



December 2021

# 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**.



**Drastically reduce**  
the use of fossil carbon



**Increase**  
carbon removals



**Recycle and**  
re-use carbon

## A ROBUST CERTIFICATION SYSTEM TO REWARD CARBON REMOVALS



To scale up **carbon farming** and **industrial solutions** removing carbon from the atmosphere, the Commission **will propose in 2022** an EU regulatory framework for the **certification** of carbon removals.



The certification rules will set **scientifically robust** requirements for transparent measurement, monitoring, reporting and verification of the carbon removed from the atmosphere, ensuring a high level of environmental integrity and biodiversity protection.



The Commission will **involve stakeholders** from the outset, conduct a thorough impact assessment, launch a **call for evidence** to strengthen our understanding of key issues for carbon removals and their accounting and certification, and set up an **expert group** to exchange **best practices on carbon farming**.

# A NEW BUSINESS MODEL FOR LAND MANAGERS

**Sustainable land management and more protected areas** will be critical in achieving the EU's 2050 climate neutrality objective as it will increase the amount of **carbon captured and stored** in plants and soils, resulting in more fertile and resilient land, while contributing to **biodiversity protection**. Land managers will be supported through EU public funding, in particular through the Common Agricultural Policy, and through private investments.



**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



More biodiversity and nature



Increased climate resilience of farm and forest land



Additional income for land managers



## Carbon farming practices



Afforestation and reforestation according to ecological principles



Use of conservation tillage, catch crops and cover crops, such as legumes, rapeseed, rye, and vetch



Restoration, rewetting and conservation of peatlands and wetlands



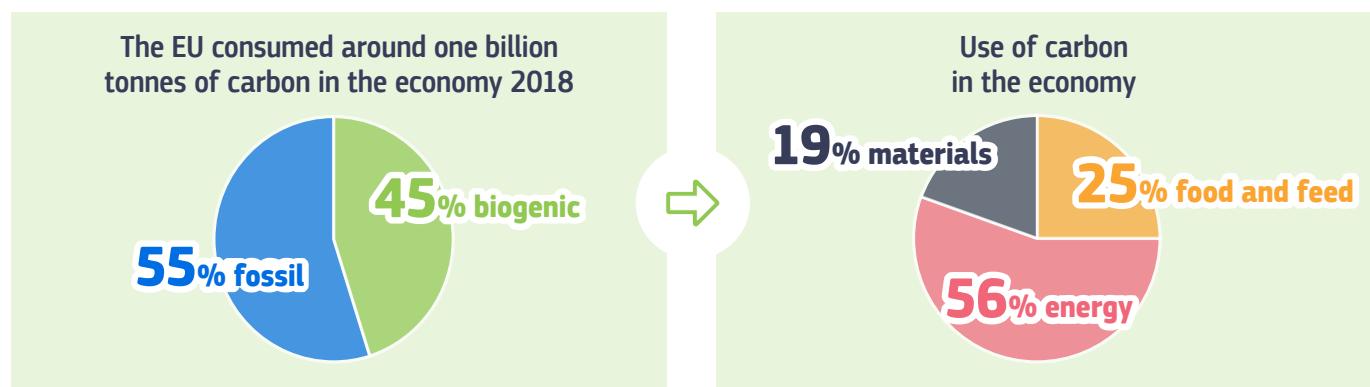
Targeted conversion of cropland to fallow, or of set-aside areas to permanent grassland



Agroforestry and other forms of mixed farming

## SUPPORT A NEW INDUSTRIAL VALUE CHAIN FOR THE SUSTAINABLE CAPTURE, USE, TRANSPORT, AND STORAGE OF CARBON

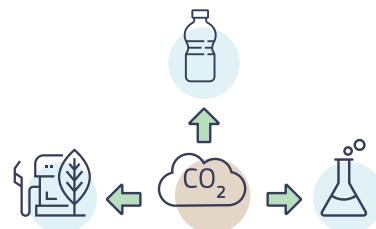
In addition to decarbonising its energy system, the EU will also need to rethink its **sourcing of carbon** as feedstock for industrial processes.



### Creating a market for capture, use, and storage of CO<sub>2</sub>



**Replace energy-intensive materials**, such as cement and steel, with bio-based materials which store carbon for a long period of time.



**Recycle carbon** transforming CO<sub>2</sub> from a waste product to a **resource** and using it as **feedstock** for the production of materials, chemicals and fuels. At least 20% of the carbon used in the chemical and plastic industries should be from non-fossil sources by 2030.



**Remove carbon** from the atmosphere. By 2030 5Mt of CO<sub>2</sub> should be annually removed from the atmosphere and permanently stored through technological solutions.

### Building a CO<sub>2</sub> network

The Commission will study **cross-border CO<sub>2</sub> infrastructure deployment needs at EU, regional and national level** until 2030 and beyond, involving all relevant public and private stakeholders. This infrastructure will require proper monitoring, reporting and accounting of the origin and quantity of the processed captured CO<sub>2</sub>.

The **Connecting Europe Facility** (CEF) under the TEN-E Regulation already provides funding for targeted infrastructure investments, including CO<sub>2</sub> transport infrastructure. The **EU ETS Innovation Fund** supports the scaling up of first-of-a-kind projects across Europe, including technologies for the capture, use, and storage of CO<sub>2</sub>.