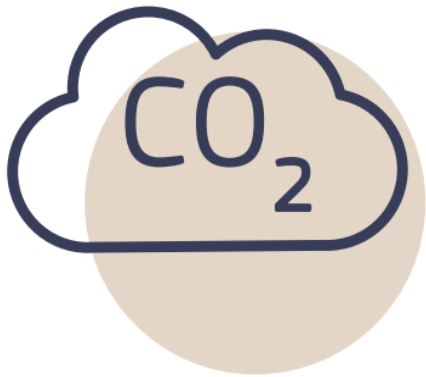
- Access to verified emission and removal data for all land managers

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

Sustainable capture, use, transport, and storage of carbon

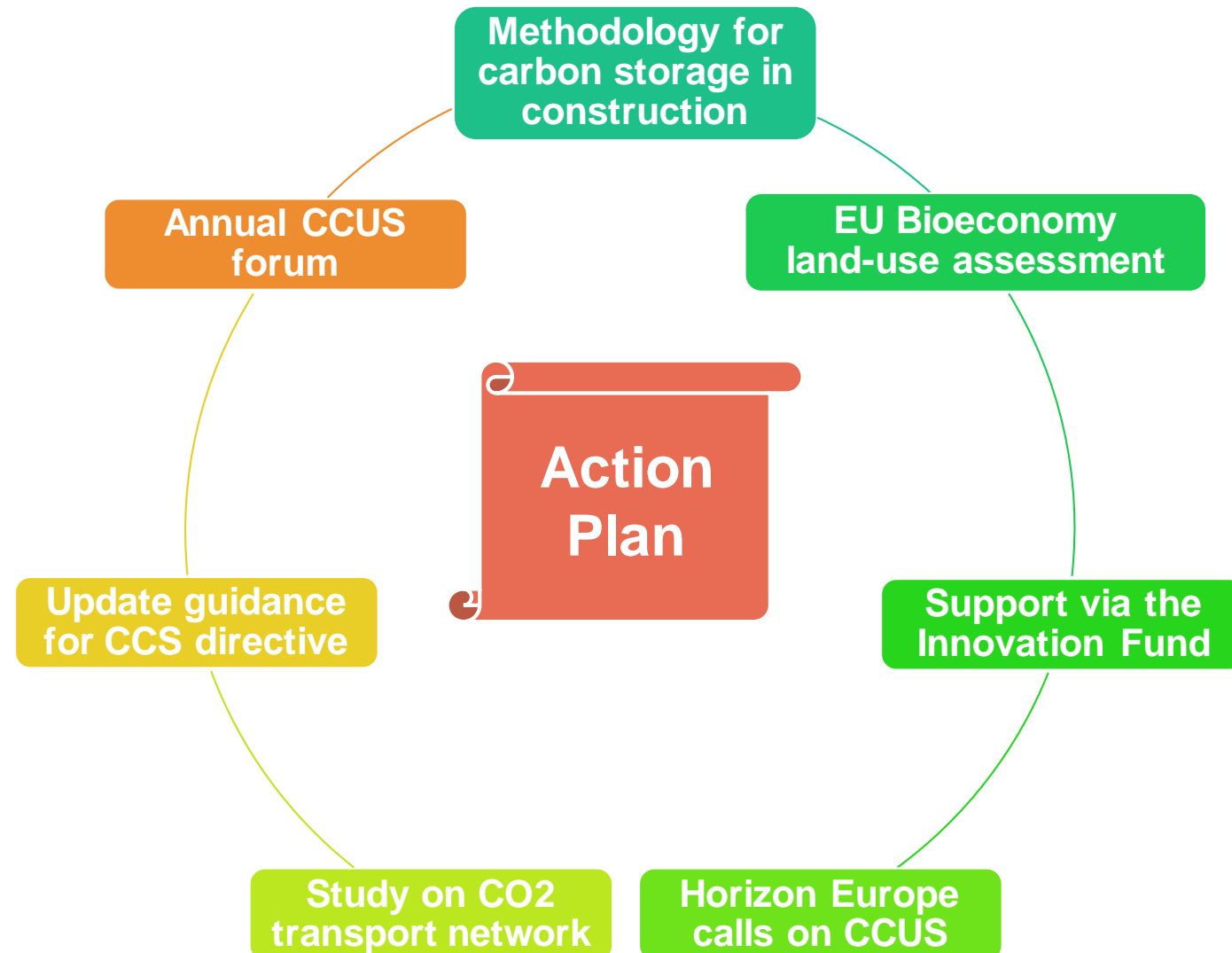
Challenges

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/>