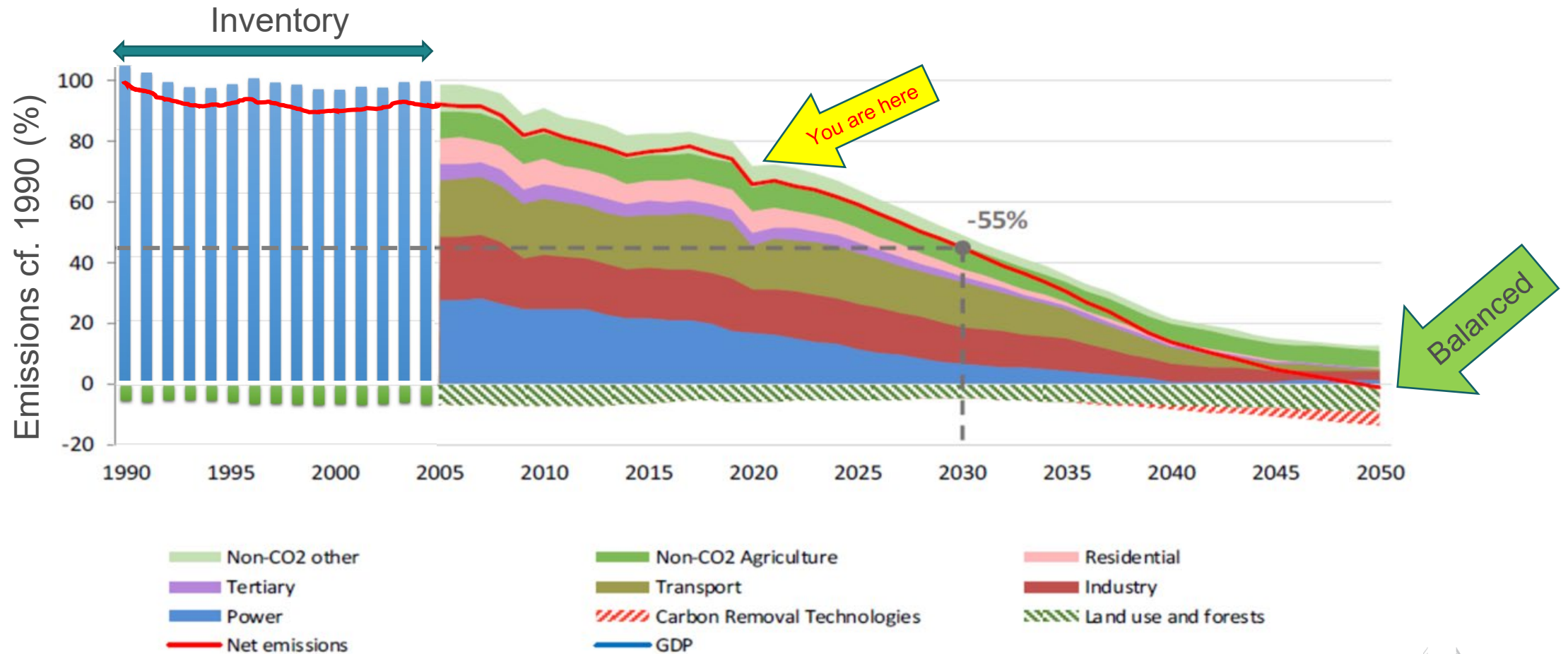




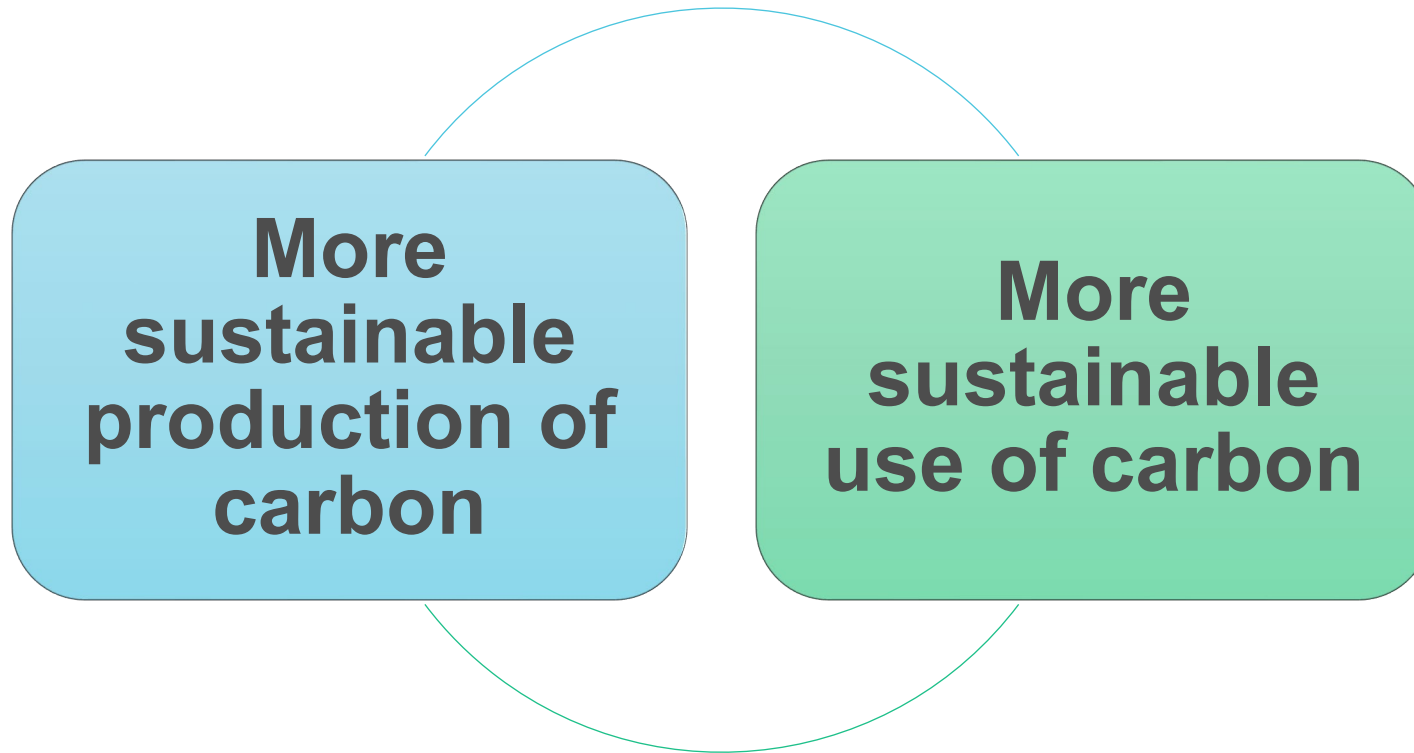
# Sustainable Carbon Cycles

*2 May 2022*

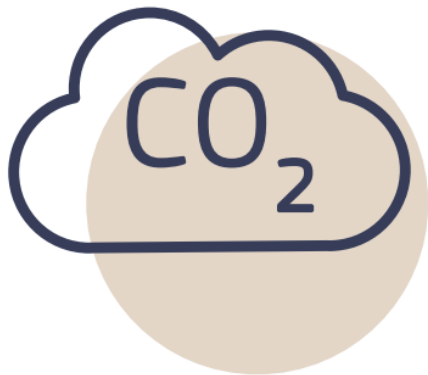
# Pathway to climate neutrality



# Sustainable Carbon Cycles



# Industrial capture, use, transport, and storage of carbon

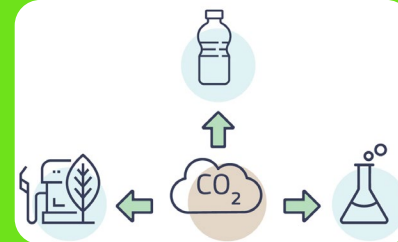


*In addition to decarbonising its energy system, the EU will also need to **rethink its sourcing of carbon** as feedstock for industrial processes.*

**Creating an internal market for the sustainable capture, use, and storage of CO<sub>2</sub>:**



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



Transform CO<sub>2</sub> from a **waste product** to a resource, and use it to produce materials, chemicals and fuels



Remove carbon **from the atmosphere**

# Sustainable capture, use, transport, and storage of carbon

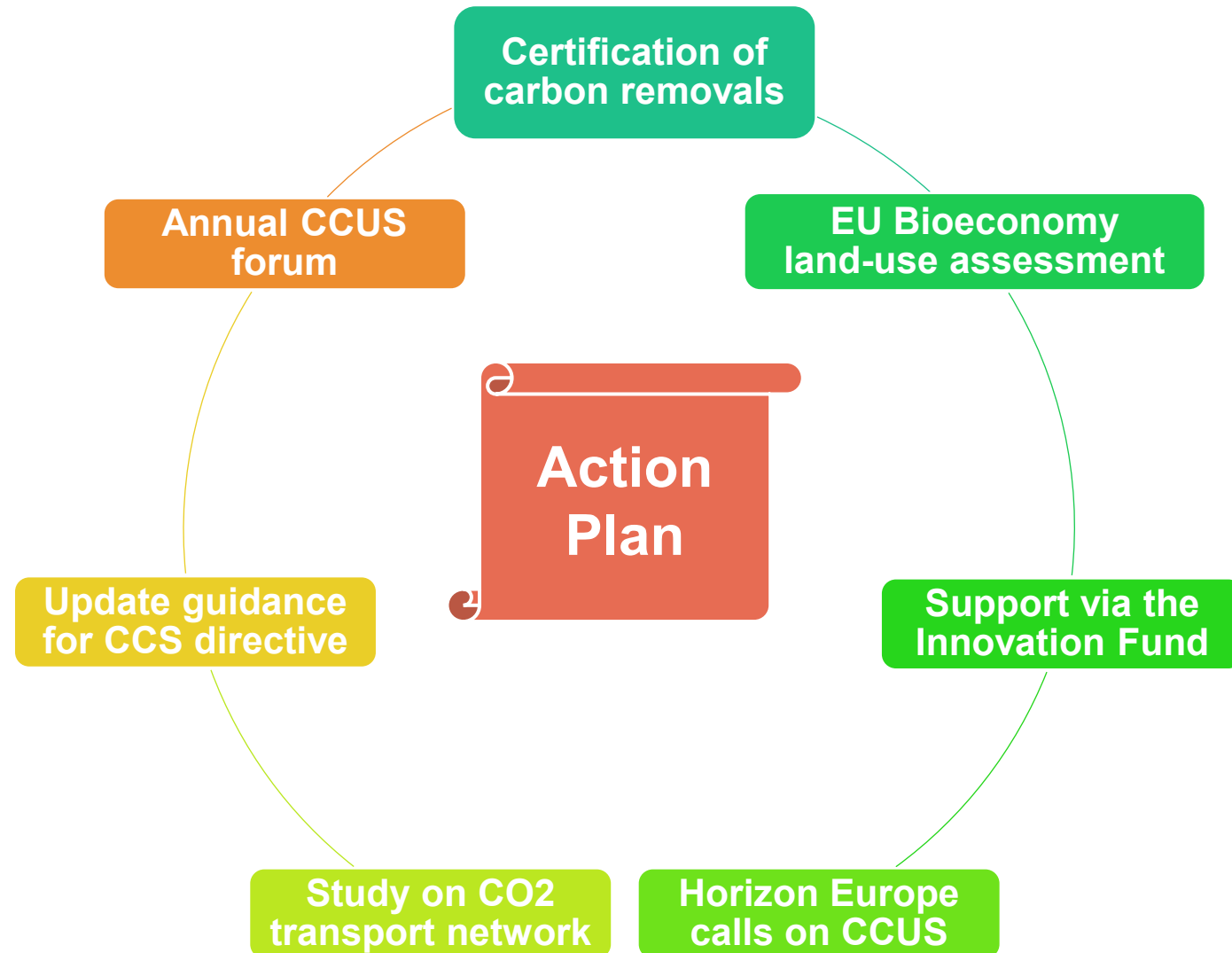
## Challenges

### By 2028:

- All CO<sub>2</sub> 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



# Innovation Fund

Production and use of  
Renewable energy

*including manufacturing plants for  
components*

Carbon Capture Use and  
Storage

**Scaling up clean tech**

Energy-intensive  
industries

*including substitute products*

Energy storage

*including manufacturing plants for  
components*

# Innovation Fund grants of € 1145 million for seven first-of-a-kind projects

## Kairos-at-C - Port of Antwerp (BE)

- Carbon capture from hydrogen, ammonia and ethylene oxide production and storage in North Sea, innovative shipping

## BECCS Stockholm (SE)

- Bio-energy carbon capture at a combined heat and power plant and storage in North Sea – negative emissions

## K6 (FR)

- CCUS at cement plant with storage in North Sea and carbon use for concrete production

## SHARC (FI)

- Green hydrogen from water electrolysis and blue hydrogen with CCS, storage in North Sea

## Hybrit (SE)

- Hydrogen-based direct reduction for steelmaking, including electrolyser

## ECOPLANTA (ES)

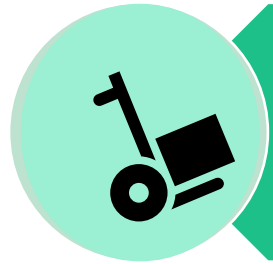
- Bio-based methanol from municipal waste

## TANGO (IT)

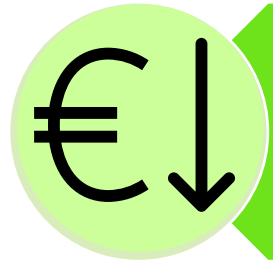
- Bifacial heterojunction photovoltaic cells production at GW scale



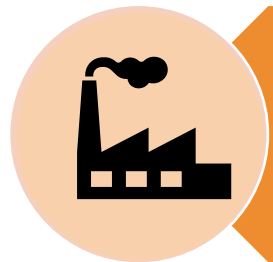
# Open-access cross-border CO<sub>2</sub> infrastructure



**Connect CO<sub>2</sub> sources with sinks**, including storage sites and production sites using CO<sub>2</sub> as a feedstock



**Drive down costs** through competition in an open EU market



**CCUS hubs** to leverage economies of scale across the EU



# Open-access cross-border CO2 infrastructure

Allowing the provisional application of article 6 amendment of the London Protocol (bilateral agreements between MS)

Ensuring provision of transport and storage services at fair conditions (prices, open-access, no obligation to bundle transport and storage)

Accelerating readiness of storage sites across the EU to increase the offer

## Next step:

# A regulatory framework for the certification of carbon removals

Conference on Sustainable Carbon Cycles – 31 January 2022

Call for Evidence\* open until 2 May 2022

Legislative proposal (Q4 2022)

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

## Set robust certification requirements

- Measurement and monitoring
- Additionality
- Duration of storage
- Environmental benefits and safeguards

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

Rules applicable for carbon farming and industrial carbon removal projects

# Links

- Call for Evidence on Carbon Removal Certification [Certification of carbon removals – EU rules \(europa.eu\)](#)
- Conference on Sustainable Carbon Cycles, 31 January 2022 [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 \(europa.eu\)](#)

# Where to find more information on the Innovation Fund?



All (past) call documents available on the Funding and Tenders Portal including:

- ✓ Guidance and calculation tools on GHG emissions and relevant costs
- ✓ Frequently asked questions

<https://europa.eu/!QB67by>



Further info, planning of new calls, recorded webinars and videos available on the IF Website:

<https://europa.eu/!rx34Dt>



Innovation Fund - YouTube

<https://bit.ly/2WxK8w7>

