CLIMATE FARMERS

Aligning Carbon Markets with Regeneration: Structural Re-Designs Necessary for Soil Carbon Markets

Position Paper

I. Executive Summary

The European Union stands at a critical juncture regarding its agricultural sector. A fundamental transition towards regenerative models is urgently needed to address environmental degradation, climate instability, and food security risks, while simultaneously improving resilience, restoring water cycles, critical biodiversity, and developing autonomy from external inputs.
While Soil Carbon Markets could offer a pivotal instrument for catalysing this shift, on-the-ground experience reveals a profound structural incompatibility. The inherent design principles of the voluntary (Soil) Carbon Market - demanding simplicity, linearity, strict quantification, and a commodified single metric - fundamentally clash with the complex, dynamic, and holistic nature of the management required for increased soil carbon cycling.

This position paper co-written by European Soil Carbon Market pioneers and practitioners details how these market design principles create systemic barriers, disproportionately affecting diversified, and family-owned farms, as well as farms integrating ruminants in the production system. The monitoring, reporting, and verification (MRV) cost and effort, coupled with additionality rules unsuitable for the context of agriculture, overwhelm the capacity of diversified farms, without offering significant added value.

In addition, unsuitable payment timelines, effectively exclude a significant portion of the farming community that embodies regenerative management.
The market structure disincentivises crucial multi-benefit approaches and the integration of animals essential for soil biology, improved ecological complexity and paramount in fire prevention.
While total livestock numbers need to be reduced from intensive systems, they are required for ecosystem regeneration in brittle environments. Their integration should not be disincentivised.

Consequently, the current Soil Carbon Market inadvertently channels support towards large-scale, industrial-style agricultural operations, thereby reinforcing existing inequalities and undermining the very socio-economic and ecological diversity vital for a truly regenerative future.

A fundamental redesign of financial and market mechanisms is therefore necessary to align climate finance with the holistic, farmer-centric principles of regenerative agrifood

systems.

To realign Soil Carbon Markets with the realities of regenerative agriculture, this report outlines six top-line redesign recommendations. These include:

(1) shifting **from linear, single-metric quantification to outcome-based metrics** that reflect the full ecological complexity of regenerative systems;

(2) implementing **tiered and proportional MRV systems** that reduce administrative burdens for smaller and diversified farms;

(3) reforming **additionality rules** to reward continuous improvement and early adoption;

(4) updating **livestock accounting frameworks** to differentiate between industrial and regenerative systems;

(5) restructuring **financial models to deliver earlier payments** and share risk more equitably with farmers; and

(6) restoring **farmer agency** through decentralized, context-aware tools that support land stewardship rather than commodified carbon supply.

Together, these reforms aim to ensure Soil Carbon Markets support - not distort - the transition toward a thriving, resilient agrifood system.

II. Introduction: The Imperative for Regenerative Agrifood Systems and the Soil Carbon Market's Promise

A. The Global Agrifood System in Crisis: A Call for Regeneration

The global agrifood system is driving ecological breakdown, accelerating climate risk, and weakening food and water security.
Industrial agriculture is a major source of emissions, biodiversity loss, and soil degradation. Europe, heavily reliant on fossil-based inputs and global supply chains, is increasingly vulnerable to climate shocks and geopolitical volatility.

This is a structural problem. The dominant model has prioritised short-term efficiency over long-term productivity, eroding the biological and economic base of European agriculture. Soils are increasingly depleted, ecosystems fragmented, rural economies hollowed out resulting in rural abandonment and leaving their settlements creating at pace large landscape territories without stewards, which in turn can enhance democracy failures across Europe.

Regenerative agriculture in this context is understood as a system of agricultural management, which adapts to the social, ecological and economic context, continuously evolves based on results, and leads to outcomes towards ecological, economic and social health of the farm, in alignment with the European Alliance for Regenerative Agriculture's defining principles.

Regenerative agriculture offers a credible path forward. Evidence from 78 farms across 14 EU countries shows regenerative systems can cut synthetic nitrogen use by 61% and pesticides by 75%, while maintaining yields and increasing gross margins. These systems restore ecological function, improve soil health, and strengthen rural autonomy.

If scaled across half of EU farmland, regenerative practices could sequester or avoid over 250 million tonnes of CO_2e annually, as estimated by a recent study. This transition reduces dependency on volatile inputs, rebuilds biodiversity, and anchors economic value in rural regions.

Regenerative agriculture is a strategic imperative for Europe - to reduce dependence on fragile and unpredictable global supply chains, reverse degradation, decarbonise effectively, enhance resilience, and contribute to thriving ecosystems and rural economies and communities.

The Soil Carbon Markets can be a valuable tool in the transition process, primarily by contributing to funding the transition process, which often includes investment costs, as well as costs for experimentation risk.
Beyond the transition process, Soil Carbon Markets offer a blueprint for a system of payments for positive externalities.

Regenerative agriculture is not a moral proposal. It is a strategic response to converging threats - and a rare opportunity to build resilience, sovereignty, and rural viability from the ground up.

B. Soil Carbon Markets: An Intended Lever for Climate Action and Agricultural Transition

Carbon Markets emerged as a pragmatic solution to mitigate global greenhouse gas emissions by assigning an economic value to carbon reductions and removals. Conceptually, this framework holds considerable promise for the regenerative agricultural sector, offering a scalable pathway for drawing down atmospheric carbon while simultaneously revitalising ecosystems and injecting funds into the farm business.

For example, in Australia, the Government legislated and implemented an official Carbon Farming Initiative to enable farmers to generate carbon credits through improved farming practices including soil carbon sequestration. The credits so generated can be purchased by industrial emitters to offset that part of their "hard to abate" emissions that can't be reduced directly. This has produced a double benefit: financially incentivising regenerative farming practices, and assisting the country meet its net-zero goals

The initial conviction among proponents was that these markets could effectively incentivise and scale the transition to regenerative agriculture. By rewarding farmers for their efforts in restoring ecosystems and leveraging soil carbon as a meaningful climate lever, Soil Carbon Markets were expected to provide the necessary financial impetus for widespread adoption of regenerative management. This vision aimed to align climate finance with agricultural transformation, creating a win-win scenario for both environmental sustainability and farmer livelihoods.

Since ca. 2018, market participants developed methodologies and projects to develop the latent potential for European agriculture. The implementation of soil carbon projects in practice represents significant complexities, which are often underestimated.
As Soil Carbon Markets are increasingly playing a role in policy conversations, we felt it important to share the experience of market pioneers about where market architecture may require additional tweaking.

C. Report Scope and Objectives: Identifying Structural Misalignments

This analysis critically examines the fundamental design flaws inherent within the Voluntary Soil Carbon Market system that impede its effective support for a regenerative agrifood system. The analysis specifically focuses on the structural misalignments - those issues stemming from the market's inherent architecture, rules, and economic incentives - rather than operational challenges that might be resolved through improved project management or methodology development.

Drawing extensively from the lived experiences of practitioners and expert commentary, particularly from organisations pioneering soil carbon projects in Europe, this report aims to diagnose why the "fit is off" between current market dynamics and the complexities of regenerative agriculture. The objective is to elucidate how the market's demands for simplicity, linearity, and strict quantification lead to unintended consequences that deviate from the overarching goal of holistic agrifood system transformation, thereby hindering the widespread adoption of regenerative practices.

This analysis does not focus on compliance markets, insetting, or natural capital markets beyond carbon.

III. Issues identified by practitioners

This chapter highlights key structural misalignments between current Soil Carbon Market mechanisms and the complex, long-term, and place-based nature of regenerative agriculture. It identifies critical friction points that, if addressed, could enable markets to better support ecological regeneration, climate mitigation, and rural revitalisation.

Key insights and recommendations:

A. **Markets Reward Simplicity, Undermining Necessary Ecological Complexity**: Current market logic favours standardisation, scale, and uniformity - traits common in industrial systems but necessarily absent in regenerative ones. Soil Carbon Markets must evolve to accommodate the dynamic and diverse nature of living systems, including soil carbon's variability over time.

B. **Carbon tunnel vision**: The market's single-metric focus on CO_2 creates blind spots and mistaken incentives. The goal of regenerative agriculture is ecological, economic and social regeneration. In the process, it delivers multiple co-benefits, of which increased soil organic carbon cycling is one important one.
By managing holistically, carbon cycling usually improves meaningfully. By focusing exclusively on "carbon farming" (i.e. agriculture for the purpose of carbon sequestration), farmers can inadvertently reduce their carbon potential.

C. **Make Participation Practical for Small and Diverse Farms**: High verification and documentation costs / efforts currently exclude smaller, diversified operations. Proportional, low-barrier MRV (Monitoring, Reporting, Verification) tools and tiered evidence systems can widen access and better reflect regenerative diversity.

D. **Rework Additionality to Support Continuous Improvement**: Strict additionality rules often penalise early adopters and discourage ongoing stewardship. Markets should evolve to recognise and reward environmental stocks and the continuous regenerative progress, not just one-time transitions.

E. **Refine Livestock Accounting**: Current methodologies and models insufficiently distinguish between intensive and regeneratively managed livestock. Improved GHG accounting frameworks are needed to avoid disincentivising integrated systems that contribute positively to ecosystem health.

F. **Address Financial Timelines and Risk Allocation**: Long payment delays and high financial risk discourage farmer engagement. Front-loaded incentives, better-aligned payment cycles, and shared risk mechanisms can make participation more viable.

G. **Respect Farmer Agency and Stewardship**: Markets that treat farmers as carbon suppliers rather than land stewards and food producers risk losing trust. A redesigned system should prioritise farmer agency, i.e. the farmer's expertise as a land manager, via outcome-based approaches, decentralised decision-making, and tools that align with how farmers actually manage land, rather than prescribing a set of practices for farmers to implement.

Soil Carbon Markets are rapidly gaining influence as a market mechanism backed up by policy and investment in agricultural climate mitigation. However, the current design of these markets risks undermining the very systems they aim to support.

Below we examine each of those in more detail.

A. Markets Reward Simplicity, Undermining Ecological Complexity

Soil Carbon Markets are built to measure and reward quantifiable, standardised, and scalable interventions. This logic is inherited from industrial carbon market systems, where emissions reductions are relatively uniform and linear. Regenerative agriculture, by contrast, is inherently context-specific, non-linear, and biologically complex.

This structural mismatch leads markets to favour practices that are easy to quantify - such as monocultures or uniform cover crops - over diverse systems that provide more resilient, long-term ecological outcomes. Integration of livestock, agroforestry, and adaptive management are often excluded or penalised because they do not fit within narrow measurement frameworks.

Furthermore, current accounting systems treat soil as a static carbon sink, failing to reflect its living, cyclical nature. Carbon sequestration in soil varies seasonally, and its permanence cannot be assumed or verified on rigid schedules. This creates friction between the biological realities of the land and the mechanistic logic of carbon crediting.

> *"Soil absorbs and releases carbon in rhythms that don't match fiscal quarters or offset schedules. This creates a cascade of distortions in the fundamental criteria for quality credits."*
> - Ivo Degn, Climate Farmers

The risk lies in building a system that works ideally for farms run on an industrial model with large hectareage and monocultures by-and-large. Monitoring costs and eligibility is currently much more favourable for such farms, while more diversified farms - which on average contribute more carbon sequestration, biodiversity habitat, productivity per hectare - are mostly excluded.

Without a fundamental redesign, markets will continue to incentivise simplified models that are ecologically and economically weaker but easier to commodify.

B. Barriers to Participation for Farms in the Process of Diversification

Broadly speaking, there are two primary approaches to quantifying soil organic carbon: measurement and modelling.

The measurement approach usually involves taking a baseline soil carbon sample in year 0, followed by additional measurements after a period long enough to detect carbon changes beyond the margin of uncertainty, typically 5 to 10 years.
In that case, barriers to participation are relatively low, although sampling costs can initially increase costs, reducing profitability for both farmers and project developers. Other issues with the measurement approach are described below in D.

The modelling approach quantifies changes in soil carbon using scientifically recognised models, allowing for year-over-year carbon tracking and more regular payment structures. However, most recognised models require data inputs that go far beyond what is feasible for many farms.

Administrative burden: The experience shows that more diversified farms - often pioneers in regenerative management - face disproportionate barriers to entering Soil Carbon Markets via modelling approaches.

However, more industrial operations face less of a burden and often have data more readily available.
High administrative burden for verification, monitoring, and reporting (MRV) creates economies of scale that systematically exclude operations below a certain size or complexity.

Farmers are expected to submit detailed management records, data logs, and undergo third-party audits - work that is time-consuming, technically demanding, and often unaligned with the data collected on-site.

Availability of data: Evidence required, e.g. for baseline documentation, is simply not available in the form required by Soil Carbon Market auditors, on many family farms. For such farmers, particularly those without technical or administrative support, this structure makes participation unfeasible.

Structural exclusion: The documentation burden is substantial. In the case of Climate Farmers, farmer and project developer often accumulated 20 - 100 person hours per farm - just to complete registration, long before any payments were made.

Project developers, who carry financial risk until carbon credits are verified and sold, naturally prefer low-risk suppliers with predictable, standardised operations. As a result, they will avoid farms that are diverse, integrated, or ecologically complex.

> *"The cost of proving good practices can be higher than the payment itself. That's why it's easier to onboard industrial farms."*
> - Ash Farber, carbon project advisor

Unless carbon programmes are made accessible to those already doing the work of regeneration, they will reinforce the dominance of the very models that degrade soil, ecosystems, and rural viability.

C. Monoculture Metrics Undermine Holistic Outcomes

The Soil Carbon Market's singular focus on tonnes of CO_2 equivalent not only distorts farm management priorities but often leads to the exclusion or penalisation of practices essential to true regeneration.

The fact that regenerative agriculture often increases soil carbon cycling has led to the assumption that regenerative agriculture and the Soil Carbon Market business model can be conflated. However, regenerative agriculture can often be a viable business model without additional carbon income, though such income can contribute meaningfully to the transition investment costs. The degree to which this is true will differ in different contexts, and a nuanced strategy for Soil Carbon Markets should consider the specific contexts where Soil Carbon Markets have the highest potential leverage.

In regenerative agriculture, carbon sequestration is a co-benefit, not the primary focus, whereas for carbon markets it is the other way around. The primary focus in regenerative management is on building a farm business which thrives ecologically, economically and socially. Ecological thriving usually entails enhanced soil organic carbon cycling.

The aim of a Soil Carbon Market which intends to support a regenerative transition should be to focus on regeneration first, which tends to increase soil organic carbon cycling, while reducing costs and creating a more resilient production system for the whole supply chain from farmers to consumers.

Rewarding farmers for ecosystem service contribution, enhanced soil organic carbon cycling being only one of them, can contribute meaningfully to the process of regeneration, but needs to be carefully designed as not to distract from the principal objective: To rebuild an agricultural sector in Europe which, through its thriving, can contribute to the thriving of ecosystems and rural economies and communities.

Word of caution: This paragraph should not be understood to mean that the fundamental issues with Soil Carbon Markets would be resolved if more metrics (e.g. for biodiversity, water or socio-economic co-benefits) were added. On the contrary, the authors want to emphasise that the existing issues would likely multiply, as data collection and verification is the main limiting factor to date.

Instead, it may be considered to allow for the shift to a simple but meaningful metric which indexes regeneration and **includes** soil organic carbon cycling. The proposed Regenerating Full Productivity metric may be one such solution.

C.1 - CO2e disincentivises critical livestock extensification

The integration of livestock is a foundational component of many regenerative agricultural systems. When managed holistically, ruminants can enhance soil fertility, stimulate plant growth, play a vital role in nutrient cycling and are paramount in fire prevention.

Limitations on greenhouse gases do not distinguish between emissions from regenerative systems and those from industrial livestock operations, i.e. emissions in the service of ecosystem regeneration and those without such added benefit.

For the avoidance of misunderstandings, the authors of this document recognise the imperative to reduce methane emissions from farmed livestock, as well as to address the negative impacts on animal welfare, ecological systems and social cohesion that intensive / industrial livestock production brings.
We need to reduce intensive livestock production, and at the same time, maintain and enhance holistic livestock management on brittle landscapes. The total number of animals should be reduced in this regard, even if animals in extensification are enhanced.

Current GHG protocols unintentionally **incentivize high-throughput, low-welfare systems** and disincentivize precisely the integrated, ecological approaches that align with broader regenerative goals.

Failing to resolve this risks marginalizing integrated grazing systems, despite their capacity to restore degraded landscapes, cycle nutrients naturally, prevent and contain wild large scale fires and contribute to food system resilience, in a moment when those systems need to be emphasised as alternatives to resource-intensive and degenerative industrial systems.

D. Misaligned Financial Structures and Risk Allocation

Farmer participation in carbon markets is predicated on a coherent cost/benefit balance. As described above, the cost side of the equation is fairly heavy.

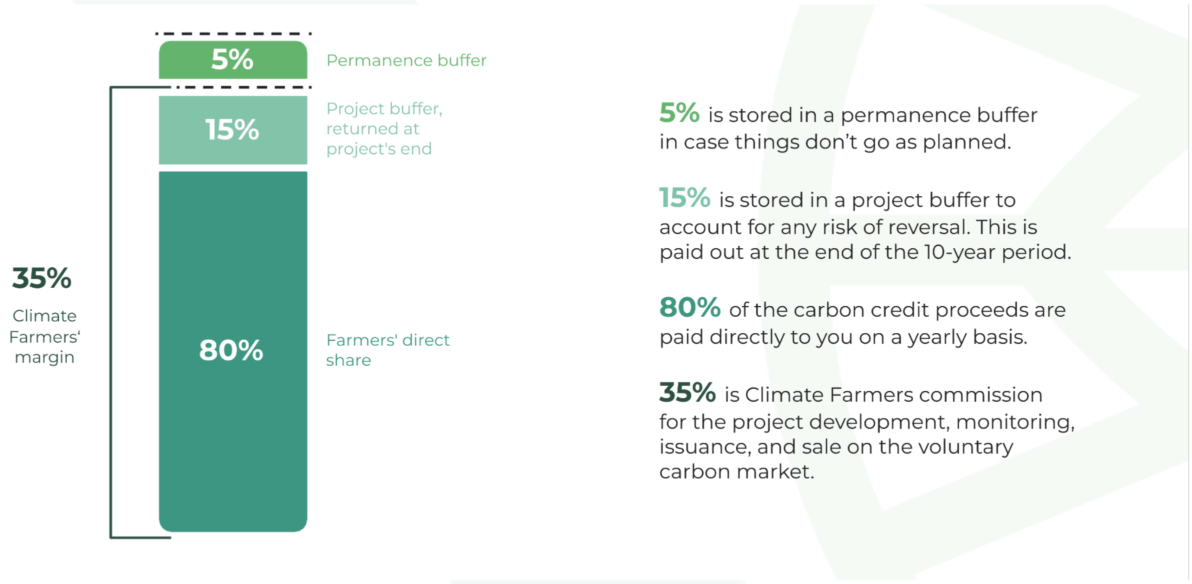
On the benefit side, three factors play an important role:

1. The amount of carbon credits (yield) which can be issued per hectare
2. The payment per carbon credit a farmer can expect
3. The payment schedule

Below we outline an example of the potential earnings of a European farm under current market mechanisms. We calculate with relatively high carbon sequestration rates (higher than the average) and high credit prices (higher than realistic for large volumes) to show that the marginal benefit per hectare to farmers is still low, and the payout timeline is too long to motivate meaningful action.

1. Example

- Farm size: 100 ha
- GHG balance (ambitious): +1 tCO_2e/ha/year → 100 tCO_2e/year gross
- Buffers & deductions:
    - Permanence buffer 5% → 5 t
    - Project buffer 15% → 15 t
    - Annual developer share 35% of remaining → 28 t
- Net credits: 52 tCO_2e/year = (100 tCO_2e - (28 + 15 + 5) tCO_2e)



Visual explainer of buffer & commission logic by Climate Farmers

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2. Payment per tCO_2e

- Assumed price: €40/tCO_2e (upper-end VCM soil carbon price)
- Annual revenue potential:
    - 52t × €40/t = €2,080
- Per hectare:
    - €2,080 / 100 ha = €20.80/ha

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3. Payment Schedule

Modelled Approach

Delivers small, regular credits (yearly), but with long lead-times.

Timeline:

1. Season completion
2. Documentation (3–4 months)
3. Audit (6–12 months)
4. Credit sale (1–6 months)
5. Farmer payment (1–2 months)
6. Total lag: ~12–24 months from implementation to payment.

Measured Approach

Delivers bulk payments.

Timeline:

1. Take soil measurements at beginning of process
2. Collect soil measurements every 5 years
3. Aggregate soil carbon change
4. Payout of cumulative balance

Zero payments in early years; a bulk payout at year 5 in case of net sequestration.

The **measurement approach** has relatively low effort, but lead times are often 5+ years with significant risk of loss.
A UK-based project developer acknowledges that in drought years, farmers often lose the entirety of carbon capture of several years even with good management.

A **modelling approach** on the other hand can mathematically exclude the impact of weather, thereby reducing risk, and it offers an earlier payout schedule, but the modelling approach has significantly higher effort (as described above)

In both scenarios, the potential gain is significantly below EU CAP payments (150 - 250€/y/ha). In both scenarios, payout is 1-5+ years after implementation of practices.

Effects:

Delay: Larger farms, and those owned by investment funds, rather than family-owned, are more able to absorb these delays, making the model valuable for them still. The average European farm can not wait 1-5+ years for payouts if they are meant to make a meaningful difference.

Risk allocation: In most current models, farmers bear all the operational and financial risk. If verification fails or market conditions shift, they may receive no return at all. Meanwhile, larger farms with capital reserves can absorb these delays, reinforcing a structural bias toward industrial models.

These conditions create a market that functions for project developers and land investment funds with large holdings - but not for most farmers. For regenerative agriculture to scale meaningfully, financial structures must be designed around farmer realities: upfront support, shared risk, and timely payments linked to observed outcomes.

The European CRCF may step in to turn it from a buyer-dominated market into one that balances out the interests of buyers and suppliers.

E. The Soil Carbon Market prices alone do not incentivize farmers' transition

Current carbon credit prices, typically ranging from $10 to $15 per ton per hectare, are insufficient to drive meaningful behavioral change among farmers. Carbon revenue remains marginal rather than transformative.

Carbon pricing today is shaped primarily by the energy sector dynamics and fossil fuels reduction projects, which fail to reflect the distinct nature and co-benefits of carbon sequestration in agriculture.

As a result, the soil carbon market systematically undervalues nature-positive agriculture, leaving farmers with little incentive to adopt regenerative practices, despite their far-reaching societal benefits.

F. Critiques of Strict Additionality

The principle of additionality - ensuring only climate-positive actions beyond a defined baseline are credited - is intended to safeguard environmental integrity. Yet, when applied rigidly in regenerative agricultural contexts, it creates significant disincentives and structural distortions.

1. Penalizing Early Adopters

Critics warn that many soil carbon projects "accept additionality to mean an increase in soil carbon using a counterfactual model" and thus exclude farmers already practicing regenerative agriculture. This reliance on static, legally enforced definitions can both dilute program integrity and exclude genuine climate-positive work.

2. Discouraging Stewardship

One interpretation of additionality is "would the project have happened without the carbon finance?". Additionality interpreted by this criterion incentivises establishing economically unsustainable projects, rather than funding agricultural transitions which are economically, ecologically and socially sound.

This disincentive structure undermines long-term ecological stewardship.

3. Baseline and Temporal Rigidity

To accommodate backdated efforts, developers often must:

- Shift baselines backward - thereby reducing creditable emissions,
- Fragment projects annually, raising administrative costs, or
- Exclude farmers altogether.

These options introduce **inefficiencies** and "economic friction" that limit program viability. Strict baselining punishes context-adaptive management and disincentivizes continued improvements.

Table 1: Economic and Operational Disparities for Different Farm Scales in Soil Carbon Markets

Characteristic	Small/Diversified Farms	Large/Industrial Farms
MRV Fixed Costs (measurement approach) (per project)	High, disproportionately high per hectare	High, but amortised over larger area (lower per hectare)
Administrative Burden	Very high, requires significant farmer time or dedicated staff (often lacking)	High, but lower per hectare. Managed by dedicated administrative staff (economies of scale)
Per-Hectare Profitability from Credits	Low to non-existent due to high fixed costs/effort and small credit volume	Likely viable due to economies of scale and larger credit volume
Capacity to Buffer Delayed Payments	Low, significant financial strain due to multi-year payment cycles	Higher, better capitalised to absorb upfront investment and delayed revenue
Ease of Baseline Establishment/Additionality Proof	Difficult for diverse, evolving systems with complex historical data	Simpler for uniform, standardised industrial systems with clearer baselines

Livestock Integration	Penalised by current undifferentiated metrics, despite ecological benefits for diverse systems	Less affected if primary focus is monoculture crops.
Overall Market Fit	Poor, due to structural barriers and misalignment with holistic practices	Better, as market demands align with existing scale, simplicity, and operational models
Access to Technical Support	Limited; often lack in-house expertise for modeling, MRV, and reporting	Readily available; teams or consultants manage compliance and data
Eligibility for Existing Methodologies	Frequently excluded; methods often don't capture mixed systems or agroforestry practices	High; standardized methods often tailored to large-scale, monoculture or input-heavy systems
Ability to Demonstrate Co-Benefits	High in reality (biodiversity, soil health, resilience), but hard to quantify or monetize	Lower ecosystem service delivery, but not penalized in current market frameworks

Table 2: Core Structural Misalignments: Soil Carbon Market Design Principles vs. Impact on Regenerative Agriculture

Soil Carbon Market Design Principle	**Impact on Regenerative Agriculture**	**Consequence for Regenerative Agrifood System**
Simplicity & Linearity	Distorts holistic, complex, and dynamic practices to fit rigid metrics	Incentivises industrial-scale, simplified systems; undermines ecological nuance
Disaggregated environmental markets	Single disaggregated metrics in different environmental markets and legislations add complexity to a natural system that is grounded on symbiotic dependencies	Complex and disaggregated environmental markets add bureaucracy and complexity and make it difficult to monetize co-benefits
Data commodification (Single Metric)	Reduces multi-faceted ecological value to a singular, tradable unit (carbon) with single monetization (credit) vs non-monetized multiple	Disincentivises integration of livestock, doesn't properly recognise whole spectrum of ecosystem service contributions

	related co-benefits	
Expectation of Accuracy & Evidence	Creates prohibitive fixed costs / efforts and administrative burdens for verification without achieving accuracy	Excludes small, diversified, and family farms; reinforces "go big or go bust" trend
Strict Additionality	Excludes early adopters and penalises continuous, adaptive stewardship	Discourages long-term regenerative transitions; favours discrete, new interventions
Static Baselines (Livestock)	Penalisation of shifting animal numbers impedes integration of holistically-managed livestock operations.	Undermines ecological and farm-level complexity; disincentivises a vital component of healthy agroecosystems
Static Baselines (General)	1. Randomly favor some farmers more than others. 2. Don’t allow adjusting to climate driven variability 3. Cannot accommodate business-as-usual sources of variability (changes in crop type) that should not be impacting the calculated sequestration (either positively or negatively).	
Delayed Payment & Risk Transfer	Places majority of financial risk and upfront investment burden on farmers	Impedes adoption by financially vulnerable farmers; acts as systemic barrier to widespread transition

V. Conclusion: Rebuilding Market Design Around Regeneration

The promise of Soil Carbon Markets as a climate finance tool in agriculture is real - but under their current design, they are structurally misaligned with the systems most capable of delivering long-term ecological, economic, and social resilience.

This report has demonstrated that regenerative agriculture - by its very nature - operates through complexity, diversity, and context. It produces not only carbon sequestration, but a broad range of public goods: biodiversity, water regulation, soil fertility, rural livelihoods, and climate adaptation capacity. Yet, these outcomes remain largely unrecognised by market structures built for linear, industrial models.

What is now clear is that the voluntary Soil Carbon Market, as currently configured, risks reinforcing the status quo. It channels investment toward large-scale, simplified systems while structurally excluding smaller, diversified farms - despite the latter often delivering greater per-hectare ecosystem benefits. It imposes verification and administrative burdens that are economically prohibitive for many regenerative farmers, penalises livestock integration, and fails to reward continuous ecological stewardship.

If left unaddressed, this misalignment may entrench a new wave of agricultural consolidation - further marginalising the types of land stewardship we urgently need.

The Path Forward: Redesign, Not Rejection

The findings in this report do not argue for the abandonment of Soil Carbon Markets. Rather, they point to the need for a strategic redesign - one that aligns incentives with actual regenerative outcomes. Doing so is not just an ethical correction. It is a geopolitical and climatic necessity.

A functional market for soil carbon in Europe must include:

- **Outcome-based design**: Focus on regeneration (incl. carbon) by tracking simple, yet meaningful indicators of ecosystem health (e.g., EARA's Regenerating Full Productivity) pegged to carbon sequestration.

- **Tiered MRV systems**: Implement proportionate, scalable evidence frameworks that allow farms of all sizes to participate.

- **Revised additionality logic**: Enable crediting for ongoing regeneration, not just novel interventions

- **Ecologically literate livestock accounting**: Reflect the role of ruminants in regenerative nutrient cycles and land health compared to current baselines.

- **Farmer-aligned financing models**: Provide earlier payments, shared risk mechanisms, reward co-benefits, include carbon and natural capital accounting and link them to long-term incentives to keep these stocks in the ground.

Markets can play a role in financing transformation - but only if they are redesigned around the complexity, diversity, and long timelines of regeneration.
With the upcoming EU Carbon Removal Certification Framework (CRCF) and the growing

role of public-private investment in climate and land-use transitions, Europe has a rare opportunity.
It can lead the development of a market model that serves both the climate agenda and the future of farming - rewarding not just the quantity of carbon removed, but the quality of the ecosystems and communities regenerated.

VII. Annex: Concrete Recommendations for a Regenerative Soil Carbon Market

To effectively leverage Soil Carbon Markets as a driver for true regenerative agrifood system transformation, fundamental adjustments to their design principles are essential. These adjustments must explicitly address the structural misalignments identified, ensuring the market serves, rather than hinders, the holistic and dynamic nature of regenerative agriculture.

1. Recalibrate Market Logic to Fit Living Systems

Redesign accounting methodologies to reflect ecological complexity:

- Maintain the transition from static baselines to **dynamic, regionally-sensitive baselines** that accommodate natural variability and ongoing improvements.
- Support **continuous monitoring frameworks** (e.g., remote sensing, in-field sensors, satellite AI interpretation), which reflect seasonal rhythms and biological fluctuations.
- Establish **context-sensitive methodologies** for diverse zones (e.g., Mediterranean, boreal, semi-arid). For the required scientific rigor and unbiased analysis policy should fund applied science projects to quickly deliver soil models, tree allometric models, standard remote sensing procedures, regional baseline numbers, etc.
- Accounting for **Multiple On-Farm Carbon Pools** (known as **'Stacking'**): By allowing multiple carbon pools - such as in soil, vegetation, and microbial biomass - to be credited within a single project or across complementary methods, stacking enables a more complete accounting of ecosystem services. It also addresses a key limitation in current carbon farming methodologies, which often credit only one dominant carbon pool, leaving significant sequestration potential untapped. Stacking can facilitate the co-crediting of soil carbon and vegetation regrowth (such as hedgerows), methane avoidance measures, and other on-farm actions further, incentivising regenerative land stewardship. Stacking can also align carbon outcomes with other important policy goals: integrating biodiversity, water, and climate outcomes. Introducing stacking would provide not just a technical fix, but would also become a strategic enabler for scaling up adoption of regenerative practices, improving landholder returns, and delivering broader environmental co-benefits.

Move beyond carbon tunnel vision:

- Maintain the core unit of value as CO2e.
- Condition credit issuance on demonstrable improvement in **overall ecosystem health measured by a simple but meaningful metric, such as RFP (Regenerating Full Productivity)**, not just tonnes of CO2e. No credit should be issued if soil health, biodiversity or water indicators deteriorate.
- Identify solution to exclude weather impacts (e.g. RFP of neighbouring farms) from carbon performance.
- Don't add additional burden for more metrics. Adding monitoring for co-benefits such as biodiversity, water or socio-economic benefits would increase the burden, thereby compounding the problem. Instead, develop simple, verifiable proxies for regeneration, reducing MRV cost and making verification fit for small and diversified farms. (e.g., EARA's RFP index: soil cover, NPP, input efficiency, biodiversity, water infiltration).

Reintegrate holistically-managed livestock:

- Consider decoupling emission reduction from carbon removal.
- Differentiate methane emissions from regeneratively managed livestock vs. industrial systems.
- Account for simplification of documentation for normal fluctuations in livestock numbers from year to year.
- Apply consistent leakage argument - if reduced livestock numbers don't lead to methane emission reductions, enhanced livestock numbers shouldn't lead to increased methane emissions.

2. Ensure Practical Inclusion of Small and Diverse Farms

Lower entry barriers and participation costs:

- Develop **low-cost digital templates** for farm data, integrated into existing record systems.
- Enable **cooperative-led project management** to pool verification resources and reduce costs.

Design equitable aggregation models:

- Allow small farms to aggregate as a carbon project, while retaining **farm-level traceability**. This balances scale efficiency with credit integrity.
- Use outcome-based aggregation that values differentiated performance, not just participation.

Streamline and tier verification requirements:

- Implement **tiered MRV** - high-rigor standards for large-scale projects, simplified but credible pathways for smallholders.
- Explore **peer verification models**, farmer-led monitoring, and community-based reporting to validate outcomes.

3. Reform Additionality Principles to Support Regeneration

Recognise regeneration as a process:

- Replace rigid additionality logic with a **continuous improvement model**: reward incremental gains in SOC and ecosystem health even if early steps preceded market engagement.
- Ensure that dynamic baselines do not penalise fluctuations in livestock or seasonal variables unrelated to project intent.

4. Adjust Financial Structures to Reflect Farmer Realities

Rebalance financial risk and timelines:

- Offer **advance payments or transition-linked grants/loans**, repaid upon credit issuance. Contemplate forward structures or offtakes with carbon warrant for farmers to realize payments sooner.
- Establish **shorter payment cycles** (annual, biannual) to support cash flow.
- Enable **five-year rolling contracts** with built-in extension options to attract ageing farmers and support continuity.

Ensure flexible, fair pricing models:

- Set a **minimum credit floor price**, akin to a FairTrade baseline, to prevent undervaluation of farmer contributions.
- Allow contracts to **adjust per-tonne payments** in response to market prices, ensuring farmers share in rising value.

Establish public de-risking mechanisms:

- Create **insurance and guarantee pools** to buffer farmers against market volatility and underperformance in SOC.
- Use buffer pools and aggregation models to reduce cost of oververification while retaining credibility.

5. **Foster Transparency, Knowledge Sharing, and Farmer Agency**

Build trust through clear communication:

- Improve **translational knowledge platforms** that explain Soil Carbon Markets, risks, and benefits in accessible language.
- Promote **open-source tools and peer networks** to allow farmers to learn from one another and from aggregated outcomes.

Support outcome-oriented storytelling:

- Allow space for **farmer narratives and contextual data** to supplement quantitative measures, reinforcing value beyond offsetting.
- Recognise programs that **report SOC losses as well as gains** to enhance transparency and buyer confidence.

Carbon credits should support, not distort, regenerative practice. When designed around ecological logic and rural realities, they can become a key pillar of Europe's climate strategy - anchored in healthy soils, thriving communities, and long-term resilience.

Signatories

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