



EU Regulation on the certification of permanent carbon removals, carbon farming and carbon storage in products (CRCF Regulation)

LULUCF Workshop

23 May 2024

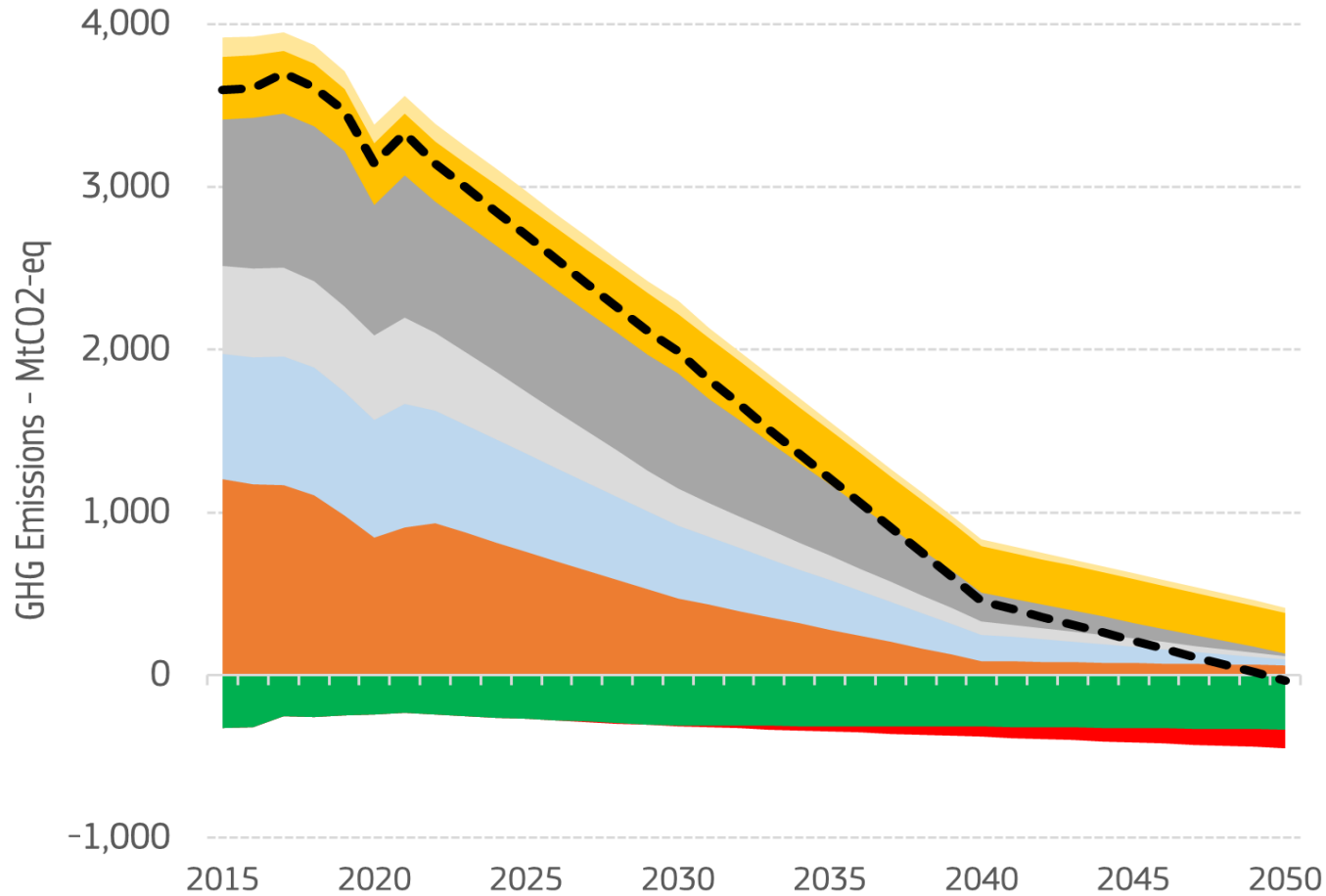
DG CLIMA Unit C3: Land economy and carbon removals

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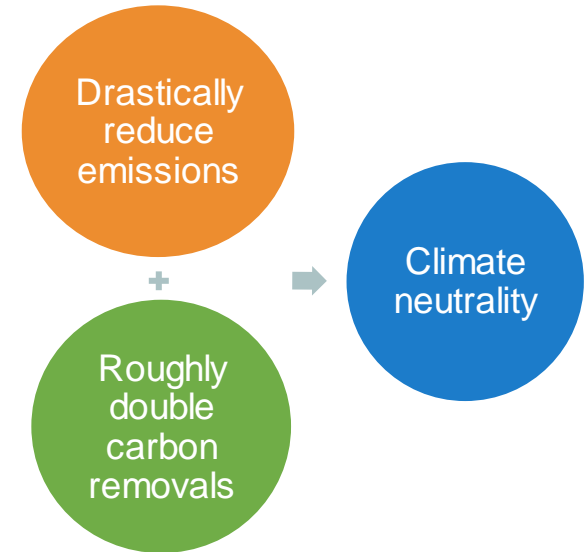
1. Introduction on carbon removals
2. Rationale and objectives of the CRCF Regulation
3. EU quality criteria
4. EU certification methodologies & Expert Group
5. Certification process and CRCF registry
6. Options for the use of certified units
7. Conclusions and next steps

Towards climate neutrality

Historical and projected sectoral greenhouse gas emissions in the period 2015-2050



- Industrial removals
- LULUCF
- Waste
- Agriculture
- Transport
- Buildings
- Industry*
- Energy Supply**
- Net GHG emissions



*Excluding non-BECCS industrial removals

**Including bioenergy with carbon capture and storage (BECCS)

Carbon farming (agriculture soils and forests)



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**



Precision farming and more efficient use of fertilizers



Forest Management and Reforestation according to ecological principles



Blue carbon: coastal wetlands

Challenges

Cost of MRV

Lack of advisory services

Access to finance

Industrial carbon removals

Permanent storage



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



Direct air capture and storage

Carbon storage in products



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

Challenges

First-of-a-kind projects/ high costs

Sustainable sourcing of feedstock and energy

Public-private financing

Rationale for the CRCF Regulation

3 KEY PROBLEMS

- Many stakeholders **do not trust** voluntary carbon removal certification
- It is difficult to **assess and compare** the quality of different carbon removals
- Carbon removal operators face **Monitoring, Reporting, Verification (MRV) barriers**



2 minute read · January 31, 2023 10:59 PM GMT+1 · Last Updated 11 hours ago

Investor group bans carbon removal from CO2 reduction plans

Reuters

LONDON, Jan 31 (Reuters) - An investor group committed to climate change and controlling \$11 trillion in assets has banned members from counting carbon removal schemes towards their emissions reduction targets before 2030, amid increasing scrutiny of the fast-growing market for carbon offsets.

Key elements of the CRCF Regulation

Two main pillars

Quality criteria for EU-based activities

- Quantification
- Additionality
- Long-term storage
- Sustainability

Certification rules

- Third party verification
- Certification schemes + bodies
- CRCF registry



EU certification methodologies

Operationalising the quality criteria for the different carbon removal activities



**PERMANENT
CARBON
REMOVALS**



**CARBON
FARMING**

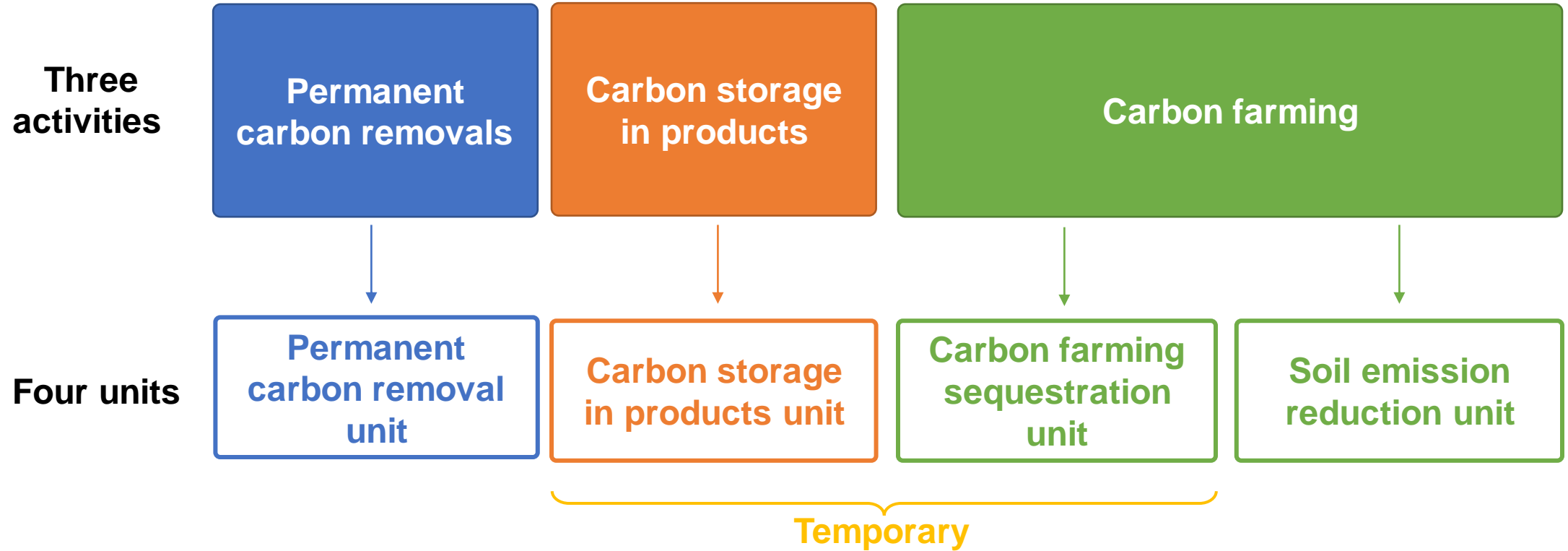


**CARBON
STORAGE IN
PRODUCTS**



**Commission to be advised by the
EU Expert Group on Carbon Removals**

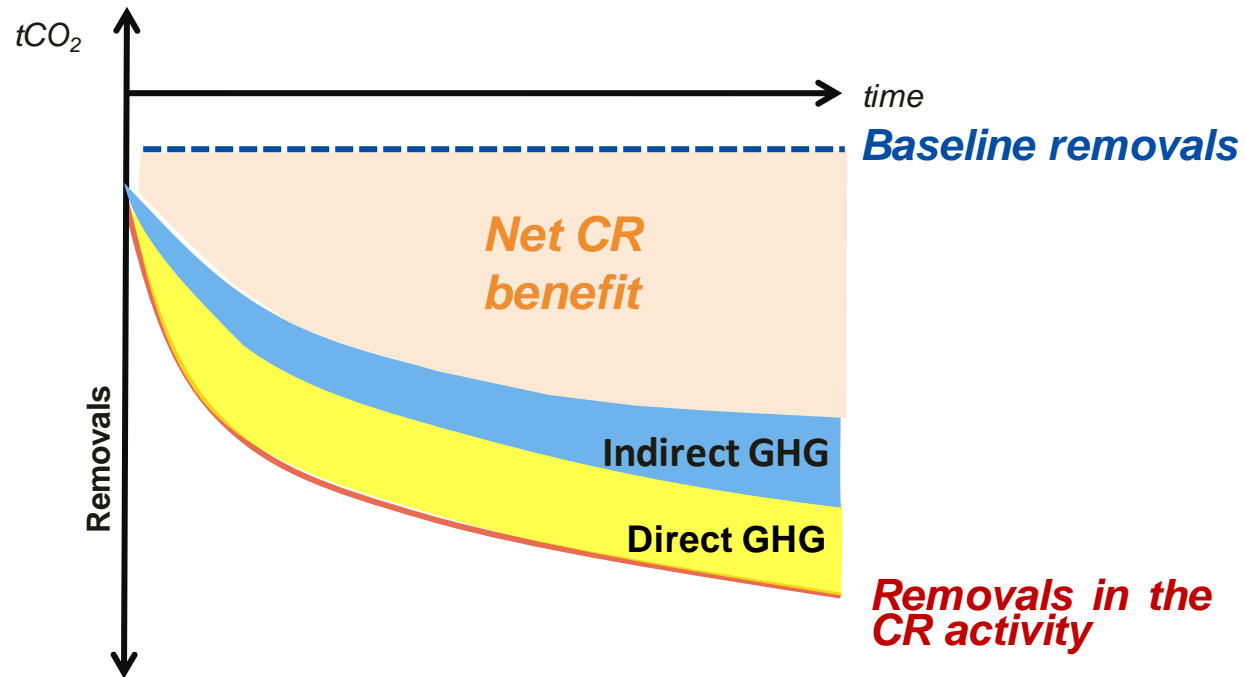
Overall architecture



How to quantify carbon removals?

$$\text{Net CR benefit} = \text{CR baseline} - \text{CR activity} - \text{GHG associated} > 0$$

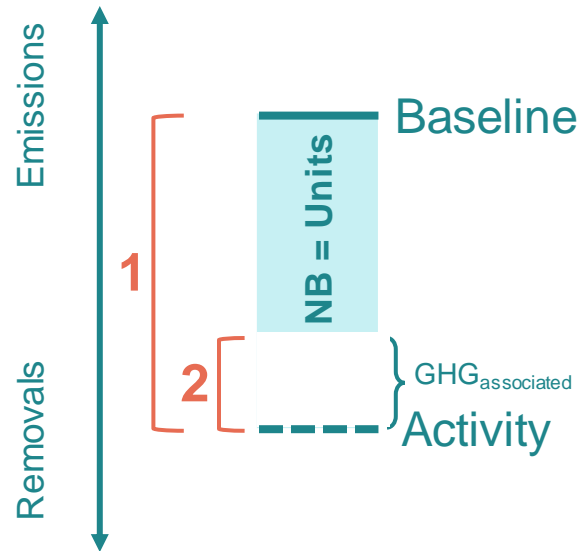
Illustrative
example



Key feature

- ✓ **Standardised baselines** (highly representative)
 - reflect the performance of similar operators in comparable regulatory, economic, and environmental circumstances
 - reward for early movers
 - lower administrative burden for operators
- ✓ **Fall back: activity specific baselines**

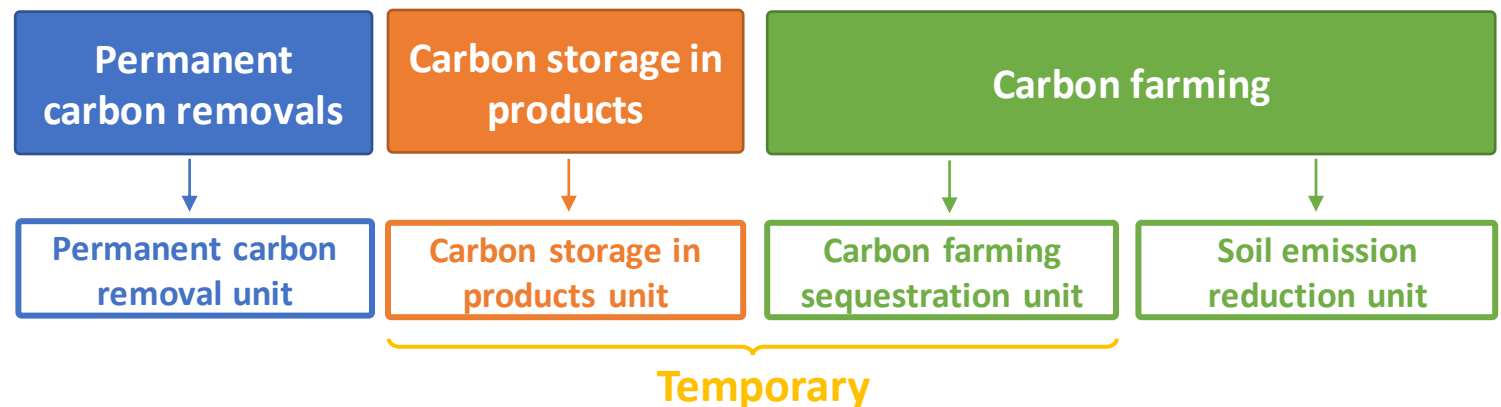
Quantification (1)



Note: the activity line must be **below** the baseline, because the activity should generate either lower emissions or more removals than in the baseline.

$$\text{Net Benefit} = \text{Baseline} - \text{Activity} - \text{Associated GHG}$$

- Activities should generate a (permanent or temporary) net carbon removal benefit or a net soil emission reduction benefit
- Only activities that generate a positive net benefit can be certified
- The tons of CO₂ corresponding to this Net Benefit are recorded in the registry as « units »



Quantification (2)

Key features

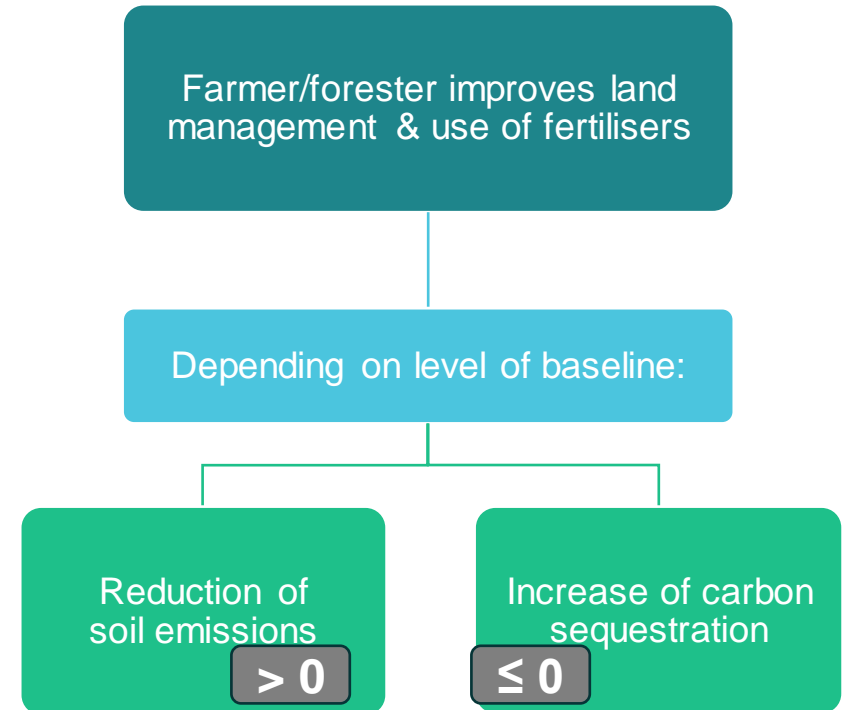
✓ Standardised baselines

- reflect the performance of similar operators in comparable regulatory, economic, and environmental circumstances
- reward for early movers
- lower administrative burden for operators
- more objective
- set out by Commission in the certification methodologies
- to be reviewed every 5y
- if data is not available, certification methodology will include rules to calculate **activity-specific baselines**

✓ Accounting of **direct and indirect emissions** associated to the activity

- includes **indirect land use change** and **energy displacement**

Carbon farming can result in **carbon sequestration** or **soil emission reduction**



Additionality

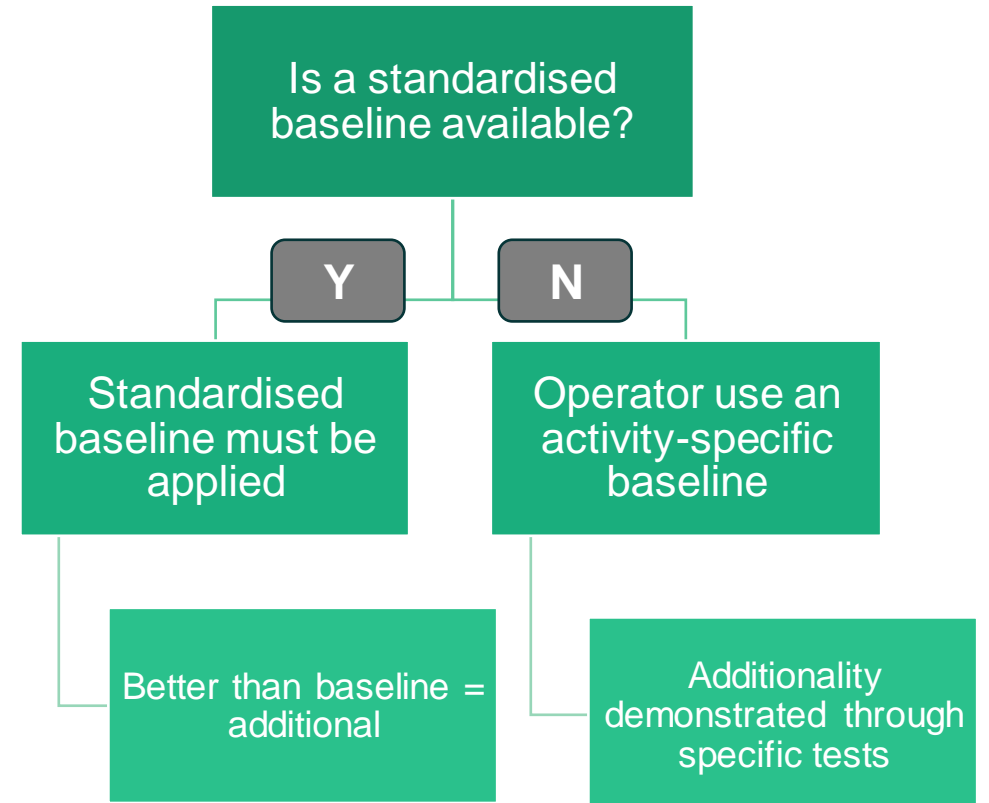
Two types of additionality shall be demonstrated:

- **Regulatory additionality**

The activity goes beyond Union and national statutory requirements at the level of an individual operator;

- **Financial additionality**

The incentive effect of the certification is needed for the activity to become financially viable.



Durability (1)

An operator or group of operators shall demonstrate that an activity stores the carbon permanently or aims to store the carbon over the long-term. To this end, they shall be:

subject to **rules to monitor and mitigate** any identified risks of reversal

liable for any reversal of the carbon captured and stored by an activity

Monitoring rules and liability mechanisms

- **Permanent carbon removals**: Be consistent with the rules and obligations set out in the **CCS Directive** (2009/31/EC)
- **Carbon permanently chemically bound in products**: Be consistent with the rules pursuant to Article 12(3b) of the EU **ETS Directive** (2003/87/EC)
- **Carbon farming and carbon storage in products**: TBD in certification methodologies

Durability (2)

- **New feature: Temporary carbon removal units**

- temporary certified units have an expiry date corresponding to the **end of the monitoring period**
- if the monitoring period is not renewed or permanent storage is not demonstrated, the units expire, as the stored carbon is considered released back to the atmosphere.

Advantages:

- ✓ Recognise the non-permanence of carbon removals from carbon farming and carbon storage of products
- ✓ More realistic commitments for operators, lower barriers to uptake
- ✓ Incentivize durability through prolongation of the monitoring period

Sustainability

Voluntary co-benefits

- An activity may generate other sustainability co-benefits
- Reporting rules will be defined in the certification methodologies
- Those rules should incentivise as much as possible the generation of co-benefits (e.g. premium)

Biodiversity co-benefits for carbon farming

- Carbon farming needs to deliver biodiversity co-benefits
- Possible use of positive lists to limit administrative burden

Sustainability of biomass (BECCS, carbon storage in products)

- Aligned with the GHG saving and sustainability criteria set out in art 29 of REDIII, and the biomass cascading use principle as applied by Member States
- BECCS: financial benefits from certification should not lead to an increase of the capacity of a bioenergy plant beyond what is necessary for the operation of the CCS part.

EU certification methodologies

The Commission will develop **EU certification methodologies** to operationalize the EU quality criteria for each type of activity, with the assistance of an **Expert Group on carbon removals**

Quantification

- Scope, duration, monitoring periods
- Baseline calculation and update
- Total carbon removals / emission reductions
- Associated GHG emissions

Additionality

- Additionality tests in case of activity-specific baseline

Durability

- Monitoring rules
- Liability mechanisms

Sustainability

- Minimum sustainability requirements
- Monitoring and reporting of co-benefits

EC Expert Group on carbon removals

https://climate.ec.europa.eu/eu-action/sustainable-carbon-cycles/expert-group-carbon-removals_en

15-17 April: Meeting on expert group



- Presentation of CRCF Regulation
- Review of verification and certification rules
- Technical assessment of certification options for permanent CR + carbon farming + storage in products

2024 work programme

15-17 April
Expert Group
meeting

May-June
Focus group meetings

- Recommendations for certification methodologies

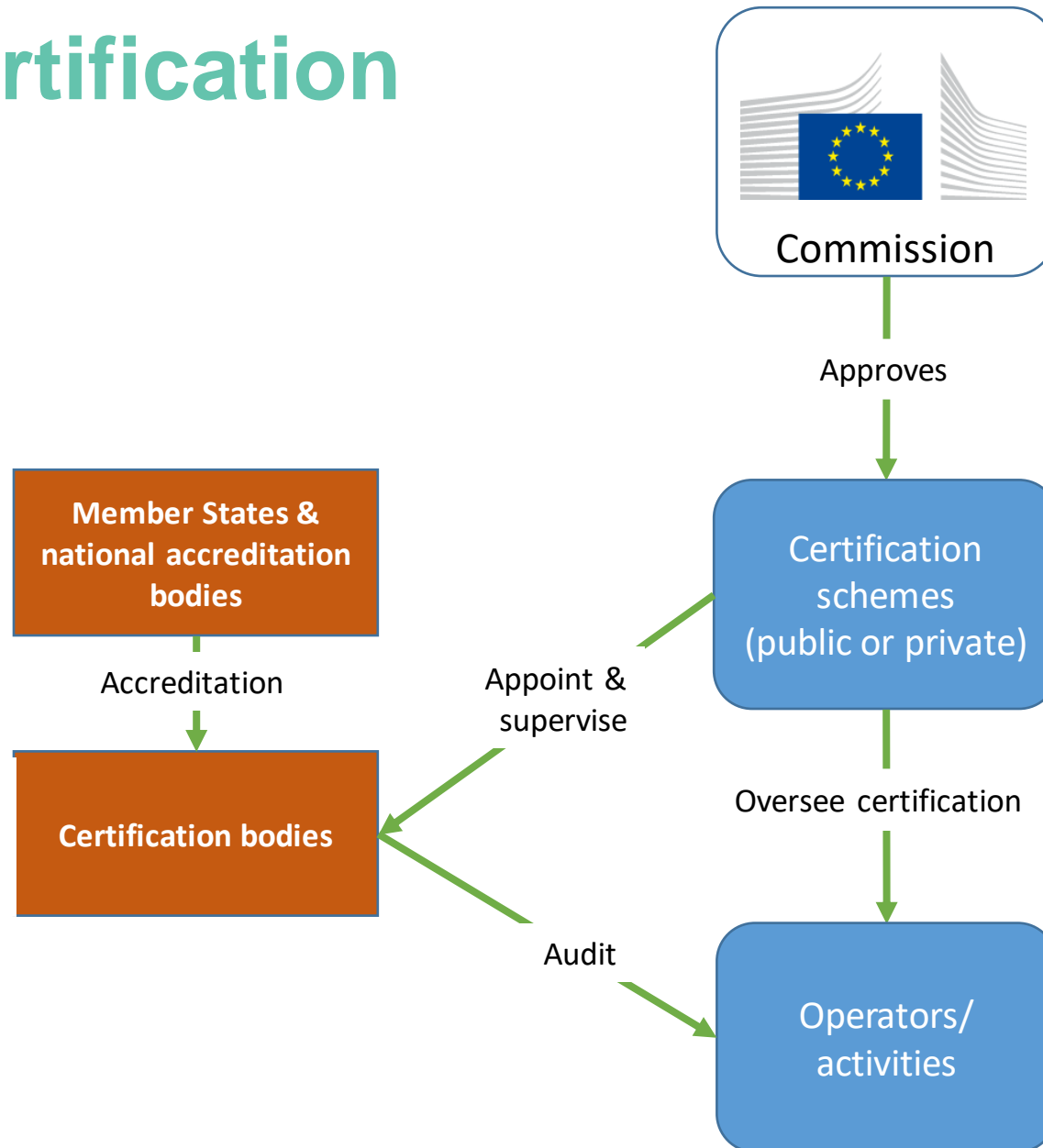
September
Meeting on
verification rules

October
Expert Group meeting

- Discussion of draft methodologies

CRCF certification process

- Accredit & control **certification bodies**
- Carry out certification **audits**
- Issue **certificates** of compliance

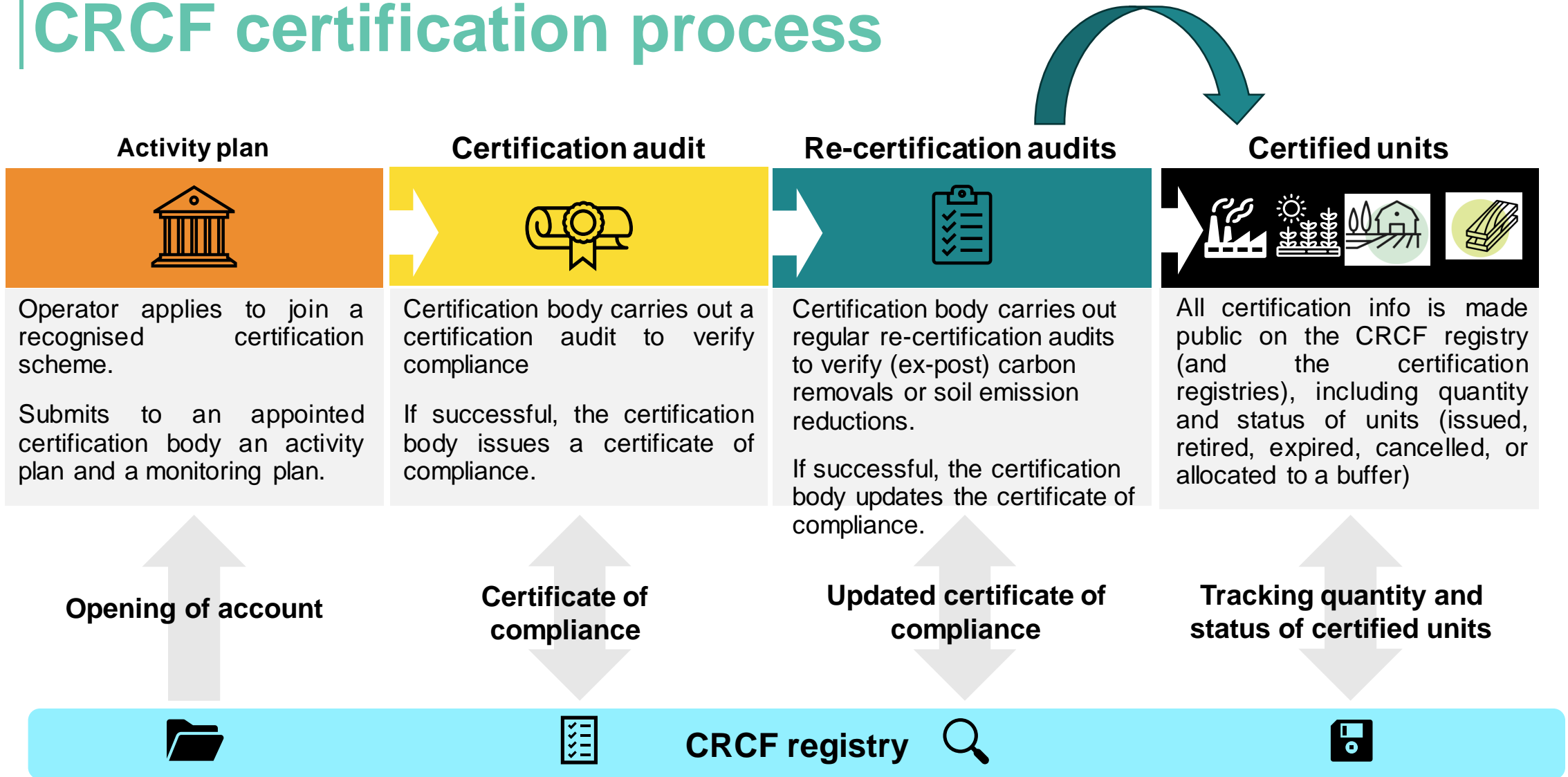


- Develops tailored **certification methodologies** through delegated acts, supported by expert group
- **Recognises certification schemes** (e.g. public or private entities tasked to implement/control the certification process)
- Manages **CRCF registry** (by 2028)

- Manage the **scheme** (including internal monitoring)
- Appoint, train and supervise **certification bodies**
- Register **activities**
- Control certification **audits** and **certificates** of compliance
- Issue carbon removal **units**
- Manages certification **registries**

- Apply for certification
- Monitor and report compliance with the quality criteria through the relevant certification methodologies

CRCF certification process



Certified units & CRCF registry

CRCF registry (4 years after entry into force)

- ❑ To make public certification information and track the quantity and use of CRCF units
- ❑ To be financed by annual fixed fees payable by users, proportionate to the use
- ❑ Until the establishment of the Union registry, certification schemes shall establish and duly maintain certification registries

Rules on certified units

- ✓ Issued by certification registries only ex-post, based on a valid certificate of compliance
- ✓ Not to be issued more than once and not to be used by more than one legal or natural person at any point in time
- ✓ CRCF units cannot be used for third country NDC and international compliance schemes (e.g. CORSIA)
- ✓ By 6/2026, review on the use of certified units to compensate emissions generated outside of the EU NDC and the Union's climate objectives and on need for alignment with Article 6 of Paris Agreement (corresponding adjustment)

Content of the CRCF registry (Annex 2a)

Minimum information :

- a) **name and type of the activity**, including name and contact details of the operator or group of operators;
 - b) **location of the activity**, including geographically explicit location of the activity boundaries, respecting 1:5000 mapping scale requirements for the Member State;
 - c) duration of the activity, including start date and end date;
 - d) **name of the certification scheme**, including its recognition decision referred to in Article 13, its rules and procedures and the list of appointed certification bodies referred to in article 11, and its annual reports referred to in Article 14;
 - e) reference to the applicable **EU certification methodology** referred to in Article 8;
 - f) **annual net benefit** referred to in article 4;
 - g) any **sustainability co-benefits** referred to in article 7;
 - h) certification status, including certificates of compliance and certification and re-certification audit reports referred to in Article 9;
- quantity and status of the certified units** (e.g. issued, retired, expired, cancelled, allocated to a buffer), and end-use purpose of the certified units and the using entity.

What about livestock emissions?



- By **31 July 2026**, the Commission should review the **inclusion of livestock emissions** in the scope of the Regulation
- This review should take into consideration:
 - opportunity costs,
 - the evolution of regulatory framework,
 - possible negative effects leading to GHG-emission increase,
 - the Union 2040 climate target
- In the context of this review, it is appropriate to
 - consider how the potential units generated by such activities should be categorized
 - accelerate the development of **a pilot certification methodology** for activities that reduce livestock emissions, in preparation of the 2026 review by COM

Conclusions

The **CRCF Regulation**:

- ✓ aims to speed-up the deployment of **high-quality carbon removals and soil emission reductions** in the EU, while fighting greenwashing and creating trust
- ✓ establishes the first **EU-wide voluntary certification framework** for permanent carbon removals, carbon farming and carbon storage in products
- ✓ sets out **four quality criteria** and the **rules for third-party verification and Union registry**
- ✓ mandates the Commission, assisted by an Expert Group, to develop tailored **EU certification methodologies** for different types of carbon removals activities
- ✓ enables the **access to private and public financing** of carbon removals
- ✓ represents the pre-condition for any possible **future integration** of carbon removals in the post-2030 EU climate policy framework

More information:

- CRCF provisional agreement: [Item9-Provisionalagreement-CFCR_2022-0394COD_EN.pdf \(europa.eu\)](#)
- Q&A on the provisional agreement: [a8abe1c4-a3c6-4c94-be0e-4b76f7fd0308_en \(europa.eu\)](#)
- DG CLIMA carbon removal certification page: [Carbon Removal Certification - European Commission \(europa.eu\)](#)
- Expert Group on Carbon Removals: https://climate.ec.europa.eu/eu-action/sustainable-carbon-cycles/expert-group-carbon-removals_en