Faulty to the CORE 2

Analysing the methodologies for certifying carbon farming

POLICY BRIEF
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CARBON MARKET WATCH

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Executive summary

The European Union's Carbon Removal and Carbon Farming (CRCF) framework, designed to certify carbon removal and emission reduction activities, is being implemented through a range of methodologies. Each of these represents different methods that the European Commission considers capable of delivering carbon removals or emission reductions, and/or increased carbon sequestration in the land sector.

This report examines cross-cutting and specific issues in the carbon farming methodologies, covering agriculture and agroforestry on mineral soils, peatland rewetting and afforestation. This analysis builds on Carbon Market Watch's (CMW) internal review of the delegated act, and the expert analysis of Oeko-Institute, GHG Management Institute, Carbon Plan, and Infras, who have previously collaborated with CMW to provide independent reviews of the methodologies (see here and here).

The results are troubling. The delegated act contradicts many basic legal requirements of the CRCF and standard integrity rules present in numerous private sector methodologies. The European Parliament and Council of the European Union should object to the rules and ask the Commission to reconsider and respect the original CRCF mandate during the two-month window they have for feedback.

This is particularly critical given that, in the upcoming post-2030 package, the Commission plans to use these units as a flexibility tool under the land use, land use change, and forestry Regulation, bearing wider implications for reaching EU targets. In addition, recent research funded by CMW has demonstrated that the CRCF sets a weaker standard than Article 6 of the Paris Agreement, a carbon crediting scheme enabling trading between participating countries.

This is not only problematic for the EU's ability to achieve its climate goals but also undermines the EU's reputation and its ability to influence international climate ambition.

RECOMMENDATIONS

1) **Set clear and responsible use cases, prioritising a certificate of performance that requires no issuance of units and excludes offsetting.** Instead, establish a contribution model that allows buyers to show support for climate action without claiming emissions reductions and compromising on integrity.

2) **Restrict the list of practices.** Non-exhaustive lists for agriculture imply that the methodology's scope is infinite. There are also environmental risks associated with certain eligible practices under agriculture, and the afforestation rules fail to prioritise unused and/or degraded land.

3) **Set comprehensive system boundaries**, including relevant associated emissions such as livestock emissions and indirect land use change.

4) **Introduce longer monitoring periods of at least a century to ensure reversals are promptly identified and addressed.** The cancellation of the affected carbon farming units from the registry should be expanded to include whatever offsetting claims were made using them, obliging buyers to purchase new units or decarbonise. This will avoid higher atmospheric emissions.

5) **Restrict the quantification approaches to minimise the risk of adverse selection.** Prioritise direct measurements, deep samples, and require operators to select the approach that results in the most conservative values, per the CRCF Regulation.

6) **Do not water down the robustness of the baseline for certain activities and regularly update them.** Setting them to zero risks overestimation and overcrediting. Regular updates help reflect the changes in assumptions used to calculate the initial baseline.

7) **Strengthen additionality**. When new laws are introduced that mandate a previously certifiable activity, the activity in question must lose its certification, and any units or credits issued must be scrapped. Remove temporary

exemptions to financial additionality and introduce a common practice test to ensure funding is not wasted on activities that occur regardless of CRCF revenue.

8) **Acknowledge non-permanence risks for peatland rewetting by introducing risk assessments and liability mechanisms** for these activities, as required by Article 6(6) of the CRCF Regulation.

9) **Carry out project-specific risk assessments, exclude high-risk activities and include risk rates for avoidable reversals.** List examples of mitigation practices that reduce the risk and do not allow their implementation to reduce the risk rate.

10) **Flesh out the rules for liability mechanisms.** Leaving it to certification schemes to elaborate on them risks non-uniform application, creating market disparities in project quality, or inducing a race to the bottom.

11) **Revamp sustainability.** Strengthen rules for demonstrating that carbon farming activities produce biodiversity and restoration co-benefits. Acknowledge albedo risks for afforestation activities. Introduce social safeguards to tackle land speculation risks and avoid exacerbating inequalities in the land sector.

Introduction and background on the CRCF

In December 2024, the EU launched the Carbon Removals and Carbon Farming (CRCF) certification framework for permanent carbon removals, carbon farming and carbon storage in products. Permanent removals cover direct air carbon capture and storage, biogenic emissions with carbon capture and storage, and biochar. Carbon farming involves soil carbon sequestration in mineral soils and agroforestry (often shortened to agriculture), afforestation, and peatland rewetting. As for carbon storage in products, its full scope is yet to be defined.

The CRCF Regulation outlines the specific quality criteria these activities must meet for certification, namely, the quantification of climate impacts, the additionality of the activity, storage of the CO_2, liability for premature release into the atmosphere, and sustainability. These criteria have been further fleshed out in delegated acts establishing dedicated certification methodologies applying to different methods.

The methodologies for permanent removals were published in the EU's official journal in April 2026, despite containing many flaws and facing resistance from the European Parliament's Environment, Public Health and Food Safety committee. As for carbon farming, these methodologies were adopted by the Commission in July 2026; they are not only inadequate but have become progressively worse with every revision. For carbon storage in products, a methodology for storage in buildings is under development.

This briefing will analyse the carbon farming methodologies. Since many of the quality criteria apply to all methods, the analysis will look at overarching issues and, where relevant, detail how this particular issue applies to the specific activity.

What's the use?

The CRCF Regulation does not prescribe how purchasers can use the certified carbon farming units they buy. This oversight is hugely problematic because it opens the door to the inappropriate utilisation of carbon farming activities, such as for offsetting emissions or greenwashing poor climate performance.

All the Regulation specifies is that these units should contribute to the achievement of the Union's Nationally Determined Contribution and its climate goals, and that, to avoid double counting, these units cannot be used to achieve the climate goals of non-EU countries or to comply with international schemes like Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). Therefore, the CRCF makes it clear that units can only contribute to domestic climate goals and that each unit can only be claimed or counted once to prevent inflating total climate benefits.

The use of credits that will eventually be issued under the scheme is also not specified under the delegated act. In response to earlier criticism of this omission, the Commission had initially stated that the Green Claims Directive would set the use case. Unfortunately, this key file was shelved, leaving the EU with a regulatory gap.

The absence of clear provisions outlining appropriate usage of certificates makes it difficult to evaluate the CRCF's potential to deliver real climate benefits. As explained below, should offsetting be allowed, this would cause significant issues, not least because temporary sequestration units are not equivalent to permanent emissions reductions. Meanwhile, corporate reporting for indirect value chain (or scope 3) emissions also raises questions due to inventory challenges. A safer option would be to revert to an activity-based scheme, allowing companies to purchase CRCF certificates of good performance and report on these contributions separately.

The trouble with offsetting

While not officially endorsed, the focus of the Commission has largely been on enabling voluntary carbon market offsetting schemes. Currently, the European Commission is designing a Buyers' Club, the objective being to aggregate finance and demand for CRCF units. This initiative presented another opportunity for the Commission to set rules on the

claims buyers of CRCF units would be permitted to make, but the EU executive will limit itself to offering guidance on the potential uses, without closing the door for offsetting and without excluding certain buyers, such as fossil fuel actors.

Both conceptually and technically, offsetting is hugely problematic. This is especially the case for carbon farming because carbon sequestration is volatile and temporary due to its exposure to natural or man-made disasters, changing climatic conditions, and its dependency on sustainable land-management practices.

If purchasers use carbon farming units for offsetting and the carbon previously stored is subsequently released back into the atmosphere, this means that the original tonne of CO_2, used to offset the emission, no longer exists, and the offsetting claim is no longer valid. While reversals mean the carbon farming unit would be cancelled from the registry of the certification entity that created it, this cancellation has no bearing on the offsetting claim that has already been made, leading to reductions on paper but increases in reality.

Using such vulnerable activities to underpin offsetting cannot credibly serve as the basis for making spurious climate claims, such as “net zero” or “carbon neutral”. It would effectively allow polluters to use poor quality, temporary and often cheap credits to offset their emissions instead of reducing them, delaying decarbonisation while misleading consumers. This approach could easily worsen the climate and biodiversity crises. It is worth noting that the academic literature has been unequivocal about the shortcomings of offsetting approaches (see, for example, here, here, here and here).

Corporate bookkeeping

Discussions on the review of the CRCF Regulation have revolved around using CRCF data for companies’ scope 3 reporting, in line with the Corporate Sustainability Reporting Directive, and voluntary reporting standards, such as the Science-Based Targets initiative and the Greenhouse Gas Protocol. Put simply, the CRCF certificate of compliance contains information relevant to scope 3 reporting, such as activity data, the location of the activity and the total emissions and removals achieved. This data could be used for calculating emissions factors or the carbon footprint of the products used in corporate inventories.

While this approach would mean dispensing with the issuance of units, and is, in principle, preferable if the purpose is quantifying and reducing Scope 3 emissions, while avoiding offsetting, accounting uncertainties persist. Corporate reporting follows inventory accounting and captures emissions at one point in time. CRCF projects follow a

consequential accounting logic, meaning that impacts derive from an intervention, such as planting cover crops, and are measured against a baseline, namely, what would have happened had the intervention not taken place.

An easier approach would therefore be to allow corporations to buy CRCF certificates for the purposes of making contribution claims or to differentiate products on the market by indicating they stem from sustainable practices. These would be reported as a separate ledger, and in addition to their internal decarbonisation.



Too permissive

The scopes of all carbon farming methodologies have been expanded. In earlier versions, afforestation was restricted to previously unused or degraded land. This has now been expanded to planting trees on grassland, cropland, and "land where in the 20 years prior to the start of the activity period the combined tree crown cover of existing sparse trees was smaller than 10 % of the activity area". In addition, there is no need to prioritise abandoned or unused land. This expansion raises questions for indirect land use change (ILUC). Despite potentially leading to significant emissions, ILUC has not been accounted for in the methodologies. This point will be examined further below in the section about leakage.

The ambition of the peatlands methodology has also been reduced to "partial rewetting", widening the scope of eligible activities. This has been justified on the grounds of easing the transition for peatlands used for agriculture, yet no time limit has been set for this transition.

For agriculture, three sets of practices are envisaged:

1. Agricultural practices that increase net carbon removals in soils or reduce net carbon emissions from soils, such as cover crops and crop rotations.
2. Agroforestry practices, such as planting hedges or woody elements between parcels
3. Agricultural and agroforestry practices that reduce direct and indirect nitrous oxide. emissions from managed agricultural soils, such as precision fertilisation.

The list of practices under the agriculture methodology is non-exhaustive, leaving the door open for individual operators or certification schemes implementing the methodologies to

add further practices. If activities can be added down the road without detailed guidance from the original methodology, there is a risk that different certification schemes will have inconsistent rules for the same activity. The fear of excluding potentially good activities is also remedied by the fact that the certification methodologies will be periodically reviewed.

As to the types of practices that have been listed, many are problematic from an environmental perspective. For instance, nitrification inhibitors can harm water quality and soil biodiversity, the climate benefits of biochar are undermined by potential changes to the albedo effect (the amount of sunlight reflected back from the surface), and the inclusion of livestock distracts from the need to reduce livestock numbers and feeds into the flawed idea that livestock form part of the natural cycle, despite the literature proving that livestock emissions tend to outweigh any potential carbon sequestration.



Leaky practices

Related to the long list of eligible practices, different carbon pools and emission sources associated with the particular practices are not robustly identified for agriculture. This is further aggravated by the list of practices being non-exhaustive, increasing the risk of excluding relevant pools and emission sources. As to those that have been identified, they have not been attributed to the particular practice, but are merely listed in a table.

Regarding the key emissions sources that have been excluded, activities such as rotational grazing are eligible, yet livestock emissions are not accounted for. This is a significant omission, as livestock can be a major source of agricultural greenhouse gas emissions. Relative to a scenario without livestock, any potential increase in soil organic carbon sequestration from the activity is unlikely to result in a net positive climate effect. Since methane and nitrous oxide emissions from livestock are not included in the monitoring and quantification tables, the methodology fails to capture the likely negative net climate effect of such activities. Similarly, fires and soil disruption are not included. Note that in the voluntary carbon market, it is standard practice to define all emission sources and pools that must be considered in both the baseline and the activity scenario.

As for displaced emissions, the delegated act confuses economy with ecology. It states that the ILUC impact of carbon farming activities would only arise in the event that revenue from CRCF units is equal to or higher than the revenue generated under previous land use.

In addition, the text states that data on the profitability of afforestation and peatland rewetting are lacking, and assumes that carbon farming activities will be carried out in degraded, marginal or low-yielding areas, thereby excluding any competition with food and feed production. It is therefore not possible to quantify ILUC emissions.

Tying ILUC risks (ecological) to profitability (economic) is simplistic and not backed by science. ILUC effects can take place when revenue from the new activity is modest, as demonstrated in the scientific literature, and are also triggered through global agricultural commodity market dynamics - even small shifts in land use can trigger displacement of food and feed production elsewhere, irrespective of profitability.

Improving crop rotation or converting arable land for fodder crops to permanent grassland implies that the production of a specific crop will be reduced. Ignoring ILUC, therefore, disregards the potential displacement of agricultural activities that might lead to deforestation elsewhere. This is particularly the case in a context where no real demand-side policies are in place to free up land by changing current unsustainable food production and consumption patterns.

This approach is also fundamentally at odds with good practice in the voluntary carbon market and under the Paris Agreement Crediting Mechanism, which has developed a leakage standard to address these emissions.

Overall, failing to account for leakage effects and to comprehensively identify all emission sources and pools is likely to lead to a significant overestimation of removals or emission reductions. It also fundamentally clashes with the need to carry out a life-cycle assessment of each activity, per Article 4(2) of the CRCF Regulation.



Short monitoring periods

Given that fossil fuel emissions have affected the climate for centuries and even millennia, carbon removal activities should have a provable impact over the same time frame. This implies that any activity which claims to draw carbon from the atmosphere or reduce emissions must be able to safeguard these gains for centuries. This requires careful monitoring.

Monitoring is the mechanism that serves to identify and address potential reversals of CO_2 into the atmosphere, and is critical to confirm that issued credits remain valid. As shown in the table below, the monitoring periods set out in the methodology vary according to the practices, though operators may willingly commit to longer monitoring periods upon submission of the activity plan.

The activity period is the time during which the operator engages in the activity and during which credits are issued. The monitoring period is the period during which the activity is monitored and reported. It starts at the same time as the activity period, and in the case of carbon sequestration, continues for a few years after the end of the activity period.

Agriculture	**Mineral soils**	**Living biomass (agroforestry)**	**Reduction in nitrous oxide emissions**
Activity period	5-20 years (in five-year blocks). At the time of submission of the activity plan, operators may already commit to an overall activity period of maximum 20 years.	15-30 years (in 15-year blocks). At the time of submission of the activity plan, operators may already commit to an overall activity period of maximum 30 years.	5-20 years (in five-year blocks). At the time of submission of the activity plan, operators may already commit to an overall activity period of maximum 20 years.
Monitoring period	For net carbon removals in soils, five years after the first or renewed activity period. For reduced net CO_2 emissions from soils, the same time as the activity period.	Five years after the first or renewed activity period.	Same duration as the activity period.

	Afforestation	Peatland rewetting (organic soils)
Activity period	35 years, no renewal.	10 up to a maximum of 30 years, and renewable up to the same overall maximum duration.
Monitoring period	40 years.	Same duration as the activity period.

Short monitoring periods are problematic because they limit the timeframe for monitoring and addressing potential reversals. While the methodology addresses this challenge by cancelling units at the end of the monitoring period, this safeguard is undermined when the units are used to offset emissions, as there is no enforcement mechanism to ensure that new units are purchased to replace the expired ones or that equivalent emission reductions are achieved to compensate for them. The absence of such safeguards means that offset emissions risk becoming net positive after the monitoring period expires.

Furthermore, there are no incentives in place for the continuation of the practices. Allowing operators to voluntarily commit to longer monitoring periods or to renew their activities is not enough and risks introducing a disparity in the market regarding the quality of projects, or inducing a race to the bottom (should no operators opt for longer monitoring periods).

There is also nothing in the methodology to prevent operators from completely changing their practices, for example, by cutting their trees and selling them for bioenergy once the monitoring period elapses.



Elastic quantification approaches

The methodology offers several options to quantify the carbon stored in soils and biomass and thus the net climate benefit of the activity. The options are models, proxies, default emission factors, and measurements. Proxies exclusively apply to peatland rewetting and shall not be analysed here. Overall, the approaches vary a lot in terms of conservativeness

and robustness, with direct measurements being more accurate and reliable than non-site-specific models, such as proxies and emissions factors.

In addition, the rules in the delegated act do not require the most conservative approach to be selected, a requirement included in the CRCF Regulation. While the methodologies emphasise that the same quantification approach must be used throughout the entire activity and monitoring periods to calculate total carbon removals/soil emission reductions, a specific approach is not prescribed. This risks an arbitrary selection of methods that maximise claimed carbon benefits.

Most flattering models

In carbon crediting projects, models are often used to estimate, predict, and quantify carbon benefits. Models simplify measurements and are also more cost-effective than direct measurements. The trade-off is that their estimations can be far less accurate and are fundamentally dependent on: the quality and quantity of input data, assumptions, model biases, the suitability to the project at hand, calibration and validation against real-world observations, and how uncertainty is accounted for. Different models in the same plot are also likely to yield different results.

The methodology offers a list of criteria on what constitutes a good model. There is, however, nothing to prevent operators from selecting models that provide greater removals or emission reductions in the context of their projects, for instance, due to assumptions about how the system works or the specific data input. This risks a systematic overestimation of emission reductions or removals. This adverse selection has been well documented by researchers.

Models require initialisation, that is, introducing the initial parameters before the model begins to learn from data. For mineral soils, initial soil organic carbon is determined based on either validated regional or national stock maps or on soil samples taken in accordance with the sampling and laboratory rules. For model verification, either the initial soil samples are resampled at the same locations or available soil sampling data from regional or national monitoring networks are used. The fact that plot-level soil samples are not mandatory means the data used to initialise and verify the models are not specific to the particular project that will be certified. This is especially problematic considering national or regional data sets may not capture variation within individual fields, may vary in sampling density, and may even rely on shallow samples (more on sampling depths below).

In addition, models routinely make simplistic assumptions about the persistence and accumulation of soil carbon over time, including that it increases linearly, that fields are in a state of equilibrium, and that proxy measurements like remote sensing can accurately capture ecosystem processes. The inherent uncertainties attached to these models mean that direct measurements for calibration are a must, but the methodologies do not mandate this.

Default emissions factors

Default values were designed by the Intergovernmental Panel on Climate Change to estimate GHG emissions and removals for inventory reporting operating on national scales. They serve to simplify reporting, though they lack granularity and accuracy, and are therefore inappropriate for project-level accounting.

Nonetheless, the CRCF also makes use of default emission factors. While they were previously restricted to certain types of measurements, such as associated emissions, it now seems that they can be used for measuring the entire activity.

Measurement

The measurement approach also offers flexibilities that do not serve the climate. For instance, for mineral soils, both indirect measurements using on-site proximal sensing techniques and direct measurements through soil sampling are eligible, rather than being limited to the latter.

While some sampling guidance is offered, it is important to note that inconsistent sample processing leads to large errors in soil carbon measurements. Research has shown that soil carbon values measured for the same soil differed by as much as double across different labs. This variation can, in fact, make it difficult to detect soil carbon changes and attribute them to on-farm practice changes. The methodology does not address this variation.

The measurement approach also restricts sampling depth to 0-30cm. Generally, a sampling depth of 30cm is deemed insufficient as it ignores carbon losses deeper in the soil column to the upper layers over time. It also likely overestimates the carbon accumulation in the first 30 cm, which are often caused by natural movements in the soil rather than the carbon farming activity. Therefore, existing protocols recommend deeper sampling.

Another shortcoming is that soil bulk density, a key indicator of soil compaction, does not need to be re-measured when the activity is renewed. This ignores that many practices that aim to increase soil carbon sequestration affect the density of soil (for instance, by making the soil fluffier or more compact), especially in the upper portions of the soil column. If the sampling depth is maintained, but soil density is not accounted for, this basically results in more soil being measured. More soil also means higher levels of CO_2 sequestered, yet this might have nothing to do with new accumulation of carbon, but rather result from the fact that there is now denser soil in the 30 cm sampling depth. The methodology should therefore require bulk density to be re-measured prior to the issuance of any units and confirmed by third-party auditors.

Building on substandard baselines

Poor starting points

Setting the situation prior to the implementation of the projects, and how the situation would develop in the absence of the project, is key to ensuring the eventual climate benefits of a project are realistically estimated. The methodology opts for an activity-specific baseline. For mineral soils, the baseline scenario must reflect the continuation of the soil or crop management carried out, at least, three calendar years immediately prior to the start of the activity period. This open-ended definition allows operators to select a period that maximises baseline emissions or minimises baseline removals, which can lead to serious overcrediting.

In addition, the methodologies water down the nature and robustness of an activity-specific baseline by setting it to zero for certain activities. Zero baselines are problematic as they fail to account for natural trends and assume that, without the project, no carbon would be removed, overestimating the project's actual climate benefit. If these credits are used for offsetting, buyers risk overstating the emissions they have compensated for relative to the project's actual climate impact. For mineral soils, the baseline can be set to zero, where operators choose the measurement option for quantifying the carbon stored.

For afforestation, a baseline of zero also applies, regardless of the selected approach. The growth in carbon stock from pre-existing vegetation is excluded from the overall

quantification, which fails to account for trees or shrubs that could have grown in the absence of a project. The reasoning behind this omission is “simplification”, but nature is not simple and omitting its complexity distorts the true climate impact of these activities.

Outdated baselines

It is important for baselines to be periodically adjusted to reflect potential changes, for instance, in the parameters and assumptions used to establish them in the first place. Usually, baselines are updated following the end of each activity period, upon renewal. In this case, however, activity periods are particularly long: 35 years for afforestation and 20 years for peatlands, meaning a significant period of time would have to pass before any updates can take place.

Moreover, the methodology does not necessarily require updating the baseline at the end of each activity period, despite the CRCF Regulation requiring the European Commission to include such rules in the certification methodologies. For instance, if operators apply for the maximum duration of the activity period from the outset - as opposed to applying for an initial period, and renewing it, the renewal being the moment where an update is required - it is unclear if they need to update the baseline.

More specifically, for mineral soils, the reference period prior to the start of the first activity period shall be used to update the baseline, i.e. the same period that was used for setting the initial baseline scenario. The text only offers clear updating language where the model approach is used, requiring the baseline to be readjusted at each re-certification audit, where appropriate.

Instead, updates are only needed for the agricultural and agroforestry practices that reduce direct and indirect nitrous oxide emissions from managed agricultural soils. This update is meant to be carried out every five years by applying a ‘downward adjustment’ corresponding to 1% of the initial baseline for every year that has passed since the start of the first activity period. Note that this downward adjustment rule was taken from the Paris Agreement Crediting Mechanism (PACM), yet the downward adjustment serves to increase the ambition of the baseline every year, and is required in addition to updating the baseline. This also applies to all activities. The CRCF has therefore confused the rules.

Overall, the failure to regularly review the baseline does not ensure conservativeness, nor does it mitigate against potential overestimation of carbon sequestration or emission reductions.

Watered-down additionality

Additionality is a criterion inherent to credit-issuing carbon market systems. It requires projects to demonstrate that the atmosphere will see real removals as a result of the particular activity being financed, preventing funding from being wasted on projects that would have happened anyway. In this sense, it is important to demonstrate that the climate benefit would not have occurred without the scheme.

There are two key tests for additionality: the regulatory and financial tests. The former serves to avoid certifying projects (and issuing units) that were already mandated by law. The latter, to avoid certifying projects that were financially viable and therefore did not actually need CRCF funding to go ahead.

Regulatory additionality

To abide by regulatory additionality, operators must prove that their activity is not already mandated by law. However, the methodology contains no rules for when new laws are introduced throughout the activity period. In addition, the methodology does not require the regulatory test to be performed again upon renewal of the activity period.

The departure from this standard norm means that, particularly in the case of long activity periods, CRCF carbon farming projects could issue credits for decades, despite the credited activities already being mandated by new laws. To illustrate, if an activity lasts for 35 years, and in year 2, new legislation is introduced mandating that activity, the project in question would end up issuing non-additional units for 33 years, resulting in no additional climate benefit to the planet and even leading to additional emissions when those credits are used to offset.

More worryingly, there are already many EU policies mandating activities the CRCF seems to certify, such as the Common Agricultural Policy (CAP) and the Nature Restoration Law. As such, the methodologies should identify overlaps with EU policies and justify why these do not already impose a requirement to implement the activities intended to be credited under the CRCF.

Alternatively, the CRCF could be used to certify the performance of good practices, instead of generating tradeable units, which could be recognised under the CAP. This would avoid the serious pitfalls associated with offsetting.

Financial additionality

To prove financial additionality, the CRCF carbon farming methodologies propose two tests. The first is the incentive effect: "induces the operator to change its behaviour in order to engage in the additional activity, which it would not carry out without certification or would carry out in a restricted or different manner". The second is the financial viability test which posits that "the activity is not financially viable in the absence of CRCF revenues".

1) Exemptions

The first test is subject to two temporary exemptions. The first is for operators who started the activity before applying to a certification scheme or joining a group of operators, if the activity started between 1 January 2023 and 31 December 2027.

Since the CRCF entered into force on 26 December 2024, this exemption would allow legacy projects that were operating successfully even before the adoption of the CRCF Regulation to be registered. Effectively, this exemption allows for retroactive crediting, which undermines the whole point of additionality.

This period also aligns with the current period of the CAP. Several practices certifiable under carbon farming methodologies are already supported through CAP instruments, such as the ecoschemes and conditionality system, and should therefore not satisfy the CRCF's incentive requirement. The timeframe of this exemption, therefore, enables operators to receive CRCF funding for activities that would otherwise fail the incentive test.

A second derogation applies for operators who started the activity under a certification scheme before it was recognised by the Commission. This exemption is less significant because existing certification schemes will eventually register to the CRCF, if they wish to issue CRCF units to their projects. In addition, the derogation specifies that "only carbon removals or soil emission reductions generated after the adoption of the recognition decision shall be eligible for certification", thereby excluding retroactive crediting.

The key for determining additionality is whether the revenue from selling the credit or certificate is the decisive factor that leads to the implementation of the project. As such, issuing credits for activities that have been implemented prior to certification goes directly

against the entire idea of financial additionality. It also means private finance for offsetting would go to business-as-usual activities, instead of real mitigation activities, making the potential for greenwashing even greater.

2) Is the activity common practice?

A crucial element of additionality is the common practice test. Recital 14 of the CRCF Regulation states that "in the context of carbon farming, only practices and processes that go beyond the common practice should be certified. Therefore, a specific carbon farming activity should not be rewarded if it is already widely adopted within a region with similar pedoclimatic and regulatory conditions". However, the delegated act contains no provisions to check whether an activity is indeed common practice, stating that knowledge sharing events should be organised with a view to eventually include a common practice test.

No common practice test means the current rules would ignore regions where cover crops, an activity eligible for certification under the CRCF, have been steadily increasing over the past years. Projects seeking certified units for cover crops in this particular region should demonstrate how their practices go beyond this trend when claiming additionality. This is currently not the case.

As stated in the expert group meeting, the reason for omitting a common practice test is the lack of data. It is unclear why the Commission cannot resort to the wealth of data that has been accumulated under the CAP. It cannot be assumed, for the entire EU territory, that carbon farming activities are not common practice, particularly in light of the CAP and organic farming certification. In fact, many farmers already undertake activities that are certifiable under the CRCF, not least because they care about long-term soil health and increasing resilience against the impact of climate change. The phenomenon of early movers attests to this, and is a concept that crediting schemes inherently struggle with, precisely due to the need to prove additionality. Ultimately, this points towards the inadequacy of results-based crediting mechanisms as a means to support farmers in their land stewardship activities.

3) Misattributing public funding

The rules require any public funding provided to the activity to be documented and to demonstrate that public funding would not have filled the funding gap in the absence of certification revenue.

While blended finance is common, merely declaring that activities are being financed through public and private funding is insufficient. Instead, it is important to proportionally

attribute the removals or emission reductions to the financial support provided. Thus, if public funding covers 30% and private funding 70% of the credit, credit ownership should be split accordingly.

There is also an inherent risk in mitigation activities receiving both public subsidies and CRCF units, as this could artificially lower CRCF unit prices. In a context where units are being used to offset emissions, public funding could implicitly subsidise dubious environmental claims made by major polluters when they buy the units.



Gauging reversal risks

The methodologies oblige operators to carry out risk assessments for their activities before the start of the activity period. The risk assessment is used to determine a risk rate related to potential unavoidable reversals, which fixes the amount of credits that need to be allocated to the buffer pool used to address future reversals. Buffer pools are liability mechanisms, as will be explained further below.

Per the rules, the risk assessment only applies for unavoidable events and excludes avoidable ones. Unavoidable, here, means events that cannot be controlled by the operator, such as natural events or war. Avoidable means reversals resulting from the (mis)management of the activity and any other wilful actions attributable to the operator.

The delegated act does not prescribe a risk assessment (or a liability mechanism) for peatlands on the questionable grounds that the claimed emissions reductions will be permanent. This assumption is incorrect as peatlands can revert to being a source of emissions if re-drained, affected by natural disturbances, or poorly managed, potentially releasing more CO_2 than the project ever avoided. Crucially, this approach is at odds with existing practices in the voluntary carbon market, such as the UK Peatlands code, the VCS Methodology for Rewetting Drained Temperate Peatlands, and the Integrity Council for the Voluntary Carbon Market.

As for mineral soils, the level of risk has been defined according to two indicators: hazard and vulnerability. For vulnerability, the level of carbon saturation in the activity area is used as a proxy. This is an oversimplification because it ignores that climate change can make

soils more prone to losing carbon. The lowest level of risk is set at 2% and the highest at 10%.

		Hazard	
		Low	*High*
Vulnerability	*Low*	2%	6%
	High	4%	10%

Source: COM, ANNEX to the Commission Delegated Regulation supplementing Regulation (EU) 2024/3012 of the European Parliament and of the Council by establishing the certification methodologies for carbon farming activities.

The risk is slightly increased when the activity area is subject to flooding or to a high or very high landslide risk, yet it may be reduced where risk mitigation practices beyond the eligibility and minimum sustainability requirements are put in place (this is also the case for afforestation). The methodology primarily defers to certification schemes for guidance on risk mitigation practices. It also allows the risk rate to be reduced where such mitigation practices are implemented. High-risk activities are not simply excluded, contrary to best practice in the voluntary carbon market.

In any case, a 10% contribution rate for "high risks" is insufficient, particularly in a context where the activity involves temporary carbon sequestration, a vulnerability that is exacerbated by ever-changing weather patterns. In an attempt to address this, the rules have set the percentage as a floor. Nonetheless, this remains voluntary, making it unlikely that operators will willingly increase the rate and thus attribute more units to the pool. Consequently, it is likely that the rules will lead to an undercapitalised buffer pool that may prove unable to address the scale of likely reversals.

More broadly, offering a pre-determined, generalised percentage is not a robust way to calculate risk. Assessments must be tailored to the particular project, the management practices, the climate, or the geographic location to accurately capture the risk of reversal.

The Verra Agriculture Forestry and Other Land Use Non-permanence Risk Tool requires multiple risks to be taken into account. These include risks that originate within the project (such as project finances and management); human-induced risks (such as certainty in land and resource ownership, community engagement and political risks); and natural risk, which refers to such natural factors as fires, extreme weather events and pests. It should be noted, however, that as the effects of climate change worsen, our ability to predict these threats becomes inherently uncertain.

Liability mechanisms

Liability mechanisms are used to compensate for avoidable and unavoidable reversals. In the delegated act, operators are allowed to choose between buffer pools or insurance policies. Insurance policies are still in their infancy and have not found widespread usage within voluntary carbon markets, making it risky to include such an untested mechanism as a fail-safe liability mechanism. However, buffer pools are also weak liability mechanisms, precisely because the difficulty of conducting accurate risk assessments often means that they are not sufficiently large to account for all potential reversals.

As with the risk assessment, no liability mechanism applies to peatlands on the assumption that, as an emission reduction, the climate benefits are permanent. Yet assuming permanence for peatland rewetting is also incorrect. Peatlands are tied to a carbon reservoir; when they are not wet, the peat oxidises and emits CO_2. Interestingly, however, liability mechanisms do apply to reductions in nitrous oxide emissions from agricultural soils, revealing methodological inconsistency.

In addition, many provisions have been left to the certification schemes, the entities responsible for implementing the methodology. These include assessing the risks of early termination of the activity, including financial, management and social risks, and establishing liability mechanisms, based on this assessment, to deter early termination of the activity and to address avoidable reversals in the event of insolvency of operators. This risks creating an unlevel playing field and disparities between schemes.

There are also rules missing on the consequences of operators being unable to replenish the pool. For instance, it is unclear whether no further units will be issued until the pool has been replenished or whether issued units will be cancelled if the buffer is not replenished.

Similarly, there are no rules for when reversals exceed the number of credits in the pool. This is particularly problematic, given the likelihood that the pool is undercapitalised, and is further compounded by the risk assessment being based exclusively on unavoidable reversals, while the buffer is expected to compensate for both avoidable and unavoidable reversals.

The methodology also states that the units in the buffer will expire at the end of the monitoring period. This is a usual safeguard to compensate for potential reversals that may

occur beyond the monitoring period. However, it assumes that no reversals exceeding the number of credits initially set aside will occur and fails to account for instances in which the units have been used to offset emissions.

Insufficient sustainability safeguards

Sustainability has three parts: minimum sustainability requirements, the mandatory co-benefits criterion, and the voluntary co-benefits. Given its importance, this section will focus on the mandatory co-benefits criterion. It will also address the failure to include albedo effects and social safeguards.

Ecological benefits or harm?

Article 7(2) of the CRCF Regulation obliges all carbon farming activities to, at least, generate co-benefits for the protection and restoration of biodiversity and ecosystems, including soil health and the avoidance of land degradation. This is known as the mandatory co-benefits criterion.

Given the interaction between carbon farming activities and nature, carbon farming should be approached holistically, recognising benefits beyond carbon sequestration. Furthermore, as stored carbon remains vulnerable to reversal, the most enduring benefits of these activities are ecological, not climatic. Consequently, the mandatory co-benefits criterion is, environmentally speaking, more important than the carbon component.

Note that, while the protection and restoration of biodiversity and ecosystems is also an objective listed under the minimum sustainability requirement (Article 7(1)(f) of the CRCF), the manner in which this has been operationalised remains vague and highly dependent on national implementation. The mandatory co-benefits criterion therefore, serves as an added safeguard.

Unfortunately, significant flexibility has been offered in the implementation of this provision. Operators may choose from several options, and the assessment is required only for one of the practices they undertake. The rules also authorise operators to engage in multiple practices, with the list of practices under the agriculture methodology being

non-exhaustive. The fact that the biodiversity assessment is only needed for one practice means that potentially dangerous activities may avoid the biodiversity assessment altogether, allowing their impact to go unexamined. As mentioned previously, certain eligible practices may negatively impact biodiversity, such as nitrification inhibitors, which can harm water quality and soil biodiversity.

In addition, none of the options contains rules on monitoring or follow-up, meaning there will be no third-party validation on whether the chosen approach is effective. Once more, this risks allowing potentially adverse biodiversity impacts to go undetected and unaddressed.

Delving into the specific options, operators may choose from several qualitative approaches to comply with this criterion. Note that this is a departure from the original approach, which suggested a results-based assessment through indicators.

First, operators may simply rely on peer-reviewed scientific literature, demonstrating that a practice has benefitted biodiversity protection or restoration under similar pedoclimatic conditions. This effectively presumes that implementing a particular practice will automatically lead to biodiversity gains, regardless of project specificities and management practices. As a result, projects may be considered to deliver environmental co-benefits based on evidence from other contexts, rather than on actual, real-world evidence gathered from the site of the project itself.

Another possibility is for operators to resort to the methodologies under the Habitats and Birds directives. However, these were not designed for CRCF purposes, and it remains unclear how the certification schemes will operationalise them.

A final option is for the practice to correspond to a typology of measures referred to in the annex of the implementing regulation on national restoration plans, and to "actively or passively" assist in ecosystem restoration, as defined in Article 3(3) of the Nature Restoration Regulation. Note that in previous versions, the activity had to be "consistent with restoration within the meaning of Article 3(3)", a formulation linking the entire definition of restoration, which includes indicators. The subsequent amendment, therefore, weakened the link to the entire definition of restoration, and consequently, the need for indicators.

The European Scientific Advisory Board on Climate Change has itself argued that measurable indicators should be included in the methodologies. Of these, soil biodiversity indicators should be prioritised as soil supports around 60% of all species on Earth and is therefore a vital living system. This requires measuring the number, type and role of

species, with research by the European Environment Agency, Regen10 Framework and EJPsoil offering guidance. The Joint Research Centre also has a working group on soil biodiversity and has published multiple studies.

Indicators are also important to avoid creating a double standard. The CRCF has decided to implement a results-based scheme and measure carbon. This requires undergoing MRV and third-party verification. Consequently, and for the sake of consistency with carbon measurements, the policy instrument should ensure that biodiversity assessments are subject to the same results-based standard as carbon, particularly since the biodiversity impacts of many carbon farming activities are at least as important as their potential climate impacts. Failing to do so could harm biodiversity by deprioritising it relative to carbon, and make it difficult, if not impossible, to determine whether a particular activity has in fact delivered environmental co-benefits. Overall, these weaknesses disqualify the methodologies from being meaningful ecological drivers in the land sector.

Lack of reflection

Lastly, the afforestation methodology does not consider the albedo effect, yet planting trees lowers the reflective properties of the Earth's surface. It increases atmospheric radiative forcing, warming the planet and partially or even entirely counteracting the carbon benefits of planting trees.

This important effect has not been taken into account, despite afforestation significantly expanding its scope and despite biochar application to soils being eligible. Instead, the delegated act states that this shall be quantified in the future review of the methodologies.

No social dimension

Under the CRCF, recital 25 mentions "the need to avoid the acquisition of land for speculative purposes resulting in negative effects on rural communities, as well as the need to respect the rights of local communities and indigenous people affected by those activities". This is partially incorporated under Article 8(3)(c), which lists the avoidance of land speculation as one of the elements the certification methodologies must cover. This point has been omitted from the delegated act on account of there supposedly being insufficient data, with the text stating that knowledge sharing events should be organised

for the purposes of collecting feedback and best practices on potential safeguards against land speculation.

To begin with, the CRCF impact assessment itself acknowledged the potentially negative effects on rural communities, as higher demand for land-based carbon sequestration may increase competition for land. Research has also shown that carbon and biodiversity offset projects account for 20% of large-scale land deals worldwide, and that green grabs have been increasing land inequality: in central and eastern Europe, for instance, land prices have tripled. This is also a problem in Scotland, where interest in carbon crediting schemes has spurred land acquisition by private investors and corporations. There is therefore enough evidence of social risks and the fact that this has not been addressed is a worrying gap.

Conclusion

Undoubtedly, the current rules fail to ensure the quality of the carbon farming units and could have serious consequences for the climate, especially if units are used for offsetting. This is also in a context where core negotiations on Article 6 of the Paris Agreement, a carbon crediting scheme enabling trading between participating countries, have concluded, with research indicating that the CRCF has fallen far short of these already imperfect standards.

This means that the CRCF is unlikely to have a positive climate impact and runs the risk of worsening the situation. It also poses a challenge for the EU's reputation and its ability to influence climate ambition on the international stage. The quality of the units is also important, given the likelihood that they will feature in the post-2030 climate package, which might entail using CRCF units as a flexibility tool to meet targets under the land use, land use change, and forestry Regulation.

While the entire CRCF process has been torn between the conflicting demands of minimising the administrative burden and maximising the environmental benefits, deregulation won. In the carbon farming certification context, this trade-off is inherently flawed since sacrificing stringent and robust methodologies will come at the expense of environmental rigour, harming the environment and the society that depends on it.

Moreover, these missteps distract from the real goal: reducing emissions as much and as quickly as possible. This is particularly relevant for the land sector, which needs better regulation, not deregulation and voluntary action.

In this vein, CMW has consistently advocated for improvements to the carbon farming methodologies both within and outside of the Carbon Removals Expert Group. Existing weaknesses have also been raised since the start of the process by many experts (see here, here and here). NGOs have also united on key demands for necessary changes and subsequently denounced the failure to implement such demands. Similarly, the public consultation of February 2026 also drew criticism from civil society organisations (see here, here and here), think tanks (see here and here), and member states, calling out methodological flaws that ought to be rectified. Still, the system remains faulty to the core.

It is evident that a credit-based approach is a poor solution that will not fix the land and agricultural sector's woes. The EU should therefore embrace an activity-based scheme, free from administrative complexity and thus better suited to land-based activities and farming realities. Rewarding ecological stewardship is important. Consequently, the CRCF should become an avenue for supporting good performance in the sector, rather than a scheme that issues questionable units for even more questionable purposes.

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