

Carbon Farming and the Commission Proposal for a Regulation on a Certification Framework for Carbon Removals: a Legal Perspective

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Carbon farming and the Commission Proposal for a Regulation on a certification framework for carbon removals: a legal perspective

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Abstract

Carbon farming is a term associated with land-based practices, agricultural practices that aim at reducing emissions and sequestering carbon. These are, for example, agroforestry

practices and practices that result in the maintenance and enhancement of soil organic carbon through the exploitation of the carbon cycle and the sequestration potential of soils.

Given the evident links with climate change mitigation, the subject matter of carbon and carbon removals has seen important developments in the European Union (EU) in the past few years. This has culminated in the adoption of a Commission Communication on sustainable carbon cycles and a Commission Proposal for a Regulation on a certification framework for carbon removals.

This contribution is meant to address the content and the potentially problematic aspects of the Commission Proposal from a legal perspective.

Carbon farming; carbon removals; carbon sequestration; soil organic carbon; certification of carbon removals.

1. Introduction

Carbon farming is a term associated with land-based practices, agricultural practices that aim at reducing emissions and sequestering carbon.¹ These are, for example, agroforestry practices and practices that result in the maintenance and enhancement of soil organic carbon through the exploitation of the carbon cycle and the sequestration potential of soils.²

Not surprisingly given the buzzwords "carbon", "soil" and "sequestration", carbon farming has been receiving attention as a potential tool for climate change mitigation.

The IPCC itself, when analysing mitigation options, considers that measures in agriculture, forestry and other land use, when sustainably implemented, can deliver great GHG emission reductions and removals. Additionally, it is considered that agricultural and forest products – provided that they are sustainably sourced – can be used to replace more GHG-intensive products in other sectors.³

Given the evident links with climate change mitigation, the subject matter of carbon and carbon removals has seen important developments in the European Union (EU) in the past few

¹ See, i.a.: *G. Radley, et al.*, Technical Guidance Handbook - Setting up and Implementing Result-based Carbon Farming Mechanisms in the EU, 2021, COWI, Ecologic Institute and IEEP. Available: <https://op.europa.eu/en/publication-detail/-/publication/10acfd66-a740-11eb-9585-01aa75ed71a1/language-en>.

² *European Commission*, Carbon Farming, n.d. Retrieved from: <https://climate.ec.europa.eu/eu-action/sustainable-carbon-cycles/carbon-farming_en> accessed 10 January 2024.

³ *P. R. Shukla, et al.*, Climate Change 2022: Mitigation of Climate Change - Working Group III Contribution to the IPCC Sixth Assessment Report, 2023, IPCC AR6 SYR. Available: <https://www.ipcc.ch/report/ar6/wg3/>.

years, culminating in the adoption of a Commission Communication on sustainable carbon cycles⁴ and a Commission Proposal for a Regulation on a certification framework for carbon removals.⁵

The Commission Communication frames carbon farming practices in the realm of climate action while also recognising the role of sustainable land management for other objectives. In particular, the Commission sees the potential of carbon farming as a green business model for farmers, as a potential new source of income delivering benefits that go beyond carbon removals, such as increased soil fertility, land resilience and biodiversity and related ecosystem services. The Commission also considers that carbon farming has the potential to be instrumental in the implementation of other policies,⁶ such as the EU forest Strategy,⁷ the Bio-economy strategy,⁸ and the Biodiversity strategy.⁹

The Commission Communication on Carbon Cycles contemplates three approaches for sustainable and climate-resilient carbon cycles: decarbonisation, carbon recycling, and carbon removal. This last one, carbon removal, is the area where carbon farming would play a role. In particular, the Communication places a great deal of importance on the monitoring, reporting and verification (MRV) of carbon removals and puts an emphasis on criteria covering the duration of the storage, risk of reversal, and uncertainty of measurement or risk of carbon leakage.¹⁰

The Commission also identifies barriers concerning the financial side, the lack of certainty and/or trust, and the unavailability, the difficulty and high costs related to monitoring, reporting and verification. It also stressed the importance of upscaling these technologies.¹¹

⁴ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - Sustainable Carbon Cycles COM(2021) 800 final, 2021. Available: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0800>.

⁵ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals COM(2022) 672 final, 2022.

⁶ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - Sustainable Carbon Cycles. *Supra* note 4.

⁷ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - New EU Forest Strategy for 2030 COM(2021) 572 final, 2021. Available: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0572>.

⁸ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions - A sustainable Bioeconomy for Europe: Strengthening the Connection between Economy, Society and the Environment COM(2018) 673 final, 2018.

⁹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - EU Biodiversity Strategy for 2030. Bringing Nature Back into our Lives COM(2020) 380 final, 2020. Available: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX:52020DC0380>.

¹⁰ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - Sustainable Carbon Cycles. *Supra* note 4.

¹¹ *Id.*

All these elements would need to be regulated and supported by a harmonised and robust framework.

Cue the Proposal establishing a Union certification framework for carbon removals dedicated i.a. to carbon farming.¹²

Against this backdrop, it might be interesting to perform a legal analysis of the Proposal in order to understand whether it would effectively deliver the objectives it set out to accomplish. This is where this contribution comes in.

The research questions guiding this work are the following: what does the Commission Proposal entail exactly? Are there problematic aspects to consider from a legal standpoint? If so, how could they be addressed?

As it can be appreciated from the above research questions, the research objectives are descriptive, evaluative and normative. In addition, the qualitative, desk-based legal analysis itself is performed considering the following aspects: effectiveness, coherence, completeness and alignment with the legal basis and appropriate consideration of issues related to the legal basis. More in particular, the purpose of the evaluation is to analyse from a legal standpoint whether the proposed framework could indeed be effective in achieving the objectives that motivated its adoption, whether it is comprehensive (also in relation to the aspects of carbon farming that should be regulated), and sufficiently clear as to not give rise to possible interpretative issues, whether the proposed Regulation is coherent with other frameworks or policies and in line with the legal basis or whether there might be other legal basis-related concerns.

The research article is structured as follows. In Section 2, carbon farming and its benefits and risks will be introduced to i.a. highlight some issues that need to be considered when discussing a framework for carbon removals addressing carbon farming, including some background information on Carbon farming in the EU. Next, in Section 3, the Proposal will be described and analysed with regard to some of its key features. Finally, Section 4 concludes.

2. Carbon farming: essential and background information

2.1. Concepts and benefits and risks

¹² For more context leading up to the adoption of the Proposal, see: *L. Jensen*, Briefing - A Union Certification Framework for Carbon Removals, 2023, EPRS - European Parliamentary Research Service. Available: [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2023\)739312](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2023)739312).

We mentioned that carbon farming concerns land-based practices. These may be agricultural practices aiming at reducing emissions and sequestering carbon, such as agroforestry practices, peatland restoration and rewetting, grassland management, and, in general, practices resulting in the maintenance and enhancement of soil organic carbon to be achieved by exploiting the carbon cycle and the sequestration potential of soils.^{13 14} In particular, carbon farming in the context of agricultural soils is meant to leverage the carbon cycle in relation to soils to make the farmland more fertile and more resilient and take advantage of its potential for climate change mitigation, with the added benefit of generating opportunities for the agro-food chain.^{15 16}

In general, in the optics of carbon farming as a green business model meant to provide new financial resources to farmers, we may have three types of carbon farming payments: action-based (payment for a particular action, e.g. certain CAP – Common Agricultural Policy – measures), result-based (payment for a particular result), and hybrid schemes (payment mixing action and result-based mechanisms).

Naturally, the choice of the scheme may entail advantages and disadvantages: for example, action-based schemes are relatively simple, but their mitigation impact is uncertain (as it is, essentially, the action that matters, and not the "results"); result-based schemes are more effective from a climate perspective, but they require effective (and costly) MRV and could be perceived as riskier for farmers; hybrid payments would potentially involve upfront payments for a certain action reducing the risk for farmers (and increasing uptake) with additional

¹³ See, i.a.: *Radley, et al. Supra* note 1.

See, also: *European Commission. Supra* note 2.

¹⁴ See, also, the background document of a roundtable organised by the European Commission to present a study conducted by Ecologic, Cowi and IEEP in relation to the project “Study on the Analytical support for the operationalization of an EU carbon farming initiative”. Said study focuses on five thematic areas: agroforestry, peatlands, grassland, whole-farm audits and the maintenance and enhancement of soil organic carbon in mineral soils: *European Commission - DG Climate Action, et al., Carbon Farming Schemes in Europe - Second Roundtable, Background Document*). Retrieved from: https://ec.europa.eu/clima/sites/clima/files/events/docs/20200923_agenda.pdf.

¹⁵ *The North Sea Region Programme, What is Carbon Farming?*, n.d. Retrieved from: <<https://northsearegion.eu/carbon-farming/what-is-carbon-farming/>> accessed 10 January 2024.

¹⁶ On soil carbon sequestration, see, also:

The North Sea Region Programme, Carbon Sequestration Techniques, n.d. Retrieved from: <<https://northsearegion.eu/carbon-farming/what-is-carbon-farming/carbon-sequestration-techniques/>> accessed 10 January 2024.

H. M. Paulsen, Inventory of Techniques for Carbon Sequestration in Agricultural Soils, 2020. Available: <https://northsearegion.eu/media/12543/20200313-cf-rapport.pdf>.

R. Lal, Conceptual Basis of Managing Soil Carbon: Inspired by Nature and Driven by Science, *Journal of Soil and Water Conservation*, 2019 (74) 2.

R. Lal, Managing Soils and Ecosystems for Mitigating Anthropogenic Carbon Emissions and Advancing Global Food Security, *BioScience*, 2010 (60) 9.

payments linked to results,¹⁷ potentially having downsides connected to both the action-based or result-based part of the scheme.

When discussing carbon farming, a few crucial issues come to the forefront, some of which may be especially valid in the case of result-based and hybrid schemes.

A first important element to highlight when considering carbon farming is that soil sequestration is site-dependent and management-dependent, meaning it varies on account of the local conditions and the type of management. Additionally, soils sequester carbon at a low rate and carbon farming activities may lead to limited changes in soil carbon over the course of time, not to mention that, at a certain point, we may also have to deal with soil C storage capacity reaching saturation.¹⁸

The second connected issue relates to quantification, and monitoring, reporting and verification: this concerns, in particular, the costs associated with MRV and questions of accuracy in the quantification, meant to ensure that the practices actually deliver carbon sequestration. These are all challenging elements to address in relation to soil sequestration.¹⁹ Depending on how the framework is set up, these issues may be prominent when discussing the quality criteria for eligible removals, in particular, quantification (starting from the baselines) and additionality.

A third issue concerns the potential for impermanence, as carbon sequestration in soils and biogenic materials can, intentionally or not, be "undone", and carbon may be released, which naturally represents a problem when such sequestration has been certified²⁰ and a very serious concern when these projects have been used to offset emissions. We will see if and how the Regulation addresses such concerns.

A final aspect that needs to be adequately considered is that not all carbon farming practices are sustainable in every situation. For example, agroecological practices may be *generally*

¹⁷ H. McDonald, *et al.*, Study - Carbon Farming, Making Agriculture fit for 2030, 2021, Policy Department for Economic, Scientific and Quality of Life Policies - European Parliament. For a summarised version of the study, see: H. McDonald, *et al.*, At a Glance - Carbon Farming, Making Agriculture fit for 2030, 2021, Policy Department for Economic, Scientific and Quality of Life Policies - European Parliament. Available: [https://www.europarl.europa.eu/RegData/etudes/ATAG/2021/695487/IPOL_ATA\(2021\)695487_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2021/695487/IPOL_ATA(2021)695487_EN.pdf).

See, also: J. Gars, *et al.*, Do Farmers Prefer Result-based, Hybrid or Practice-based Agri-environmental Schemes?, 2023.

On these issues, see also: B. Henry, *et al.*, Creating Frameworks to Foster Soil Carbon Sequestration, - Burleigh Dodds Series in Agricultural Science, 2023. R. J. Burton & G. Schwarz, Result-oriented Agri-environmental Schemes in Europe and their Potential for Promoting Behavioural Change, Land Use Policy, 2013 (30) 1.

¹⁸ T. O. West & J. Six, Considering the influence of sequestration duration and carbon saturation on estimates of soil carbon capacity, Climatic Change, 2007 (80) 1-2.

A. Siemons, *et al.*, Funding Climate-friendly Soil Management: Risks and Key Issues. Interim Report 19/2023, 2023, Öko-Institut, Ecologic Institute, Universität Giessen.

H. McDonald, *et al.*, QU.A.L.ITY Soil Carbon Removals Assessing the EU Framework for Carbon Removal Certification from a Climate-friendly Soil Management Perspective, 2023, Ecologic Institute.

¹⁹ McDonald, *et al.* *Supra* note 17.

²⁰ Id.

considered sustainable, and yet agroforestry practices may have negative effects on biodiversity linked to their implementation when considering the local conditions.²¹ In short, the location, the type of measure and the manner in which the measure is carried out may have different effects on soil, soil health and biodiversity and may even give rise to different social impacts.²²

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2.2. Background information on carbon farming in the EU

Up until recently, carbon farming was primarily conducted and financed through bottom-up initiatives in the EU.

Firstly, there were/are informational projects which aimed to inform and raise awareness among farmers.²⁴

Secondly, some measures under the CAP sought/seek to support farmers in changing the management of their farms by way of providing compensation for additional costs or foregone income caused by modifications in management. In the last version of the CAP, farmers may make use of Ecoschemes providing incentives to take action towards sustainability in farm and land management for the uptake of agricultural practices beneficial for the environment and climate: these may include carbon farming schemes.²⁵ On a more general basis, the CAP sets Good Agricultural and Environmental Conditions (GAECs) linked to payments and Statutory Management Requirements (SMR), which also somewhat further soil health and carbon storage in soils.²⁶

²¹ Id. *Supra* note 17.

²² *Siemons, et al. Supra* note 18.

See, also: A. *Scheid, et al.*, Carbon Farming Co-benefits. Approaches to Enhance and Safeguard Biodiversity, 2023, Ecologic Institute, IEEP - Institute for European Environmental Policy. Available: [https://ieep.eu/publications/carbon-farming-co-benefits-approaches-to-enhance-and-safeguard-biodiversity/#:~:text=Carbon%20farming%20interventions%20\(such%20as,balance%2C%20air%20quality%2C%20and%20climate.](https://ieep.eu/publications/carbon-farming-co-benefits-approaches-to-enhance-and-safeguard-biodiversity/#:~:text=Carbon%20farming%20interventions%20(such%20as,balance%2C%20air%20quality%2C%20and%20climate.)

²³ For an overview of difficulties in relation to carbon farming and certification, see: C. *Paul, et al.*, Carbon Farming: Are Soil Carbon Certificates a Suitable Tool for Climate Change Mitigation?, *Journal of Environmental Management*, 2023 (330).

²⁴ *European Commission - DG Climate Action, et al.*, Carbon Farming Schemes in Europe - Roundtable, Background Document). Retrieved from: https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/events/documents/carbon-farming-schemes-roundtable-background_en.pdf.

²⁵ Some examples: List of Potential Agricultural Practices that Eco-schemes could Support, 2021. Available: https://agriculture.ec.europa.eu/system/files/2021-01/factsheet-agri-practices-under-ecoscheme_en_0.pdf.

²⁶ Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 Establishing Rules on Support for Strategic Plans to be Drawn up by Member States under the Common Agricultural Policy (CAP Strategic Plans) and Financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and Repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013 OJ 2021 L435/1.

Under the LIFE+ programme and EIP Agriculture are also several projects that are intended to make progress in elements and methods significant for carbon farming schemes. Other projects are dedicated to voluntary carbon markets: farmers earn carbon credits in exchange for their mitigation impact (calculated through an approved methodology), and private actors and businesses can then buy these carbon credits from farmers.²⁷

Lastly, there are also initiatives – originating from retailers and agri-food companies in the context of their supply-chain management – according to which farmers are remunerated for changes that play a part in improving climate outcomes. In addition, some initiatives pull carbon farming products through (generally) shorter supply chains to answer the demand for more sustainable, possibly organic, and healthier food.²⁸

From a policy and legislative perspective, we are now witnessing major developments on this topic – one of which is certainly the Proposal for a Certification Framework for Carbon Removals – spurred on by climate and sustainability concerns.

Indeed, the Commission recognises the key importance of sustainable land management and carbon stored in plants and soils in achieving climate neutrality.²⁹ It notes, in particular, that, in the last years, net removals from terrestrial ecosystems have suffered a decline (more than 12 MtCO₂eq per year), especially driven by the deterioration of forests.³⁰ Additionally, other problems were also identified in the presence of unexploited opportunities to address climate action in the LULUCF (Land Use and Land Use Change and Forestry) sector and challenges related to the implementation of the accounting, monitoring and reporting rules as set out in the (then) LULUCF Regulation.³¹ In light of these findings, the Commission worked on a Proposal to amend the LULUCF Regulation. However, this Proposal does not address the importance of direct incentives at the farm level veered towards the increase of carbon removal and protection of the carbon stocks.³²

²⁷ *European Commission - DG Climate Action, et al. Supra* note 14.

²⁸ *Id.*

²⁹ Sustainable Carbon Cycles (Communication) COM(2021) 800 final, 15 December 2021 . *Supra* note 4.

³⁰ This decline is due to several factors: an increase in wood demand and an increased share of forest reaching harvest maturity leading to increasing harvesting levels, and an increase in natural disturbances, including forest fires and insect outbreaks. See: Commission Staff Working Document - Impact Assessment Report Accompanying the Document Proposal for a Regulation of the European Parliament and the Council amending Regulations (EU) 2018/841 as Regards the Scope, Simplifying the Compliance Rules, Setting out the Targets of the Member States for 2030 and Committing to the Collective Achievement of Climate Neutrality by 2035 in the Land Use, Forestry and Agriculture Sector, and (EU) 2018/1999 as Regards Improvement in Monitoring, Reporting, Tracking of Progress and Review SWD(2021) 609 final.

³¹ *Id.*

³² Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - Sustainable Carbon Cycles. *Supra* note 4.

In the meantime, the Regulation has been adopted: Regulation (EU) 2023/839 of the European Parliament and of the Council of 19 April 2023 Amending Regulation (EU) 2018/841 as Regards the Scope, Simplifying the Reporting and Compliance

Carbon farming is supposed to support and complement these initiatives by making verified emission and removal data accessible to land managers and by supporting the achievement of the removal target of 310 million tonnes of CO₂ equivalent in the land sector.³³

These are some reasons motivating EU action in the form of a Regulation establishing a Union Certification framework for carbon removals, in which the certification of carbon removals generated through i.a. carbon farming would be regulated.

3. Commission Proposal for a Regulation establishing a Union Certification framework for carbon removals

The Proposal was published in 2022 and has as its main objectives to ensure high-quality carbon removals in the EU and to establish an EU (European Union) governance certification framework. In particular, the Regulation seeks to lay down (a) quality criteria for EU carbon removal activities, (b) rules for the verification and certification of carbon removals, and (c) rules for the functioning and recognition by the Commission of certification schemes.³⁴ Through a correct application and enforcement of EU quality framework criteria in the entire EU region and with a proper system of verification and certification, and recognition of the schemes, the Regulation intends to ensure harmonisation of market conditions and reliability of the removals across the EU, all of which would also help to avoid or minimise greenwashing.³⁵ What the Proposal does not do is create a new carbon market.

The Proposal is also conceived to be consistent, at least from the Commission's point of view, with existing policy provisions in the policy area of reference, mentioning, in particular, the LULUCF Regulation,³⁶ the Emission Trading System (ETS) revision,³⁷ the already considered

Rules, and Setting Out the Targets of the Member States for 2030, and Regulation (EU) 2018/1999 as Regards Improvement in Monitoring, Reporting, Tracking of Progress and Review OJ 2023 L107/1.

³³ *European Commission*, Delivering the European Green Deal: On the Path to a Climate-neutral Europe by 2050, n.d. Retrieved from: <https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en#working-with-nature-to-protect-our-planet-and-health> accessed 10 January 2024.

³⁴ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5.

³⁵ *Id.* Explanatory memorandum and Recitals 4 and 31.

³⁶ Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the Inclusion of Greenhouse Gas Emissions and Removals from Land Use, Land Use Change and Forestry in the 2030 Climate and Energy Framework, and Amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU (Text with EEA relevance) OJ 2018 L156/1.

³⁷ Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 Amending Directive 2003/87/EC Establishing a System for Greenhouse Gas Emission Allowance Trading within the Union and Decision (EU) 2015/1814 Concerning the Establishment and Operation of a Market Stability Reserve for the Union Greenhouse Gas Emission Trading System OJ 2023 L130/134.

Communication on sustainable carbon cycles³⁸ and other policy areas (the (proposed) Nature Restoration Law, the Common Agricultural Policy,³⁹ the Renewable Energy Directive (RED),⁴⁰ and the EU forest strategy⁴¹).⁴²

Currently, the Proposal is undergoing the ordinary legislative procedure: both the Council and the European Parliament recently agreed on their negotiating mandate (November 2023), giving the "green light" for the trilogue negotiations to begin.⁴³

3.1. Structure of the Proposal

As mentioned, the Regulation, if adopted, would establish a voluntary Union framework for the certification of carbon removals, with a three-pointed system: the establishment of quality criteria for certain removal activities that take place in the EU, the verification and certification of these carbon removals, and European Commission recognition of certification schemes.⁴⁴

Carbon removals are defined as "the storage of atmospheric or biogenic carbon within geological carbon pools, biogenic carbon pools, long-lasting products and materials, and the marine environment, or the reduction of carbon release from a biogenic carbon pool to the atmosphere".⁴⁵ As can be seen, this is a very broad definition comprising carbon removals from a variety of sources, including closer-to-nature technologies and more industrial-like technologies.

³⁸ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - Sustainable Carbon Cycles. *Supra* note 4.

³⁹ In particular, Regulation (EU) 2021/2115 on Support for the CAP Strategic Plans (CAP Strategy Plans Regulation). *Supra* note 26.

⁴⁰ The RED II and its update.

1. Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the Promotion of the Use of Energy from Renewable Sources (Recast) OJ 2018 L328/82.

2. Interinstitutional Agreement or Provisional Deal on the Proposal for a Directive of the European Parliament and of the Council Amending Directive (EU) 2018/2001 of the European Parliament and of the Council (RED III) Interinstitutional File: 2021/0218(COD), 2023. Available: <https://www.consilium.europa.eu/media/65109/st10794-en23.pdf>. Retrievable: <https://www.consilium.europa.eu/en/press/press-releases/2023/03/30/council-and-parliament-reach-provisional-deal-on-renewable-energy-directive/>.

⁴¹ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - New EU Forest Strategy for 2030. *Supra* note 7.

⁴² Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5.

⁴³ *European Parliament*, Legislative Train Schedule - Legislative Proposal on a Union Certification Framework for Carbon Removals, n.d. Retrieved from: <<https://www.europarl.europa.eu/legislative-train/theme-a-european-green-deal/file-carbon-removal-certification>> accessed 9 January 2024.

⁴⁴ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. Art 1(1). *Supra* note 5

⁴⁵ Id. Art 2(1)(a).

Importantly, removals are eligible for certification only when they are generated from a carbon removal activity that complies with the quality requirements established in the Regulation (Articles 4 to 7) and when they are independently verified according to the rules of the Regulation (Article 9).⁴⁶

A carbon removal activity is defined as "one or more practices or processes carried out by an operator resulting in [1] permanent carbon storage, [2] enhancing carbon capture in a biogenic carbon pool, reducing the release of carbon from a biogenic carbon pool to the atmosphere, or [3] storing atmospheric or biogenic carbon in long-lasting products or materials".⁴⁷ [numbers added].

To be noted here in this definition is the introduction of three types of "recognised" carbon removal activities.

Firstly, we have "permanent carbon storage". This is also further defined as "a carbon removal activity that, under normal circumstances and using appropriate management practices, stores atmospheric or biogenic carbon *for several centuries*, including bioenergy with carbon capture and storage and direct air carbon capture and storage".⁴⁸ These are the more industrial-like types of technologies.

Secondly, we have carbon farming, which is considered in the following manner: "enhancing carbon capture in a biogenic carbon pool, reducing the release of carbon from a biogenic carbon pool to the atmosphere".⁴⁹ Carbon farming is further defined as follows: "a carbon removal activity related to land management that results in the increase of carbon storage in living biomass, dead organic matter and soils by enhancing carbon capture and/or reducing the release of carbon to the atmosphere."⁵⁰ These are the most close-to-nature technologies.

Thirdly, we have the storing atmospheric or biogenic carbon in long-lasting products or materials, which also has its own definition: "a carbon removal activity that stores atmospheric and biogenic carbon in long-lasting products or materials".⁵¹ These are related to the manufacturing of materials or products with carbon sequestration potential.

The recognition of these specific activities is meant to ensure that only longer-lasting (at least on a human scale) carbon removals of a certain quality are able to "enter" the scheme and be

⁴⁶ Id. Art 3.

⁴⁷ Id. Art 2(1)(b).

⁴⁸ Id. Art 2(1)(g).

⁴⁹ Id. Art 2(1)(b).

⁵⁰ Id. Art 2(1)(h).

⁵¹ Id. Art 2(1)(i).

certified accordingly, as the whole underlying objective is to have long-term quality carbon removals actually contributing to climate change mitigation.

3.2. The quality criteria and methodologies

As mentioned, the Regulation aims to guarantee that all carbon removals in the EU are of a certain quality. In order to do this, the Regulation sets down quality criteria meant to cover four different aspects linked to higher-quality carbon removals: (1) quantification, (2) additionality and baselines, (3) long-term storage and (4) sustainability. Naturally, these will need further detailing through the laying down of certification methodologies. Such further implementation is meant to create tailored rules to the attributes, properties and features of the different carbon removal activities.⁵²

In the matter of how to decide on these methodologies, it was considered this role would be given to the Commission, which would determine these methodologies in close consultation with an expert group; the reason behind this decision is that such a process, according to the Commission, has the greatest potential to ensure the quality of the removals and their comparability and minimisation of administrative costs of developing and approving certification methodologies.⁵³

The proposed Regulation establishes said quality criteria in its Chapter 2. The reason behind all these rules and criteria is twofold: to enhance transparency and build trust among the stakeholders about the quality of the removals (and, thus, avoid or minimise greenwashing) on the one side and to harmonise conditions for certification to facilitate access to financing and remove existing barriers.⁵⁴

3.2.1. Quantification of the carbon removal benefit

The first quality criterion is related to the quantification of the carbon removal benefit, which, in the end, needs to be above zero, i.e. positive. Article 4 establishes the formula of reference that will have to be used for this qualification⁵⁵ with some specifications for carbon farming.⁵⁶ The net carbon benefit is calculated by subtracting to the carbon removal baseline

⁵² Id. Explanatory memorandum.

⁵³ Id.

⁵⁴ Id. Explanatory memorandum.

⁵⁵ Id. Art 4(1).

⁵⁶ Id. Art 4(2).

(the carbon removals under the baseline), the total carbon removal of the carbon removal activity and the increase in GHG emissions (increase in direct and indirect GHG emissions other than those from biogenic carbon pools in the case of carbon farming, and related to the implementation of the carbon removal activity),⁵⁷ all expressed in tonnes of carbon dioxide equivalent.⁵⁸ As the whole result needs to be in the positive, the formula expresses the fact that the carbon removals need to be additional to the baseline to which they are compared, and they should outweigh greenhouse gas emissions produced as a result of the implementation of the activity over the whole lifecycle of the activity.⁵⁹

Naturally, differences are in place for carbon farming because, with carbon farming, there usually are naturally formed emissions that are not related to the implementation of the activity and depend on natural processes. In addition, the carbon removal baseline and the total of carbon removal are to be understood as net greenhouse gas removals or emissions as per the accounting rules in the LULUCF Regulation.⁶⁰ Similarly, the quantification of carbon removals in the case of carbon farming needs to be underpinned by data on carbon removals and greenhouse gas emissions in a manner compatible with the national GHG inventories as per the LULUCF Regulation.⁶¹

More generally, for the purpose of quantification, the carbon removals must be calculated in a relevant, accurate, complete, consistent, comparable and transparent manner.⁶² When it comes to emission reduction and carbon removals, the output of quantifications of any kind is not necessarily certain, so the quantification of carbon removals has to consider the uncertainties in accordance with the statistical approaches that are recognised.⁶³ However, it should already be noted that this is not easy for carbon farming, especially given the risk of overestimating carbon removals in relation to carbon farming activities, the inherent risk of intentional or non-intentional carbon release associated with them, including the potential for leakage, and given the difficulty of monitoring in relation to certain carbon farming practices.⁶⁴

⁵⁷ Id. Art 4(1).

⁵⁸ Id. Art 4(3).

⁵⁹ See: *European Commission*, Questions and Answers on EU Certification of Carbon Removals, n.d. Retrieved from: <https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_7159> accessed 9 January 2024.

⁶⁰ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 4(2).

⁶¹ Id.

⁶² Id.

⁶³ Id. Art 4(8).

⁶⁴ See: *McDonald, et al. Supra* note 17. See also: *Radley, et al. Supra* note 1.

It can also be appreciated that, in the formula, the baseline assumes a substantial role. With regards to the baseline, the Regulation specifies that, unless duly justified,⁶⁵ it must correspond to the standard carbon removal performance of comparable activities and in terms of similarity of social, economic, environmental, and technological circumstances and considering the geographical context,⁶⁶ and that it needs to be periodically updated.⁶⁷

Such a standardised baseline is problematic, however, because it may lead to an inaccurate description of the amount of carbon that is sequestered in a project and of whether conditions are actually improving. The issue is the source of said baseline, likely the average figures for carbon sequestration in the case of similar activities, which could also be based on incomplete and fragmented data on soil monitoring. This would mean that the baseline would not be set in an accurate manner and would, thus, not correctly reflect the actual starting amount of carbon. Given that the baseline is the starting point, the basis, for the calculation of the net carbon removal benefit, an inaccurate figure will skew the actual result, which would then also be inaccurate, leading to the potential issuing of inexistent carbon credits.⁶⁸ In other words, credits might be issued where no removals are taking place because the actual baseline is higher than the standardised baseline. This would encourage participation in the scheme as limited or no effort would be needed, with limited or no removals attained in reality. At the same time, in those cases where the actual baseline is lower than the standardised baseline, we might discourage participation in the scheme as more effort would be required.⁶⁹ The problem is, then, further exacerbated in the situations where these certificates may be used to offset emissions, as the "neutralisation" expected through balancing removals and emissions will not occur.⁷⁰

In this respect, the Proposal does not assuage concerns, as it is unclear how the certificates could be used once the removal has been certified. Recital 21 mentions, among the possible uses, the compilation of national and corporate GHG inventories, corporate claims and exchange of verified carbon removal units in voluntary carbon markets; that said, eligible uses are not defined in the text of the Regulation, and offsets are not explicitly excluded. This is, naturally, an element of the proposed framework which deserves to be both appropriately discussed and

⁶⁵ See: Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 4(6).

⁶⁶ *Id.* Art 4(5).

⁶⁷ *Id.* Art 4(7).

⁶⁸ S. Scherger & S. Sharma, Twelve Problems with the European Commission's Proposal for a Carbon Removal Certification Framework, 2023. Retrieved from: <https://www.iatp.org/twelve-problems-ec-crcf#_ednref29> accessed 9 January 2024.

⁶⁹ McDonald, *et al.* *Supra* note 18.

⁷⁰ *Id.*

See, also: Scherger & Sharma. *Supra* note 68.

clarified, given the significant consequences that could follow from a climate mitigation standpoint.⁷¹

Another issue, here, is the clear connection with the additionality criterion, as additionality is calculated on the baseline, meaning that both the quantification and the additionality might not be accurately calculated.⁷²

At the basis of these reflections are the complex and diverse composition of agricultural soils and the different developments these soils may undergo, which may vary significantly from field to field and area to area. The quantification of soil carbon is not an easy or inexpensive endeavour as the results are often uncertain and/or come at a high cost (e.g soil sampling, which also needs to be conducted appropriately to be reliable⁷³).⁷⁴

Now, the justification for opting for such a standardised baseline was the pursuit of objectivity and minimisation of compliance and other administrative costs. The Commission also mentions the positive recognition of "the action of first movers", already engaged in carbon removal activities as another reason for a standardised baseline.⁷⁵ However, these do not seem to be sufficient reasons to argue for a standardised baseline, especially in consideration of the fact that it is not clear how the certificate could be used.

3.2.2. Additionality

The second quality criterion is "additionality", laid down in Article 5 of the Proposal: the carbon removal must be additional, i.e. it must go beyond the Union and the national statutory requirements, and it must take place due to the incentive effect of the certification.⁷⁶ The additionality is regarded as implied if a baseline is established according to the standard carbon removal performance of comparable activities in similar circumstances; if not, it must be proven.⁷⁷ Ideally, a baseline would provide a reference for the standard practices and would reflect the regulatory and market conditions where the activity is to take place. If so established,

⁷¹ *McDonald, et al. Supra* note 18.

⁷² *Scherger & Sharma. Supra* note 68.

⁷³ *Id.*

E. Slessarev, et al., Depth Matters for Soil Carbon Accounting, CarbonPlan. <https://carbonplan.org/research/soil-depth-sampling>, 2021.

⁷⁴ *Scherger & Sharma. Supra* note 68.

⁷⁵ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. Recital 7. *Supra* note 5.

⁷⁶ *Id.* Art 5(1).

⁷⁷ *Id.* Art 5(2).

according to the Commission, it represents a cost-effective and objective demonstration of the additionality criterion.⁷⁸

As with the previous criterion, difficulties emerge in relation to carbon farming activities. Indeed, it can be tricky to determine whether mitigation would have still occurred in the absence of a carbon removal scheme or if carbon removals, for example, are the result of other measures (e.g. CAP measures) and what the baseline would be (it can be calculated in different ways and the way indicated in the Proposal is problematic, as we just saw).⁷⁹

In addition, this additionality criterion is also a relevant concern in connection with the CAP, as CAP compliance provisions might be a driver for the definition of the baseline itself. If this is the case, increasing CAP standards with future CAPs might end up reducing the economic opportunity of carbon farming (as such, the baseline would be adapted to new standards), which, in turn, could generate a chilling effect on the upward revision of the CAP environmental requirements.⁸⁰

Indeed, upward revisions of Good Agricultural and Environmental Conditions and Statutory Management Requirements (respectively, conditions linked to CAP payments and mandatory requirements regardless of payments⁸¹) or Eco-schemes measures under the CAP may reduce this gap between baseline and additionality requirements.⁸²

Another substantial possible inherent issue with the certification of soil sequestration is that the quantity of carbon that can be stored in soil may be finite.⁸³ It is considered that while we may have initial carbon gains in the soil, the net gain eventually may fall towards zero, when the new equilibrium is reached if the activity is maintained over time.⁸⁴ Then, the only way forward would be carbon maintenance,⁸⁵ which would potentially also come to clash with the additionality mechanism in the future as the future baseline could then correspond (or come

⁷⁸ *European Commission*. *Supra* note 59.

⁷⁹ See: *McDonald, et al. Supra* note 17.

⁸⁰ See: *M. Willard*, *Can the CAP and Carbon Farming Coexist?*, 2023. Retrieved from: <<https://www.arc2020.eu/can-the-cap-and-carbon-farming-coexist/>> accessed 10 January 2024.

⁸¹ See: *European Commission*, *Conditionality Explained*, n.d. Retrieved from: <https://agriculture.ec.europa.eu/common-agricultural-policy/income-support/conditionality_en> accessed 9 January 2024.

⁸² See the more detailed considerations: *Willard. Supra* note 80.

⁸³ See: *C. I. D. Rodrigues, et al.*, *Soil Carbon Sequestration in the Context of Climate Change Mitigation: A Review*, *Soil Systems*, 2023 (7) 3.

⁸⁴ *A. Renwick, et al.*, *Economic, Biological and Policy Constraints on the Adoption of Carbon Farming in Temperate Regions*, *Philosophical Transactions of the Royal Society A*, 2002 (360).

B. A. McCarl & U. A. Schneider, *US Agriculture's Role in a Greenhouse Gas Emission Mitigation World: An Economic Perspective*, *Applied Economic Perspectives and Policy*, 2000 (22) 1.

See, also: *J. Berthelin, et al.*, *Soil Carbon Sequestration for Climate Change Mitigation: Mineralization Kinetics of Organic Inputs as an Overlooked Limitation*, *European Journal of Soil Science*, 2022 (73) 1.

⁸⁵ *Renwick, et al. Supra* note 84.

very close) to the state of saturation. In this, one must also consider the potential effect of climate change as the ability of soils to store carbon may be diminished with a warming climate,⁸⁶ thereby further restricting the economic opportunities for carbon farming certification in the future.

If we consider these aspects, we may come to conclude that with a possible upward future revision of soil mandatory standards in the Common Agricultural Policy, especially in relation to organic matter, we may have a consequent reduction of the room for manoeuvre for soil carbon sequestration through carbon farming as framed in the Proposal because of the additionality criterion. It is, then, possible that in order not to reduce this room for manoeuvre for carbon removal certification in relation to carbon farming and connected economic benefits and not to render the instrument ineffective and moot, such (needed) upward revision of the standards in the CAP – which could potentially have more far-reaching consequences than carbon certification – might be frozen to a lower ambition. This situation has led to considering that a proper and strong CAP and other instruments may be better suited for the development of carbon farming.⁸⁷

3.2.3. Duration of the storage

The third criterion refers to the duration of the storage, which is especially relevant for carbon farming and for carbon storage in products, which could generate shorter storage than activities where permanent (several centuries-worth)⁸⁸ storage is achieved.

Regardless of the activity, for a carbon removal activity seeking certification, it is required that operators demonstrate that a carbon removal activity aims at ensuring the long-term storage of carbon.⁸⁹ This obligation is somewhat "strangely" formulated as the words used are "aims at ensuring the long-term storage" rather than a more assertive "achieves or ensures the long-term storage". This *could* suggest that the Commission intended to create an obligation of means and activity-based more than an obligation of result, which could take into account the potential uncertainty of these technologies.⁹⁰ However, at the same time, this does not appear to be the case, as carbon removals also need to be quantified, and the methodologies will also need to

⁸⁶ *McCarl & Schneider. Supra* note 84.

⁸⁷ See more detailed considerations on this: *Willard. Supra* note 80.

⁸⁸ To be noted that this is also rather ambiguous, yet less so than for carbon farming and carbon sequestration in products.

⁸⁹ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 6(1).

⁹⁰ For example, carbon farming and carbon storage in products are more exposed to the risk of releases of carbon into the atmosphere, whether these are voluntary or involuntary. See: *id.* Recital 13.

cover rules for the identification of carbon removal sinks and GHG emissions sources, the calculation of the (total) carbon removals, the increase in direct and indirect GHG emissions, and rules to address uncertainties in the quantification of carbon removals, and on monitoring and mitigation of risk of releases.⁹¹ In addition, the Article itself also adds two requirements: operators must monitor and mitigate any risk of release of stored carbon occurring during the monitoring period, and they must be subject to appropriate liability mechanisms in order to address these potential releases,⁹² though these are not further defined in the legislation. Given the more limited carbon storage potential of carbon farming and carbon storage in products, it is also specified that the carbon will be considered as being released at the end of the monitoring period.⁹³

It should also be noted that a Recital (Recital 13) specifies that "the carbon should be assumed to be released into the atmosphere, *unless the economic operator proves the maintenance of the carbon storage through uninterrupted monitoring activities.*" [emphasis added].⁹⁴ This addition is not followed by an actual binding provision in the Proposal, giving rise to potential confusion as to its relevance and to concerns over whether such an obligation might be included in the methodologies without a proper legal basis. If this is the case, then, we would need to call into question potential obligations in this sense included in the methodologies (if these obligations will eventually be included), as a proper legal basis in this sense would be lacking in the text of the Regulation, expanding the already significant role played by the methodologies.

As for "long-term storage", this term is not defined, meaning that it is not immediately clear from the legislation how long carbon would need to be stored for an activity to be able to be certified according to the rules of the Regulation. In these cases, given that the duration of the storage essentially relies on the monitoring period (at least according to the Article), additional information in this sense will have to be included in the certification methodologies. As we will see, these will have to include a monitoring period,⁹⁵ which helps define the minimum duration of the carbon removal effect.

One of the problems with this setup, and which is inherent with the risky business that is carbon farming in terms of removals, is that this monitoring period would need to be not only accurately defined (very difficult) but also very closely monitored and verified, given the very real risk of having a certification of carbon removals that are not eventually realised (as this amounts,

⁹¹ Id. Art 8 and Annex I.

⁹² Id. Art 6(2).

⁹³ Id. Art 6(3).

⁹⁴ Id. Recital 13.

⁹⁵ Id. Art 8 read in conjunction with Annex I.

essentially, to an ex-ante certification). In this light, it should be considered that monitoring, which at this point becomes an essential element for the certification in relation to carbon farming, is a challenge with regard to certain carbon farming practices, as was considered in section 2.1.^{96 97} Additionally, further uncertainties might arise depending on the method of monitoring chosen (direct measurement vs modelling vs combination of the two).^{98 99} Coupling these considerations with the fact that, as mentioned, "long-term" is not defined in the proposed legislation itself, we end up with additional ambiguities.

In other words, the reliance on the delimitation of the monitoring period in the methodologies *seems* a sensible approach to address uncertainties in relation to long-term storage, but doubts remain as to the legal basis in relation to what constitutes "long-term", as to the determination itself of such a monitoring period (with the added difficulty it entails) and the monitoring itself, which becomes an essential element of the carbon removals in light of potential certification. As such, an option that could be considered to address the issue of the lack of legal basis might be to delimit the monitoring period in the text of the Regulation or to define a precise duration in relation to the permanence for carbon removals in soils for each carbon farming practice.¹⁰⁰ However, uncertainties in relation to the determination of this duration and the consequent monitoring, reporting and verification will likely still be an unavoidable issue in certifying carbon removals from carbon farming practices. In this light, it could be maintained that co-benefits comparatively assume a key importance in view of these inevitable uncertainties.

As things stand, the risk in relation to the duration of the storage is somewhat tempered by the fact that operators must monitor and mitigate any risk or release and must be subject to appropriate liability mechanisms; it also helps that, after a first certification, periodical re-certification is also required, that the certification bodies must be independent and that the Commission retains a certain amount of public oversight through the recognition of the schemes. That said, what constitutes an "appropriate liability mechanism" is not defined in the Proposal, and clarifications in relation to the certified removals and (in)operation of the liability mechanism are also not covered, representing a weakness in the text.

Additionally, considering the above issues, transparency and fraud risk prevention in the schemes assume enormous importance: it is critical that schemes are fully transparent and that

⁹⁶ See, e.g.: *McDonald, et al. Supra* note 17.

⁹⁷ See, also: *Scheid, et al. Supra* note 22.

⁹⁸ *McDonald, et al. Supra* note 17.

⁹⁹ For a US law analysis on these issues, see: *B. A. Davis, A Climate Solution on Shaky Ground: the Voluntary Carbon Market and Agricultural Sequestration*, University of Illinois Law Review, 2023 (3).

¹⁰⁰ See, e.g. suggestions made by: *I. Criscuoli, et al., Lessons Learned from Existing Soil Carbon Removals Methodologies in Agriculture to Drive European Union Policies*, 2023.

the risk of fraud is duly considered as certification schemes may not exactly be reliable and transparent, as was observed with schemes that have obtained EC recognition under the RED.¹⁰¹ In conclusion, a lot is left out of the Proposal and needs to be further fleshed out in the methodologies. In this sense, risks are perhaps not entirely addressed (not even through the rules in certification schemes and the certification procedure).

3.2.4. Sustainability

The fourth criterion is related to the sustainability of the activity, according to which an activity must generate co-benefits in terms of certain sustainability objectives or, at best, have a neutral impact on them. The indicated sustainability objectives are the following: climate change mitigation (besides the apparent contribution in terms of carbon removal benefit), climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, protection and restoration of biodiversity and ecosystems.¹⁰²

The Commission also intends to facilitate this assessment by laying down minimum requirements, which will be further defined in the certification methodologies (to be adopted through additional delegated acts).¹⁰³ The minimum requirements will likely be modelled from the current EU environmental and energy standards to ensure consistency; these could be, for example, the sustainability criteria for biomass set out in the RED II(I).

Compliance with these minimum requirements is, therefore, essential. On top of this, other co-benefits can be reported, which, naturally, must go beyond the minimum requirements.¹⁰⁴

An issue with the current formulation of this Article is that a carbon removal activity may also simply have a neutral impact on sustainability objectives and still be eligible. Setting aside what "neutral" would mean in this context, the requirement of neutral impact would also be compounded with the issue of the potential dubious carbon removals of carbon farming. For a better account of co-benefits in relation to carbon farming specifically, ever more important in relation to carbon farming, the activity should perhaps be eligible only where there

¹⁰¹ See, for example, this NGO report: *Greenpeace*, Destruction: Certified, 2021. Available: https://www.greenpeace.org/static/planet4-international-stateless/2021/04/b1e486be-greenpeace-international-report-destruction-certified_finaloptimised.pdf.

¹⁰² Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 7(1).

¹⁰³ *Id.* Art 7(2).

¹⁰⁴ *Id.* Art 7(3).

are net co-benefits related to sustainability objectives and not merely be allowed to have a neutral impact on them.¹⁰⁵

Additionally, sustainability objectives may include social elements, which may be crucial to consider on account of the potential social impacts of carbon farming.¹⁰⁶ These, however, are not included among the sustainability objectives in Article 7.

3.2.5. The central role of the methodologies

We mentioned the certification methodologies; Article 8 of the Proposal covers basic rules on this specific point.

Firstly, these certification methodologies must be applied by the operators to comply with the abovementioned quality criteria.¹⁰⁷

Secondly, these methodologies will be laid down through delegated acts for the three carbon removal activities covered in the legislation: permanent carbon removal, carbon farming and carbon storage in products.¹⁰⁸

Additionally, they also must include the elements indicated in Annex I to the Proposal, i.e., a description of carbon removal covered and monitoring period, rules for identifying the sinks and GHG emission sources, rules for the various calculations as mandated by the Regulation, rules to address quantification-related uncertainties, to carry out the additionality test, rules on monitoring and risk-addressing and liability rules (mitigation of risks and appropriate liability mechanisms), rules on minimum sustainability requirements, and on the monitoring and reporting of co-benefits.¹⁰⁹

As it can plainly be seen, a lot depends on the methodologies: if these are not appropriate and give importance to problematic elements while not considering certain crucial aspects (e.g. lifecycle, biodiversity contribution, negative soil impacts), and if they do not give the appropriate weight to these crucial aspects, the methodologies can create problematic consequences.

For example, certain activities that might have a limited carbon sequestration potential in the short term but a great biodiversity value might not be able to be certified despite the potential

¹⁰⁵ Similar considerations are made by: *McDonald, et al. Supra* note 18, in relation to biodiversity benefits, more specifically. The authors also provide interesting, more tempered, suggestions (i.a.) on the definitions of “neutral impact” and harm.

¹⁰⁶ *Id.*

¹⁰⁷ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. Art 8(1). *Supra* note 5.

¹⁰⁸ *Id.* Art 8(2).

¹⁰⁹ *Id.* Annex I.

they might hold in the long run in terms of co-benefits. On the other hand, projects (such as afforestation by means of plantation) which might provide a greater carbon removal potential but dubious (biodiversity) co-benefits might end up being certified.¹¹⁰ An additional difficulty is that certain carbon farming practices might generate environmental or biodiversity trade-offs and trade-offs in terms of ecosystem services: for example, actions may benefit one species and have, at the same time, a detrimental effect on another species, e.g. specialist species that need specific conditions to be able to thrive.¹¹¹

These concerns are especially valid for carbon farming, where GHG emissions and carbon removals accounting is challenging and where biodiversity and overall good quality and health of ecosystems might be more easily overlooked in favour of carbon sequestration.

With regards to carbon farming and carbon sequestration specifically in terms of methodology, there are already some elements which could be potentially used or be the basis for inclusion in the current legislation. In fact, the Commission Regulation 2022/996 on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria¹¹² might be of some help. This Commission Regulation, among other things, identifies the methodology for determining the emission savings from soil carbon accumulation via improved agricultural management in its Annex V and foresees a non-exhaustive list of examples of essential management and monitoring practices to promote and monitor soil carbon sequestration and soil quality in its Annex VI. Said methodology is currently used in the renewable energy (RE) framework in the methodology regarding the calculation of greenhouse gas emissions from the production and use of biomass fuels, transport fuels, biofuels and bioliquids.¹¹³ A variation of this RE methodology could be considered, or this same RE methodology could be seen as a starting point for the establishment of the methodology on carbon farming. It should be considered, however, that this RE methodology only concerns soil carbon accumulation and not other co-benefits and trade-offs, which the Commission will certainly have to take into account and give due recognition to when preparing the delegated acts dedicated to the methodologies.

A particularly interesting solution worth noting to include effective biodiversity considerations into any decision process aimed at funding carbon farming was developed by

¹¹⁰ See, for example, consequences of the public French label (Label Bas Carbone), as reported by Fern: *S. Vennin & S. Angerand*, *Low Carbon, High Risk - Lessons for the EU from Label Bas-Carbone forestry Projects in France*, 2023. Available: <https://www.fern.org/id/publications-insight/low-carbon-high-risk-2672/>.

¹¹¹ See, for example, considerations made here: *Scheid, et al. Supra* note 22 at 15 et seq.

¹¹² Commission Implementing Regulation 2022/996 of 14 June 2022 on Rules to Verify Sustainability and Greenhouse Gas Emissions Saving Criteria and Low Indirect Land-use change-risk Criteria OJ 2022 L168/1.

¹¹³ Directive 2018/2001 on Renewable Energy (Renewable Energy Directive, RED II). *Supra* note 40. Annexes V and VI.

the IEEP and Ecologic: given the heterogeneity of carbon farming practices, they argue for a three-tier requirement system (basic, medium and high requirements) based on the risks the carbon farming activity presents. In particular, the system would take into account (1) the uncertainty of biodiversity impact, as different practices are expected to have different impacts on biodiversity, and (2) the scale of the project, given that, generally speaking, larger-sized projects will comparatively have a more significant impact than small-sized projects. Given these premises, they argue that carbon farming practices should be classified according to these criteria and associated with different levels of requirements, progressively increasing with the higher risk of the project on biodiversity. For example, this would translate into having stricter requirements in terms of monitoring and area-based restrictions for higher-risk activities.¹¹⁴ That being said, it remains to be seen if and how this would be included in the EU methodology.

A step into considering the co-benefits is already embedded in the legislation, where it specifies that the Commission, in preparing the Delegated Acts, must take into account the objectives of ensuring the soundness of carbon removal and recognising the protection and restoration of ecosystems, among others.¹¹⁵ While the Article could be formulated more strongly, it is already consequential that checks and balances are somewhat embedded in the Regulation. In addition, in this endeavour, the Commission will be assisted by the Climate Change Committee established under the so-called Governance Regulation (Regulation 2018/1999)¹¹⁶ and by an expert group.¹¹⁷ Hopefully, this will mean that many recommendations and opinions will be heard and properly considered in the process of establishing the methodologies.

In particular, said expert group, the Expert Group on carbon removals, will assist the Commission in the preparation and implementation of policy initiatives and related legislative proposals on carbon removals, including carbon farming; they are meant to facilitate the exchange of experiences and good practices from public and private carbon removal initiatives on issues related to certification, quantification, monitoring and reporting and on the assessment

¹¹⁴ *Scheid, et al. Supra* note 22 at 17 et seq.

¹¹⁵ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 8(3).

¹¹⁶ *Id.* Art 17.

See: Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council OJ 2018 L 328/1. Art 44(1)(1).

¹¹⁷ *European Commission, Carbon Removal Certification*, n.d. Retrieved from: <https://climate.ec.europa.eu/eu-action/sustainable-carbon-cycles/carbon-removal-certification_en> accessed 9 January 2024.

of the criteria; they are also meant to assist the Commission in the preparation of the DAs, to establish cooperation between the Commission, MSs, and stakeholders, and assist in identifying, assessing and realising synergies with other policy developments in the land use, forestry and agricultural sector. Given the importance of the contribution that is expected from the Expert Group, it is a sizeable group with a broad representation of interests, therefore somewhat inclusive of independent experts, research institutions and civil society organisations.¹¹⁸ Transparency is also ensured, according to the rules on Expert Groups that the Commission has developed.¹¹⁹ That being said, it is also crucial that the contributions, findings and recommendations of civil society and research institutions are properly represented and recognised, as these are less guided by vested interests: proper and transparent involvement can go a long way in ensuring that we do not end up having skewed methodologies that do not give proper consideration to essential co-benefits together with carbon sequestration potential. In this regard, NGOs have lamented the limited involvement of civil society and research institutions and the lack of room for a balanced discussion in this process.¹²⁰ In addition, the Commission has also informed that work on the certification methodologies will involve the JRC (for the permanent storage activities), an external consultant unknown at the time this information was disclosed (for carbon farming), and CEN and CENELEC (in relation to the standards for CO₂ in construction products).¹²¹

The already observed magnitude and the key significance of the elements the methodologies are supposed to cover have caused some researchers to consider this delegation, as formulated, as a violation of Article 290 TFEU. According to Article 290, delegated acts are not to regulate the "essential elements" of a legislative act, which must be "reserved for the legislative act and accordingly shall not be the subject of a delegation of power".¹²² In their assessment, the authors of this study published by the German Environment Agency argue that the methodologies do

¹¹⁸ See: *European Commission*, Expert Group on Carbon Removals, n.d. Retrieved from: <[To check the members of said group, see: *European Commission*, Register of Commission Expert Groups and Other Similar Entities - Expert Group on Carbon Removals \(E03861\), n.d. Retrieved from: <<https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3861>> accessed 9 January 2024.](https://climate.ec.europa.eu/eu-action/sustainable-carbon-cycles/expert-group-carbon-removals_en#:~:text=The%20Expert%20Group%20comprises%20of,the%20field%20of%20carbon%20removals.> accessed 9 January 2024.</p></div><div data-bbox=)

¹¹⁹ See: Commission Decision of 30 May 2016 Establishing Horizontal Rules on the Creation and Operation of Commission Expert Groups 2016 C(2016) 3301 final/.

¹²⁰ See: *Carbon Market Watch, et al.*, NGO Letter on the Functioning of the Expert Group on Carbon Removal and its Meetings. Retrieved from: <https://eeb.org/library/ngo-letter-on-the-functioning-of-the-expert-group-on-carbon-removals-and-its-meetings/>.

¹²¹ *Bioenergy Europe*, Bioenergy Europe - Exploring the New Frontier of Carbon Dioxide Removal Certification, (2023). Retrieved from: <https://www.youtube.com/watch?v=RuiSoc4lel8>.

¹²² Consolidated Version of the Treaty on the Functioning of the European Union OJ 2012 C326/47. Art 290.

represent essential elements that would fall into the category of acts that are intended to give concrete shape to fundamental guidelines of the policy of the EU and political choices in the responsibility of the EU legislature, hence requiring the weighing up of conflicting interests on the basis of a number of assessments.¹²³ In regards to such essential elements, only a strict and very circumscribed delegation where the margin of discretion would be so restricted as to be non-existent or extremely limited would be admissible.¹²⁴

In contrast, Articles 4 to 8 of the Proposal have left, as was observed just above, many unanswered or underdeveloped points (e.g. definition of long-term, sustainability requirements, liability mechanisms) to be answered in the methodologies, which then would assume key importance, and, according to the researchers, would amount to an essential element not to be addressed through delegation.¹²⁵ Specific amendments and additions to the Proposal might already go a long way toward addressing such issues and concerns, which are – in the eyes of this author – well-founded and justified. Once again, it remains to be seen how the file will be handled during- and the final outcome(s) of the legislative procedure and Expert Group sessions.

3.3. Certification procedure

The Proposal also sets down rules for the certification in Chapter 3.

Firstly, certification happens on the basis of an application submitted to a certification scheme and, when the application is first accepted, the operator must submit the necessary information indicated in Article 9.^{126 127}

¹²³ This would be how the European Court of Justice has defined “essential elements” in its case law. See: Case C-240/90, Case C-240/90 (Germany v Commission) [1992]. Para. 37. Case C-355/10, Case C-355/10 (Parliament v Council) [2012]. Paras. 65, 76.

¹²⁴ As interpreted by the Legal Service of the Council of the EU (Opinion of 31 March 2010 (8177/10, paragraph 14)), as reported by: Opinion of the Legal Service - Application of Articles 290 (Delegated Acts) and 291 (Implementing Acts) TFEU Brussels, 11 April 2011 (14.04) (OR. fr) 8970/11, 2011. Available: <https://data.consilium.europa.eu/doc/document/ST-8970-2011-INIT/en/pdf>.

¹²⁵ See the analysis and the many points raised: *N. Meyer-Ohlendorf & A. Siemons*, Commission Proposal for an EU Carbon Removal Certification Framework - Is the Proposed Delegation of Power in Line with Article 290 of the Treaty on the Functioning of the EU?, 2023, Ecologic Institut gGmbH and Öko-Institut e.V. Available: <https://www.ecologic.eu/sites/default/files/publication/2023/50122-fact-sheet-commision-proposal.pdf>. Retrievable also from: <https://www.ecologic.eu/19325>.

¹²⁶ In particular, a “description of the carbon removal activity, including the certification methodology applied to assess compliance with Articles 4 to 7, the expected total carbon removals and net carbon removal benefit”. On this, the Commission may also adopt implementing acts to delineate the structure, format and details of the description.

¹²⁷ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 9(1).

The second step involves a certification audit conducted by the certification body to verify the information and to confirm compliance with the quality requirements; the result of the certification audit is a certification audit report,¹²⁸ which also includes a minimum amount of information (as set out in Annex II to the Proposal).

Thirdly, the certification scheme must control the certification audit report and the certificate and make the summary of the audit report and the certification publicly available.¹²⁹ Thereafter, periodic re-certification must be carried out to reconfirm compliance with the Regulation and verify the carbon benefit generated, resulting in a re-certification audit report¹³⁰ that will have the same fate as the first-issued counterpart.¹³¹

Given the significant role of the certification bodies, we also have rules on these, laid out in Article 10. In particular, without going into too much detail, they must be accredited by a national accreditation authority as per Regulation (EC) No 765/2008,¹³² ¹³³ be competent to carry out their tasks and be independent from the operators.¹³⁴ To ensure some control over certification bodies, the Regulation requires that MSs supervise their operation.¹³⁵

3.4. Rules on certification schemes and EC recognition

Besides the rules of certification bodies, we also have rules on the certification schemes themselves, which are the receiving end of the application from the operator to have their activity recognised.

The most important element related to the certification schemes is that only those certification schemes recognised by the Commission will be able to certify a carbon removal activity as compliant with the Regulation.¹³⁶

¹²⁸ On this, the Commission may also adopt implementing acts to delineate the structure, format and details of the certification audit report.

¹²⁹ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 9(2).

¹³⁰ On this, the Commission may also adopt implementing acts to delineate the structure, format and details of the re-certification audit report.

¹³¹ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 9(3).

¹³² Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 Setting out the Requirements for Accreditation and Market Surveillance Relating to the Marketing of Products and Repealing Regulation (EEC) No 339/93 OJ 2008 L218/154.

¹³³ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5.

¹³⁴ *Id.* Art 10(1), (2), and (3).

¹³⁵ *Id.* Art 10(4).

¹³⁶ *Id.* Arts 11(1) and 13(1).

The Regulation also sets down quality-oriented criteria for the certification schemes: they must operate in a transparent and reliable manner, particularly with regard to certain aspects such as stakeholder consultation, transparency, publication of information, and addressing of non-conformity issues.¹³⁷

They must also verify that the information and data coming from the operators were subject to independent auditing and that the certification of compliance happened accurately, reliably and cost-effectively,¹³⁸ and they must publish a list of appointed certification bodies with related information on appointment and monitoring.^{139 140}

Another important aspect related to the certification schemes is the establishment and maintenance of a public registry in order to render public relevant information.^{141 142} All these measures are evidently intended to build trust in carbon removal certification schemes, which is currently lacking among potential stakeholders, and to harmonise conditions for certification in order to remove existing barriers to accessing finance.¹⁴³

As mentioned, only Commission recognised certification schemes can be used by the operator to certify compliance of a carbon removal activity with the Regulation; such recognitions occur through Commission Decisions valid for not more than five years. The process of recognition is laid down in Article 13 and involves a notification to the Commission of the application for recognition of a scheme and a negative or positive decision from the Commission.^{144 145} Recognised certification schemes are also subject to annual reporting requirements about their operations; accordingly, they must submit a yearly report,¹⁴⁶ which the Commission will then make publicly available (either in full or in aggregated form if there are confidentiality issues).¹⁴⁷

¹³⁷ Id. Art 11(2).

¹³⁸ Id. Art 11(3).

¹³⁹ Id. Art 11(4).

¹⁴⁰ On all these aspects, the Commission may also adopt implementing acts to delineate the structure, format and details and processes related to the certification schemes.

¹⁴¹ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 12.

¹⁴² On this, the Commission may also adopt implementing acts to delineate the structure, format and details of public registries and of the recording, holding or use of carbon removal units.

¹⁴³ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Explanatory memorandum.

¹⁴⁴ Id. Art 13.

¹⁴⁵ On this, the Commission may also adopt implementing acts to delineate the structure, format and details of the notification and recognition processes.

¹⁴⁶ The Commission may also adopt implementing acts to delineate the structure, format and details of such reports.

¹⁴⁷ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Art 14.

As a final note, it might be interesting to recall that some interactions might emerge with the schemes that the Commission recognises under the RED II(I) involving the sustainability criteria for bioenergy as expressed under the RED II(I).¹⁴⁸ That being said, it must be noted that these schemes might potentially become relevant also for the certification of carbon removal activities assessing compliance with the quality criteria required by the Proposal.¹⁴⁹

4. Final considerations

The Proposal is an interesting development. However, as with all legislative instruments, it needs to be robust and tight to ensure quality removals. As we have had the opportunity to note, there are some gaps that would need to be filled to have a strong framework in place in relation, for example, to the quality criteria, the methodologies, questions on liability, etc.

Moreover, while the framework is clearly focused on carbon, it is also important that initiatives that have to do with land management (but not only) are seen and considered holistically: firstly, carbon is not the only factor that makes soil healthy and able to perform better as a carbon reservoir. Secondly, we may have issues with the reversibility and duration of the storage of carbon removals in the context of carbon farming. In this light, in addition to providing for a safety net in case of reversal (e.g., delineating consequences and obligations when reversals do happen), co-benefits should be given proper relevance in the text of the Regulation.

Next, in relation to carbon farming specifically (but also for the other solutions), the role of monitoring is central as it allows higher confidence in the actual creation and maintenance of the removals. We have also seen how monitoring, reporting and verification are especially challenging for carbon farming and that this may be a costly yet necessary endeavour.

Finally, a crucial aspect to stress is that while the Regulation would need to facilitate the uptake of the certification to stay relevant, this should not come at the expense of climate change mitigation efforts. In other words, there needs to be additional clarity over the role and the use of the certifications and the carbon credits: it is essential to know how the certificates could be

¹⁴⁸ Directive 2018/2001 on Renewable Energy (Renewable Energy Directive, RED II). *Supra* note 40.

See, also, its update: Interinstitutional Agreement or Provisional Deal on the Proposal for a Directive of the European Parliament and of the Council Amending Directive (EU) 2018/2001 of the European Parliament and of the Council (RED III). *Supra* note 40.

¹⁴⁹ Proposal for a Regulation of the European Parliament and of the Council establishing a Union Certification Framework for Carbon Removals. *Supra* note 5. Explanatory memorandum.

used, and, in particular, it is of paramount importance that the Proposal expressly excludes offsetting. At this moment in time, emissions reductions have the biggest role in meeting the decarbonisation targets, and carbon removals should only be used to further support the transition and only when they are certain and reliable.