

THE DANGERS OF CARBON FARMING



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**AN UNHOLY ALLIANCE BETWEEN
FINANCE AND ENVIRONMENTALISM**

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1. Introduction

As the 21st century version of the old saying goes, the road to disaster is paved with green intentions. And there's probably no better example of the way in which lofty, progressive-sounding ideals such as "sustainability" and "carbon neutrality" can lead to catastrophic outcomes than the concept of carbon farming.

The idea is simple, and at first glance even rather alluring: since soil and plants have the ability to capture and store carbon from the atmosphere — which is why they are known as "carbon sinks" — why don't we increase the extent of grasslands and forests throughout Europe? Not only would we end up with greener habitats, literally, but we would also be contributing to the fight against climate change. What's not to like?

Well, as it turns out, quite a lot. A first problem with this idea is that a big chunk of Europe's land area is currently used for agriculture, which means converting land currently used for crops and pasture into permanent grassland and/or forestry. Hence the term carbon farming: the idea is that farmers should become "land managers" — or carbon farmers.

From the perspective of Europe's policymakers, this is not a problem at all; in fact, it's a double win: as the second-largest contributor to greenhouse gas emissions, agriculture has naturally ended up in the crosshairs of net zero advocates — first and foremost the European Union.

Hence the various measures rolled out in recent years to reduce emissions in the agricultural sector. These have sparked massive protests across the continent — from Germany to the Netherlands, from France to Italy — by farmers angry about the growing economic and bureaucratic burden of the EU's climate agenda.

The problem is that, with current technologies, one can only go so far in reducing emissions in the agricultural sector. So it's hardly surprising that policymakers, in their drive towards carbon neutrality, have turned to a drastic alternative: reducing agricultural (particularly livestock) production altogether — and transforming ever-growing

swathes of farmland into so-called "carbon sinks".

The implications, as this report shows, are deeply concerning. For starters, creating financial incentives for farmers to give up farming, if not actually forcing them to do so via regulatory action, represents a serious threat to European food security — as the experience of other countries with carbon farming shows — and this at a time when Europe, and indeed the world, is already facing serious problems of food inflation due to rising energy costs, supply shortages and falling production.

To make things worse, carbon farming entails very high costs and technical-administrative burdens that are prohibitive for small farmers. This will dramatically accelerate the long-standing trend of farmland concentration and consolidation in Europe — to the benefit of big landowners, corporate agri-food enterprises and financial interests. No wonder these powerful actors are embracing carbon farming.

"Creating financial incentives for farmers to give up farming represents a serious threat to European food security."

This is highly worrying in itself, to the extent that small farmers are important elements of Europe's social, economic and cultural fabric — not to mention crucial contributors to Europe's food security and food sovereignty.

But perhaps most absurdly, it also risks being totally self-defeating from the perspective of climate mitigation and the promotion of "sustainability": from a technical standpoint, the ability of carbon sequestration techniques to provide long-term climate mitigation benefits is highly doubtful — and indeed, as this report explains, the policy could actually lead to a net increase in emissions in the long run. Once again, this would benefit big industrial polluters, who would get to "climate-wash" their operations via carbon farming credits, while putting out of business small farmers, which generally have a more

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beneficial environmental footprint than large farms.

One of the ironies is that the very small scale producers who are being put out of business by environmental regulations are those which many environmentalists champion as “greener”. Many environmental activists note that small-scale agroecological practises are more environmentally efficient and less demanding on resources. The current policy goes in the opposite direction.

One cannot help but wonder: are European policymakers simply blinded by ideology or are they rather beholden to corporate-financial interests intent on exploiting the “green transition” to their advantage? Probably both, as this report argues.

Either way, it’s more important than ever to support the struggle of European farmers against the EU establishment’s latest assault on (what’s left) of Europe’s social and economic model. This report aims to be a modest contribution to that struggle.

2. Net-zeroing in on agriculture

“Net zero” has become the buzzword of the climate movement. The idea is that, in order to avert the most disastrous consequences of climate change, the world needs to reach a state of net zero greenhouse gas (GHG) emissions as soon as possible.

The term was popularised in 2016 at the signing of the Paris Agreement at that year’s United Nations (UN) climate change conference, COP21. According to the UN, which sets most of the world’s climate targets, net zero “calls for nothing less than a complete transformation of how we produce, consume, and move about”.¹

Several countries — including the biggest polluters: China, the United States and the European Union (EU) — have announced dates by which they aim to be carbon neutral, with many of them targeting the year 2050. Many companies and investment groups have also set themselves a net zero target.

The EU is at the forefront of this “green shift”.

Until recently, agriculture, due to the systemically crucial nature of food production, had largely been excluded from emission-reduction schemes, and especially from emissions trading, since the latter emerged as a policy option from the Kyoto Protocol, which didn’t focus on agricultural emissions.

Agriculture is the second-largest contributor to greenhouse gas emissions (after the energy sector including transport). Agricultural emissions come mostly in the form of non-CO₂ emissions such as methane, nitrous oxide and ammonia. For this reason, it has ended up in the crosshairs of net zero advocates — that is, virtually all major international and global organisations.

The solution, we are told, is “sustainable agriculture” — one of the UN’s 17 Sustainable Development Goals (SDGs), which form their “Agenda 2030”.

Over the past two years, the issue has been pushed to the top of the global agenda. The November 2022 G20 meeting in Bali called for “an accelerated transformation towards sustainable and resilient agriculture and food systems and supply chains” to “ensure that

food systems better contribute to adaptation and mitigation to climate change”.² Just a few days later, at the COP27 annual Green Agenda Climate Summit in Egypt, the UN’s Food and Agriculture Organization (FAO) and the World Health Organization (WHO) launched two initiatives: respectively, the Food and Agriculture for Sustainable Transformation (FAST) initiative³ and the Initiative on climate action and nutrition (I-CAN), aimed at promoting “a shift towards sustainable, climate-resilient, healthy diets”.⁴

“If emissions can’t be reduced, why don’t we simply offset them? Alas, things are not that simple.”

At the latest climate summit — COP28, which took place in Dubai in December 2023 — the focus on agriculture was greater than ever before. The conference opened with a Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action signed by more than 150 countries.⁵

Though the declaration is not legally binding, the countries that signed on have effectively committed themselves to integrating agricultural and food emissions into their national climate pledges under the Paris Agreement — also known as Nationally Determined Contributions (NDCs).

COP28 also featured, for the first time ever, a whole day devoted to food and agriculture. Perhaps most strikingly, the final decision text — the main outcome of the climate talks — acknowledged sustainable agriculture as a part of responding appropriately to climate change.⁶

In Dubai, the UN’s FAO also unveiled its “global roadmap” to bring the world’s agri-food systems in line with global climate goals.⁷ The FAO pathway aims at cutting gross emissions of agri-food systems by 25 percent by 2030.

The problem is that, with current technologies, one can only go so far in reducing emissions in the agricultural sector — and especially in the livestock sector — without sacrificing

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output (or seriously harming animal welfare).⁸ So, it's hardly surprising that a lot of these international initiatives emphasise the need to reduce agricultural (particularly livestock) production/consumption — and to transform ever-growing swathes of farmland into so-called "carbon sinks".

A natural carbon sink is anything that absorbs more carbon from the atmosphere than it releases — namely soils, plants and the ocean. Insofar as agricultural climate policies are concerned, carbon sinks are related to the concept of carbon farming. The term refers to a wide variety of agricultural and livestock farming methods aimed at "trapping" carbon in the soil. In policymaking terms the emphasis is primarily on the conversion of crop land and pasture land into permanent grassland and/or forestry, i.e. carbon sinks.

Carbon farming is quickly becoming a fundamental pillar of global climate policies. It represents a form of carbon offset — an activity that compensates for the emission of carbon dioxide or other greenhouse gases by providing for an emission reduction elsewhere.

The notion of carbon offsetting is strictly related to the concept of net zero. Net zero effectively means reaching a state of "carbon neutrality": where the same amount of emissions that are released into the atmosphere are removed by other means. In other words, net zero can be achieved both by reducing actual emissions as well as by increasing carbon offsets. Reducing emissions, however, has so far proven to be an elusive solution: despite huge sums of money invested in renewables over the past twenty years, global CO₂ emissions have continued to rise over the same period. Together, fossil fuels — coal, oil, and methane — still account for around 80 percent of the world's energy.

Hence the growing interest in carbon sinks: if emissions can't be reduced, why don't we simply offset them? Alas, things are not that simple.

Convincing farmers to change their production methods, or give up production altogether, requires incentives and/or regulation. Such measures may include:

- Rewarding farmers for carbon removals through increased sequestration

- Allowing or even forcing farmers to sell "carbon credits" (earned through their climate-friendly policies) on "carbon markets". These policies are also known as emissions trading systems (ETS)
- Making them pay for their emissions according to the so-called polluter pays system. For example by setting an emission ceiling (cap) on the total amount of emissions that farmers may emit, and requiring them to hold emission permits (or allowances) in amount equal to their emissions, which they can buy or sell as needed. The latter is known as a cap-and-trade system: a mandatory emissions trading system

Currently, agriculture is not included in any cap-and-trade system anywhere in the world, at least not as a pricing mechanism under which agricultural producers have to pay for their emissions. Cap-and-trade systems generally apply only to energy producers and energy-intensive industries. That means that agricultural carbon markets, to the limited extent that they exist, are largely unregulated and operate on a purely voluntary basis: farmers may earn carbon credits, verified and validated by standard-setting private companies and foundations (such as Verra and Gold Standard), and then sell them on to companies looking to "offset" their emissions. But, overall, agricultural carbon markets remain relatively underdeveloped.

However, several countries are now considering ways to bolster, and even enforce, agricultural carbon markets — and the European Union is at the helm of this paradigm shift.

3. Transforming farmers into “land managers”

The EU prides itself on being at the vanguard of the fight against climate change.

In 2005, it launched the world’s first mandatory carbon market — the EU ETS — which is still the largest. It covers around 40 percent of the EU’s greenhouse gas emissions, with about 11,000 firms operating in energy-intensive sectors participating in the scheme. Agriculture is currently exempted from the programme. Since the launch of the first EU ETS, Europe has recorded significant reductions in emissions, which EU institutions credit in large part to the EU ETS. Independent studies, however, have called into question its role in the reduction of EU emissions compared to other factors (such as the impact of the financial crisis).⁹ This year, a second ETS was approved covering buildings, road transport and other sectors, which will take effect in 2027.

Furthermore, over the past decade, in particular, the EU has approved a wide range¹⁰ of directives and regulations aimed at tackling climate change, including:

- The Effort Sharing Regulation (ESR), approved in 2018 and revised in 2023, which establishes for each EU Member State a national target for the reduction of greenhouse gas emission by 2030 in several sectors, including agriculture
- The Regulation on land, land use change and forestry (LULUCF), approved in 2018 and revised in 2023, which aims to promote nature-based solutions to mitigating GHG emissions and to reduce the impact of land management and forestry practices on climate change
- The Renewable Energy Directive, which seeks to ensure that, by 2030, renewable energy such as solar power, wind, hydroelectric power and biomass will make up an initial target of at least 32 percent of the EU’s total energy consumption in terms of electricity generation, transport, heating and cooling
- The 2019 European Green Deal, an ambitious package of intended measures designed to enable the EU to become carbon neutral by 2050. The goal of net zero emission by 2050 was made legally

binding in 2021 with the signing of the European Climate Law

One of the most salient features of the EU’s climate policies in recent years has been its steadily increasing focus on agriculture.

Agriculture is an important part of Europe’s economy with farmland covering 38 percent¹¹ of the EU’s total land area. The sector accounts for approximately 13 percent of the EU’s greenhouse gas emissions.¹² The largest sources of these emissions come from enteric fermentation from livestock, nitrous oxide emissions from soils mainly from the use of synthetic fertilisers, manure management from livestock production, and emissions from organic soils caused by agricultural production on drained peatlands.

“One of the most salient features of the EU’s climate policies in recent years has been its steadily increasing focus on agriculture.”

Currently, climate mitigation policies in the agricultural sector are mostly channelled through the EU’s Common Agricultural Policy (CAP). Since 2013, climate action has been one of the main objectives of the CAP. Contrary to popular belief, CAP is being transformed from a system of agricultural subsidies for a strategically vital industry into a behaviour-changing mechanism to turn farmers into the vanguard of the green movement. During the 2014-2020 period, the Commission attributed over €100 billion — more than a quarter of the total CAP budget — to mitigating and adapting to climate change. However, a 2021 European Court of Auditors (ECA) report found that these measures “had little impact on agricultural emissions, which have not changed significantly since 2010”.¹³

The reason the CAP failed to bring down emissions in the agricultural sector, according to the report, is that the environmental goals fundamentally conflict with its original *raison d’être*: supporting farmers’ incomes, and therefore agricultural production. By contrast,

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bringing down emissions in the agricultural sector ultimately requires cutting back agricultural production altogether — especially livestock farming. The report’s rather ominous conclusion was that the CAP’s “problem” is that “[it] does not seek to limit or reduce livestock”. It recommended “assess[ing] the potential to apply the polluter-pays principle to emissions from agricultural activities” — for example through a carbon tax or the inclusion of the agricultural sector into the EU ETS — “and reward[ing] farmers for long-term carbon removals”.

The ECA’s report reflected a growing consensus among EU policymakers: that emission reductions in the agri-food sector are only achievable through the reduction of agricultural production. Thus, it is not a coincidence that ever since the report’s publication we have seen a flurry of legislative activity, both within and beyond the framework of the CAP, aimed at achieving just that.

In December 2021 the Commission adopted the Communication on Sustainable Carbon Cycles¹⁴, as announced in the European Green Deal’s Farm to Fork Strategy, which included the promotion of carbon farming practices under the CAP. The main objective of the Communication was to propose the development of tools to achieve carbon neutrality in Europe by increasing the EU’s carbon sink capacities — first and foremost through the radical upscaling of carbon farming practices.

The Communication emphasised that “an increasing number of private carbon farming initiatives have emerged where the land managers sell carbon credits on voluntary carbon markets. The potential for carbon farming is significant and it is the right moment to scale up high quality supply at EU level”.

To that end, the Commission announced that “carbon credits” (tradeable on carbon markets as carbon offsets) would be granted to farmers who chose to pursue carbon sequestration practices — i.e. to convert their crop land and/or pasture land into carbon sinks. The Communication’s purpose is rather explicitly that of creating “a new business model” — one in which farmers become “land managers”. Carbon farming practices envisioned by the Communication include:

- Planting new forests and reforestation

- Agroforestry and other forms of mixed farming
- Use of catch crops, cover crops, conservation tillage and increasing landscape features
- Targeted conversion of cropland to fallow or of set-aside areas to permanent grassland
- Restoration of peatlands and wetlands

Next, the Commission set about establishing a regulatory framework for the institutionalisation of carbon farming — and of an agricultural carbon market. This resulted in the Commission’s adoption, in November 2022, of a proposal for the creation of a Carbon Removal Certification Framework¹⁵ — an EU-wide voluntary framework to reliably certify high-quality carbon removals. The proposal set out EU-wide standards for certifying carbon removals, including in farming, but remained silent on whether these certificates should be traded on carbon markets or otherwise remunerated.

“A growing consensus among EU policymakers: emission reductions in the agri-food sector are only achievable through the reduction of agricultural production.”

Since then, however, the endgame of policymakers has increasingly come into focus. In March 2023, a major revision of the Regulation on land, land use change and forestry (LULUCF) was adopted.¹⁶ It introduced a binding land-based net removal target for the EU of -310 million tonnes of CO₂ equivalent by 2030, with each EU country assigned a binding national target; carbon farming has to contribute to increasing the land sector carbon sink capacity by 42 million tonnes of CO₂ equivalent. As of 2026, removals from the land sector should start exceeding emissions.

Then, in November 2023, the European Parliament adopted its position on the European Commission’s proposal for a Carbon Removal Certification Framework.¹⁷ EU lawmakers proposed several amendments to the text that stressed the need for the monetisation and trading of carbon farming

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certificates — in other words, that farmers should be allowed to use the certificates “for voluntary climate claims”.

However, it is becoming clear that policymakers intend to go beyond simply promoting the development of voluntary agricultural carbon markets.

In November 2023, a study commissioned by the Commission’s Directorate General for Climate Action was published.¹⁸ It responded to the aforementioned European Court of Auditors’ 2021 report, which invited the Commission to “assess the potential of applying the polluter-pays principle to agricultural emissions, and reward farmers for long-term carbon removals”. Aside from investigating how to financially reward carbon removals, the study presents five policy options for an agricultural emissions trading system, separate from the already existing EU ETS, as a way of applying the polluter pays principle to agricultural greenhouse gas emissions.

Even though the introduction of an EU-wide agricultural emissions trading system still has a lot of legislative hurdles to overcome, there is little doubt that policymakers view this as the next big step for the bloc’s climate policies. In the meantime, as the Commission’s proposal for a Carbon Removal Certification Framework makes its way through the EU’s legislative process, we can expect the voluntary carbon market for agricultural carbon credits to continue growing, potentially also through the incorporation of agricultural offsets into the EU ETS.

Other measures aimed at reducing agricultural emissions are already underway: see the frontal attacks against farmers waged in recent years in the Netherlands (over nitrogen emissions), and currently underway in Germany (where the government has announced plans to end agricultural diesel subsidies), prompting massive protests. Overall, the pressure on European farmers to reduce emissions — and indeed to reduce production itself — is bound to increase in the coming months and years.

As Wopke Hoekstra, the EU’s new climate commissioner, said at his confirmation hearing in October: “There is no escape for any of the sectors — they need to make sure they see through this change. That is true for industry, for citizens, for maritime, it is true for aviation

— and it is also true for farming. It will not stay the way it was. The way we are farming today... will have to change”.¹⁹

In the next section, we will examine the potential risks and consequences of the current push towards carbon farming in the EU.

4. The final nail in the coffin for small farmers?

Even though the idea of carbon farming may sound attractive — what’s not to like about lush green hills and forests in place of monocultures and giant farm sheds? — it actually harbours numerous problems and dangers.

Carbon farming involves the implementation of costly and very complex monitoring, reporting and verification (MRV) systems to establish the actual quantity of carbon being sequestered. This is because the (mainly non-CO₂) GHG emissions generated by the physical processes involved in agricultural and livestock farming are much more complex to calculate than the CO₂ emissions generated from the combustion of carbon. Indeed, some studies call into question the possibility of being able to accurately measure the degree of soil carbon at all, as discussed further on.

“While large farms may be able to shoulder these upfront and continued costs, they are clearly prohibitive for small farmers.”

These procedures are extremely costly. For example, setting up an MRV with the Gold Standard system, one of the best-known private certification systems, costs around €130,000, and then €40,000 every five years.²⁰ And this does not include the payments to all the experts and consultants involved in the different stages of project implementation. Overall, the full costs can easily run into the hundreds of thousands of euros. While large farms may be able to shoulder these upfront and continued costs, they are clearly prohibitive for small farmers, especially considering the uncertainty of the future revenue streams generated by these carbon sinks: not only can they not be sure of the quantity of CO₂ that they will actually be able to sequester, as discussed below, but carbon prices are also very volatile.

In 2021, the European Coordination of Via Campesina (ECVC), an organisation representing more than 200 million small farmers and producers around the world, issued an open letter to the

European Commission, endorsed by five other organisations, stressing that “the economic cost of the announced [carbon certification framework] is enormous, and its impacts seem not only useless but directly detrimental”.²¹

Indeed, it’s not just a matter of costs. MRV protocols require farmers to feed huge amounts of data into the system, which will probably become increasingly detailed and precise over time. Some protocols also foresee the use of satellite data to monitor and verify cover crops, conservation tillage, crop rotation and other carbon farming practices.²² The result is a hyper-technocratic system that places huge technical-administrative burdens on farmers — or future “land managers”. As the ECVC noted in a 2022 report:

*The smallest actions of the farmers will be noted and monitored, and they will be obliged to be connected. What will be left of their autonomy, which has already suffered severely? And what about their private lives? Indeed, nothing is said about the ownership of this data on the precise organisation of farms, work rhythms, and production choices. The dangers of surveillance capitalism, well analysed by Shoshana Zuboff, thus threaten farmers, even those who have not chosen digital farming.*²³

When all these aspects are taken into account, it seems inevitable to conclude that carbon farming will disproportionately hurt small farmers vis-à-vis large ones, leading to further concentration and consolidation of agricultural land to the disadvantage of small and mid-sized farmers. In the event of the introduction of a compliance carbon market, or cap-and-trade system, for agriculture, these effects would be even more marked, of course, as small farms that are unable to implement emission-reduction techniques would effectively be squeezed out of the market. As one study put it: “In smaller farms, the application of [emission] reduction techniques is simply unprofitable financially”.²⁴

EU policymakers are perfectly aware of this. Lars Aagaard, Denmark’s climate minister, for example, recently proposed including agriculture in the EU ETS polluter pays system, even though he acknowledged that there was “a risk” that forcing farmers to pay

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for emissions would favour larger, industrial-level farms, saying: "I'm sure...not all farmers or agricultural activities would benefit from such a system to the same extent".²⁵

That's a euphemism. From the perspective of big corporate agri-food enterprises, carbon farming isn't seen just as an additional revenue stream, but also as a way to "climate-wash" their own operations (as discussed in greater detail further on).

The industry association FoodDrinkEurope, for example, welcomed the Commission's proposal for a Carbon Removal Certification as "great opportunity to further de-carbonise the food sector".²⁶ Similarly, the European Landowners' Organization lauded it as "an important step towards achieving the Green Deal's climate targets".²⁷ Meanwhile, agrochemical giants like Bayer and Syngenta, food giants such as the Hero Group, and the "food innovation community" EIT Food, sponsored by such heavyweights as Danone and PepsiCo, have launched the EU Carbon+ Farming Coalition to "support the decarbonisation of Europe's food system".²⁸

5. Speculators at the ready: The environmental financialisation of farming

There are also powerful financial interests that stand to benefit from the expansion of carbon farming. Banks expect to rake in billions in trading revenues from the carbon offset market.²⁹ “The huge surge in carbon trading activity that is expected to come from increasing regulation will create many opportunities for financial institutions”, as one industry report put it.³⁰

Ultimately, it is these powerful corporations and financial institutions that are largely driving the EU’s carbon removal agenda³¹ — and we can rest assured that they don’t have the interests of small farmers in mind.

It’s important to acknowledge that as it is, under the Common Agricultural Policy, small farms already face a high relative administrative burden. Many do not receive subsidies because of their small size. The result is that the distribution of CAP funds is highly concentrated: 20 percent of beneficiaries receive 80 percent of total farm income payments.³² The CAP and its subsidies per hectare have already led to an increase in farm size, greater concentration of land, and the disappearance of small and medium family farms across Europe. As one 2022 European Parliament report noted:

Over the years, structural change has led to a sharp decline in the number of farms, a consolidation of farmland, and an increase in average farm size. The EU’s smallest farms have experienced the strongest decline compared to other farm sizes. This consolidation process, which sees the growth of the largest farms and their farmland, is occurring nearly all over the EU [...].³³

Indeed, several studies show that Europe is not exempt from the global “land grabbing phenomenon”.³⁴ As one 2015 study, commissioned by the European Parliament’s Committee on Agriculture and Rural Development, stated:

[T]here is significant, albeit partial, evidence that farmland grabbing is underway in the EU today, as measured by the degree of foreign ownership of land, the capturing of control over extended tracts of land, and the

irregularities that have accompanied various land transactions.³⁵

The report further noted that one of the features of this phenomenon has been the growing involvement in farmland acquisition of financial investors not traditionally involved in the agricultural sector, usually for purely speculative purposes: banking groups, investment funds, individual traders and private equity companies.

The report already acknowledged, almost a decade ago, that “it is often precisely in the conversion of farmland from agricultural to non-agricultural use that the largest returns can be made” — a practice termed “land artificialisation”.³⁶ One of the driving forces behind this trend has been the rise of energy crops, i.e. crops grown solely for renewable bioenergy production (not for food), and the resulting economic revaluation of farmland — yet another unintended consequence of the EU’s decarbonisation agenda. This process has been called “green grabbing” — i.e. “instances where ‘green’ credentials are called upon to justify appropriations of land”.³⁷

“Ultimately, it is powerful corporations and financial institutions that are largely driving the EU’s carbon removal agenda. We can rest assured that they don’t have the interests of small farmers in mind.”

Another European Parliament report from 2017 noted that 3.1 percent of farms in the European Union controlled 52.2 percent of the land; and conversely, 76.2 percent of farms took up just 11.2 percent of the European agricultural area.³⁸ This shows the grave extent of land concentration in the EU. Since then, land grabbing and land concentration in the EU has only intensified.

It goes without saying that carbon farming, by financially rewarding big landowners for the simple fact of owning land, and for transforming arable land and pasture land

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into grassland, would dramatically accelerate this trend of growing farmland concentration and consolidation. As Jean Thévenot, a young small farmer from the French Basque Country told *POLITICO*: “Carbon farming systems will lead to a very big rush for land. Access to land is already a big problem in Europe, so if you add financial interests for carbon credits, the price of land would rise even more”.³⁹

This is already happening outside of the EU. In March 2022, the *Financial Times* reported about a wave of land purchases in Scotland by corporations and financial institutions seeking to offset their carbon footprint or make money investing in carbon credits. “This is driving land prices out of reach of many locals. Areas currently used for farming are being targeted for carbon capture, threatening local jobs”, the magazine wrote. “[F]or many [farmers] living and working on the land, the current carbon bonanza feels less like a free lunch and more like the enemy at the gates”.⁴⁰

“The marginalisation of small-scale farming would have serious implications for European food security, employment, and animal welfare.”

Another case in point is New Zealand, which has one of the most developed agricultural carbon markets in the world. A recent report highlighted the massive increase in land-use change from pastoral farming to large-scale forestry for carbon farming purposes.⁴¹ “This takes the total to more than 200,000 hectares of sheep and beef farms bought over the last five years, which is a significant concern for the sheep and beef sector and rural communities”, said Sam McIvor, CEO of Beef + Lamb New Zealand. He noted that the conversion of food-producing sheep and beef land into carbon farming “will have a negative impact on rural communities, food production and export income, which affects all New Zealanders”.⁴²

Europe would do well to heed these warning signs from abroad. The further marginalisation of small-scale farming would have serious implications for European food security, employment, welfare and biodiversity. It’s important to note that, although under threat, the European model of farming is still one which is largely based on small, family farming. Around 70 percent of all farms in

the EU are small farms covering less than 5 hectares.⁴³

This type of farming system provides multiple benefits: research shows that small farms have higher crop and non-crop diversity, and higher yields, compared to larger farms⁴⁴; are more likely to employ sustainable farming practices⁴⁵; make important contributions to both production and local food availability; and play a key role in keeping remote rural areas alive by keeping up services and social infrastructure, helping to preserve the identity of regional products, and offering employment in regions with fewer job opportunities.

But perhaps most interestingly from the perspective of climate policy, even though there is no conclusive evidence on the relationship between farm size and greenhouse gas emissions, some studies have found that nitrogen and phosphorous balances, and greenhouse gas emissions, are lower on small farms than larger farms on a per hectare basis.⁴⁶

Ultimately, it is clear that carbon farming represents a serious threat to the European small farming model, which, on top of yielding a wide range of economic and societal benefits, is also the one that generally has the most beneficial environmental footprint. Which begs the question: is carbon farming at least effective in reaching its stated aim of reducing greenhouse gas emissions?

6. The ultimate climate-washing tool

Carbon farming is touted by EU institutions as a powerful climate mitigation tool, and indeed as “key for reaching a climate-neutral economy”.⁴⁷ But does this claim hold up to scrutiny?

Let’s start by looking at the potential for carbon sequestration in the EU. An extensive literature review from 2021 indicated that the mitigation capacity of carbon farming in the EU could range from 101 to 444 million tonnes of CO₂ equivalent.⁴⁸ This is equivalent to approximately 3-12 percent of the EU’s total annual GHG emissions. There are however numerous practical challenges.

For starters, as noted already, measuring and quantifying soil carbon sequestration requires very complex (and costly) monitoring, reporting and verification (MRV) systems to establish the actual quantity of carbon being sequestered. First a baseline must be established, against which changes can be assessed and valued; then, long-term monitoring has to be carried out to demonstrate even relatively small changes in soil carbon stock.

It takes time to substantially increase soil carbon stocks, typically decades, and how much carbon a soil will eventually be able to hold, and how quickly it will reach equilibrium — i.e. a stage where no further carbon can be stored — depends on a wide range of factors, including soil texture, weather conditions and soil nutrient status. Moreover, there can be unintended consequences from land-use changes aimed at storing more carbon that actually lead to *increased* GHG emissions from soils such as nitrous oxide and methane.⁴⁹ This makes it extremely hard to predict levels of carbon sequestration *ex ante*.

Furthermore, accurately measuring carbon soil changes can be very challenging. As the Washington-based Institute for Agriculture and Trade Policy (IATP) notes, “[t]he tools to measure soil carbon to the degree of accuracy and reliability that a market would require do not currently exist”.⁵⁰ One 2018 study published in *Soil Science Society of America Journal* showed that three commonly-used measurement tools for soil carbon all yielded different results.⁵¹ Other measurement techniques, instead of directly analysing the soil, involve using satellite

and/or drone images and other datasets to elaborate mathematical models to predict soil carbon stock, but these are still in their early stages and present numerous problems of reliability.⁵²

And then, of course, there’s the very high risk of fraud. Last year, the former chair of Australia’s Emissions Reduction Assurance Committee, the body responsible for verifying the integrity of the carbon offset methods, caused shockwaves when he admitted that most of Australia’s government-issued carbon offsets did not represent genuine emissions reductions, and amounted to “environmental and taxpayer fraud”.⁵³

“Carbon farming’s greatest flaw, in terms of climate mitigation, is its intrinsically impermanent nature: permanent sequestration is impossible.”

“All of the major emission reduction methods have serious integrity issues, either in their design or the way they are being administered”, Macintosh said. “People are getting [carbon credits] for not clearing forests that were never going to be cleared; they are getting credits for growing trees that are already there; they are getting credits for growing forests in places that will never sustain permanent forests; and they are getting credits for operating electricity generators at large landfills that would have operated anyway”. Macintosh’s statement caused a plunge in carbon credit prices.

But carbon farming’s greatest flaw, in terms of climate mitigation, is its intrinsically impermanent nature. The CO₂ emitted into the atmosphere remains there for several hundred years. Thus, creating a system where carbon can be sequestered for a few years, or even a few decades — most of these project have a lifespan of 5-10 years — will have virtually no mitigation impact.

To really offset emissions, you have to make sure that the equivalent carbon sequestered in the soil remains there for the same period of time. The sequestration has to be

The ultimate climate-washing tool

“permanent”. But that is of course impossible. At any moment, the stored carbon could be released back into the atmosphere, through intentional actions, such as the land owners/managers choosing to change farming practices or land use, or unintentionally, for example as a result of a fire that sends a forest up in smoke, or due to other natural disturbances such as floods and droughts. The challenge of impermanence is compounded for soil carbon (in peatlands or mineral soils), because monitoring permanence is much harder.

“Even barring a re-release scenario, allowing actual emissions to be offset with carbon sequestration techniques that are lacking in accuracy and reliability seems dubious at best.”

So it’s perhaps not surprising that a 2022 study published in the *Journal of Environmental Studies* found that “soil-based private carbon certificates are unlikely to deliver the emission offset attributed to them and that their benefit for climate change mitigation is uncertain... as permanence of [soil carbon] sequestration cannot be guaranteed”.⁵⁴

The conclusion is obvious: to the extent that carbon credits allow companies to maintain, or even increase, their levels of GHG emissions under the pretence that they are “offsetting” them, even though the sequestered carbon could subsequently be re-released into the atmosphere, carbon farming could actually lead to a net *increase* in emissions in the long run. Even barring a re-release scenario, allowing actual emissions to be offset with carbon sequestration techniques that are lacking in accuracy and reliability seems dubious at best.

This is particularly worrying if we consider that one of the reasons big corporate polluters are interested in carbon farming is precisely the fact that they see it as an opportunity to generate great amounts of carbon credits that will allow continued emissions — a classic example of climate-washing. As an IATP study from last year noted: “Carbon farming’ is part of a rapidly growing corporate agenda pushed by big polluters from the agriculture and fossil fuel industry alike. It plays a crucial role in corporate net-zero pledges that rely on the

assumption that companies’ continued and even increased emissions can be balanced out by removing carbon from the atmosphere, particularly by buying carbon offsets”.⁵⁵

No wonder big business has embraced the logic of carbon offsetting, as we have seen. This includes non-agricultural companies — such as those regulated under the EU ETS — who are asking for the integration of agricultural carbon credits into the EU ETS compliance market to meet their obligatory emission reduction, as well as big agri-food companies aiming to use the credits to offset emissions within their own supply chain (a practice known as “insetting”).

As one Wisconsin dairy farmer told the IATP: “The last thing we should be doing is turning carbon into another commodity to be sold or traded in the global economy. Carbon markets will do nothing to reduce greenhouse gas emissions. All they will do is create another way for polluters to profit from their lack of environmental concern”. This is why even the Intergovernmental Panel on Climate Change (IPCC) recommends using carbon offsets as a very last resort to compensate residual emissions.

When all these factors are taken into account, the case for carbon farming starts to appear very weak indeed: we’re talking of a practice that presents numerous financial and technical obstacles; that will almost certainly result in small farmers being squeezed out of the market, leading to further concentration and consolidation of agricultural land, and to the loss of a wide range of social, economic and environmental benefits associated with Europe’s small farming model; that threatens food security; and that, to add insult to injury, allows corporate polluters to climate-wash their actions, offers no guarantees in terms of climate mitigation (with a limited impact even under the most optimistic scenarios), and may in fact lead to increased emissions in the long run.

Ultimately, one may say that carbon farming is the result of a perverse marriage between green ideology and corporate-financial interests, allowing EU policymakers to present themselves as tough on climate — by demonising and scapegoating small farmers — while pandering to big corporate polluters.

7. Don't demonise farmers — support them!

As noted already, small farms don't just yield a wide range of economic and societal benefits; they also generally have the most beneficial environmental footprint. Adopting measures that will harm small farmers in the name of "fighting climate change" is like shooting oneself in the foot — and calls into question the true sincerity of the policymakers' motivations. A much better alternative — for the environment, for farmers and for society as a whole — would be to promote small-scale agroecological practices. As the European Coordination of Via Campesina writes:

[Agroecological systems] do not need much capital, they employ a lot of people, they use very little pesticide or none at all, they produce a broad variety of healthy foods, they consume less water... in short, they are better than industrial agriculture in many respects. Furthermore, using only a quarter of the cultivated land in the world, they produce nearly three quarters of the food consumed.⁵⁶

Even though, as noted, reducing emissions is only possible to a limited extent through agricultural measures, practices such as agroecology offer great potential for climate adaptation. Agroecological techniques that have been tried and tested for centuries — balanced crop rotation with diverse and deep root penetration, permaculture, agroforestry, the recycling of organic matter by way of solid manure, crop residues and compost, etc. — represent a much better alternative, even simply from a climate mitigation perspective, than dubious pseudo-sustainable techniques such as carbon farming.⁵⁷

Moreover, agroecology doesn't just consider the ecological aspects of food production but also its social, cultural, economic and political aspects. Ultimately, small farms deserve better than just to be treated as a sinks into which to "dump" the carbon produced by industrial production; they deserve to be treated for what they are: crucial elements of Europe's social, economic and cultural fabric. They contribute to local food supply, food security and food sovereignty. They protect landscape features. They support rural employment.

For all these reasons, they need to be supported — not threatened and marginalised, to the benefit of corporate and financial interests. Rejecting carbon farming would be an important first step in that direction.

About the author

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Thomas Fazi is an independent researcher, writer and journalist based in Rome. He is the author of several books, including: *The Battle for Europe: How an Elite Hijacked a Continent – and How We Can Take It Back* (Pluto Press, 2014); *Reclaiming the State: A Progressive Vision of Sovereignty for a Post-Neoliberal World* (co-authored with Bill Mitchell; Pluto Press, 2017); and *The Covid Consensus: The Global Assault on Democracy and the Poor—A Critique from the Left* (co-authored with Toby Green; Hurst, 2023). He is a columnist for *UnHerd* and *Compact*.



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At a time of unprecedented political polarisation, MCC Brussels is committed to providing a home for genuine policy deliberation and an in-depth exploration of the issues of our time.

MCC Brussels is committed to asking the hard questions and working with people of goodwill from all persuasions to find solutions to our most pressing problems. An initiative of MCC (Mathias Corvinus Collegium), the leading Hungarian educational forum, MCC Brussels was founded in the autumn of 2022 to make a case for celebrating true diversity of thought, diversity of views, and the diversity of European cultures and their values.

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Under the guise of environmentalism, a strange transformation is taking place. Farmers are no longer encouraged to farm crops, rear animals, or produce animal products. Instead, they have a new product to farm: carbon credits.

An unholy alliance of big finance and environmentally-minded NGOs and bureaucrats have identified farms as a source of a new, precious commodity: a license to emit carbon. The only problem is that in order to produce these credits, the farmers must cease agricultural production.

The logic of this process is brutally simple, but potentially devastating for agriculture. By letting land lie fallow, farmers make reductions to greenhouse gas emissions. To incentivise this behaviour, farmers can claim a credit for land they leave unproductive. The credits can be purchased by industrial companies, who can then “offset” these against their own emissions.

This report illustrates the process through which big finance and big environmentalism have captured EU policymaking on farming. The smallest farms - ironically the ones with most to commend them in environmentalist terms - are the biggest casualties of this process.

Supporting farmers, especially small farmers, means resisting the imposition of carbon credits.



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