

# Real Zero Europe

## ***Analysis: Real Zero, net zero, and the European Commission's proposal for a carbon removal certification framework***

To avoid the worst effects of climate chaos—the worst human rights crisis of our time—we must radically transform, equitably and justly, the way we produce our food, manage our ecosystems, and power our economies. To stand any shot of keeping below 1.5 °C of warming and have a chance at saving our communities and ecosystems from experiencing worsening climate impacts, we must urgently deploy real and proven, socially just and people-led climate solutions and dramatically reduce greenhouse gas emissions at source, down to Real Zero.

Yet fossil-drenched and fossil-entrenched government and corporate interests keep delivering more of the same: they continue to subsidize, and to explore for, drill for, and burn fossil fuels. They continue to expand damaging industrial agriculture at home and overseas. They do this while promoting a fantasy that ‘nature-based solutions’ and future ‘carbon dioxide removal’ (CDR) technologies will be able to suck those continuing emissions back out of the atmosphere *some day*. CDR is essential to their claims of ‘net zero’, as removal of carbon dioxide is how the ‘net’ is supposed to happen, always sometime in the future.<sup>1</sup>

Europe has a huge historical responsibility to cut emissions fast and support a just transition for the Global South. However, the European Commission (EC) is betting big on CDR and on voluntary carbon offset markets to deliver future climate action, and to justify current inaction. As part of their plan, laid out in the December 2021 [Communication on Sustainable Carbon Cycles](#), the EC will propose a regulatory framework and process at the EU-level for the certification of carbon removals.

To stay below 1.5 °C of warming requires real, immediate, and just emission reductions **now**. Because emissions are cumulative, every ton of current emissions contributes to the growing climate chaos that we see all around the world: heat waves, glaciers collapsing, intensified cyclones, crop losses, wildfires, and massive flooding, among other devastating impacts. Every ton of promised **future** CDR represents emissions that are bringing us more climate chaos **today**.

We know what Real Zero looks like: a just and equitably managed phase-out of fossil fuels; an energy transformation to real, fair, democratic, and sustainable renewable energy; support for small-scale farmers and a just transition of food and agricultural

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<sup>1</sup> A simple way of thinking about ‘net’ zero is that it implies emissions *minus* removals. Theoretically, at net zero, emissions minus removals equals zero.

systems towards agroecology<sup>2</sup> for food sovereignty; close-to-nature forestry practices; and the redirection of public subsidies, away from fossils, to support these measures. **Getting to Real Zero and staying below 1.5 °C of warming requires halting emissions and restoring ecosystems now.**

### **The European Commission Proposal: Sustainable carbon markets?**

The European Commission plans to submit a legislative proposal before the end of 2022 to the European Parliament and the Council **to establish a carbon removal certification framework** for the monitoring, reporting, and verification (MRV) of removals.

This proposal will be made in the context of the [European Climate Law](#), which sets a goal for reaching ‘climate neutrality’, or ‘net zero’ greenhouse gas (GHG) emissions, within the European Union by 2050. The law also establishes a target for a 55% reduction in *net* emissions by 2030, compared to 1990.

The EC communication elevates carbon removal—the ‘net’—in the climate neutrality strategy, despite acknowledging that in order to be climate neutral or net zero by 2050 at least 95% of current EU fossil carbon use must be eliminated. This incongruence is the core of the problem with the commission proposal. The EC communication and the expected legislative proposal shift the focus and burdens **away from** the essential work of phasing out fossil fuels, and **towards** land-sector sequestration and technological removals. In its communication, the EC sets an ‘aspirational’ objective for technological removals and permanent storage of 5 Mt of CO<sub>2</sub> annually by 2030. Additional removals are envisioned in the revised Land Use, Land Use Change and Forestry (LULUCF) regulation, which sets a 2030 target of 310 Mt CO<sub>2</sub> for net annual removals in the land sector.

The communication describes three main elements of the EC strategy to scale-up carbon removals:

- incentivizing ‘carbon farming as a business model’, including both forests and agriculture in the category of ‘carbon farming’;<sup>3</sup>
- expanding development and deployment of the industrial capture, use, and storage of carbon (CCU and CCS); and
- establishing a regulatory framework for certification of carbon removals, which is seen as the first step in a strategy to use the voluntary carbon offset market to provide finance and incentives for upscaling both industrial CO<sub>2</sub> capture and land-based carbon farming.

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<sup>2</sup> Agroecology is a way of producing food, a way of life, a science, and a movement to transform food systems towards ecological, social, gender, economic, racial and intergenerational justice. See the [Nyéléni 2015 declaration](#) for more on agroecology.

<sup>3</sup> In the Communication, carbon farming is defined as “the increase of carbon sequestration...by enhancing carbon capture and/or reducing the release of carbon to the atmosphere...”(p. 4) This definition problematically conflates two very different processes of climate mitigation—increasing **flows** into soils and ecosystems versus preventing the loss of carbon **stocks**.

The regulatory framework is the near-term objective, designed to integrate European removals into global voluntary carbon markets, and eventually compliance markets after 2030. The communication notes that certification can contribute to ‘enhanced uptake’ of removal offsets by carbon markets, and that ‘lack of standardization is a major barrier to the expansion of ... voluntary carbon markets.’ With the framework, the EC hopes to address the lack of standardization that they claim is standing in the way of expanding carbon offset markets by establishing ‘*an EU standard in monitoring, reporting and verifying GHG emissions and carbon removals at farm and forest holding level as well as for captured fossil, biogenic or atmospheric CO<sub>2</sub> that is transported, processed, stored and potentially re-emitted to the atmosphere each year.*’<sup>4</sup>

### Removals and net zero

Net zero is, theoretically, a balance between emissions by sources and removals by sinks. The Paris Agreement obligates countries to achieve this balance by mid-century, **at a global scale** rather than on an individual country-by-country or corporate-by-corporate basis. The aim is ‘to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties and to undertake rapid reductions thereafter.’

Still, net zero has become the latest fad in government and corporate climate action claims. ‘Net zero by 2050’ pledges sound great and are easy to make. The high-profile targets are set so far into the future that actors can continue to increase their emissions today while promising that someday their emissions will be *net* zero. It cannot be emphasized enough—because of the cumulative nature of carbon dioxide in the atmosphere, it is near-term action to **get emissions to zero** that matters.

Removals are key to these fairy tales. All corporate and government net zero targets and claims rely heavily on *future* removals. The vast majority of net zero claims assume significant continued fossil emissions, while excusing those emissions as ‘hard-to-abate’ without any more specificity as to what is hard and the quantum of continued emissions that are expected. In making these claims, future imagined removals—through carbon farming or technology-based capture and storage such as [bioenergy with carbon capture and storage](#) (BECCS) or direct air carbon capture and storage (DACCS)—are implicitly assumed to be feasible, abundant, and permanent. None of these assumptions hold yet these very assumptions underpin the EC communication and its proposal for a carbon removal certification framework.

**Relying now on future carbon dioxide removal implies overshooting 1.5 °C.** Relying on speculative carbon dioxide removal instead of deep emissions cuts now not only adds to current climate chaos but also [locks in overshoot](#), pushing the planet past a point of no return, with no way of knowing whether a return to 1.5 °C will even be possible. Indeed, the IPCC has repeatedly warned that CDR may not be able to reverse temperature rise

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<sup>4</sup> Communication from the Commission to the European Parliament and the Council. 2021. Sustainable Carbon Cycles. Page 21.

after overshoot because of the impermanence of removals and the risk that pulling CO<sub>2</sub> out of the atmosphere will lead to a release of the excess CO<sub>2</sub> currently stored in oceans and terrestrial ecosystems.<sup>5</sup>

**Nature-based removals are not permanent.** Nature-based carbon sequestration is inherently reversible. Living organisms die. Temporary sequestration in trees and soils are not interchangeable with and cannot compensate for effectively permanent fossil emissions that stay in the atmosphere for hundreds to thousands of years. Devastating fires across the EU this summer are somber and vivid illustrations of the temporary character of nature-sequestered carbon.

**The capacity and time frame for nature-based removals is insignificant compared to ongoing emissions.** Right now the only viable type of removals available at relevant scale is carbon sequestration in natural ecosystems. And the capacity of ecosystems to take up carbon over the course of the century is extremely limited—recent estimates suggest this could be less than 400 Gt CO<sub>2</sub> removed *in total* over the next 75 years, which is equivalent to just over 5 Gt CO<sub>2</sub> per year, likely unfeasible in the real world, and absolutely not a replacement for the reductions needed.<sup>6</sup> To put that figure in perspective, **yearly** global carbon emissions are about 40 Gt CO<sub>2</sub>, and total GHG emissions are above 50 Gt CO<sub>2</sub>-equivalent per year.

Moreover, natural ecosystems absorb carbon dioxide relatively slowly—the impact of today’s removals will be reflected in reduced heating two or three decades from now.<sup>7</sup>

**Carbon farming practices—in fields and forests—will not lead to permanent removals, but will lead to further land-grabbing and displacement of small producers.** Investor and carbon speculator interest will drive up the value of land. Further concentration of land ownership threatens the viability of small farms and agroecological practices that can significantly reduce emissions in food production.

**Technological CDR approaches are not currently viable at scale and have enormous potential costs.** Technological approaches to carbon dioxide removal include BECCS and DACCS, both of which have potentially enormous social, environmental, and economic risks and costs.<sup>8</sup> If either of those technologies were to become technically viable at scale one day, they could instead end up exacerbating climate change and impacts due to their high energy and resource consumption. For example, **BECCS** will require huge

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<sup>5</sup> IPCC Unsummarized: unmasking clear warnings on overshoot, techno-fixes, and the urgency of climate justice. <https://www.ciel.org/reports/ipcc-wg3-briefing/>. Page 29; Meyer, A. et al. 2022. Risks to biodiversity from temperature overshoot pathways. *Philosophical Transactions of the Royal Society B* **377**: 20210394.

<sup>6</sup> Dooley et al. 2022. Carbon removals from nature restoration are no substitute for steep emission reductions. *One Earth* 5: 812-824.

<sup>7</sup> Dooley et al. 2022.

<sup>8</sup> IPCC. 2022. Working Group III contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, in particular chapters 7 and 12.

amounts of land, which will drive land grabbing and deforestation and further increase climate impacts.

**[Carbon capture and storage \(CCS\)](#) and [carbon capture and utilisation \(CCU\)](#) do not remove CO<sub>2</sub> from the atmosphere.<sup>9</sup> CCS and CCU are processes designed to capture CO<sub>2</sub> generated by high-emitting activities like fossil- or bioenergy-fueled power production, with the captured CO<sub>2</sub> then stored in products (CCU) or underground (CCS).**

No amount of investment in CCS or CCU can accelerate the phase-out of fossil fuels, nor remove CO<sub>2</sub> from the atmosphere. Instead, both serve to mask the emissions from existing fossil infrastructure and enable the perpetuation of fossil-dependent economies. The storage of most current CCS projects is linked with enhanced oil recovery (EOR). Indeed, EOR is the only way that CCS is economically viable right now, with the end result of boosting oil production and prolonging the era of fossil fuels. The processes also generate additional risks, impacts, and costs associated with the transport and storage infrastructure such as pipelines. Finally, the ‘use’ element of CCU even includes uses that emit all the carbon dioxide back into the atmosphere!<sup>10</sup>

### **Real Zero requires real solutions to avoid dangerous and potentially irreversible overshoot**

It is both technically and economically feasible to pursue a rapid fossil-fuel phase-out immediately, limiting warming to 1.5°C, rather than overshooting it and gambling on speculative technologies to bring temperatures back down.

Rather than net zero and carbon offset markets, we need to quickly get to Real Zero using a suite of proven, equitable, and real solutions—solutions that can immediately, truly, and justly address the climate crisis we face.

These solutions include phasing out fossil fuel production, with equity at the core; transforming energy systems; ensuring close-to-nature forestry practices; providing support for peasant agroecology and small-scale farmers and enabling a just transition for farmers out of an extractive industrial agriculture system.

Indigenous Peoples, local communities, women, and youth all play critical roles in carrying out real solutions and they must be enabled to do this work.

### **Why a regulatory framework for carbon removal certification must be rejected**

The EC is proposing to create a certification process for nature-based and technological removals, to provide government sanction and market confidence for removal offset credits to be sold in voluntary, and eventually compliance, carbon markets. The idea is that the many companies that have made ‘net zero by ...’ claims will start to purchase removal offset credits and then claim that these removals will balance out their ongoing

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<sup>9</sup> CCS and CCU are sometimes linked in a single acronym—CCUS. For simplicity and clarity we keep them separate.

<sup>10</sup> For example, as [carbonation for soft drinks and beer](#), or turned into [animal feed](#).

emissions.<sup>11</sup> If all these companies with net zero claims will need to buy offsets, the EC wants to help facilitate that.

But a government certificate will not keep trees from burning, nor will it reduce the huge environmental and economic costs associated with technological CDR approaches. We have already put far too much carbon dioxide into the atmosphere and continued emissions will push us past the 1.5 °C warming threshold within the next decade. A carbon removals-offset market relies on a false justification for continued emissions now: that someone, somewhere, might at some time in the future remove a ton of carbon from the atmosphere. It is a sure way to torch the planet. A carbon removal certificate only serves to shore up an artificially created market where polluters profit and that should not exist in the first place.

The proposed framework for carbon removal certification will:

- **Enable the continuation of the fossil economy:** The idea that CDR could compensate for ongoing emissions is flawed, and the continued promotion of removal ‘solutions’ keeps this dangerous idea—and the fossil economy—alive, and only serves to exacerbate the climate crisis and accompanying human rights impacts. The framework provides public subsidy and legitimacy for real world investments in infrastructure that lock us into continued fossil fuel use.
- **Legitimize and fuel global voluntary and compliance offset markets:** The European Union is actively positioning itself as a global rule-maker, and its systems, such as the EU-European Trading System, become de facto global norms. Enormous damage will be done to the global effort to stop climate change by the delaying effect of trading CDR offsets instead of reducing emissions. Damage will also be done to the global effort to stop climate change if one small group of countries (the EU) is setting the standard for the global community without their participation, potentially undermining equity and other core principles of the global process.
- **Empower ‘Big Ag’ and timber companies while undermining biodiversity restoration and food sovereignty:** Carbon offsets from agriculture, forest conservation, and tree plantations have repeatedly failed to reduce emissions. Carbon offset payments via carbon markets are unfit as a financing mechanism for farmers and small-scale foresters. There are concerns that carbon farming will further consolidate agricultural land concentration, enrich corporations, and hinder a just transition of the agricultural sector<sup>1213</sup>. By prioritising carbon targets above the integrity of the living world, ‘nature-based solutions’ threaten to undermine the

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<sup>11</sup> Probably the first of many, there is [a lawsuit pending against KLM](#) for making such claims, with the plaintiffs arguing that the claims are unfounded, misleading, and in violation of EU consumer law.

<sup>12</sup> See: [Rethinking the EU’s approach to carbon removals and agriculture](#), Sophie Scherger, IATP (May 2022)

<sup>13</sup> See: [Lessons for the EU’s carbon farming plans](#), Ben Lilliston, IATP (June 2022)

preservation of rich forest ecosystems, worsening the loss, erosion, and extinction of biodiversity, at a time when planetary boundaries are already being surpassed<sup>14</sup>.

- **Delay real climate action:** By shifting the focus of attention away from emission reductions at source to CDR and betting on strategies of temperature overshoot which the IPCC WGII says are dangerous, the false promise of CDR is used to buy time for polluters and their investors that we don't have, while risking tremendous harm to communities and ecosystems. The focus on future CDR diverts attention and resources away from the real solutions that could be scaled up right now.

## Conclusion

Carbon markets are not a solution to climate change. Moreover, reliance on future removals instead of action now to reduce emissions—in other words, a strategy to overshoot 1.5 °C and bet on temporary removals and currently non-existent technologies to return someday to safe global temperatures—is a strategy of climate disaster.

A Commission proposal for a carbon removal certification framework will lead us in the wrong direction. The EU must reject any CDR certification proposal and refocus and redouble its efforts on real zero solutions.

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<sup>14</sup> See: [Planetary Boundaries](#), The Stockholm Resilience Centre