

Q&A on the provisional agreement on the Regulation establishing an EU-wide voluntary framework for certifying permanent carbon removals, carbon farming and carbon storage in products (CRCF Regulation)

1. What are carbon removals and why are they important for the climate?

The European Union (EU) has committed to reaching climate neutrality by 2050 to secure a liveable future on our continent and our planet. The first and most urgent priority is the reduction of EU greenhouse gas (GHG) emissions. At the same time, research increasingly shows that [carbon removals](#) (i.e. technologies and practices for removing carbon dioxide (CO₂) directly from the atmosphere) will be a key enabler for a future intermediate EU climate target for 2040, as recommended by the Commission in its recent [Communication](#) and in the [EU industrial carbon management strategy](#).

Carbon removals can be grouped in three broad categories of activities or projects:

- **Permanent carbon removals:** Permanent carbon removals include a wide range of industrial technologies that capture carbon from the atmosphere and securely store it for several centuries, preventing any release back into the air. This process occurs in geological formations, reactive minerals, or through permanently chemically bound carbon in products. For example, this includes technologies like direct air carbon capture with storage (DACCS) and biomass with carbon capture and storage (BECCS). Under new EU rules (see below), permanent carbon removals should not be associated with Enhanced Hydrocarbon Recovery (EHR), in order not to increase GHG emissions.
- **Carbon farming:** Carbon farming encompasses a broad range of practices and processes on agricultural land, wetlands, in forests or coastal environments that sequester carbon from the atmosphere through biological processes, while also generating positive effects for biodiversity. For example, carbon farming can include activities such as reduced tillage, the introduction of legume/rotation crops, improved forest management, reforestation, and agroforestry. Some carbon farming activities, such as peatland rewetting, can both reduce soil carbon emissions and increase biogenic carbon removals. In addition, carbon farming activities could also reduce emissions of nitrous oxide associated to the excessive use of fertilisers.
- **Carbon storage in products:** atmospheric or biogenic carbon can also be captured and stored in long-lasting products, such as wood-based construction elements of buildings or bio-based insulation materials. Typically, the storage of carbon in products needs to be guaranteed over the long term, requirement which excludes short-lived products such as paper or furniture. In addition, activities in this category do not include fossil Carbon Capture and Storage (CCS) or Utilisation (CCU). While these technologies do help storing or recycling fossil CO₂ emissions, they do not remove carbon from the atmosphere.

2. What are the objectives and key elements of the CRCF Regulation?

Deploying a range of carbon removal and carbon farming activities across the European Union is a great opportunity to boost industrial competitiveness, ensure food security, and promote the bioeconomy. However, the deployment of carbon removals and carbon farming at scale faces [several barriers](#). There are not yet widely accepted standards for measuring, reporting,

and verifying (MRV) these activities. In addition, current costs for permanent carbon removals are still significantly high and deployment at scale is needed to bring them down.

To address these barriers, in February 2024 the European Parliament and the Council reached a [political agreement](#) on the first EU-wide voluntary framework for certifying permanent carbon removals, carbon farming and carbon storage in products, known as Carbon Removal Certification Framework (CRCF Regulation). The Regulation has been developed to facilitate and speed up the deployment of high-quality carbon removals and soil emission reductions, while fighting greenwashing and harmonising conditions in carbon removal markets. Developing EU certification methodologies for the quantification of removals is also the first step towards their possible future integration into the [EU climate policy framework post-2030](#).

To be certified, eligible activities need to comply with four quality criteria and related EU certification methodologies (see questions 3 and 5) and need to undergo third party-verification and certification (see question 6). The Regulation distinguishes three groups of activities that can generate four certified units:

Type of activity	Certified unit
• Permanent carbon removals	➤ Permanent carbon removal unit
• Carbon farming	➤ Carbon farming sequestration unit, or ➤ Soil emission reduction unit
• Carbon storage in products	➤ Carbon storage in product unit

3. *What are the Q.U.A.L.I.T.Y criteria?*

Building on [best practices](#), the Regulation requires activities to meet the four criteria (so-called ‘Q.U.A.L.I.T.Y’ criteria’) of quantification (against a baseline), additionality, long-term storage, and sustainability.

- **Quantification** (article 4): certified activities need to deliver a measurable net benefit for the climate. Therefore, carbon removals or soil emission reductions generated by activities over their entire duration (called ‘activity period’) need to go beyond a baseline and need to outweigh any direct or indirect GHG emissions associated with the implementation of the activity. To keep the administrative burden low, in the EU certification methodologies the Commission will set out highly representative standardised baselines - that accurately reflect standard practices and the regulatory and market conditions in which the certified activity takes place. Standardised baselines aim to recognise early efforts of land managers and industries that have already engaged in carbon removal action in the past. The Commission shall review the standardised baselines at least every five years and update them as appropriate. Where the setting of standardised baselines is not possible, for instance due to a lack of data, the EU certification methodologies will include rules and default factors for operators to calculate their own activity-specific baselines. The activity-specific baselines shall be periodically updated at the beginning of each activity period.
- **Additionality** (article 5): certified activities need to be additional, i.e. they need to go beyond the standard practice. In other words, operators must carry out activities that are not already imposed upon them by the applicable law. Moreover, activities should become financially viable thanks to the incentive effect provided by the certification. Such effect is present when the incentive created by the potential revenues resulting from the certification

changes the behaviour of operators in such a way that they engage in the activity to achieve additional carbon removals or soil emission reductions. To keep certification costs manageable, an activity is deemed to meet the additionality criterion when it generates carbon removals or soil emission reductions beyond a standardised baseline. However, when an activity-specific baseline is used due to lack of a standardised baseline, the operators will need to apply specific additionality demonstration tests, whose rules will be set out in the relevant EU certification methodology.

- **Long-term storage** (article 6): to ensure that carbon is stored permanently or over the long term, operators need to monitor and guarantee the storage of carbon over a given period (so-called “monitoring period”) – and are liable for any carbon reversal occurring during the monitoring period. For instance, permanent carbon removals need to be stored for several centuries (i.e. at least 200 years), carbon storage in long-lasting products for at least for 35 years and carbon farming for at least 5 years. The EU certification methodologies will set out specific rules on monitoring and liability, reflecting the expected duration of the storage and the risk of carbon reversal. For instance, permanent carbon removals with underground storage will be subject to the same safeguards of the [CCS Directive](#). In addition, under the Regulation, certified units generated by carbon farming and carbon storage in products are temporary and therefore expire at end of the monitoring period, unless the latter is renewed, or permanent storage is demonstrated by the operator. These additional safeguards aim to transparently address differences in durability amongst the various carbon removal activities, while at the same time avoiding burdening operators with disproportionate liability commitments.
- **Sustainability** (article 7): to contribute to the wider sustainability objectives, activities need to meet minimum sustainability requirements, which will build as appropriate on the “Do No Significant Harm” (DNSH) Screening Criteria set out under the [Taxonomy Regulation](#). Under the Regulation (article 7, paragraph 3), operators can also voluntarily report co-benefits for other environmental objectives such as the protection and restoration of biodiversity and ecosystems, soil health, avoidance of land degradation, climate change adaptation, the reduction of greenhouse gas emissions, water quality, zero pollution or the circular economy. In particular, carbon farming activities must generate co-benefits for biodiversity, soil health, or avoidance of land degradation. Reporting these co-benefits is expected to give more economic value to the certified units and therefore result in higher revenues for operators. Administrative burden could be kept low through, for instance, the development of positive lists of activities that are shown to result in biodiversity co-benefits.

4. What are the sustainability criteria for biomass?

Under the Regulation (article 7), biomass raw material used by certified activities need to comply with the EU sustainability and GHG saving criteria laid down in article 29 of the [revised Renewable Energy Directive](#) (REDIII). In addition, in order to promote the sustainable and efficient use of limited biomass resources, article 8 requires that the relevant EU certification methodologies ensure the application of the principle of the cascading use of biomass as laid down in Article 3(3) of Directive RED III, while relying on existing rules and procedures applied under REDIII in order to avoid duplication. The rules for the implementation by national authorities of this principle are laid down in Article 3(3), 3(3a) and 3(3b) of Directive RED III. In other words, biomass raw material that is compliant with the

REDIII [sustainability certification](#) will also be compliant with the sustainability criterion under the CRCF Regulation and will not need to undergo a second certification.

At the same time, the Regulation (article 8 and recital 18a) introduces a new sustainability requirement for existing BECCS plants, with the aim of avoiding unsustainable demand for biomass raw material. These plants will need to demonstrate that, as a result of the financial benefits related to the CRCF certification, their total energy capacity has not increased beyond what is necessary for operating carbon capture and storage.

5. What are the EU certification methodologies?

To operationalise the quality criteria, the Commission will develop EU certification methodologies for a wide range of carbon removal activities, by means of [delegated acts](#). According to the Regulation (article 8, the Commission will prioritise the development of methodologies for activities that are the most technologically mature, can provide the largest co-benefits, and where existing EU legislation can be used. For carbon farming, the contribution to the sustainable management of agricultural land, forest and marine environment should also be considered. For carbon storage in products, priority should be given to wood-based and bio-based construction products.

The development of the EU certification methodologies will be underpinned by an inclusive preparatory process, in close consultation with the [Expert Group on carbon removals](#). This group facilitates an exchange of experiences and good practices and is comprised of approximately 70 members with diverse expertise, ensuring broad representation from national authorities, public entities, businesses, industry, non-governmental organizations, certification bodies, and research institutions. The Expert Group meets at least twice a year, both in person and remotely, in line with the [Commission's rules on expert groups](#). To ensure maximum transparency and inclusiveness, the meetings of the Expert Group are also web-streamed, and all proceedings are made public on the [Commission's website](#).

In this context, the Commission has announced its intentions to: a) publish on its website a forward-looking plan for the development of EU certification methodologies; b) adopt the first delegated act on certification methodologies within one year after the entry into force of the Regulation; c) organise appropriate opportunities for stakeholders to comment on those methodologies; and d) ensure the full involvement of the European Parliament and the Council in the works of the Expert Group, in line with the provisions of the [Interinstitutional Agreement on Better Law Making](#).

6. What are the different steps of certification?

The robustness and transparency of the certification process is key for guaranteeing the overall environmental integrity of carbon removals and soil emission reductions. Under the Regulation (article 9), the European Commission will recognise (public or private) certification schemes that will be responsible for implementing the certification framework on the ground. Typically, the recognition will be granted for five years, and it is based on a thorough assessment of the scheme's governance, rules and procedures. To maximise synergies with existing EU certification rules, the Regulation builds extensively on the [EU bioenergy certification](#) model, applied under REDIII. Under the Regulation (article 9), the certification process includes the following steps:

- Participation in a certification scheme. An operator seeking certification of their activity (or project) applies to a certification scheme recognised by the European Commission. Upon acceptance of its application, the operator needs to submit an activity plan and a monitoring plan to a certification body appointed by a certification scheme.
- Certification audit. A certification body carries out a certification audit of the activity to verify ex-ante its compliance with the EU quality criteria and the relevant EU certification methodology. Upon successful completion of the audit, the certification body issues a certificate of compliance, which will be valid until the next re-certification audit.
- Re-certification audit. Re-certification audits are carried out regularly by competent certification bodies to verify ex-post the correct implementation of the activity and the generation of carbon removals or soil emission reductions. Upon successful completion of the re-certification audit, the certification body issues an updated certificate of compliance. The relevant EU certification methodology defines the frequency of re-certification audits (typically every year, or at least every five years).
- Certification registry. For transparency and accountability, the Regulation (article 12) requires disclosure of essential certification information through a Union-wide registry (so called ‘CRCF registry’), including the summary of the certification and re-certification audits, the certificate of compliance, and quantity and status of certified units (e.g. issued, retired, expired, cancelled, or set-aside in a buffer to address reversal risks). Until the establishment of the CRCF registry, certification schemes will publish this information in their own registries. Certified units can be issued only based on a valid certificate of compliance attesting the amount of carbon removals or soil emission reductions generated by an activity.

7. How does the Regulation minimise certification costs?

The Regulation includes several provisions to minimise monitoring and certification costs while ensuring robustness and transparency.

- Remote sensing and modelling. According to article 4 (paragraph 8), the monitoring shall be based on an appropriate combination of on-site measurements with remote sensing or modelling according to the rules set out in the relevant EU certification methodologies. In the context of carbon farming, the quantification of the ‘net carbon removal benefit’ and ‘net soil emission reduction benefit’ could be done cost-effectively by exploiting empirical data, remote sensing technologies (e.g. [Copernicus satellite system](#)) and highly accurate models based on machine learning and artificial intelligence. Obtaining climate relevant data compatible with electronic maps and more geo-explicit data layers will also significantly contribute to improving the quality of national greenhouse gas inventories for the LULUCF sector and to enhancing monitoring activities, in line with the proposed EU Laws on [Forest Monitoring](#) and [Soil Monitoring](#).
- Group auditing. The EU certification methodologies will allow for the use of the simplified certification and auditing rules such as group auditing, in order to avoid disproportionate administrative burden for operators or group of operators, in particular for small farmers and forest holders.

- **CAP information systems.** For carbon farming, the Regulation promotes synergies with the existing information systems, such as the [Land Parcel Information System](#) (LPIS), established under the [Common Agricultural Policy](#).
- **Standardised baselines.** The use of standardised baselines, which will be set out in the EU certification methodologies, will also reduce monitoring and reporting costs for operators as it would avoid establishing activity-specific baselines and carrying out burdensome additionality demonstration tests.

8. How can the CRCF certified units be used?

The Regulation does not regulate the end-use of the certified units, to avoid double regulation with horizontal EU legislation dealing with climate-related reporting and claims (see below). The EU certification framework aims rather to help public and private organisations to back their voluntary claims on carbon removals or soil emission reductions, while increasing transparency and avoiding the risk of greenwashing. As such, it can enable new income opportunities for industries deploying carbon removal technologies or developing long-lasting carbon storage products, and for land managers engaging in innovative carbon farming practices. Some examples include:

- **[Corporate Sustainability Reporting Directive](#) (CSRD).** The CSRD requires all large companies and all listed companies (except listed micro-enterprises) to disclose the impact of their activities on people and the environment. In particular, the climate reporting standard adopted under CSRD ([ESRS E1](#)) covers a series of disclosure requirements related to corporate climate claims, including net-zero and climate neutrality goals. The ESRS E1 standard distinguishes between emission reductions or carbon removals applied within the company's own operations and value chain and removals or reductions obtained through the purchase of high-quality carbon credits. The data reported on the CRCF certificates of compliance could be used for reporting total emissions and removals in the value chain. The CRCF certified units could also be used for neutralising residual emissions under climate-neutrality goals. For instance, food companies could reduce their reported scope 3 emissions underpinned by CRCF units from carbon farming activities from within their value chains. Finally, CRCF certified units could be the basis to substantiate contribution claims.
- **Proposed [Green Claims Directive](#) (GCD).** The GCD proposal establishes minimum requirements for substantiating and communicating voluntary corporate environmental claims to consumers. In particular, companies will have to ensure that such claims, including climate-related ones, are backed by scientific evidence, take a life-cycle perspective and are communicated in a clear, unambiguous and transparent way. Climate-related claims regarding a company, such as “net-zero” or carbon neutral, fall under the Directive's remit. To substantiate such claims, the Commission has proposed that companies will need to report offsetting and emissions data separately, specify whether offsetting relates to emissions reductions or carbon removals, and accurately explain the accounting methodology applied. CRCF units could be used to meet the GCD requirements on climate-related claims, particularly those related to carbon removals or soil emission reductions. Under the new [Directive on Empowering Consumers for the Green Transition](#), product-related claims based on carbon offsetting are not possible anymore.

- **[Energy Performance of Buildings Directive](#)** (EPBD). The revised EPBD allows building owners to declare the carbon storage capacity of their structures on their Energy Performance Certificate (EPC). Through the upcoming CRCF certification methodology for carbon storage in products, and the related carbon storage in product units, building owners will be able to provide reliable and transparent evidence of their buildings' carbon storage capacity on their EPC. For instance, construction companies or property owners investing into the long-term use of more sustainable building materials which remove and store carbon - such as wood-based ones - could earn additional income through the sale of CRCF units.
- **Public funding.** Public authorities or private investors that want to finance innovative carbon removal projects or procure carbon removals – e.g., through reverse public auctions or advance market commitments – could use the CRCF quality criteria and certification methodologies to better compare the offers and reward the projects based on the amount of the certified removals or soil emission reductions. This could be relevant for example for EU or national public procurement of DACCS, or for funding carbon farming activities through the [eco-schemes](#) of the Common Agricultural Policy.
- **Voluntary carbon markets.** Currently, one of the primary sources of funding for carbon removal innovation are voluntary carbon markets (VCMs), where carbon removal buyers and suppliers exchange carbon credits. The Regulation will help raise the quality of carbon removal credits or soil emission reduction credits exchanged in these voluntary markets. For instance, regional authorities could finance the establishment or enlargement of nature parks through the sale of CRCF certified units from carbon farming activities on VCMs, monetising both the climate and the biodiversity benefits.

9. How do the CRCF certified units relate to the Union climate objectives and voluntary climate claims?

The Regulation aims to support the achievement of the Union objectives under the Paris Agreement, in particular the collective achievement of the climate neutrality objective at the latest by 2050 laid down in the [European Climate Law](#). Therefore, carbon removals and soil emission reductions certified under this Regulation will facilitate the achievement of the [EU's Nationally Determined Contribution](#) (NDC) and its climate objectives, including the national targets set out in the [Land Use, Land Use Change and Forestry \(LULUCF\) Regulation](#) and in the [Effort Sharing Regulation](#).

While there is no direct link between the certified units, which are based on a life-cycle assessment (LCA) methodology, and the accounting of carbon removals and soil emissions reductions towards the EU climate objectives, which are based on the relevant EU legislation and IPCC rules, the CRCF certificate of compliance will contain relevant information for EU and national GHG accounting (e.g. amount of total removals).

The certified units cannot be used to achieve third-party NDCs or international compliance schemes (e.g. the CORSIA scheme for aviation). The Regulation does not require corresponding adjustments for any uses of the CRCF certified units, including uses for voluntary climate goals. While some carbon removal activities cannot yet be accounted for in the EU GHG inventory, all of them can already be certified under the Regulation, and certified units can still be issued for voluntary climate claims. By mid-2026, the Commission is tasked to review the use of certified units for compensating emissions outside of the EU NDC, and to

assess the need for alignment with the relevant provisions related to the implementation of Article 6 of the Paris Agreement and with best practices on corresponding adjustment. This review would be accompanied by a legal proposal, if appropriate.

10. Does the Regulation establish EU-wide targets on carbon removal?

The Regulation does not set out EU-wide carbon removal targets, as these are outside the scope of this initiative. An assessment of the possible future inclusion of carbon removals into the [EU climate and energy framework](#) will take place when designing the post-2030 EU climate policy framework. The [Communication on the 2040 climate target](#) has already identified the need for of carbon removals for reaching climate neutrality by 2050. In accordance with Article 17 of the revised LULUCF Regulation, the Commission will assess the possible benefits and trade-offs of the inclusion of sustainably sourced long-lived carbon storage products in the framework of the LULUCF Regulation. Furthermore, under Article 30 of the [revised ETS Directive](#), the Commission is requested to assess by 2026 whether permanent carbon removals could be subject to emission trading and, if appropriate, present a legislative proposal and an impact assessment.

11. Does the Regulation incentivise livestock emission reductions?

[Livestock emission reductions](#) are not eligible for certification under the Regulation. However, by July 2026, the Commission is tasked to prepare a report assessing the feasibility of certifying activities that reduce agricultural emissions from the management of livestock (i.e. emissions from enteric fermentation and manure management). To prepare such review, the Commission will start developing a pilot methodology on how to certify livestock emission reductions. This will inform the 2026 review on the extension of scope of carbon farming to also include these emission reductions.

12. What are the next steps?

The [political agreement](#) was endorsed by the Member States' representatives in the Council (COREPER) on 8 March and by the European Parliament's Environment Committee on 11 March 2024, and is due to be voted by the Parliament's plenary in April 2024. The final legal text will be revised by lawyer-linguists, before it can be formally adopted by both institutions, published in the EU's Official Journal, and enter into force. This process is expected to be concluded before the end of 2024. The Commission intends to adopt the first set of certification methodologies within one year from the entry into force of the Regulation.

The Regulation foresees a number of reviews. By mid-2026, the Commission will assess the feasibility of certifying activities that reduce agricultural emissions from the management of livestock. By the same date, the Commission will also review the use of CRCF certified units for compensating emissions outside of the EU NDC and assess the need for alignment with the relevant provisions related to the implementation of Article 6 of the Paris Agreement. In addition, by 2028, the Commission will carry out a general review of the implementation of the Regulation. Amongst other issues, the review will address the potential for carbon storage in third countries, provided that this is subject to bilateral agreements ensuring compliance with standards equivalent to those set out in the EU Directive on Carbon Capture and Storage (CCS), in line with the approach agreed under the recently agreed [Net Zero Industry Act](#) (NZIA).