

Towards a regulation on carbon removals in the EU: lessons learned from existing experiences

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- A common Monitoring Reporting and Verification (MRV) methodology is needed in Europe to guarantee comparability of carbon farming (CF) removals.
- Market mechanisms can potentially incentivize CF more effectively than existing CAP payment schemes.
- Make use of the existing Information Administrative and Control Systems (IACS) of the CAP to minimize MRV costs.

INTRODUCTION

Achieving sustainable soil management and sequestering soil carbon represent a crucial challenge in the transition towards an economy focused on climate change mitigation. In this context, the analysis of the state of the art of carbon farming (CF) schemes in Europe emerges as a key pillar for effective policy-making, stakeholders guidance and engagement.

This policy brief aims at providing a concise overview of the current state of CF schemes in and outside Europe and of research findings derived from the WP8 of the EJP SOIL programme and the Road4schemes project. It builds on existing incentive schemes under the European Common Agricultural Policy (**CAP, Reg. EU 2021/2116**), and in anticipation of the forthcoming **European regulation on carbon removals (COM/2022/672 final)**, which will play a key role in CF in Europe.

In this context, key challenges and policy recommendations to promote the implementation of a common European CF framework are provided.

REGULATORY FRAMEWORK

According to the recent **Regulation EU 2023/839**, the Land Use, Land Use Change, and Forestry (**LULUCF**) sector must achieve the target of 310 mil t CO₂eq of carbon removals by 2030. In the agricultural sector, this target should partly be achieved by CF practices (42 MtCO₂eq). Member States (MS) can use net removals in the LULUCF sector exceeding their national emission reduction targets to compensate for emissions from non-ETS sectors (e.g. waste, transportation, small industry, etc.), by exchanging forestry and agriculture credits on a European Voluntary Carbon Market (VCM). But a common VCM is still missing, and for this reason the EC set out a proposal of regulation, establishing the rules for a European VCM.

CF practices are also funded by the new CAP 2023-2027 both through the first pillar (conditionality and voluntary eco-schemes) and the second pillar (agro-environmental measures and investment support). This is part of a wider regulatory framework linked to the EU climate and biodiversity strategies, which forms the backdrop of a domestic VCM.



KEY MESSAGES FOR POLICY MAKERS

RECOMMENDATION ONE: To reduce transaction costs (costs needed to operationalize a voluntary carbon market) by involving the existing public governance bodies already responsible for monitoring compliance with Agri-environment-climate commitments (e.g., Information Administrative and Control Systems (IACS) currently managing CAP payments) in issuing credits from carbon removals projects. This could increase trust in certificates, and it would make it easier and more effective to manage:

- Administrative controls and spot-checks to verify compliance, and apply sanctions, when needed.
- Any risk of double funding with competing incentive policies (i.e., CAP eco-schemes and Agri-environment-climate commitments).

RECOMMENDATION TWO: In the inability to monitor the project beyond the committed period, and therefore to guarantee the long-term storage of carbon, we suggest to differentiate:

- **Emission reduction projects:** projects involving only changes in management practices. In this case, the carbon sequestered is considered to be released to the atmosphere at the end of the monitoring period, as stated in the current version of the regulation. Therefore only emission reductions are accounted for.
- **Carbon sequestration projects:** land-use change projects (e.g., shift from cropland to an agroforestry system). In this case the carbon sequestered is not considered to be released to the atmosphere for a longer time because the absence of reconversion (e.g., shifting back to cropland management) can be guaranteed by existing administrative controls (land registry, income agencies) and the high investment costs.

By extension, the **carbon accounting methodology** should be differentiated based on the above-mentioned project typologies.

RECOMMENDATION THREE: To guarantee **additionality** (i.e., occurrence of an actual change in agricultural management beyond the baseline):

- Foresee at least a **direct inspection**, at the farm level, before the beginning of a project, to ascertain initial conditions, and one when the project is implemented, followed by indirect inspections throughout the duration of the project.
- Make use of the existing **Information Administrative and Control Systems (IACS) of the CAP to minimize MRV costs** (i.e., use of images and remote sensing techniques, administrative checks to verify ownership conditions, etc.).

This way, additionality will be strengthened compared to the regulation proposal where, in order to reduce transaction costs, MS are allowed to define **average regional baselines**, allowing land managers above baseline conditions to generate carbon credits, with the consequence of jeopardizing the credibility of a common market.



Figure 1 / © European Carbon Farming Schemes map (Source: C.S.I platform)

KEY RESULTS

Our research documents at least **156 CF schemes** in Europe (<http://reports.crea.gov.it/powerbi/CarbonSchemesInventory.html>) (Fig. 1) that can be divided into 3 categories:

- **public payments (PP)** to the farmers, where local authorities fund CF projects;
- **voluntary carbon market (VCM)**, where polluting actors buy credits generated from carbon removals activities, to offset their emissions;
- **company-led initiatives (CI)**, where consumers fund carbon removals projects (Thorsøe et al., 2024).

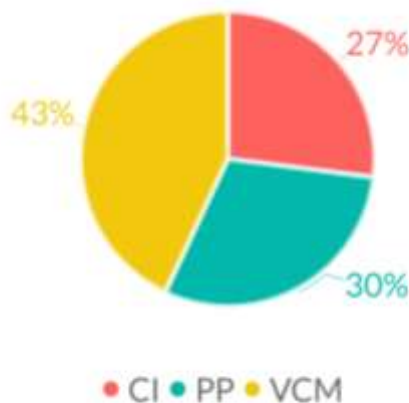


Figure 2 / © Inventory results: categories of European schemes

Very often mixed schemes exist, combining markets and co-financing instruments (Smit and van der Kolk, 2024). VCMs, which comprise 43 % of the European CF schemes, are often a lever for company-led initiatives, but for their functioning, the carbon market **requires regulations from outside the emitting company** (Fig. 2).

Most of the schemes explored are already implemented initiatives based on international exchange platforms (Smit and van der Kolk, 2023) except for the Label Bas Carbone, a **national VCM** where the French government (Ministère de la transition énergétique, 2024) certifies credits and records transactions. Outside Europe, governmental carbon removals experiences are the Alberta Emission Offset System and the Australia’s Emission Reduction Fund.

An ad-hoc economic simulation complemented the above investigation revealing that:

- **market mechanisms** can potentially incentivize CF initiatives more effectively than existing payment schemes (i.e., CAP), which are based on covering implementation costs and income losses, but



- **transaction costs** (MRV, legal and brokerage fees) requires the aggregation of initiatives in bigger projects to be able to access the payment.

Finally, all 156 CF schemes have **different methodologies** to quantify carbon removals, entail different agricultural practices and guarantee different storage time and reversal and leakage risks management, making carbon credits **not comparable**.

To face all these challenges, the EU regulation on carbon removals could:

- guarantee a **better control** of transactions compared to international VCMs,
- create a **common and more reliable MRV methodology**, based on the QU.A.L.ITY¹ criteria, and
- make the carbon market **accessible** to land managers by providing reliable and low cost MRV systems.

Nevertheless, EJP SOIL and Road4schemes observed some weaknesses in the current EU proposal that could hinder the development of a common VCM (Criscuoli et al., 2023), among which:

- **Transaction costs** – These costs can raise the costs of contracting carbon credits from 3% to 85% of the total credit value and reduce land managers’ willingness to participate in carbon markets. In the regulation proposal there is not a clear explanation of how it could contribute to reducing transaction costs.
- **Permanence** – The non-permanence of soil carbon stocks (SOC) entails the risk of paying for removals that are released to the atmosphere in the future. For this reason, the EU proposal considers CF removals **released to the atmosphere at the end of the monitoring period**. This implies that CF initiatives cannot be used to offset emissions and substitute emission reductions.
- **Additionality** – To guarantee additionality, policies should encourage the implementation of practices that go beyond “business as usual”. **Standardized baselines** are considered in the EU proposal with the risk of not representing the reality at the farm level and compromising the reliability of carbon credits.

The above criticisms give rise to the recommendations presented in the Box “Key messages for policy makers”.

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¹QU.A.L.ITY: **Q**uantification, **A**dditionality and baselines, **L**ong-term storage and **S**ustainability

