



CREDIBLE
EU carbon farming



Funded by
the European Union

Deliverable 2.1

Report on Options for Standards to Ensure Environmental Integrity and Uptake

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**Project CREDIBLE: “Building momentum and trust to achieve credible soil
carbon farming in the EU”.**

Funded by the European Union under the Grant Agreement n° 101112951.

www.project-credible.eu



Document information

GRANT AGREEMENT N°	101112951
Project title	Building momentum and trust to achieve credible soil carbon farming in the EU
Project acronym	CREDIBLE
Project duration	36 months
Coordinator	SAE
Related work package	WP2
Related task	T2.1
Lead organisation	Ecologic Institute
Contributing partner(s)	
Linked to the milestone	D2.1

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1. Introduction

Carbon farming increases the amount of organic carbon stored in soils and biomass, helping to mitigate climate change. Carbon farming practices do not only affect the climate, but can also impact other sustainability outcomes, including biodiversity, soil health, and water use and quality. The promotion of carbon farming poses an opportunity – and a risk – for meeting other sustainability objectives, alongside climate change mitigation.

In 2024, the European Union introduced a certification framework for permanent carbon removals, carbon farming, and carbon storage in products (the **CRCF**).¹ It supports the upscaling of carbon farming (and other carbon removals) by establishing a voluntary framework for carbon removal activities, including monitoring and verification processes and minimum quality standards. The CRCF includes specific rules related to sustainability, requiring carbon farming activities to avoid negative impacts and encourage positive impacts on sustainability outcomes.

This Deliverable presents the work of the CREDIBLE² Focus Group 2.1, titled “Minimum requirements to ensure carbon farming delivers sustainability benefits”. The objective of the Focus Group and the goal of this document is to make recommendations on how the CRCF can maximise the positive impact of carbon farming on biodiversity, adaptation, water and other sustainability outcomes, while minimising negative effects on these crucial areas. Other CREDIBLE Focus Groups consider other issues relevant to the successful implementation of the CRCF in the context of carbon farming and soils.³

Focus Group 2.1 brought together participants from carbon farming certification schemes, farmer associations, soil scientists, and policy experts. The Focus Group met in six online workshops over a 12-month period across 2023/2024 and hosted an in-person workshop with wider stakeholders at the 2024 European Carbon Farming Summit. A list of the participants and meeting details are provided in Annex II. Focus Group participation and activities.

The Focus Group and this document focus on this specific context of carbon farming on mineral soils. As defined by the CRCF, carbon farming includes a wide variety of activities that mitigate climate change, including the rewetting of peatlands to reduce soil emissions, as well as the temporary removal and storage of carbon from the atmosphere in soil or forests. While many of the conclusions will also be relevant for other activities, our limited focus matches the CREDIBLE project’s focus on soils, with the specific focus

¹ REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for permanent carbon removals, carbon farming and carbon storage in products: [Item9-Provisionalagreement-CFCR_2022-0394COD_EN.pdf](#)

² CREDIBLE (<https://www.project-credible.eu/>) is an EU-funded Horizon project that aims to build trust for the implementation of carbon farming by supporting the development of a consensus on methodologies that enhance soil’s capacity as carbon sink at European level. With 11 Focus Groups, it engages experts and stakeholders in discussing key issues on soil carbon sequestration, quantification, data and policy.

³ For example, other Focus Groups consider quantification of soil organic carbon, monitoring, reporting, and verification (MRV), etc. Our recommendations should be considered alongside the conclusions of these other Focus Groups.

on mineral soils, prompted by gaps identified in legislation supporting the implementation of the CRCF⁴, and Focus Group expertise.

The Deliverable proceeds as follows:

- Section 2 outlines the principles for ensuring sustainability that were agreed upon by the Focus Group.
- Section 3 summarises our research into approaches to ensure sustainability outcomes in existing carbon farming certification schemes.
- Section 4 focuses on how sustainability objectives can be implemented through the CRCF: we introduce the CRCF and its sustainability requirements, then summarise the Focus Group's recommendations. The primary focus is on how sustainability can be implemented in CRCF certification methodologies. This section also includes more detailed discussions of practical approaches to sustainability, including farm environment plans and price premiums.
- Section 5 presents key recommendations and conclusions.
- Annex I presents the CREDIBLE Focus Group 2.1 Policy Brief: Ensuring carbon farming delivers sustainability benefits. This policy brief is the key output of the Focus Group, summarising discussions and making recommendations for the implementation of sustainability in the CRCF.
- Annex II provides details on Focus Group 2.1, listing participants and activities.
- Annex III presents CRCF text most relevant to our focus area.
- Annex IV lists useful resources identified by the Focus Group related to the topic of operationalising sustainability in the context of carbon farming certification.

2. Principles for ensuring sustainability

An early objective of the Focus Group was to agree upon a set of principles for ensuring sustainability in the context of carbon farming. These principles were intended to support the development and evaluation of different approaches for ensuring that carbon farming certification delivers sustainable outcomes. While different actors emphasised different principles, all Focus Group members agreed on the importance of all elements.

The following list of six principles was identified to guide how sustainability can be achieved through carbon farming certification⁵:

1. **Holistic approach:** Carbon farming should incentivise a holistic and context-specific approach to farm management that promotes sustainable outcomes and avoids unintended negative sustainability impacts, whilst prioritising climate mitigation.

⁴ Approaches employed in the EU Taxonomy Regulation were proposed to support the implementation of the CRCF, however, as explained in more detail in section 4.1.3 EU Taxonomy Regulation, this regulation does not have published approaches for carbon farming on mineral soils.

⁵ Our principles focus on sustainability outcomes (i.e. beyond climate mitigation). Out of scope for this brief but crucial is the overall environmental integrity of the CRCF, which demands robust rules for quantification, additionality, double-counting/claiming and permanence, as well as regulation of buyers' environmental claims.



2. **Accessibility:** Participation costs for farmers must be minimised to ensure that it is financially attractive for farmers to implement sustainable measures. Financial support should be provided to early adopters of carbon farming practices, e.g. for advisory services and MRV, or in the form of offtake agreements.
3. **Pragmatism:** A pragmatic approach is essential to ensuring sustainability through carbon farming certification, aiming to reduce the barriers to farmer participation and promote farmer uptake, e.g. integrating existing management and monitoring systems.
4. **Incentives:** Farmers should be rewarded for the sustainability impacts of carbon farming, which will be enabled by robust monitoring of impacts.
5. **Consistency:** Carbon farming certification approaches to sustainability should be consistent and comparable to facilitate market demand.
6. **Integrity:** Certification must deliver buyers robust sustainability impact information, using metrics and indicators that are valuable to them. The CRCF must also manage buyer claims to ensure they align with the sustainability impacts delivered.⁶

In addition to these guiding principles, Focus Group members emphasised the importance of trust in carbon farming certification – for farmers, for buyers of temporary carbon credits, and for society at large. Three aspects were highlighted in discussions (CREDIBLE 2024)⁷:

- **Trust that the certificate supports a resilient and sustainable farm business model while sustaining food production.** Carbon credits must be seen as a tool to support and enable the transition towards sustainable farm business models.
- **Trust that the certificate is enhancing the production basis of farms.** Healthy soils are the one most important resource for agricultural production. Other environmental and social objectives, such as good labour and working conditions, resource efficiency and a good ecological condition of natural resources, are also essential for sustainable farm businesses.
- **Trust that the certificate is in compliance with environmental and social objectives of the European Union.** The identification and monitoring of risks and impacts supports the avoidance, mitigation and management of risks and impacts as part of the way of doing business in a sustainable way.

⁶ Rather than the CRCF, this may be managed by additional EU policies such as the Green Claims Directive. However, the CRCF methodologies must be developed considering the types of claims that will be permissible, once the Green Claims Directive is finalised.

⁷ These principles were published in a public discussion document shared ahead of the 2024 CREDIBLE European Carbon Farming Summit (CREDIBLE 2024).



3. Existing approaches for implementing sustainability objectives

To support Focus Group discussions on how carbon farming certification can ensure that broad sustainability objectives are met alongside climate objectives, we researched the concept of sustainability and existing approaches for managing sustainability outcomes in certification and related frameworks. This research was discussed by the Focus Group and was also published in a public consultation document as background for a public workshop with wider stakeholders at the 2023 CREDIBLE EU Carbon Farming Summit (CREDIBLE 2024).

3.1 Existing approaches to ensuring sustainability

Sustainability is a socio ecological process, defined by the UN as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (UN 1987), which encompasses economic development, natural resources conservation, and social equity. Carbon farming actions are part of a wider effort towards sustainability, integrating environmental, social, and economic objectives to create a more resilient and regenerative agricultural system. Frameworks such as the Sustainable Development Goals (SDGs 2015), the EU Taxonomy (EU 2020), the Performance Standards of the International Finance Corporation (IFC PS) (IFC 2012), and the Forest Stewardship Council Ecosystem Service Procedure (FSC 2021) provide a starting point for how to integrate sustainability into carbon removal certification. As part of a short assessment all four frameworks were analysed regarding their suitability for operationalising sustainability standards into carbon removal certification (Table 1). None of the four existing frameworks are sufficient to operationalise sustainability standards within the CRCF. However, they offer a basis to learn from and develop robust and trusted sustainability standards for carbon dioxide removals.

Table 1: Assessment of four sustainability frameworks

Sustainability Framework	Positive	Negative
EU Taxonomy & Do No Significant Harm Principle	Reduces environmental risk and impacts caused by a project or activity.	Excludes agriculture from the technical screening.
Identifies environmentally	Prioritises environmental aspects.	No motivation for sustainable transition in taxonomy-excluded activities.



sustainable economic activities	Builds stakeholder trust. Implementing this framework shows commitment to sustainable practices.	Minimum social safeguards, potentially overlooking social concerns.
SDGs	Sets measurable targets and indicators which ensure accountability.	Broad objectives can raise implementation challenges.
Holistic approach that incorporates sustainable development principles across global and local sectors, and stakeholders	Adaptability for global adoption, through tailored approaches.	Monitoring and reporting difficulties
	Holistically addresses multiple sustainability aspects through the different goals.	Conflicts may arise in the prioritisation of the goals.
IFC PS	Standardises environmental and social management aspects in projects.	Focus on the banking and industry sector, excluding the agri-food sector.
Defines Performance Standards (PS) for social and environmental sustainability aimed at World Bank Group clients	Internationally recognised standards.	Compliance limitations, specifically in areas lacking strong governance structures.
	Fosters stakeholder trust by demonstrating commitment to sustainable practices.	Largely unknown in the agri-food sector.
FSC Ecosystem Services Procedure	Reduces risks of unintended consequences through strict social and environmental do no harm safeguards.	Designed for the forestry sector and forest ecosystem services.
Establishes requirements for FSC-certified forest managers to demonstrate the impact of their activities on ecosystem services	Promotes the responsible use of forest resources, biodiversity conservation and the well-being of local forest-dependent communities.	

To gain insights about the practical implementation of sustainability in carbon removal certification, we reviewed relevant literature assessing how sustainability is implemented in existing voluntary carbon markets. We drew on recent review reports that assessed certification methodologies and rules and requirements in place in the voluntary and compliance carbon markets (Scheid et al., 2023; Schneider et al., 2022; Wissner & Schneider, 2022; van Baren et al., 2023; Böttcher et al., 2023). We identified six categories of approaches, presented in Table 2. The categories and examples we



identify are employed by different certification schemes in the voluntary carbon market in differing combinations; no schemes implement all of these.

Table 2: Approaches to ensure sustainability outcomes through carbon removal certification

Approach	Description	Examples
Identification and management of risks and impacts	Ex-ante whole farm evaluation identifying risks and impacts that considers the complexity of a project and how it can contribute positively across different dimensions of sustainability (with or without third party verification).	<ul style="list-style-type: none"> - Ex-ante qualitative assessment of sustainability impacts - SDG assessments - Development of a performance standard (IFC PS1)
Transparent reporting	Provision of detailed and disclosed documentation of the sustainability impacts of certified carbon farming activities and assigning roles and responsibilities for managing environmental and social risks when implementing removal activities.	<ul style="list-style-type: none"> - Project documents published - Detailed and public registries - Verification reports published - Mechanism-level evaluations - Internal person responsible for sustainability requirements
Stakeholder processes and policies	Process for involving relevant stakeholders in the different stages of the carbon certification process (promoting social and environmental integrity) and assessment which local stakeholders are impacted by a project.	<ul style="list-style-type: none"> - Stakeholder engagement - Indigenous consent - Grievance system - Gender policy - Impact assessment
Activity eligibility conditions	Setting minimum standards (eligibility criteria for activities, actors or contexts) to ensure that carbon farming activities pose low or no risk to sustainability and providing guidelines for project developers to demonstrate that their project follows the requirements	<ul style="list-style-type: none"> - Detailed eligibility criteria for activities (e.g. CAP interventions) - Methodology-level sustainability assessments (ex-ante) - Guidance documents (e.g. IFC guidelines, positive lists, handbook)
Quantitative monitoring of sustainability	Quantifiable information that measures the compliance with	<ul style="list-style-type: none"> - Ex post monitoring of sustainability impacts



	established standards (with or without third party verification)	<ul style="list-style-type: none"> - Quantitative sustainability indicators - Quantification of eco-system services
Rewards for sustainability benefits	Rewarding for sustainability benefits, either due to direct financial incentives, increased consumer willingness to pay for sustainability outcomes or funding for training and advisory services to ensure landowners achieve sustainability goals.	<ul style="list-style-type: none"> - Sustainability outcomes reported on certificates/credits - Premium labels (e.g. CCBS) - Training and advisory services

3.2 Categorisation and assessment of sustainability approaches

As illustrated in Figure 1, these six approaches identified can be grouped into three categories.

General requirements: Certification schemes can implement scheme-wide requirements to promote positive sustainability outcomes. These would apply in the same way to all activities covered by the certification scheme. These approaches of identifying and managing risks and impacts, transparent reporting, and stakeholder processes and policies are basic building blocks that support the attainment of broader sustainability objectives.

Activity-based requirements: Certification schemes can also promote sustainability through rules and requirements specific to the activity. These more specific approaches can be more effective, as they are designed to manage sustainability risks and opportunities in the specific context of a particular mitigation activity (e.g. carbon farming on mineral soils). Examples of these approaches include activity eligibility criteria that may exclude certification for some particularly risky activities or contexts), and activity-specific qualitative or quantitative monitoring of sustainability impacts.

Rewarding of sustainability benefits: A third category is providing additional rewards (financial or other) for activities that generate sustainability benefits. In addition to the rules and requirements established by general and activity-based requirements, offering benefits can increase willingness to ensure sustainability outcomes.





Figure 1: Categories of carbon certification approaches to ensure sustainability

These approaches were discussed with broader stakeholders at the 2024 CREDIBLE EU Carbon Farming Summit (more detail is provided in **Error! Reference source not found.**). Key reflections from those discussions are highlighted below:

- All approaches identified in Table 2 are important and should be integrated into one comprehensive carbon removal certification framework.
- It is important to differentiate between quantifying sustainability outcomes, and other forms of monitoring and reporting of sustainability objectives, both qualitative approaches and quantitative approaches to monitoring sustainability outcomes should be considered.
- Success criteria for sustainability objectives (e.g. water quality, soil health, improved biodiversity) should be developed.
- Carbon removal actions and sustainability standards are highly context dependent, which needs to be taken into consideration.
- Sustainability requirements should be feasible for farmers and land-users to implement and monitor, while avoiding complex administrative burden for them.



4. Implementing sustainability in the Carbon Removals Certification Framework

The central topic of the Focus Group discussions was how to effectively integrate sustainability into the CRCF. In this section, we introduce the CRCF and its proposed objectives related to sustainability. We then present the Focus Group's recommendation for how this can be operationalised in the context of carbon farming on mineral soils. These recommendations were published in abbreviated form as a policy brief in late 2024 (the policy brief is included in Annex I).

4.1 Carbon Removals Certification Framework

4.1.1 CRCF overview

The European **Carbon Removal and Carbon Farming certification framework regulation (CRCF)** aims to scale up high-quality carbon removals. The regulation creates a voluntary framework for certifying permanent carbon removals, carbon farming and carbon storage in products, aiming to establish minimum standards for removal activities. The CRCF sets certification eligibility criteria and sets out monitoring and verification processes to ensure the quality of carbon removals. In addition to providing an overall framework, subsequent delegated acts to the CRCF will establish certification methodologies for the covered activities, including carbon farming on mineral soils. These **certification methodologies** set out how carbon farming activities must be implemented in order to be certified, including how mitigation impacts are quantified, how additionality will be demonstrated, how liability in case of reversal of carbon removals will be managed, and minimum sustainability requirements. These certification methodologies are central to the implementation of the CRCF and are currently being developed by the Commission with input from a group of experts.⁸ The most relevant sections of the CRCF legal text are provided in Annex III.

The CRCF defines **carbon farming** as any activities that result in the capture and storage of carbon in biogenic carbon pools (e.g. soils, trees) or the reduction of soil emissions. This covers the rewetting of peatlands, agroforestry, soil protection measures, reforestation, and improved fertiliser use.

The use case for the CRCF credits over time is not yet defined. The CRCF has been proposed as a voluntary mechanism and it is assumed that the methodologies may be first useful within the voluntary carbon market. However, there is the potential for these methodologies to be adapted for other uses over time, for example to target public funding, or even within regulatory systems. The Focus Group discussions focused on use cases where the CRCF was a voluntary system. Their proposals should be

⁸ The Expert Group on Carbon Removals, see <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3861>. The Methodologies will be published as delegated acts.



considered in this light, with other or additional requirements potentially necessary for alternative use cases.

4.1.2 CRCF sustainability requirements

The CRCF establishes four certification eligibility criteria, including one focused on sustainability.⁹ The sustainability criterion calls for all certified activities to do no significant harm to, and if possible to generate co-benefits for, six sustainability objectives (Article 7(1)):

- a) **climate change mitigation** (beyond the main net carbon removal benefit and net soil emission reduction benefit);
- (b) **climate change adaptation**;
- (c) sustainable use and protection of **water and marine resources**;
- (d) transition to a **circular economy**, including the efficient use of sustainably sourced bio-based materials;
- (e) **pollution prevention** and control;
- (f) protection and restoration of **biodiversity and ecosystems** including soil health, as well as avoidance of land degradation.¹⁰

In the case of carbon farming activities, an additional sustainability requirement is that they must generate co-benefits related to (f) biodiversity and ecosystems including soil health, while also avoiding land degradation, in addition to doing no significant harm to the other sustainability objectives.

Principally, the CRCF calls for sustainability requirements to be put into action through the certification methodologies.¹¹ The methodologies are required to establish two sets of requirements:

- **Minimum sustainability requirements** (Article 7.2): In the case of carbon farming, this means ensuring that carbon farming activities generate co-benefits related to the protection and restoration of biodiversity, and do no significant harm to other sustainability objectives.⁵ Where appropriate, these should be consistent with the EU Taxonomy (see section 4.1.3 below).
- **Co-benefits beyond minimum sustainability requirements** (Article 7.3): Certification methodologies should include elements to incentivise as much as

⁹ The remaining criteria focus on ensuring removals are robustly quantified, additional, and long-lasting.

¹⁰ We propose that criteria (f) should be interpreted to mean “protection and restoration of biodiversity and ecosystems,” with “soil health” and “avoidance of land degradation” as additional but not sufficient examples of how this could be met. That is, simply avoiding land degradation should not be considered sufficient to achieve this objective – biodiversity and ecosystems must also be protected and restored.

¹¹ In addition to the certification methodologies, the CRCF has other avenues for supporting the sustainability of carbon farming activities. For example, the CRCF stipulates that certification schemes (e.g. Verra, Gold Standard, MoorFutures etc.) must be recognised by the EU Commission, a process that offers another opportunity to promote sustainable outcomes. The CRCF also requires member states and/or national accreditation bodies to accredit or recognise certification bodies to carry out third-party verification of CRCF project operators. We discuss how these and other opportunities for further operationalising sustainability within the CRCF in section 4.2.2.



possible the generation of co-benefits that go beyond minimum requirements, especially related to protection of biodiversity and ecosystems.

4.1.3 EU Taxonomy Regulation

The CRCF requires that, “where appropriate,” the CRCF minimum sustainability requirements should be consistent with the EU Taxonomy’s technical screening criteria.

The EU Taxonomy Regulation¹² aims to support the reorientation of financial capital flows towards sustainable investments by categorising some economic activities as “environmentally sustainable.” The Taxonomy considers the same six sustainability objectives used in the CRCF.¹³ To be classified as “environmentally sustainable”, activities must substantially contribute to at least one of these sustainability objectives (e.g. climate mitigation) and do no significant harm to the other objectives, as defined by the Taxonomy’s technical screening criteria.

The EU Taxonomy has defined technical screening criteria for some carbon farming activities that can support operationalisation of sustainability in the CRCF, but significant gaps remain. The EU Taxonomy has developed criteria for forestry activities.¹⁴ It has also developed criteria for “restoration of wetlands” projects that substantially contribute to climate mitigation (described in Box 1, which also explains how these can be used to operationalise sustainability in the CRCF for the carbon farming activity “peatland rewetting”).¹⁵ However, the EU Taxonomy has not published technical screening criteria for other agriculture activities such as soil carbon sequestration on mineral soils or agroforestry. It is also not appropriate to simply take the approach proposed by the EU Taxonomy and apply these in the context of soil carbon projects. The EU Taxonomy approach has been developed within the context of large-scale economic activities and investments, making the approach relatively cost intensive. The smaller average scale of carbon farming projects (in terms of mitigation impact and expected revenue) requires a lower cost approach to ensure that sustainability assessments are not a significant barrier.

Box 1. Carbon farming activity of “rewetting peatlands”: proposal for operationalising sustainability objectives in the CRCF

¹² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852>

¹³ These originated in the EU Taxonomy; the CRCF objectives are slightly adjusted from the EU Taxonomy version (e.g. in the EU Taxonomy, objective (f) protection and restoration of biodiversity and ecosystems does not include “including soil health, as well as avoidance of land degradation,” which was an addition in the CRCF).

¹⁴ The EU Taxonomy developed criteria for the following forestry activities related to making a substantial contribution to climate mitigation: Afforestation; Rehabilitation and restoration of forests, including reforestation and natural forest regeneration after an extreme event; Forest management; Conservation forestry.

¹⁵ The EU Taxonomy has also established technical screening criteria for the activity restoration of wetland that makes a substantial contribution to adaptation, however, given the focus of the CRCF on climate mitigation, the climate mitigation screening criteria are most appropriate.



The EU taxonomy has developed technical screening criteria for “wetland restoration projects” that make a significant contribution to climate mitigation.

This means that, unlike some other CRCF carbon farming activities, for the activity “rewetting peatlands” the CRCF can rely on the EU Taxonomy to operationalise sustainability objectives. As described in section 4.1.2, the CRCF requires that, where appropriate, CRCF minimum sustainability criteria are aligned with the EU Taxonomy.

The definition of wetland restoration includes peatland rewetting. These projects are assumed to do no significant harm to other sustainability objectives if they pass these technical screening criteria:

- b. Climate adaptation: A climate risk and vulnerability assessment must be carried out.
- c. Water and marine resources: A water use and protection management plan (or an Environmental Impact Assessment that considers water impacts) must be developed.
- d. Circular economy: Requires that “peat extraction is minimised”.
- e. Pollution: Requires that pesticide and fertiliser use is minimised, measures are taken to avoid the use of hazardous active ingredients, and pollution is avoided or cleaned up.
- f. Biodiversity: Requires that activities align with relevant national conservation objectives, avoid the conversion of high conservation areas, and include a restoration plan that ensures the maintenance and possible improvement of biodiversity.

We propose that these do no significant harm criteria are used in the CRCF peatland rewetting certification methodology with a few minor changes:

- The criteria for biodiversity should be made more ambitious to match the CRCF criterion that carbon farming activities generate co-benefits for this objective (i.e. require that the restoration plan “ensures improvement of biodiversity”).
- The process should be streamlined to decrease administrative costs for all parties. While peatland rewetting projects generate relatively large numbers of credits and revenue (compared to other carbon farming projects), and therefore can better cover the transaction costs of implementing sustainability requirements, the cost of meeting the EU Taxonomy criteria could pose a barrier. In place of the technical screening criteria requiring multiple plans for the different sustainability objectives, these should be addressed in a single overarching peatland restoration plan that considers all sustainability objectives. The CRCF peatland rewetting methodology should also allow group certification of sustainability impacts to reduce costs when projects are suitably homogenous (often necessary in the case of peatlands as rewetting often affects multiple pieces of land).



4.2 Implementing sustainability in CRCF: proposed approach for carbon farming

In this section, we propose an approach for achieving sustainability objectives in the CRCF for carbon farming activities.¹⁶ Our proposal has been developed for carbon farming on mineral soils.¹⁷ We consider that the CRCF should not be designed for all farmers but should target to the top 10-15% of “leader” farmers.

In developing this approach, the **principles** developed by the Focus Group 2.1 and discussed in section 2 have been central.¹⁸ Accordingly, the proposal below aims to balance three objectives:

- **Maximise trust in environmental outcomes** through robust and comparable information on sustainability impacts for buyers. While the CRCF’s primary focus must be climate mitigation, the goal is to avoid negative impacts on other sustainability outcomes, and to promote biodiversity as much as possible.
- **Support holistic change in agriculture**, i.e. support farms, farmers, and the value chain to transition towards sustainable production and consumption processes.
- **Minimise transaction costs for farmers** to ensure that it is financially attractive for them to implement environmentally sustainable carbon farming practices.

We propose two areas for operationalising sustainability in the CRCF: section 4.2.1 outlines how sustainability should be integrated into certification methodologies, implementing minimum sustainability requirements and incentivising co-benefits beyond minimum standards; section 4.2.2 suggests how sustainability outcomes can be achieved through other elements of the CRCF.

4.2.1 Operationalising sustainability in certification methodologies

The CRCF provides some guidance on how the sustainability objectives should be integrated into the certification methodologies, including relying on criteria developed under the EU Taxonomy. However, particularly in the case of carbon farming, there is still considerable flexibility in how to meet the CRCF requirements. In the following section, we propose how the certification methodologies can implement (1) minimum sustainability requirements and (2) incentivise co-benefits beyond minimum

¹⁶ Our proposed approach does not consider the attainment of the other certification eligibility criteria (i.e. that carbon farming mitigation must be robustly quantified, additional, and long-lasting); these must also be ensured.

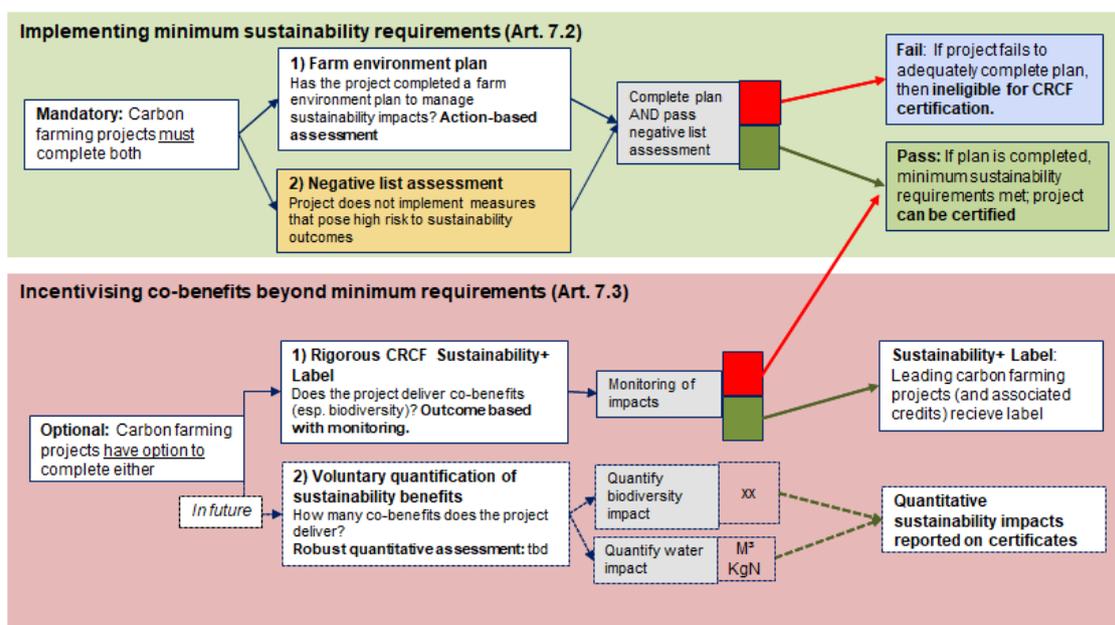
¹⁷ We discuss the case of peatland rewetting Box 1.

¹⁸ This includes the central role of trust in enabling carbon farming markets, including trust that carbon farming supports a resilient farm business model, supports an enhanced production basis on farms, and ensures compliance with the environmental and social objectives of the EU.



requirements. Our proposal is summarised in Figure 2. We identify strengths and weaknesses of the approach, identify open questions, and discuss other approaches.

Figure 2. Operationalising sustainability in CRCF Certification Methodologies: visual overview



4.2.1.1 Implementing minimum sustainability requirements

To meet the minimum sustainability requirement, we propose carbon farming projects must complete **both 1) a farm environment plan and 2) a negative list assessment**.

Minimum sustainability requirements approach: 1) Farm environment plan

We propose meeting minimum sustainability requirements by means of completing a farm environment plan. Specifically, we suggest that completing and maintaining this plan should be sufficient to fulfil the requirement of generating a mandatory biodiversity co-benefit and ensuring no significant harm to other sustainability objectives. This assessment would be action-based, and not conditional on monitoring of impacts: minimum sustainability requirements would be assumed to be met if the carbon farming project completed a farm environment plan and kept it updated over the life of the carbon farming project. The environment plan would aim to provide farmers with information regarding sustainability impacts of their carbon farming activities and aim to drive desirable behaviours. See Box 2 for a proposal of the content and process of a farm environment plan.

Carbon farming projects pass the minimum sustainability requirements if they adequately complete the plan, and keep it updated, i.e. there would be no way to “fail” the minimum sustainability requirements, regardless of the measures implemented or their impacts.



This relies on an assumption that the measures implemented are likely to, in general, align with sustainability requirements, and a theory of change that assumes that if farmers receive additional sustainability information (through the environment plan), they will over time adapt in consideration of sustainability impacts.

To ensure that this approach sufficiently delivers positive sustainability outcomes, the impacts on sustainability at a CRCF-level (or certifications scheme-level) must be monitored and assessed over time. Should this monitoring identify that significant harm to sustainability (or a failure to generate biodiversity co-benefits) is occurring, this approach would need to be revised. For example, if negative impacts were associated with a subset of particular carbon farming measures, these could be excluded (i.e. a “negative list” of excluded measures could be implemented).

To make this approach affordable for small carbon farming projects, the development of farm environment plans should be co-financed, for example through the Common Agriculture Policy (CAP), e.g. under the CAP intervention to support knowledge and advice (KNOW).¹⁹

Table 3 Farm environment plan approach: qualitative evaluation

	Justification	Potential issues
Farm environment plan	+ Increasing farmer knowledge of sustainability impacts will increase likelihood that they implement sustainable carbon farming measures.	- No monitoring of sustainability outcomes (as action-based)
	+ Holistic and farmer-centred: considers unique local context and farmer expertise.	- Costly for farmer and administrator: Must be co-financed by CAP and must generate high value for the farmer. - Insufficient farm advisory services Europe-wide?

Box 2 Farm environment plans – Content and process

We propose using a “farm environment plan” as a tool to meet minimum sustainability requirements. This is motivated by both a theory of change and practical constraints, which in turn influence what we recommend as a farm environment plan, in terms of content (what is in a farm environment plan?) and process (how is the farm environment plan developed and monitored?).

Our **theory of change** is that by increasing farmer knowledge and awareness of sustainability impacts, they are more likely to implement measures that avoid negative sustainability impacts and/or generate sustainability benefits. That is, we assume that

¹⁹ The CAP intervention “Knowledge exchange and dissemination of information” (KNOW), laid out in Article 78 of Regulation (EU) 2021/2115, could be the central CAP intervention to co-finance farm environment plans. To date, the current CAP strategic plans of the Member States make only limited use of this type of intervention linked to the relevant specific objectives (SO) (climate action (SO4), natural resources (SO5) and Biodiversity (SO6) (Mapping and analysis of CAP strategic plans - Publications Office of the EU (europa.eu); this could be upscaled.



the completion of a farm environment plan is aligned with generating biodiversity co-benefits and doing no significant harm to other sustainability objectives.²⁰

In terms of **practical constraints**, the context-specific nature of carbon farming measure impacts must be highlighted: to understand sustainability outcomes, we must consider the specifics of individual farms (e.g. their geography, soil type, baseline performance, etc.). Secondly, any cost to the farmer for promoting sustainability can act as a barrier to their participation in a carbon farming scheme, that is, there is a trade-off between the certainty of sustainability outcomes and CRCF participation (and the resulting climate mitigation). Given that the CRCF's primary objective is climate mitigation, there is a need to balance this trade-off, choosing an approach that is relatively low-cost. A farm environment plan is farm-specific and (relatively) low-cost, thus meeting these constraints.

Given our theory of change, when deciding upon farm environment content and process, we should consider how the plan will support **on-farm strategic decision making**. Building on Öhlmer et al (1998)²¹, Coteur et al. (2020)²² identify five steps involved in farm sustainability tools supporting on-farm decisions: 1 assessment, 2 interpretation, 3 development of improvement strategies, 4 their implementation, and 5 monitoring of results. More sophisticated, complex farm environment plans that cover more of these steps (and processes that provide more wide-ranging support to farmers), better support strategic decision making and will support better sustainability outcomes but will come at higher cost for farmers and administrators.

Content

The content of the farm environment plan is primarily concerned with the first step(s) Coteur et al. (2020) identify: assessment and (ideally) interpretation. The content of the farm environment plan should relate to the CRCF sustainability objectives (i.e. mitigation, adaptation, water, circular economy, pollution prevention, biodiversity). The degree of depth per sustainability objective should reflect the specifics of the carbon farming on mineral soils context, e.g. circular economy may not need to be as detailed.

Farm environment plans can be either quantitative or qualitative²³:

Quantitative farm environment plans rely on a digital farm management tool. In addition to quantifying climate mitigation impacts, some of these tools calculate other sustainability indicators (e.g. nitrogen balance). Quantitative farm environment plans

²⁰ The Focus Group's proposal that the completion of a farm environment plan is sufficient to meet the minimum sustainability requirements is somewhat risky, in that the completion of a plan is no guarantee that either an action will be implemented or that the desired results will be achieved. The Focus Group nevertheless considered that this approach was the best option for achieving sustainability outcomes through certification. This is contingent on the accompanying requirements of a negative list assessment (see subsequent section) and long-term monitoring at certification- and CRCF-scale to assess whether sustainability results are achieved.

²¹ [https://doi.org/10.1016/S0169-5150\(97\)00052-2](https://doi.org/10.1016/S0169-5150(97)00052-2)

²² <https://doi.org/10.1016/j.ecolind.2020.106298>

²³ The Focus Group did not conclude whether quantitative or qualitative farm plans were preferable, or whether only one kind should be permitted; this depends in part on how robust quantitative farm environment tools are or become regarding sustainability impacts.



would consist of a digital farm management tool run: data would be inputted to calculate both a baseline scenario and a carbon farming measure scenario based upon input data that describes the farm and farm management (e.g. farm characteristics, weather, baseline and project farm management, ...). The tool would generate output that includes sustainability indicators (along with tCO₂ mitigated, farm economic data, etc.). The content of the farm environment plan should include both the input data and output data, which would depend on the tool that is used (and what input it requires and what outputs estimates). The CRCF could either identify particular tools that could be used or set minimum standards for what they should cover (e.g. we may permit only tools that output indicators related to at least water use and water pollution, and biodiversity) and how it should be estimated. The approval of digital farm management tools should be primarily based upon their quantification of climate mitigation outcomes but could also include criteria related to sustainability.

Qualitative farm environment plans consist of a structured series of steps, questions, and requirements. Qualitative plans do not quantify impacts but gather data and provide a frame for increased farmer knowledge of their baseline farm management and carbon farming measure impact on sustainability. Building on examples from the EU Taxonomy,²⁴ UK Rural Payments Agency Sustainable Farming Incentive (e.g. NUM1 Nutrient management),²⁵ and Waikato Nutrient Management Plans²⁶, and matching the CRCF sustainability indicators, the contents could be the following:

- Farm description: Map land management units and land uses, descriptive characteristics
- Adaptation: Climate vulnerability assessment, consisting of identifying physical climate risks, their likelihood/scale, and potential solutions (e.g. EU Taxonomy generic adaptation approach)
- Water use and water pollution: Nitrogen management plan that identifies nutrient application, local water pollution context, key indicators, and measures that could decrease nutrient runoff (alternatively, could require quantification of nitrogen balance, e.g. UK SFI or Waikato Nutrient Management Plan)
- Biodiversity: "Restoration plan" that identifies high biodiversity sites on farm, existence of nearby Natura2000 sites, key local biodiversity priorities and relevant indicators, as well as measures that could enhance biodiversity
- Circular economy and pollution: identify potential risks, and, if relevant, measures that could reduce risk
- Monitoring plan: identify key indicators for monitoring sustainability indicators, and how these would be monitored

Process

To increase the likelihood that completion of a farm environment plan is translated into sustainability improvements, the farm environment plan process should go beyond

²⁴ EU Taxonomy - Delegated regulation - 2021/2139 - EN - EUR-Lex (europa.eu)

²⁵ Sustainable Farming Incentive (SFI) Handbook for the SFI 2023 offer (publishing.service.gov.uk) (p. 63)

²⁶ Nutrient management plan guidelines | Waikato Regional Council



simply completing the plan (i.e. “assessing”) and also focus on supporting farmers in the development of improvement strategies, their implementation, and the monitoring of results. The extent to which the farm environment plan process can provide these additional steps will be cost dependent (on administrator and farmer side). At a minimum, we propose the following:

- Farmer + farm consultant work together
- Together, they complete the farm environment plan (based on farmer knowledge of farm and local context, and farm consultant expertise)
- Farm consultant interprets results, and discusses improvement and implementation strategies with farmer
- Farm consultant identifies relevant monitoring indicators and how these could be collected
- Farmer should be responsible for updating the farm environment plan at the same time as quantifying mitigation impacts (whether this is annually, or every certification cycle would depend on quantification approach and verification/validation requirements)
- Farm environment plan would be assessed for completeness by certification bodies

Additional considerations

While the CRCF sustainability requirements only consider environmental objectives, the farm environment plan could also include additional elements, such as farmer income and social impacts.

Minimum sustainability requirements approach: 2) Negative list assessment

In addition to a farm environment plan, to manage sustainability risks, the CRCF should develop a list of “negative” measures that pose a high risk to one or more sustainability objectives. Carbon farming projects would not be permitted to implement any of these measures (or in particular contexts) or be ineligible for certification. This list would be updated over time, with additional measures added if monitoring showed that they were associated with negative impacts on sustainability objectives. Examples of measures or contexts on the negative list could include:

- Biodiversity: Measures that result in the conversion of natural ecosystems or lead to a significant increase in pesticide use would not be allowed.
- Water: Measures in water-scarce areas that result in substantial increases in water withdrawals or fertilizer use would be prohibited.

Carbon farming projects would be required to assure that they do not implement measures or operate in contexts that are on the negative list.



Table 4 Negative list assessment approach: qualitative evaluation

Negative list assessment	Justification	Potential issues
	+ Low-cost mechanism to avoid most-high-risk measures	Given context-specificity of sustainability impacts, challenging to create meaningful “negative” list

4.2.1.2 Incentivising co-benefits beyond minimum sustainability requirements

The CRCF should incentivise carbon farming projects to generate co-benefits beyond the minimum sustainability requirements. We propose that these additional benefits should arise from the market in the form of price premiums for carbon credits from projects that deliver additional sustainability benefits. For the market to pay a price premium, the certification process and resulting credits need to demonstrate sustainability benefits in a way that is valuable to them. We propose that this is achieved through two voluntary steps: 1) a sustainability label (the CRCF Sustainability+ Label) and 2) the voluntary quantification of sustainability benefits. In Box 3, we present existing evidence on price premiums for carbon farming activities that deliver sustainability benefits.

Box 3. Price premiums for sustainable carbon farming: Potential sources of demand

The most common method for demonstrating sustainability benefits in the voluntary carbon market are sustainability labels. Labels take two forms: (1) additional sustainability certification, where carbon projects complete an additional sustainability certification procedure (e.g. Verra’s Climate, Community and Biodiversity Standard or SD Vista certification) and then list this as a label on their credits and in registries or marketplaces e.g. the Verra Registry; or (2) SDG labels, where certification methodologies identify the additional Sustainable Development Goals (SDGs) achieved by projects generating credits through the methodology, and list these SDGs on credits or in registries or marketplaces (e.g., Gold Standard methodologies, Sylvera registry).

Evidence from the voluntary carbon market suggest that sustainability labels may generate price premiums. A recent review of voluntary carbon market performance found that, in 2022, the 22% of voluntary carbon market credits that report co-benefits received an average credit price of USD\$10.51, compared to an average price of USD\$6.46 for those credits without co-benefits. The 18% of voluntary carbon market credits that list SDGs received an average credit price of USD\$11.64,



compared to an average price of USD\$6.49 for those credits without SDG labels (SOVCM, 2024). This is not conclusive evidence of price premiums, as it does not compare like credits with like, however, is suggestive that carbon credit buyers are willing to pay more for projects that generate sustainability benefits. A SBTi survey of credit buyers found that the existence of environmental and social co-benefits was the most frequently identified factor in determining which carbon credits companies purchase and retire (SBTi 2023). Shifting from compensation claims to contribution claims may increase price premia for credits with co-benefits, as the precise climate effect becomes less important relative to overall narrative.

There is also potential for additional corporate and public demand for quantitative sustainability outcomes, if these can be presented in a manner and metric that aligns with buyer needs. Potential sources of demand include:

Private demand:

- The **EU Corporate Sustainability Reporting Directive** (CSRD - [Directive - 2022/2464 - EN - CSRD Directive - EUR-Lex \(europa.eu\)](#)) is a EU regulation requiring companies to report their impact on sustainability objectives, including biodiversity ecosystems, including any compensatory actions they have taken. This could generate additional demand for carbon farming projects that generate sustainability impacts, if those sustainability impacts are reported and demonstrated in a manner aligned with CSRD reporting requirements.
- A related process, the **Taskforce on Nature-related Financial Disclosures** (TNFD, <https://tnfd.global>) is a market-led initiative that develops guidelines to support organisations report and address impacts on nature to support a shift in financing towards nature positive outcomes.
- The **Science Based Targets Network** (SBTN, <https://sciencebasedtargetsnetwork.org/>) is a civil-society initiative that has developed target methods and is developing validation processes for companies and cities to address their environmental impacts beyond climate mitigation, and could generate demand for sustainability outcomes. This builds on the **Science-Based Targets** initiative (SBTi, <https://sciencebasedtargets.org/>), which enables corporate climate action, and which in turn could support price premiums for sustainable carbon farming: it encourages companies to purchase and retire credits beyond their value chain and is exploring the potential of use of credits within value chains, both which could generate additional demand for credits with sustainability co-benefits.

Public demand:

Member States may be interested in funding projects that deliver sustainability outcomes that will enable them to meet their targets under the EU Nature Restoration Law, the EU Nitrates Directive, their national environmental targets or support CAP reporting.



Beyond minimum requirements approach 1: CRCF Sustainability+ Label

Carbon farming projects that generate significant benefits for sustainability should be able to apply for a “**CRCF Sustainability+**” label.²⁷ This label would be voluntary and **outcome-based**, i.e. based upon project monitoring of impacts on sustainability criteria.²⁸ Rather than reporting outcomes in quantitative terms, the label would indicate that the project is generating sustainability benefits without specifying them numerically. This label would be awarded to projects and appended to the certificates and publicised in registries and marketplaces. This would make certificate purchasers aware of the additional sustainability benefits associated with projects generating the certificates, supporting increased demand and prices premiums.

The assessment of outcomes should be based upon farmer self-assessment of key, identified sustainability indicators. This assessment and its reporting should occur at the same time and through the same methods as the quantification of mitigation impacts, to reduce farmer transaction costs and to support accurate reporting, with assessments subject to third-party verification and random auditing.

Given the CRCF’s requirement for carbon farming actions to generate biodiversity co-benefits, we propose that at a minimum **monitoring should consider sustainability objective (f) biodiversity impacts.** Other sustainability objectives could also be considered.

Sustainability indicators should be monitorable at low cost, be good proxies for sustainability objectives, and be influenced by farmer actions. We propose that indicators are selected from the [Regen10 Outcomes Framework](#).²⁹ These indicators are farm-level and thus well-suited to the project-scale of the CRCF.³⁰ Farmers that demonstrate significant improvements to at least two metrics should be awarded a Sustainability+ label. The Focus Group did identify that this approach comes with some key risks and challenges. Some of the identified indicators may be difficult for farmers to self-assess. Additionally, self-assessment may not be considered sufficiently robust by buyers in the voluntary carbon market to motivate a price premium.

²⁷ It is potentially misleading to use the terminology “sustainability+”. While carbon farming projects may have biodiversity or other positive nature effects, a big part of sustainability is climate outcomes, and carbon farming has low permanence. More specific terminology may be more appropriate.

²⁸ This goes beyond the farm environment plan discussed above, which may include proposal of a monitoring plan (and monitoring indicators) but does not require this monitoring to be carried out or reported.

²⁹ Regen10 is a global multi-stakeholder initiative focused on regenerative agriculture. https://regen10.org/https://regen10.org/wp-content/uploads/sites/19/2023/12/Zero-Draft-Regen10-Outcomes-Based-Framework_Shared-at-COP28_4thDec-2.pdf

³⁰ The OP2B scaling up regenerative agriculture initiative and their Framework for Restoration Actions offers another potential source of indicators (see [Technical-Document_OP2Bs-Framework-for-Restoration-Actions.pdf](#) (wbcsd.org)). However, their scale of reference is the company and the landscape, making their indicators less appropriate for the CRCF project scale we consider. The OP2B principles and their indicators should be further considered when selecting CRCF indicators for sustainability outcomes: Overarching Imperative: Avoid further conversion of natural ecosystem: Principle 1: Restore at a landscape scale and across different jurisdictional boundaries and ensure permanent outcomes; Principle 2: Restore nature by considering ecosystem integrity or species; Principle 3: Include Indigenous peoples and local communities in conservation and restoration actions and support their rights and livelihoods



Table 5. Biodiversity sustainability indicators (Regen10 Outcomes Framework Zero Draft)

Farm indicators	Metrics
Health of farm biodiversity	# of wild native species on the farm (bird count and pollinator count) # of crop species
Quality of land for farming	% of productive land in each grade of agricultural land classification system (classification system to be identified in each context)
Farm habitat health	# indicator species for habitat quality % Area of habitats (including natural, productive and restored habitats) (% per km ²) % edge-of-field in native species Area of restored/created habitats (ha)

Given the current lack of sufficient incentives for biodiversity or nature outcomes, the CRCF should act now and promote the development of robust sustainability requirements. Should mature methodologies and markets for sustainability impacts be developed outside of the CRCF (e.g. biodiversity or water quality credit markets), the CRCF revision should consider the extent to which certification methodologies should set ambitious sustainability requirements versus how the CRCF could facilitate farmers earning multiple credits for generating multiple benefits (e.g. mitigation, biodiversity, water quality).

Table 6 Sustainability+ label: qualitative evaluation

	Justification	Potential issues
Sustainability+ label	<p>+ Low cost</p> <p>+ Generates incentive for farmers to monitor biodiversity indicators and take action to increase them.</p>	<p>- Focuses only on biodiversity outcomes</p> <p>- Some indicators challenging to self-assess, e.g. number of wild native species would require farm advisor support.</p> <p>- Self-assessment may be insufficiently trustworthy to generate market price premiums and may also pose risks for</p>



	farmers, if a later audit disagrees.
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Beyond minimum requirements approach 2: Voluntary quantification of sustainability impacts

CRCF certification methodologies should also include rules for the voluntary quantification of sustainability co-benefits and allow these to be reported by projects and appended to CRCF-certified carbon certificates. This would be voluntary. This would allow those projects that would like to quantitatively demonstrate the sustainability impacts they achieve, enabling result-based price premiums for carbon farming project sustainability benefits, i.e. those that deliver more biodiversity enhancement, for example, can report this on credits and receive higher prices for their credits.³¹

Given the challenge of identifying a consistently agreed on, low-cost sustainability quantification methodology, **we propose that rules for the voluntary quantification of sustainability impacts should be an objective for the first revision of the CRCF certification methodologies, rather than their first version.** Additionally, we recommend focusing on key sustainability objectives: CRCF carbon farming certification methodologies at least propose rules for voluntary quantification of impacts on sustainability objective (f) biodiversity and ecosystems and (c) sustainable use and protection of water and marine resources (including nitrate pollution). Rules for sustainability objective (b) climate adaptation should be a secondary priority, with rules for quantifying other sustainability objectives low priority. The basis for this ranking are Focus Group’s perceptions of the potential market value of the sustainability benefit and maturity and affordability of sustainability quantification methods. This would reduce administration costs and reflect that some sustainability benefits are more valued by buyers, and some sustainability impacts are more costly or difficult to quantify.

Voluntary quantification should be guided by the types of sustainability metrics valued by the market. Here, the requirements of the Corporate Sustainability Reporting Directive, Science Based Targets Network, and other drivers of corporate demand (and price premiums) should be considered. Quantification approaches must also consider the transaction costs faced by farmers.

Voluntary quantification should be based on proxies or using farm sustainability tools, as high quality in-situ monitoring with sampling is expected to be too costly for

³¹ As discussed in Box 3, we lack sufficient evidence regarding price premiums to make confident policy recommendations in the space, and further experience and data is required. Relevant to this voluntary quantification proposal is the question of whether quantified sustainability impacts will command higher price premiums than self-assessed sustainability impacts.



individual carbon projects.³² If farm sustainability tools³³ are to be used for quantifying climate mitigation impacts (or in Farm environment plans), where possible, rules should specify how the same tools should be utilised to quantify sustainability impacts. If sustainability tools are not to be used, we propose the following rules for voluntary quantification of the following sustainability objectives:

- **(f) biodiversity and ecosystem** quantification should rely on pointer species. Given the context-specificity of biodiversity impacts, the methodologies will need to be tailored to specific carbon farming methodologies (peatland rewetting²⁵, agroforestry, carbon farming on mineral soils, etc.) and geographic contexts.²⁶
- **(c) sustainable use and protection of water and marine resources** should consider nitrogen runoff (e.g. kg N per ha) and water use (M³ per ha).

The next revision of the certification methodology (due by 2029) should feature voluntary quantification of sustainability impacts and allow carbon farming projects to report these on their carbon farming certificates. This will enable those who deliver more biodiversity benefits to demonstrate this to buyers and attract larger price premiums.

We call on the Commission to support the identification and/or development of approaches for the voluntary quantification of sustainability impacts. This is in recognition of the current challenge of identifying a consistently agreed on, low-cost sustainability quantification approach. The approach should quantify sustainability impacts in a manner that is valuable to buyers, considering e.g. requirements of the Corporate Sustainability Reporting Directive, Science Based Targets Network, Taskforce on Nature-related Financial Disclosures, Corporate Sustainability Due Diligence Directive and other drivers of corporate demand. The priority sustainability objectives for quantification should be (f) biodiversity and (c) sustainable use of water and marine resources.

In line with the CRCF's pragmatic focus on climate mitigation, some Focus Group members suggested partnering with approved sustainability standards external to the CRCF. They could apply their own methodologies to measure additional sustainability benefits, with the results reported on CRCF certificates to support premium prices for sustainable carbon farming projects.

³² High-quality, representative monitoring of sustainability impacts should be required to monitor sustainability impacts of certification scheme at the certification scheme scale; see section 12. The Commission could also consider requiring large projects (in terms of expected carbon credit revenue) to do more detailed monitoring, but this is likely to pose a significant barrier to farmer participation in the carbon farming context, given the relatively small project size.

³³ Farm sustainability tools calculate environmental impacts based upon farm activity data. Different tools are established for different contexts, utilise different input data and models and can calculate different environmental impacts. For example, [Cool Farm Tool](#) calculates GHG and soil carbon sequestration, water usage, and a biodiversity score; the [EU FaST tool](#) can be used to calculate nutrient leaching; [CAP'2er](#) can calculate GHG emissions, water use, and water quality impacts.



Table 7 Voluntary quantification approach: qualitative evaluation

	Justification	Potential issues
Voluntary quantification	+ Result-based , incentivising projects to deliver extra sustainability benefits through higher price premium	- No short-term impact , as not included in initial version of certification methodology - High MRV requirements , potentially costly for farmers

4.2.1.3 Additional considerations

It is important to minimise costs for farmers wherever possible, to reduce barriers to their participation and to maximise their income from generating sustainability impacts. To achieve this, we propose that verification of sustainability impacts should be carried out in alignment with the quantification of mitigation impact of carbon farming projects. They should occur concurrently, where possible, and as part of the same process. For example, if verification of mitigation impact is calculated using a farm sustainability tool, the same tool should be used to calculate sustainability impacts (if possible); if a farm environment plan is to be developed, this should consider both climate mitigation and other sustainability objectives; to the extent possible, collected data should be used for all objectives.

Monitoring of sustainability impacts should occur at the CRCF- and certification scheme-scale. Representative monitoring based on sampling should occur regularly at these larger scales to monitor the effect the CRCF is having in detail, and to support amending the CRCF to minimise negative sustainability impacts and increase positive impacts.

Quantification of sustainability impacts can also be motivating for farmers, who also value the additional sustainability impacts (e.g. adaptation impacts).

4.2.1.4. Other approaches considered and rejected

Minimum sustainability requirements

In developing our recommended approach, we also considered an alternative approach to meeting minimum sustainability requirements, in the form of an activity eligibility assessment. This was rejected by our Focus Group for the following reasons:

- Due to the context-specificity of carbon farming impacts, it is difficult to accurately assess impacts of activities on sustainability objectives, especially across different contexts. Experience from the forestry sector indicates that, as



a result, creating a positive/negative list³⁴ of acceptable or unacceptable actions is infeasible.

- A focus on individual measures does not support whole farm change and accordingly does not align with the principle of supporting holistic change in agriculture, i.e. support farms, farmers, and the value chain to transition towards sustainable production and consumption processes.
- Further, Focus Group members identified a risk of generating farmer frustration if they implement eligible actions without a more complete assessment of impacts, as on some farms, this may result in limited climate benefits; a full farm environment plan would avoid this risk.
- The Focus Group also identified practical challenges, including the difficulty of defining what level of detail would be needed, e.g. regarding crop rotation, is it sufficient to rotate crops, or would the crops in the rotation need to be identified.

We nevertheless include the proposal below.

Minimum sustainability requirements approach (alternative): Activity eligibility assessment:

Minimum sustainability requirements should first be assessed using **activity eligibility requirements**. As documented in section 3, activity eligibility requirements are a common approach to managing sustainability requirements in the voluntary carbon markets. They involve setting minimum standards (eligibility criteria for activities, actors or contexts) to ensure that carbon farming activities pose low or no risk to sustainability and providing guidelines for project developers to demonstrate that their project follows the requirements.

We propose that activity eligibility requirements are implemented in the CRCF by identifying a list of eligible carbon farming measures in advance. Table 8 presents an illustrative example of how this could be developed.³⁵ These would require assessing carbon farming measures against each of the sustainability objectives:

- ✓ Measure is expected to do no significant harm (or generate an expected co-benefit) for the sustainability objective. Given the requirement for carbon farming activities to generate co-benefits for biodiversity and ecosystems, the biodiversity assessment would need to be more stringent: to receive a tick the measure must be expected to generate significant co-benefits for biodiversity and ecosystems.
- Measure's impact on a sustainability objective is unclear or sometimes negative in some contexts

³⁴ The minimum sustainability requirements approach: 2) Negative list assessment differs from a more general positive/negative list, as it focuses just on particularly extreme cases where we have clear grounds for expecting significant risks to sustainability objectives.

³⁵ This work could draw on recent work by the Science-based Targets Network on setting targets for the land sector related to nature outcomes, see e.g. <https://sciencebasedtargetsnetwork.org/wp-content/uploads/2024/07/Technical-Guidance-2024-Step3-Land-v1.pdf>



- × Measure is expected to significantly harm the sustainability objective.

Table 8. Minimum sustainability requirements: Measure eligibility table (illustrative example scoring)

Measure	Sustainability objectives: Do no significant harm					Sustainability objective: Co-benefits	Overall eligibility score
	a) Mitigation	b) Adaptation	c) Water	d) circular economy	e) pollution	f) biodiversity	
e.g. Crop rotation (JRC code: R11).	✓	✓	✓	✓	✓	✓	Green
e.g. Fertilisation practices to reduce nutrient losses (JRC code: F2X)	✓	✓	○	✓	✓	✓	Orange
e.g. No tillage (with additional pesticide use) (JRC code: S12)	✓	✓	✓	✓	○	×	Red
...							

Based on this assessment, each measure would receive an overall eligibility score

- **Green:** Measure that receives a tick for all sustainability objectives: this measure is expected to generate co-benefits for biodiversity and do no significant harm to other sustainability objectives.
- **Orange:** Measure that receives a mix of ticks and dots: this measure may do significant harm to at least one sustainability objective (or may not generate co-benefits for biodiversity) in some contexts.
- **Red:** Measures that receive even one cross are scored red, implying that they are expected to do significant harm to at least one sustainability objective (or fail to generate co-benefits for biodiversity).

The measures that a carbon farming project implements would then define whether they automatically pass the minimum sustainability test. Projects that implement:

- **Only green measures -> Automatic pass:** Projects implementing only green measures would automatically pass minimum sustainability requirements.
- **Any orange measures -> Farm environment plan required:** Projects implementing any orange measures must complete a farm environment plan.
- **Any red measures -> Fail minimum sustainability requirement:** Projects implementing any red measures are ineligible for CRCF certification.



Categorisation of carbon farming measures and their assessment should be carried out by a team of scientific experts. Categorisation could follow the classification scheme for farming practices developed by the EU Joint Research Centre (Angileri, Guerrero, & Weiss, 2024).³⁶ The assessment should also consider synergies and trade-offs between different measures and indicators, to understand where stacking of interventions could manage (or exacerbate) risks. The scoring would require scientific consultants to consider the existing evidence for impact of measures on the sustainability objectives, considering an appropriate geographic scale.³⁷

Sustainable Development Goals (SDGs) framework

The Focus Group also discussed whether the CRCF should utilise the UN SDGs framework to frame sustainability impacts. However, the overall view was that the SDGs are too broad and not easily applicable at farm level. The FG suggested that other frameworks, more directly linked to the farming context, could be more effective in operationalising sustainability, as reflected in the recommendations above. Useful resources in this context can be found in Annex IV. List of resources.

4.2.2 Operationalising sustainability in CRCF: Certification process and other general recommendations

In addition to operationalising sustainability objectives in the certification methodologies, sustainability outcomes can be supported through other elements of the CRCF. In this section, we explore the CRCF certification process to identify actors involved and key stages where sustainability outcomes can be further supported.

We draw on the research findings on existing sustainability approaches identified in Chapter 3, in particular those we have categorised as ‘general requirements’, which include approaches to identifying and managing risks and impacts, transparent reporting, and stakeholder processes and policies, that are fundamental building blocks for achieving broader sustainability goals.

³⁶ In terms of granularity, tier 2 of this categorisation may be sufficient in most cases. Tier 1 is likely to be too broad. E.g. Tier 1: Soil cover; Tier 2: Mulching, Crop residues left on field, Cover crops, No burning of crop residues, Green cover on permanent crops, Crop residue incorporated into the soil. See <https://data.europa.eu/doi/10.2760/33560>.

³⁷ Considering the diverse farming contexts across the EU, the EU-scale seems unlikely to be appropriate (e.g. the impact of tillage measures on sustainability objectives is likely to differ in Mediterranean and Scandinavian climates). It may be more appropriate to consider this at the Member State level or at a regional or pedo-climactic. The largest possible scale that delivers relatively accurate results should be selected, to decrease administrative costs.



4.2.2.1 CRCF certification process, actors, and stages

As illustrated in Figure 1, the implementation of the CRCF will involve multiple actors in a number of steps. This offers a wide scope of areas where sustainability can and should be implemented.

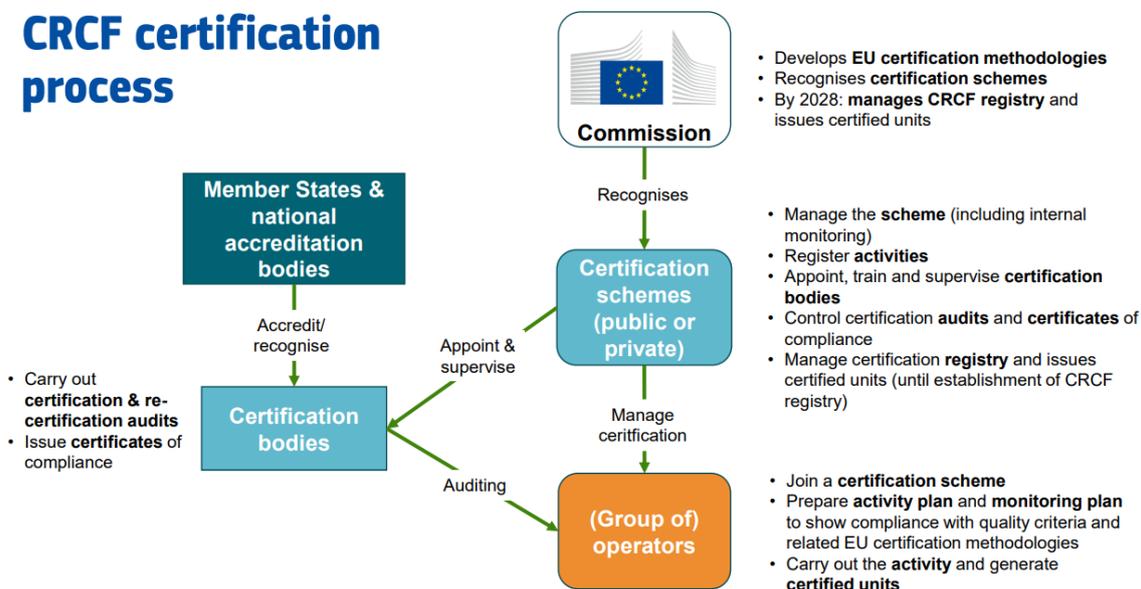


Figure 1 CRCF certification process (DG CLIMA 2024)

Key actors

Several actors are involved in the CRCF process, each of whom can influence sustainability outcomes in different ways. Key actors and their responsibilities include:

- EU Commission (develops certification methodologies, recognises certification schemes, and manages CRCF Registry from 2028)
- Certification schemes (certifies the compliance of activities and operators with the CRCF certification methodologies, appoint certification bodies and supervise their audits, manage registry until 2028)
- Member State and national accreditation bodies (accredit certification bodies)
- Certification bodies (carry out certification and re-certification audits)
- Project operators (operates or controls an activity, e.g. farmer)

Key stages

Different stages of the CRCF certification process offer different opportunities to influence sustainability outcomes. We identify the following nodes as most significant:

- **Certification methodologies** (defines rules for activities that will be certified, including sustainability elements); see section 4.2.1 for detailed recommendations on how certification methodologies can best support sustainability outcomes.



- **Recognition of certification schemes:** The Commission shall adopt implementing acts setting out the structure, format, technical details and process for approval of all certification schemes recognised by the Commission. This provides significant scope for the Commission to influence the operation of schemes so as to support sustainability outcomes.

Key recommendations

In addition to the certification methodologies, other nodes of the certification process must be utilised to ensure positive impacts on sustainability outcomes. We make the following recommendations:

- **Transparent reporting is essential for ensuring sustainability outcomes.** This includes making detailed information and documentation about the impacts of certified carbon farming activities publicly available. Additionally, this involves assigning clear roles and responsibilities for managing environmental and social risks associated with the implementation of carbon removal activities. The EU Commission should ensure that the implementing acts setting out the structure, format, technical details and process for approval of all certification schemes establish high standards of transparency as a precondition for approval of certification schemes.
- **Stakeholders should be involved** in the development and ongoing revision of CRCF methodologies and certification scheme requirements. Stakeholder complaints procedures should also be established, to ensure that ongoing stakeholder input is maintained.
- **The Commission should set wide-ranging general requirements for the approval of certification schemes** that go beyond the relatively narrow environmentally focussed sustainability criteria covered by certification methodologies. This should set requirements for certification schemes to promote social sustainability, including consideration of labour rights, indigenous rights and impacts on local communities (including health impacts), and gender equality.



5. Conclusion

Carbon farming practices extend their impact beyond climate change; they also influence various sustainability outcomes, such as biodiversity, soil health, and water management. Therefore, certification for carbon farming must align with broader sustainability objectives.

This deliverable has summarised key discussion points from CREDIBLE Focus Group 2.1 Minimum requirements to ensure carbon farming delivers sustainability benefits. It also presents the Focus Group's key recommendations for how the EU's regulation establishing the Carbon Removal and Carbon Farming Certification Framework (CRCF) can ensure that carbon farming on mineral soils contributes to sustainability goals.

A key output of the Focus Group was the identification of **six overarching principles for ensuring sustainability in the context of carbon farming**:

1. **Holistic approach:** Carbon farming should incentivise a holistic and context-specific approach to farm management that promotes sustainable outcomes and avoids unintended negative sustainability impacts, whilst prioritising climate mitigation.
2. **Accessibility:** Participation costs for farmers must be minimised to ensure that it is financially attractive for farmers to implement sustainable measures. Financial support should be provided to early adopters of carbon farming practices, e.g. for advisory services and MRV, or in the form of offtake agreements.
3. **Pragmatism:** To ensure sustainability through carbon farming certification, a pragmatic approach should be taken to reduce barriers to farmer participation and encourage farmer adoption e.g. integrating existing management and monitoring systems.
4. **Incentives:** Farmers should be rewarded for the sustainability impacts of carbon farming, which will be enabled by robust monitoring of impacts.
5. **Consistency:** Carbon farming certification approaches to sustainability should be consistent and comparable to facilitate market demand.
6. **Integrity:** Certification must deliver buyers robust sustainability impact information, using metrics and indicators that are valuable to them. The CRCF must also manage buyer claims, to ensure they align with the sustainability impacts delivered.

The deliverable also reports on our evaluation of existing approaches to ensuring sustainability, identifying six common approaches. These can be grouped into three categories, general requirements, activity-specific approaches, and rewarding of sustainability benefits. The Focus Group concluded that all approaches should be drawn upon to ensure sustainability through the CRCF.

The Focus Group also developed recommendations for how CRCF sustainability objectives should be operationalised. The key tool is certification methodologies.

To meet minimum sustainability requirements, farmers should be encouraged to develop



a "farm environment plan," which would be supported by a farm advisor. This plan should be cost-effective for farmers and encourage sustainable farming practices without making them mandatory. Additionally, a "negative list" of prohibited high-risk actions could help prevent activities that threaten sustainability. In addition, to further incentivise positive outcomes beyond minimum standards, the CRCF could introduce a "CRCF Sustainability+" label, allowing market price premiums for farmers who self-assess their sustainability performance. Random third-party audits would verify these assessments. Alternatively, voluntary quantification of sustainability impacts could be promoted, although consistent, low-cost methods are currently lacking. The deliverable also reports on other approaches that were considered and rejected by the Focus Group, including an activity eligibility assessment approach that was rejected for failing to adequately control for the context-specific nature of carbon farming and its impacts on sustainability.

In addition to operationalising sustainability objectives through CRCF certification methodologies, other aspects of the CRCF certification process can play a crucial role in supporting sustainability outcomes. We recommend several actions: First, transparent reporting is vital to ensuring sustainability outcomes. Secondly, stakeholder engagement is essential throughout the development and revision of CRCF methodologies and certification requirements to ensure that the policy serves societal interests. Finally, the Commission should set ambitious and broad general requirements for the approval of certification schemes, extending beyond narrow environmental criteria to encompass social sustainability issues such as labour rights and gender equality.

A final key conclusion of Focus Group discussions is that ensuring carbon farming delivers societal benefits requires thinking beyond the CRCF regulation. To ensure consistency, it will be necessary to consider interactions with other policies, such as the Common Agricultural Policy, as well as sustainability-specific policies such as the Nature Restoration Law. Private actors, such as existing certification schemes, also have a significant role to play. Most importantly, farmers and the agri-food value chain are the key actors in ensuring that carbon farming not only delivers on climate change mitigation, but also supports a broader transition towards sustainable agriculture. Ensuring that farmers have the knowledge, skills, and financial capacity to deliver on sustainability outcomes as well as mitigation will be essential.



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A. Annexes

Annex I. Policy brief

1 Key messages

- Carbon farming practices do not just affect the climate, they also impact other sustainability outcomes, including biodiversity, soil health, and water. **Carbon farming certification must support broad sustainability objectives.**
- In this brief, we propose how the EU's regulation establishing a Carbon Removal and Carbon Farming Certification Framework (CRCF) can **ensure that carbon farming also delivers sustainability outcomes in the case of carbon farming on mineral soils.**
 - **To meet minimum sustainability requirements, farmers should complete a “farm environment plan,”** which should be supported by a farm advisor, be low cost for farmers, and support adoption of sustainable farming practices – without requiring it. A negative list of excluded high-risk actions could avoid carbon farming actions that pose high risks to sustainability.
 - **To incentivise co-benefits beyond minimum requirements, the CRCF should support market price premiums** by creating a “CRCF Sustainability+” label, based on farmer self-assessment of sustainability indicators, supported by random third-party audits. Alternatively, the CRCF should encourage voluntary quantification of sustainability impacts, though there is a current lack of consistent and low-cost approaches.
- **We also identify six principles to guide how sustainability can be achieved through carbon farming certification,** including calling for a **holistic approach,** ensuring **accessibility** for farmers, **pragmatism,** providing **incentives** to reward sustainability, and **consistency** and **integrity** to facilitate market demand.

CREDIBLE is an EU-funded Horizon project that aims to build trust for the implementation of carbon farming by supporting the development of a consensus on methodologies that enhance soil's capacity as carbon sink at European level. With 11 Focus Groups, it engages experts and stakeholders in discussing key issues on soil carbon sequestration, quantification, data and policy.



Focus Group 2.1 “Minimum requirements to ensure carbon farming delivers sustainability benefits” features participants from carbon farming certification schemes, farmer associations, soil scientists, and policy experts. We aim to support the EU Expert Group on Carbon Removals by providing recommendations on how the objective of sustainability can be operationalised for carbon farming within the EU Regulation establishing a Certification framework for permanent carbon removals, carbon farming and carbon storage. In addition to six online workshops, our recommendations reflect an in-person workshop with wider stakeholders at the 2023 EU Carbon Farming Summit. **Focus Group Members are listed on page 10.**

2 Introduction

Carbon farming increases the amount of organic carbon stored in soils and biomass, mitigating climate change. Carbon farming practices don't just affect the climate, they may also impact other sustainability outcomes, including biodiversity, soil health, and water use and quality. **The promotion of carbon farming poses an opportunity – and a risk – for meeting other sustainability objectives, alongside climate change mitigation.**

In 2024, the European Union established a certification framework for permanent carbon removals, carbon farming and carbon storage in products (the **CRCF**).³⁸ It supports the upscaling of carbon farming (and other carbon removals) by establishing a voluntary framework for carbon removal activities, including monitoring and verification processes and minimum quality standards.

In this policy brief, we recommend how the CRCF can maximise the positive impact of carbon farming on biodiversity, adaptation, water and other sustainability outcomes - and avoid negatively affecting these crucial objectives.³⁹ Our recommendations are targeted at the specific context of carbon farming on mineral soils. These recommendations reflect Focus Group member discussions and views.

Sustainability in the CRCF certification methodologies

The CRCF's key tool for ensuring high quality carbon farming removals is the **certification methodologies**, which are currently being developed by the Commission with input from a group of experts. These certification methodologies will establish standards for quantifying mitigation impacts, demonstrating additionality, ensuring long-term storage or liability for removals, and meeting sustainability requirements.

The CRCF considers the following sustainability objectives:

- a) climate change **mitigation** beyond the net carbon removal benefit and net soil emission reduction benefit,
- b) climate change **adaptation**,
- c) sustainable use and protection of **water** and marine resources,

³⁸REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for permanent carbon removals, carbon farming and carbon storage in products: [Item9-Provisionalagreement-CFCR_2022-0394COD_EN.pdf](#)

³⁹ While we recognize the relevance of methodology design, quantification of soil organic carbon, monitoring, reporting, and verification (MRV), etc., it is important to note that these issues are not within the scope of our discussions about sustainability.



- d) **pollution prevention** and control,
- e) transition to a **circular economy**, including the efficient use of sustainably sourced bio-based materials, and
- f) protection and restoration of **biodiversity** and ecosystems including soil health, as well as avoidance of land degradation (mandatory for carbon farming).⁴⁰

The CRCF sets two sustainability requirements, which should be addressed by the certification methodologies:

- **Minimum sustainability requirements** (Article 7.1): Carbon farming activities must generate co-benefits related to (f) protection and restoration of biodiversity and must do no significant harm to other sustainability objectives.
- **Co-benefits beyond minimum sustainability requirements** (Article 7.3): Certification methodologies should include elements to incentivise as much as possible the generation of co-benefits that go beyond minimum requirements, especially related to protection of biodiversity and ecosystems.

3 Principles for ensuring sustainability

The Focus Group identified the following principles to guide how sustainability can be achieved through carbon farming certification⁴¹:

1. **Holistic approach:** Carbon farming should incentivise a holistic and context-specific approach to farm management that promotes sustainable outcomes and avoids unintended negative sustainability impacts, whilst prioritising climate mitigation.
2. **Accessibility:** Participation costs for farmers must be minimised to ensure that it is financially attractive for farmers to implement sustainable measures. Financial support should be provided to early adopters of carbon farming practices, e.g. for advisory services and MRV, or in the form of offtake agreements.
3. **Pragmatism:** A pragmatic approach should be taken to ensuring sustainability through carbon farming certification to reduce the barriers to farmer participation and promote farmer uptake, e.g. integrating existing management and monitoring systems.
4. **Incentives:** Farmers should be rewarded for the sustainability impacts of carbon farming, which will be enabled by robust monitoring of impacts.
5. **Consistency:** Carbon farming certification approaches to sustainability should be consistent and comparable to facilitate market demand.

⁴⁰ We propose that criteria (f) should be interpreted to mean “protection and restoration of biodiversity and ecosystems,” with “soil health” and “avoidance of land degradation” as additional but not sufficient examples of how this could be met. That is, simply avoiding land degradation should not be considered sufficient to achieve this objective – biodiversity and ecosystems must also be protected and restored.

⁴¹ Our principles focus on sustainability outcomes (i.e. beyond climate mitigation). Out of scope for this brief but crucial is the overall environmental integrity of the CRCF, which demands robust rules for quantification, additionality, double-counting/claiming and permanence, as well as regulation of buyers’ environmental claims.



6. **Integrity:** Certification must deliver buyers robust sustainability impact information, using metrics and indicators that are valuable to them. The CRCF must also manage buyer claims, to ensure they align with the sustainability impacts delivered.

4 Operationalising sustainability in the CRCF Certification

Methodologies

Based on Focus Group discussions, we have developed a proposal for how the CRCF certification methodologies can ensure sustainability, in line with the principles identified.

We propose a differentiated approach to meet the minimum sustainability requirements (Article 7.2) of generating some biodiversity co-benefits and doing no significant harm to other sustainability objectives, and incentivising co-benefits beyond minimum requirements (Article 7.3). Our proposal has been developed for the specific context of carbon farming on mineral soils.⁴² The overall approach is illustrated in **Error! Reference source not found.**

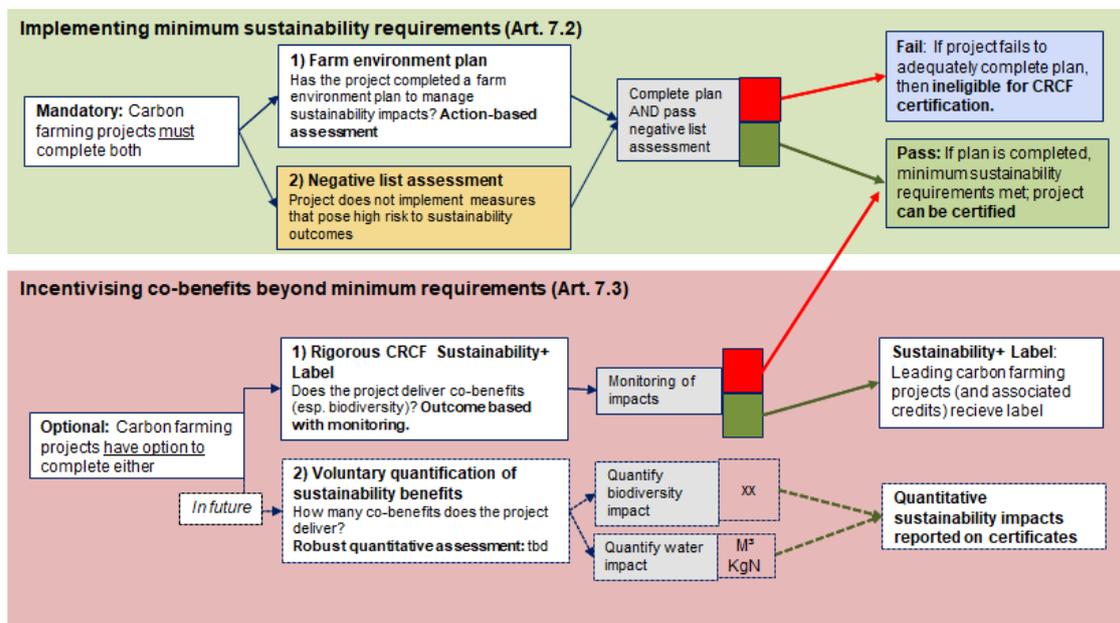


Figure 2. Operationalising sustainability in CRCF Certification Methodologies: visual overview

Implementing minimum sustainability requirements

To meet the minimum sustainability requirements, we propose all carbon farming projects must complete two mandatory steps: 1) a farm environment plan and 2) a negative list assessment.

⁴² This approach could be adapted to other carbon farming activities and their certification methodologies, e.g. peatland rewetting, agro-forestry.



Minimum sustainability requirement 1: Complete farm environment plan

Carbon farming projects would be required to complete a farm-environment plan.

This should be completed as part of the project design document at validation and assessed when the project is verified. The **content** of the farm environment plan should relate to the CRCF sustainability objectives (i.e. mitigation, adaptation, water, circular economy, pollution prevention, biodiversity). It could be quantitative (e.g. based on a digital farm management tool that estimates sustainability outcomes arising from carbon farming actions). It could, alternatively, be qualitative: a structured series of steps, questions, and requirements, whose aim is not to quantify sustainability impacts but gather data and provide a frame for increased farmer understanding of sustainability impacts. The **process** should involve a farm advisor and farmer collaborating, drawing on farmer knowledge of the farm and local context and farm advisor sustainability expertise, to complete the plan, interpret results, identify potential improvement strategies and how they could be implemented, and relevant monitoring indicators.

The cost of this step for farmers must be minimised to avoid this requirement being a barrier to farmer participation. To this end, it should be aligned with the CRCF's quantification of mitigation and draw on existing data to the extent possible. Given the public benefit of a farm environment plan for farmers, its creation should be publicly subsidised (e.g. under CAP). To encourage first movers, offtake agreements and other upfront financing should be offered.

The farm environment plan assessment would be **action-based, and not conditional on monitoring of impacts**: the minimum sustainability requirements would be assumed to be met if the carbon farming project completed the farm environment plan and kept it updated over the life of the carbon farming project, justified by a theory of change that increasing farmer knowledge will increase the sustainability of their actions.

	Justification	Potential issues
Farm environment plan	<ul style="list-style-type: none"> + Increasing farmer knowledge of sustainability impacts will increase likelihood that they implement sustainable carbon farming measures. + Holistic and farmer-centred: considers unique local context and farmer expertise. 	<ul style="list-style-type: none"> - No monitoring of sustainability outcomes (as action-based) - Costly for farmer and administrator: Must be co-financed by CAP and must generate high value for the farmer. - Insufficient farm advisory services Europe-wide?

Minimum sustainability requirement 2: Pass negative list assessment

As an additional safeguard, the CRCF should identify a “negative” list of carbon farming measures that pose an especially high risk to one or more sustainability objectives. A potential example could be increased residues from legumes on the field, which in some contexts increases nutrient leaching. Carbon farming projects would be



required to demonstrate that they do not implement any of the practices included in the negative list. The negative list should evolve over time based on the ongoing monitoring and assessment of carbon farming practices. This step would ensure that should any carbon farming activities proven to have significant negative impacts on sustainability objectives in many contexts can be excluded from certification, avoiding the funding of unsustainable business models.

Negative list assessment	Justification	Potential issues
	+ Low-cost mechanism to avoid most high-risk measures	- Given context-specificity of sustainability impacts, challenging to create meaningful “negative” list

Other approaches to implementing minimum requirements considered and rejected: The Focus Group also considered an “activity eligibility assessment”. This approach would have required the Commission to assess all potential carbon farming measures, and categorise them into no-risk, medium-risk, high-risk of failing the minimum sustainability requirements. This would involve upfront setup costs but would have low costs for farmers, as they could just avoid implementing high risk measures. A differentiated approach to sustainability requirements was supported (e.g. lower requirements for low-risk measures or smaller actors). However, the overall approach was rejected, as the measure-by-measure approach fails to consider whole-farm impacts, and because carbon farming’s context specificity makes very difficult to generalise sustainability risks across the EU, and because it insufficiently supports farmers.

Incentivising co-benefits beyond minimum requirements

The CRCF regulation calls for incentivising co-benefits beyond minimum requirements. We propose that the CRCF differentiate those carbon farming projects that generate additional benefits for biodiversity and ecosystem services to provide options for buyers who would like to reward these additional efforts (in the form of price premiums) To enable this, the certification process and resulting credits must demonstrate sustainability benefits in a manner that is valuable to buyers. We propose that this is achieved through two voluntary steps: 1) a sustainability label (the CRCF Sustainability+ Label) and 2) the voluntary quantification of sustainability benefits.

Incentivising co-benefits beyond minimum requirements 1: Sustainability+ label

Carbon farming projects that generate benefits for sustainability should be able to apply for a “**CRCF Sustainability+**” label. This would be voluntary. **The label would be outcome-based**, i.e. based upon project monitoring of indicators linked to sustainability criteria. This label would be awarded to projects and appended to the certificates and publicised in registries and marketplaces, acting as a qualitative indicator of the



additional sustainability benefits associated with projects generating the certificates, supporting increased demand and prices premiums.

Farmers would monitor sustainability outcomes based upon self-assessment. Any farmer who reports improvement in two or more indicators would be eligible for the label. Assessment and reporting should be aligned with the quantification of mitigation impacts, to reduce farmer transaction costs, and be subject to random auditing by third-party verifiers.

Monitoring must focus on sustainability objective (f) biodiversity. Sustainability indicators should be monitorable at low cost, be good proxies for sustainability objectives, and be affected by farmer actions. The selected indicators must be recognised by buyers, we therefore propose that indicators are selected from the Regen10 Outcomes Framework.⁴³

Given the current lack of sufficient incentives for biodiversity or nature outcomes, the CRCF should act now and promote the development of robust sustainability requirements. Should mature methodologies and markets for sustainability impacts be developed outside of the CRCF (e.g. biodiversity or water quality credit markets), the CRCF revision should consider the extent to which certification methodologies should set ambitious sustainability requirements versus how the CRCF could facilitate farmers earning multiple credits for generating multiple benefits (e.g. mitigation, biodiversity, water quality).

	Justification	Potential issues
Sustainability+ label	<ul style="list-style-type: none"> + Low cost + Generates incentive for farmers to monitor biodiversity indicators and take action to increase them. 	<ul style="list-style-type: none"> - Focuses only on biodiversity outcomes - Some indicators challenging to self-assess, e.g. number of wild native species would require farm advisor support. - Self-assessment may be insufficiently trustworthy to generate market price premiums and may also pose risks for farmers, if a later audit disagrees.

Incentivising co-benefits beyond minimum requirements 2: Voluntary quantification

⁴³ E.g. Health of farm biodiversity (# of wild native species on the farm - bird count and pollinator count; # of crop species), farm habitat health (# indicator species for habitat quality, % Area of natural, productive and restored habitats; % edge-of-field in native species; area of restored/ created habitats ha). Note not all Regen10 indicators are appropriate, as some are not linked to farmer actions (e.g. “quality of land for farming”, which is a land characteristic). See <https://regen10.org/outcomes-based-framework/>



The next revision of the certification methodology (by 2029) should feature **voluntary quantification of sustainability impacts and allow carbon farming projects to report these on their carbon farming certificates**. This will enable those who deliver more biodiversity benefits to demonstrate this to buyers and attract larger price premiums.

We call on the Commission to support the identification and/or development of approaches for the voluntary quantification of sustainability impacts. This recognises the current challenge of identifying a consistently agreed, low-cost sustainability quantification approach. The approach should quantify sustainability impacts in a manner that is valuable to buyers, considering e.g. requirements of the Corporate Sustainability Reporting Directive, Science Based Targets Network, Taskforce on Nature-related Financial Disclosures, Corporate Sustainability Due Diligence Directive and other drivers of corporate demand. The priority sustainability objectives for quantification should be (f) biodiversity and (c) sustainable use of water and marine resources.

In line with a pragmatic focus of the CRCF on climate mitigation, some Focus Group members called for partnering with approved sustainability standards external to the CRCF. They could apply their own methodologies to measure additional sustainability benefits, with results reported on CRCF certificates to support premium prices for sustainable carbon farming projects.

	Justification	Potential issues
Voluntary quantification	+ Result-based , incentivising projects to deliver extra sustainability benefits through higher price premium	- No short-term impact , as not included in initial version of certification methodology - High MRV requirements , potentially costly for farmers

Other approaches to incentivising co-benefits beyond minimum requirements considered and rejected: The Focus Group also considered whether all carbon farming projects should receive a Sustainability+ label just for passing minimum requirements (reflecting minimum requirement that carbon farming projects generate co-benefits for biodiversity). However, this was rejected, as it represents an insufficiently ambitious definition of sustainability impacts, would not incentivise projects to go beyond minimum standards, and therefore unlikely to be valued by the market (generating no price premium).

The Focus Group considered framing sustainability benefits within the framework of the Sustainable Development Goals framework but concluded that this was too general to operationalise action at farm level.



Annex II. Focus Group participation and activities

Table 1. Partners of CREDIBLE who participated in the Focus Group.

Name of the expert	Affiliation	Role*	Country
Mathieu Mal	EEB	Member	Belgium
Hugh McDonald	Ecologic Institute	Lead	Germany
Julia Pazmino	Ecologic Institute	Co-lead	Germany
Aaron Scheid	Ecologic Institute	Co-lead	Germany
Pilar Andrés	CREAF	Member	Spain
Juan Sagarna	COOP ES	Member	Spain
Hui Xu	ILVO	Member	Belgium

Table 2. Members of the Focus Group external to CREDIBLE.



Name of the expert	Affiliation	Role*	Country
Ivo Degn	Climate Farmers	Member	Germany
Chris Ajemian	Verra	Member	USA
Owen Hewlett	Gold Standard	Member	UK
Scarlett Benson	SBTi/Systemiq	Member	UK
Nanna Victoria Kryger	DG CLIMA	Observer	Belgium
Claire Chenu	INRAE	Member	France
Maguelonne Joubin	Label bas Carbone/ Direction Générale de l'Energie et du Clim	Member	France
Julia Grimault	I4CE	Member	France
Wesley Snell	EITIFOR	Member	Italy
Jens Leifeld	Agroscope	Member	Switzerland

Table 3. List of main activities

General description of the activity	Date of execution
1 st FG meeting	13.12.2023
2 nd FG meeting	24.01.2024
In-person workshop: Breakout session at First European Carbon Farming Summit	03.03.2024
3 rd FG meeting	03.06.2024
4 th FG meeting	06.09.2024
5 th FG meeting	16.10.2024
6 th FG meeting	14.11.2024
Contribution to Carbon Removals Expert Group	25.11.2024



Focus Group 2.1 Meetings: Topic coverage and discuss questions

Meeting 1 (13.12.2023)

1. Which of the environmental objectives in the EU Taxonomy should be considered by the EU carbon removal certification framework
 - a. Climate change mitigation
 - b. Climate change adaptation
 - c. Sustainable use and protection of water and marine resources
 - d. Transition to circular economy
 - e. Pollution prevention and control
 - f. Protection and restoration of biodiversity and ecosystems
2. Which Sustainable Development Goals should be considered by the CRCF?
3. How should the EU implement sustainability objectives within the Carbon Removal Certification Framework?
4. Which approaches should the EU Carbon Removal Certification Framework implement to ensure sustainability benefits?
 - a. Transparent reporting
 - b. Stakeholder processes and policies
 - c. Activity eligibility conditions
 - d. Qualitative assessment
 - e. Quantitative sustainability monitoring
 - f. Financial rewards for sustainability benefits

Meeting 2 (24.01.2024)

Discussion I: Principles of sustainability: Frameworks, gaps and requirements

1. Is the EU Taxonomy and the DNSH-Principle sufficient in the context of soil carbon sequestration in the EU? What could be other frameworks or approaches to be used (e.g. SDGs and IFC PS approaches)?
2. What are additional gaps in the proposed CRCF Framework and the DNSH principle (e.g. soil health and fertility, avoidance of land degradation, etc)
3. What could be specific minimum requirements and thresholds to avoid significant harm to the sustainability objective?
4. Which rules are needed to specify minimum requirements for carbon farming?

Implementation of sustainability: Which approaches?



5. Which approach(es) should the EU Carbon Removal Certification Framework implement to ensure sustainability benefits (in the context of soil carbon sinks)?
6. Are any approaches missing?
7. Which of these approaches are most effective? Are all necessary or can we exclude some? How should they be combined? Can we define a set of minimum approaches/criteria that need to be met (e.g. biodiversity protection, ecosystem restoration, soil health, etc)?
8. How can these approaches be made legal binding?

Meeting 3 (03.06.2024)

Key messages from the First Carbon Farming summit held in Valencia, Spain March 2024.

- Updates in the provisional agreement and Expert Group from the Certification Framework for Carbon Removals (CRCF)
 - Discussion about the updates with all the FG members.
 - Highlight the key messages from the summit which are more pertinent to sustainability.
- FG discussion: Can you share examples and resources related to sustainability and carbon farming?
 - What are different frameworks that can be considered when discussing sustainability in the CRCF?
 - What are existing sustainability standard and certifications that can be considered as examples for the FG2.1 discussions?
- FG workplan: Overview of the future development of the background document:
 - Preparation of a policy brief which includes the constant feedback from the FG members to identify practical recommendations to operationalise sustainability in carbon farming.

Meeting 4 (06.09.2024)

How should certification methodologies operationalise sustainability requirements for carbon farming?

Minimum sustainability requirements

- **Activity eligibility assessment**
 1. What measure categorisation approach should be used?
 - a. JRC farming practice classification scheme: Tier 1



- b. JRC farming practice classification scheme: Tier 2
 - c. Another categorisation
 - 2. What geographic scale is appropriate for assessment for sustainability of carbon farming measures:
 - a. EU
 - b. Member State
 - c. Regional (e.g. Biogeographical zones or Pedo-climatic).
- **Farm environment plan**
 1. Are there good examples of “farm environment plans” we can draw on?

Co-benefits beyond minimum sustainability requirements

- **CRCF Sustainability+ Label**
 1. What form should a sustainability +label take?
 - a. CRCF Sustainability+ Label (general label for all sustainability objectives)
 - b. Differentiated CRCF Sustainability+ Labels (one label per sustainability objective e.g. biodiversity, adaptation, etc.)
 - c. SDG Label. SDGs expected to be delivered by methodologies are listed.
- **Voluntary quantification of sustainability impacts**
 1. Are the proposed approaches (Sustainability+ label and voluntary quantification) sufficient incentive to go beyond minimum requirements?
 2. What sustainability metric(s) related to biodiversity does the market want to see from carbon farming projects?
 3. What methodology is appropriate for quantifying sustainability impacts (e.g. biodiversity impacts) for carbon farming on mineral soils?
 4. Other than biodiversity and water impacts, what are the most important sustainability objectives in the carbon farming context (i.e. they are significantly impacted by carbon farming projects, and valued by market)?
 - a. Adaptation
 - b. Pollution
 - c. Circular economy

Meeting 5 (16.10.2024)

- **Beyond minimum requirements 1: CRCF Sustainability+ Label Questions**
 1. Is focus on just biodiversity justified, or should the Sustainability+ label also consider other sustainability criteria?
 2. Are selected metrics and indicators appropriate?
 3. Is requirement for improvement in two indicators appropriate – or should this be metrics?



4. (If other sustainability criteria are considered, what indicators are appropriate?)
- **Beyond minimum requirements approach 2: Voluntary quantification of sustainability impacts**
 1. Is it acceptable that the first version of CRCF certification methodologies will not include rules on voluntary quantification?
 2. *What sustainability metric(s) does the market want to see from carbon farming projects, especially for biodiversity impacts?
 3. What methodology is appropriate for quantifying sustainability impacts (e.g. biodiversity impacts) for carbon farming on mineral soils?
 4. Are other sustainability objectives also important in carbon farming context (i.e. they are significantly impacted by carbon farming projects, and valued by market), e.g. adaptation, pollution, circular economy?
 5. Are the proposed approaches (label and voluntary quantification) sufficient incentive to go beyond minimum requirements and deliver more sustainability co-benefits?
- **General sustainability recommendations for the CRCF: Beyond the certification methodologies**
 1. What leverage points should we focus on?
 2. What general sustainability recommendations should we make?
 - a. Transparency?
 - b. Stakeholder processes?
 - c. Effective governance?

Meeting 6 (14.11.2024)

1. **Minimum sustainability requirements**
 - a. Do you disagree with any principles? Are we missing any?
 - Principles for ensuring sustainability:
 - How sustainability can be achieved through carbon farming certification
 - Farm environment plan
 - Negative list assessment
2. **Beyond minimum sustainability requirements (Additional incentives)**
 - a. Do you disagree with any principles? Are we missing any?
 - Price premiums:
 - Sustainability Label “CRCF Sustainability+”
 - Voluntary quantification of sustainability impact
3. **Which should be key messages for policy brief overall?**
4. **Should we include comments from the COM Consultant Sustainability Proposal in the brief?**
 - a. Minimum sustainability requirements
 - Biodiversity insufficient (due to circular reasoning)



- b. Beyond minimum requirements
 - Clarity needed on reporting
 - COM should prioritise biodiversity impact assessment and water impact methodology
- c. Specific requirements
 - Implementation/assessment too vague
 - Potentially costly or uncertain

5. Do you disagree with any of the COM Consultant Sustainability Proposal comments? What to add?



Annex III. EU Framework for Carbon Removal Certification Provisional agreement – key legal text related to sustainability

In this section, for convenience, we copy the key articles related to sustainability from the CRCF regulation.

Regulation (EU) 2024/3012 of the European Parliament and of the Council of 27 November 2024 establishing a Union certification framework for permanent carbon removals, carbon farming and carbon storage in products

PE/92/2024/REV/1

OJ L, 2024/3012, 6.12.2024, ELI: <http://data.europa.eu/eli/req/2024/3012/oj>

CHAPTER 2: QUALITY CRITERIA

Article 7: Sustainability

Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a Union certification framework for permanent carbon removals, carbon farming and carbon storage in products

1. An activity shall not significantly harm and may generate co-benefits for one or more of, the following sustainability objectives:
- (a) climate change mitigation beyond the net carbon removal benefit and net soil emission reduction benefit referred to in Article 4(1) and (1a);
 - (b) climate change adaptation;
 - (c) sustainable use and protection of water and marine resources;
 - (d) transition to a circular economy, including the efficient use of sustainably sourced bio-based materials;
 - (e) pollution prevention and control;
 - (f) protection and restoration of biodiversity and ecosystems including soil health, as well as avoidance of land degradation.
- (fa) 1a. A carbon farming activity shall at least generate co-benefits for the sustainability objective referred to in point (f) of this paragraph.

2. For the purposes of paragraph 1 of this Article, an activity shall comply with minimum sustainability requirements laid down in the certification methodologies set out in the delegated acts adopted pursuant to Article 8. The minimum sustainability requirements shall take into account the impacts both within and outside the Union and local conditions. Those minimum sustainability requirements shall, where appropriate, be consistent with the technical screening criteria for the ‘do no significant harm’ principle. The minimum sustainability requirements shall promote the sustainability of forest and agriculture biomass raw material in accordance with the sustainability and GHG saving criteria for biofuels, bioliquids and biomass fuels laid down in Article 29 of Directive (EU) 2018/2001.

3. Where an operator or group of operators reports co-benefits that contribute to the sustainability objectives referred to in paragraph 1 of this Article beyond the minimum sustainability requirements referred to in paragraph 2 of this Article, they shall comply with the certification methodologies set out in the delegated acts adopted pursuant to in Article 8. The certification methodologies shall include elements to incentivise as much as possible the generation of co-benefits going beyond the minimum sustainability requirements, in particular for the objective referred to in paragraph 1, point (f), of this Article.

Article 8 Certification methodologies

2. The Commission shall adopt delegated acts in accordance with Article 16 to supplement this Regulation by establishing the certification methodologies referred to in paragraph 1 of this Article. Those certification methodologies shall specify, for each activity, the elements set out in Annex I. The Commission shall prioritise the development of certification methodologies for those activities that are the most mature, have the potential to provide the largest co-benefits or where Union legislation relevant for the development of those methodologies has already been adopted. In the case of carbon farming activities, as a part of its prioritisation the Commission shall take into account in addition whether the activities contribute to sustainable management of agricultural land, forests, and the marine environment. In case of carbon storage in products, the Commission shall prioritise methodologies on wood-based and bio-based construction products.



2a. Delegated acts adopted pursuant to paragraph 2 shall differentiate between activities related to permanent carbon removal, carbon farming and carbon storage in products and further differentiate the activities on the basis of their characteristics. The certification methodologies shall :

(a) ensure the robustness and transparency of carbon removals and soil emission reductions;

(b) promote the protection and restoration of biodiversity and ecosystems;

(c) contribute to ensuring the Union's food security and avoiding land speculation;

(d) take into account the competitiveness of farmers and foresters in the Union in a sustainable manner, particularly for small-scale operators;

(e) promote the sustainability of biomass in accordance with the sustainability and GHG emissions saving criteria for biofuels, bioliquids and biomass fuels laid down in Article 29 of Directive (EU) 2018/2001;

(f) ensure the consistency of the application of the principle of the cascading use of biomass as per national authorities in accordance with Article 3(3) of Directive RED III;

(g) ensure the avoidance of unsustainable demand of biomass raw material;

(h) minimise the administrative and financial burden for operators, particularly for small-scale operators, keep the certification process as simple as possible, and easy to use;

(i) ensure that cases of reversal are addressed through appropriate liability mechanisms such as collective buffers or up-front insurance mechanisms and as a last resort direct cancellation of units.

3. When preparing **the** delegated acts **referred to in paragraph 2**, the Commission shall take into account

(a) relevant Union and national law; and

(b) relevant Union, national and international certification methodologies and standards.

(ba) best available scientific evidence.



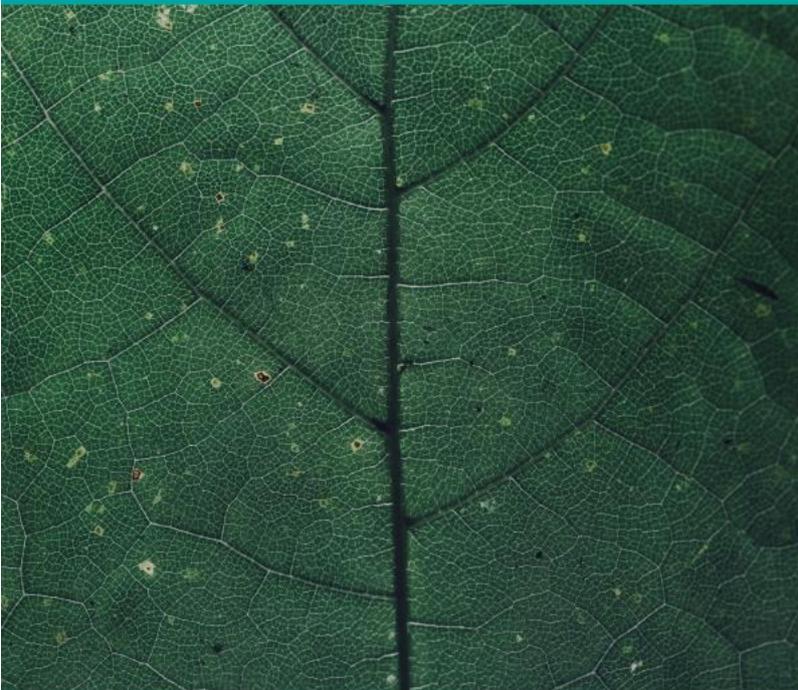
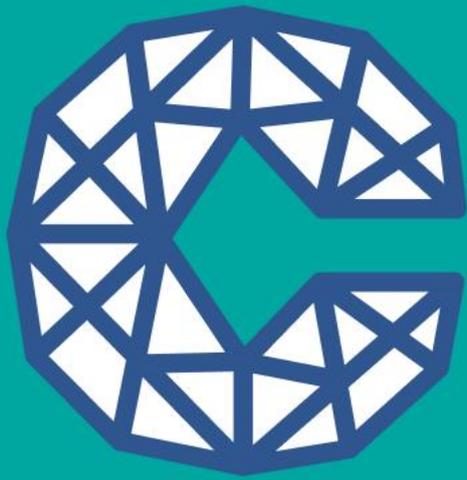
Annex IV. List of resources

The following list of resources were identified by Focus Group members and supported discussions and development of recommendations.

Name	Description	Link/ reference
SBTI Corporate Engagement Survey	Survey includes results on buyer views on sustainability impacts (see page 26)	https://sciencebasedtargets.org/resources/files/BVCM-Results-of-corporate-engagement-survey.pdf
	See also summary blogpost on SBTI Beyond Value Chain Mitigation report by Calyx Global	https://calyxglobal.com/blog-post?q=120
GLOBAL G.A.P	Good Agricultural Practice standards	https://www.globalgap.org/what-we-offer/solutions/ggfsa/
SAI Platform — Sustainable Agriculture Initiative Platform	Organisation created by the food industry to communicate and to actively support the development of sustainable agriculture involving stakeholders of the food chain	https://saiplatform.org/
Regen10 – Outcomes-based framework (zero draft)	Platform dedicated to regenerative agriculture, aiming to promote sustainable farming practices that enhance soil health, biodiversity, and ecosystem resilience. Piloting their outcomes framework with farmers at the moment.	https://regen10.org/wp-content/uploads/sites/19/2023/12/Regen10-FrameworkReport-Final.pdf https://regen10.org/
OP2B - One Planet Business for Biodiversity , linked to World Business Council for SustainableDevelopment	International, cross-sectoral and action-oriented business coalition on biodiversity with a specific focus on regenerative agriculture.	https://www.wbcso.org/Projects/OP2B OP2B’s Framework for Regenerative Agriculture - World Business Council for Sustainable Development (WBCSD)

OECD Food Chain Analysis Network (FCAN)	The FCAN is an expert group of the OECD Committee for Agriculture: -Interoperability and data flows. -Specialises in agro-food system analysis.	https://www.oecd.org/agriculture/topics/food-chain-analysis-network/
ISCIA - International Soil Carbon Industry Alliance	Soil carbon experts to deliver CO ₂ removals in agriculture at scale	https://iscia.org/
Soilguard H2020	Biodiversity indicators in soil considered by SOILGUARD. More ambitious than monitoring Soil Directive: Soil basal respiration, Metabarcoding, DNA assessment (bacteria, fungi, protist, animals), Abundance and diversity of nematodes, Microbial biomass, Abundance and diversity of earthworms	https://soilguard-h2020.eu/
VCMI (Voluntary Carbon Market Integrity Initiative)	Focuses on the eligibility of the buyers of credits	https://vcmintegrity.org/
Energy Transition Accelerator		https://www.rockefellerfoundation.org/initiative/energy-transition-accelerator/
BIOservices	A Horizon Europe-funded project that aims to understand the connection between soil organisms and the delivery of multiple soil ecosystem functions and services at different scales.	https://bioservices.co/





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