



Questions and Answers on EU Certification of Carbon Removals

Brussels, 30 November 2022

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

The 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, the EU needs to compensate for residual emissions that cannot be eliminated, by scaling up carbon removals, or in other words by removing carbon dioxide (CO₂) from the atmosphere. Today's proposal for a carbon removals certification scheme is an important tool to achieve this goal.

Removing several hundred million tonnes of CO₂ out of the atmosphere will become increasingly necessary every year. Carbon can be removed and stored in three broad ways:

- **Permanent storage:** industrial technologies such as BECCS (bio-energy with carbon capture and storage) or DACCS (Direct Air Capture with Capture and Storage), capture carbon from the air either indirectly (through the processing of biomass in the case of BECCS) or directly (in the case of DACCS) and store it in a stable form;
- **Carbon farming:** carbon can be naturally stored on land through activities that enhance carbon capture in soils and forests (e.g. agro-forestry, forest restoration, better soil management), and/or reduce the release of carbon from soils to the atmosphere (e.g. restoration of peatland). Carbon farming activities contribute to achieving the EU's ambitious target of -310 Mt of CO₂ net removals in the Land Use, Land Use Change and Forestry (LULUCF) sector;
- **Carbon storage in products:** atmospheric carbon captured by trees or industrial technologies can also be used and stored in long-lasting products and materials, such as wood-based or carbonate-bonded construction materials.

The Commission's proposal does not cover the capture of fossil carbon for Storage (CCS) or Utilisation (CCU). These technologies help recycle or store fossil CO₂ emissions but they do not remove carbon from the atmosphere.

2. What is the Commission proposing with this initiative?

The proposal aims to accelerate the deployment of high-quality carbon removals, build trust with stakeholders and industry by countering greenwashing, and enable a wide variety of financing options. To achieve these objectives, the Commission is proposing a **first EU-wide voluntary certification framework for carbon removals**. Today's proposal lays down requirements for the third-party verification and certification of carbon removals, the management of certification schemes, and the functioning of registries. These provisions will further ensure transparency and credibility of the certification process.

Carbon removals, under this proposal, can and must bring clear benefits for the climate, as well as preserving or strengthening other environmental objectives. Specifically, carbon removal activities need to meet four Q.U.A.L.I.T.Y criteria:

- **QU**antification: carbon removal activities must be measured in an accurate way and deliver unambiguous carbon removal benefits. The additional carbon removals generated by an activity (in comparison to a baseline) should outweigh any greenhouse gas emissions that were produced as a consequence of the implementation of the activity over its whole lifecycle. The 'net carbon removal benefit' should be quantified in a robust and accurate way.

In the context of carbon farming, the quantification of the net carbon removal benefit can be done cost-effectively by exploiting empirical data, remote sensing technologies (e.g. Copernicus) and highly accurate models based on machine learning and artificial intelligence. Obtaining climate-relevant data compatible with electronic maps will also significantly contribute to improving the quality of national greenhouse gas inventories for the LULUCF (Land Use, Land Use Change and

Forestry) sector, and improve the quality of forest monitoring activities in line with the upcoming proposal for a regulation on Forest Monitoring.

- **Additionality:** carbon removal activities must go beyond standard practices and what is required by law. The preferred way to prove additionality is to set a "standardised" baseline that accurately reflects the standard practices and the regulatory and market conditions in which the activity takes place. A standardised baseline facilitates a cost-effective and objective demonstration of additionality, and also has the advantage of recognising the early efforts of land managers and industries that already engaged in carbon removal activities in the past. In order to ensure ambition over time, the standardised baseline should be periodically updated.
- **Long-term storage:** carbon removal activities must ensure that the carbon removed is stored for as long as possible and the risk of release of carbon should be minimised. The certificates will clearly account for the duration of carbon storage, and distinguish permanent storage from temporary storage.

The risk of release varies among carbon removal activities. Therefore, the risk must be monitored and mitigated, and operators should be held responsible through specific liability mechanisms if carbon is released. In addition, certificates should transparently carry an expiry date that depends on the risk of release specific to each type of carbon removal. In this way, the proposal distinguishes technologies that ensure the permanent storage of carbon (and which should have no expiry date) from temporary carbon removals (e.g. from carbon farming and carbon storage in products). Thanks to these rules, providers of temporary carbon removals will be subject to more realistic commitments that do not hinder uptake, and at the same time they would have the incentive to continue the carbon removal activity to get certified again.

- **Sustainability:** carbon removal activities must have a neutral impact on, or generate a co-benefit for, other environmental objectives such as biodiversity, climate change adaptation, the reduction of greenhouse gas emissions, water quality, zero pollution or the circular economy. For instance, industrial solutions such as BECCS must not lead to unsustainable demand of biomass. The Commission will prioritise the development of tailored certification methodologies on carbon farming activities that provide significant co-benefits for biodiversity. At the same time, practices, such as forest monocultures, that produce harmful effects for biodiversity should not be eligible for certification.

To ensure the above, all carbon removal activities should comply with minimum sustainability requirements that will be defined in the upcoming methodologies. In addition, the certification methodologies shall incentivise as much as possible the generation of co-benefits going beyond the minimum sustainability requirements, especially as regards biodiversity and ecosystems. These additional co-benefits will give more economic value to the certified carbon removals and will result in higher revenues for the operators and will be more attractive for investors.

The proposal sets out the process through which the Commission, with the support of an Expert Group, will translate these quality criteria into detailed certification methodologies that are tailored to the diverse characteristics of the various carbon removal activities.

3. How will this proposal support carbon farming and biodiversity?

Carbon farming includes those farming practices that remove CO₂ from the atmosphere and contribute to the climate neutrality objective. Certification will enable more effective rewards for carbon farming, either via the Common Agricultural Policy (CAP) or other public or private initiatives.

Carbon farming increases carbon sequestration while often providing important co-benefits for biodiversity and other ecosystem services. An illustrative example is the rewetting of peatlands: raising their water table has multiple benefits as it contributes to reducing CO₂ emissions, preserving biodiversity, providing ecosystem services linked to water purification and helping flood control and drought prevention, whereas trade-offs resulting from the loss of agricultural land could be addressed through support for paludiculture (farming under wet conditions).

Other examples of carbon farming practices include:

- Afforestation and reforestation that respect ecological principles favourable to biodiversity and enhanced sustainable forest management including biodiversity-friendly practices and adaptation of forests to climate change
- Agroforestry and other forms of mixed farming combining woody vegetation (trees or shrubs) with crop and/or animal production systems on the same land;
- Use of catch crops, cover crops, conservation tillage and increasing landscape features:

protecting soils, reducing soil loss by erosion and enhancing soil organic carbon on degraded arable land;

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

With certification in line with today's proposal, carbon farming can offer a new source of income to farmers, foresters, and land managers. Carbon removal activities have a strong potential to deliver win-win solutions for sustainability.

4. How can carbon removal certificates be used?

The carbon removal certificates can be used for result-based rewards by private or public sources. Here are several examples:

- Food companies can reward farmers for higher carbon removals that result from more carbon storage in soils or other climate-friendly practices such as agroforestry. While farmers will benefit from additional income, food companies can credibly document their carbon footprint. It will be easier for consumers and investors to compare the food companies' climate claims thanks to harmonised certification rules.
- 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 – can use the certification rules to better compare the offers and reward the projects based on the amount of the certified removals.
- Regional authorities can finance the establishment or enlargement of nature parks through the sale of carbon removal certificates, monetising both the climate and biodiversity benefits.
- 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 - can earn additional income through the sale of carbon removal credits. Labelling programs for sustainable construction materials could equally benefit from harmonised certification rules.
- The carbon removal certificates can be used for result-based financing under EU programs, such as the Common Agricultural Policy or the Innovation Fund, or State aid schemes by Member States.
- The certificates can also increase transparency in private markets, such as in the context of the CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation) mechanism for the offsetting of internal aviation emissions.
- The carbon removal certificates can also help public and private organisations back-up credible carbon removal claims and meet stakeholders' high expectations that carbon removals should not be used for greenwashing, in line with the [Corporate Social Responsibility Directive and the related Sustainability Reporting Standards](#).

Thus, the proposal will create 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. However, it will not be possible to use the certified carbon removals for compliance with the [EU Emission Trading System](#).

5. How will the certification methodologies be developed?

As carbon removal activities bring about different benefits and risks, there can be no one-size-fits-all methodology to certify each of them. The Commission will therefore progressively develop certification methodologies that are tailored to the different carbon removal activities. These carbon removal activities will be chosen based on the mitigation potential, capacity to deliver environmental co-benefits, the technical readiness, and/or the robustness of existing monitoring and reporting methods.

The development of the certification methodologies will be underpinned by thorough preparatory processes, building on the experience of existing certification protocols, and in close consultation with a new Expert Group on Carbon Removals and all interested parties. This Expert Group will include individuals with special expertise in the field of carbon removals, as well as representatives from academia, industry, civil society, Member States' competent authorities, and other public entities. It will consist of around 70 members and will meet at least twice a year. The first meeting is planned for the first quarter of 2023.

6. How will the voluntary certification of carbon removals work in practice?

The proposal requires third party verification and certification of the compliance of carbon removals with the Q.U.A.L.I.T.Y criteria and the related certification methodologies. In practice, this will require the following steps:

- an operator applies to a certification scheme approved by the Commission
- an independent certification body carries out periodic audits of the carbon removal activity to verify the compliance with the quality criteria and, if positive, it issues a certificate of compliance
- the certification scheme registers the certificate and certified the 'net carbon removal benefit' generated by the carbon removal activity in a public registry.

The proposal requires all the relevant information on the certified removals to be publicly accessible. This will help prevent the risk of double-counting and fraud, and will also help the providers of carbon removals to access different types of financing opportunities.

7. What is the difference between carbon offsets and the carbon removal certificates produced under the EU framework?

Offsetting is when an organisation compensates its greenhouse gas emissions by purchasing carbon credits to finance emission reductions or carbon removals elsewhere. However, the vast majority of carbon credits traded today actually come from emission reductions and not carbon removals.

A carbon removal certificate, though, is a recognition that an activity is providing high-quality carbon removals in accordance with the quality criteria and the certification process set out in today's proposal. Therefore, offsets are only one of the possible uses of the carbon removal certificates.

Upcoming EU legislation will cover the specific use of offsets. For instance, the EU sustainability reporting standards will define how organisations can report on climate targets and climate performance.

8. What are the next steps?

The legislative proposal will require adoption by both co-legislators - the European Parliament and the Council - in line with ordinary legislative procedure.

In parallel, the Commission will set up the Expert Group to provide technical advice on the preparation of certification methodologies for carbon removals, with a first meeting foreseen in the first quarter of 2023.

Upon formal adoption of this Regulation and following its entry into force, the Commission will adopt the secondary legislation which will operationalise it, including:

- delegated acts establishing technical certification methodologies for the different carbon removal activities;
- implementing acts setting out harmonised rules on the certification modalities and procedures and on the recognition of certification schemes.

The EU certification framework for carbon removals will be fully operational once the Commission has adopted the first certification methodology and has recognised the first certification scheme.

For More Information

[Press release](#) on Carbon removal certification

[Factsheet](#) on Carbon removal certification

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