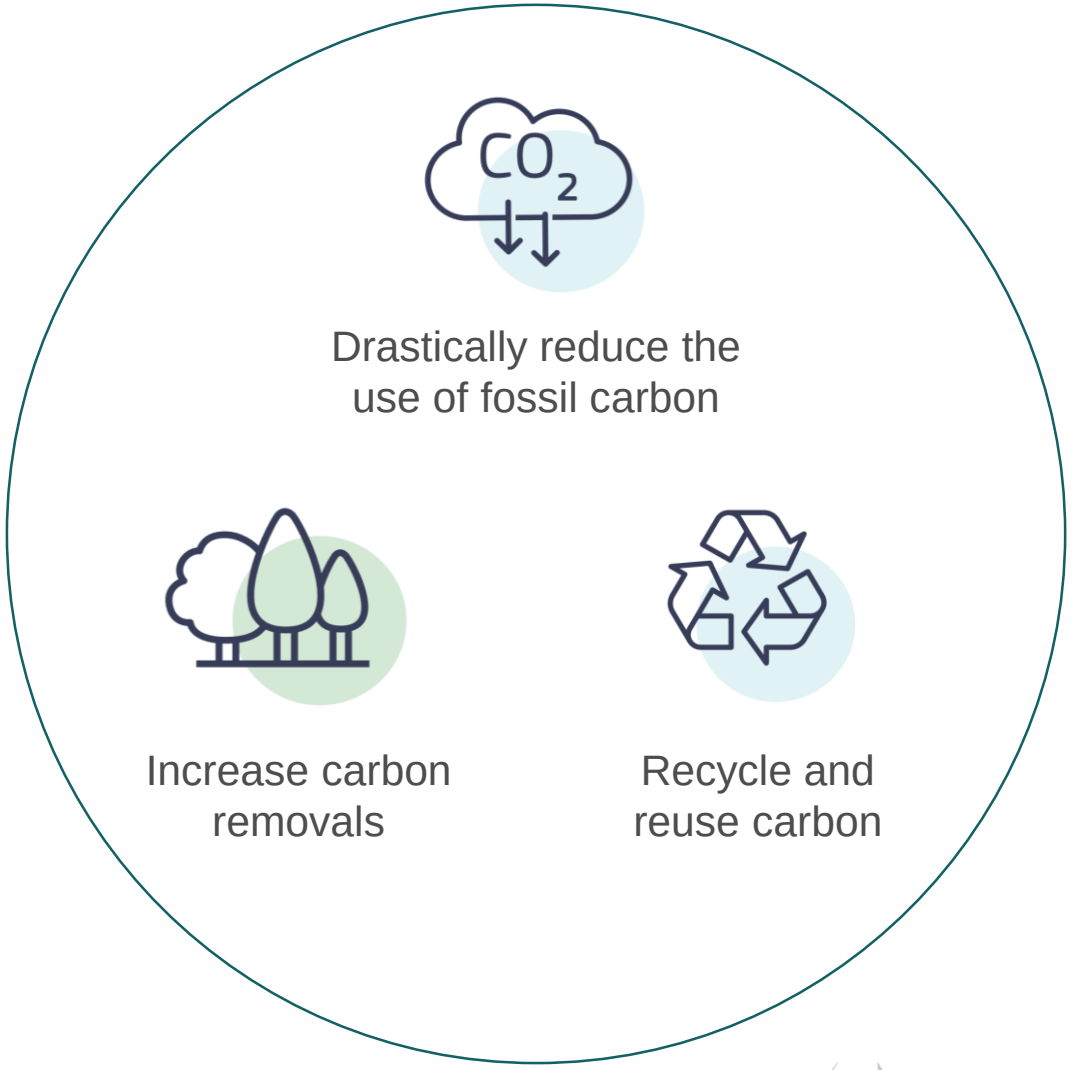
Sustainable Carbon Cycles

8 February 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**.*



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Communication
Sustainable Carbon Cycles

Staff Working Document #1
Technical assessment for 2050 Climate Neutrality

Staff Working Document #2
Carbon Farming

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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

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Carbon farming - examples

Afforestation and reforestation according to ecological principles

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

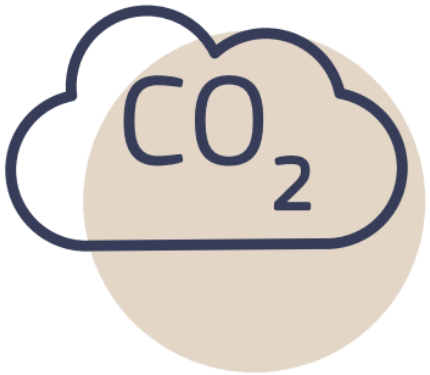
Use of **conservation tillage, catch crops, cover crops** and increasing **landscape features**

Agroforestry and other forms of mixed farming

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

Blue carbon: coastal wetlands, regenerative aquaculture, marine permaculture

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:

Sustainable **bioeconomy**

Recycle carbon and transform CO2 from a waste to a resource

Remove carbon from the atmosphere

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Industrial capture, use and storage - examples

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

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

Carbon capture and use to produce materials, chemicals and fuels

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

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A regulatory framework for the certification of carbon removals

By 2050, both natural ecosystems and industrial solutions should contribute to **removing several hundred million tonnes of CO2 per year** from the atmosphere

EU is **not on track to deliver these quantities**:

- carbon removals in natural ecosystems have been decreasing in recent years
- no significant industrial carbon removals are currently taking place in the EU

There is a **lack of a common EU standard** for the transparent identification of carbon removals.

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A regulatory framework for the certification of carbon removals

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

https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13172-Certification-of-carbon-removals-EU-rules_en

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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/

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