

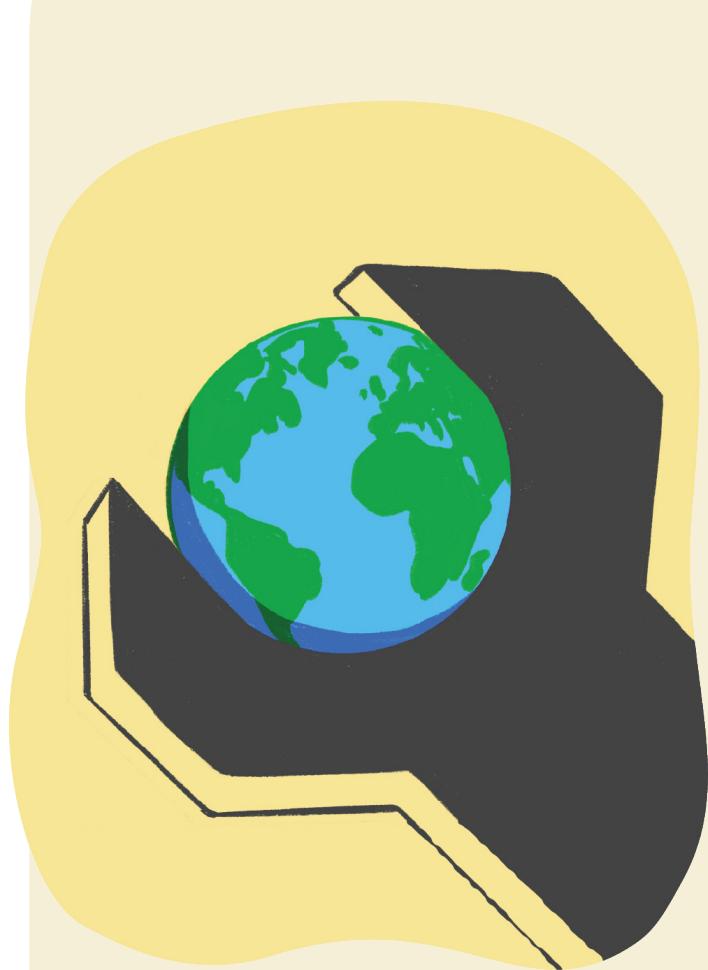
False solutions alert:

Geoengineering in climate negotiations

Geoengineering – the large-scale and intentional technological manipulation of the planet’s climate – is creeping onto the agenda and into the processes of the United Nations Framework Convention on Climate Change (UNFCCC) despite multiple concerns about potential environmental and social impacts. This briefing is intended as an initial guide for those wanting to know more about these concerns and where and how geoengineering is being promoted within climate negotiations (both in terms of the elevation of geoengineering-friendly ‘narratives’ and with respect to specific policy proposals like the development of new carbon markets). Developments within the UNFCCC contrast with the cautious approach to geoengineering being taken in other intergovernmental fora such as the Convention on Biological Diversity and the London Convention on ocean dumping.

For over a decade, climate negotiators and UN officials have dismissed geoengineering as a last resort or an undesirable plan B. It was confined to hushed talks in corridors and informal chatter on the sidelines of climate negotiations. However, geoengineering is now being pushed into the limelight as alarm bells warning of the gravity of the climate crisis and demands for urgent action become louder. There are numerous worrying proposals that need to be challenged, from proposed new market mechanisms that aim to legitimize geoengineering as ‘carbon removal’ to the promotion of marine geoengineering techniques in the UNFCCC’s Ocean and Climate Dialogues.

Yet geoengineering technologies are no solution to the climate crisis. These projects are environmentally risky and energy hungry. They demand huge public subsidies and could result in increased greenhouse (GHG) emissions and further climate disruption. Geoengineering is also a dangerous distraction from the real solutions needed to confront climate change in the little time we have left.



Geoengineering comprises a set of technologies that include interventions on land, in the oceans, or in the atmosphere. Technologies that are intended to capture carbon from the atmosphere are referred to as ‘carbon dioxide removal’ (CDR) technologies. Others, which aim to reduce the amount of sunlight that reaches the Earth or to reflect it back to space, are referred to as ‘solar geoengineering’. Critically, most of these proposals are just theoretical or at pilot stage, and none has been successfully developed at a significant commercial scale. Furthermore, because they all entail significant social and environmental risks, two UN bodies – the Convention on Biological Diversity (CBD) and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (commonly known as the London Convention on ocean dumping) – have adopted strong precautionary calls, including moratoria on the deployment of geoengineering.

Laying the ground for geoengineering: the big narratives

The narratives or background stories that have paved the way for the acceptance of geoengineering within the climate negotiations have been introduced into the UNFCCC over a number of years, especially after the adoption of the Paris Agreement in 2015. These narrative frames have also been introduced into other UN bodies and are now emerging in various negotiations and processes, such as those on the conservation of biodiversity.

Narrative #1: 'Net Zero'

Fossil fuel and other high-emitting industries and governments have devised various greenwashing strategies to appear concerned about climate change while protecting their investments and avoiding making the necessary reductions in emissions. One of the main rhetorical tools used by industry is the so-called 'net zero' or 'climate neutrality' claim. 'Net zero' assumes that continued and even increased emissions can be 'balanced' by the removal of carbon from the atmosphere, and /or compensated for through carbon offsets. However, this is an accounting trick that facilitates the continued extraction of fossil fuels rather than reducing greenhouse gas emissions¹. This helps to explain why, by the end of 2022 – in anticipation of the establishment of a new carbon market mechanism under Article 6.4 of the Paris Agreement, which would enable the hoped-for offsetting – over 2,000 of the world's largest companies were announcing 'net zero' pledges.

The Intergovernmental Panel on Climate Change (IPCC) has made it clear that the way to halt and recover from climate change is to drastically reduce the extraction and use of fossil fuels. Continuing to extract fossil fuels at the current rate will cause the Earth's temperature to rise by more than 1.5°C above pre-industrial levels within a few years, leading to a scenario with serious global consequences, which the IPCC calls "climate overshoot."² As carbon emissions are cumulative, scientists estimate that to avoid this overshoot, there is only a GHG emissions "budget"

of 420 Gt of CO₂.³ Current emissions exceed 40 Gt of CO₂ per year, which indicates that, at this rate, an overshoot scenario is only a few years away. It is therefore necessary to plan now for the drastic reduction of GHG emissions in their sources and in consumption and to prevent them from continuing to increase in any way possible.⁴

In short, there is no room left in the atmosphere to continue emitting greenhouse gases (GHGs) at current levels, much less to increase them, not even with supposed "offsets".

Nonetheless high emitting industries and other powerful economic actors, such as giant asset management companies, and the governments that enable these corporate interests, are championing different ways to achieve this 'climate neutrality' or 'net zero' emissions. One popular method for greenwashing emissions in this way is to appropriate natural ecosystems and other landscapes and trade them as carbon sinks through massive crop and tree plantations. However, Earth's land, forests and ecosystems are finite and their capacity to absorb carbon is much less than would be needed for the combined 'net zero' claims that these 2,000 companies and financial institutions have made (and continue to make as they anticipate the implementation of new carbon markets and an increased carbon price.)⁵

That is why many of the same actors are proposing a range of technological fixes to artificially remove carbon from the atmosphere. Among the geoengineering proposals included in the 'net zero' pledges are carbon capture and storage (CCS), carbon capture use and storage (CCUS), direct air capture (DAC), bioenergy with carbon capture use and storage (BECCS), ocean fertilization, enhanced weathering, and biochar.

Most of these CDR techniques are theoretical and speculative, and none have proven useful as a means of effectively and permanently removing carbon from the atmosphere. In fact, evaluating the full life cycle of these technologies – including the immense scale needed to have climate impact, the massive resources required (land, minerals, biomass), the new infrastructure and facilities necessary, and their high energy and water demands – shows that they are likely to drive an overall increase in GHG emissions.⁶

¹ Simon Lewis. "The climate crisis can't be solved by carbon accounting tricks" The Guardian, 3 March 2021. <https://www.theguardian.com/commentisfree/2021/mar/03/climate-crisis-carbon-accounting-tricks-big-finance>

² IPCC. Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the IPCC Sixth Assessment Report. <https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/>

³ Carbon dioxide in the atmosphere is cumulative, the budget left is calculated based on the excess CO₂ emitted historically since pre-industrial times and the correlated temperature increase.

⁴ IPCC. Climate Change 2022: Mitigation of Climate Change, Contribution of Working Group III to the IPCC Sixth Assessment Report. <https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/>; quoted in www.clara.earth/netzero

⁵ Doreen Stabinsky. Fossil futures built on a house of cards, Friends of the Earth International, 2022. <https://www.foei.org/publication/fossil-futures-built-on-a-house-of-cards/>

⁶ You can see details of each geoengineering proposal at Geoengineering Monitor: <https://www.geoengineeringmonitor.org/cat/briefings-and-factsheets/>

The development of CDR technologies also implies the expansion of transboundary extractive industries to enable those proposals. It is likely that these industries and the infrastructures involved will reproduce and deepen unjust patterns of extraction and exploitation of land and resources both in the Global South and in communities impacted by extractive industries in the Global North. Large-scale CDR would have devastating impacts on local communities and natural ecosystems, such as land grabs, human rights violations and sharp increases in food prices.

Narrative #2: *'Nature-based proposals'*

Another dangerous greenwashing concept associated with 'net zero' claims is 'nature-based solutions' (NBS) or 'nature-based climate solutions' (NBGS). The term is intentionally vague and ill defined, so that it can be applied to as many measures as possible, in order to maximise the appropriation and/or manipulation of forests, land, coasts and oceans.

Geoengineering proposals that are often labeled as 'nature-based solutions' include large scale plantations, BECCS, large scale macroalgae cultivation, and the genetic engineering of plants and soil microbes.

What do these big narrative frames mean for people and climate?

Having strong greenwashing narratives helps facilitate corporate grabs of natural ecosystems – such as forests, wetlands, watershed and mangroves – to claim them as carbon sinks that can be used to offset emissions. However, in most cases these areas were already absorbing carbon, meaning that this constitutes double counting.

For example, BECCS is labeled as a 'nature-based solution', despite the fact that the monoculture plantations involved in the BECCS process are not remotely natural. BECCS also comes with serious risks: the IPCC stated in their February 2022 report that proposed methods of carbon dioxide removal such as BECCS and afforestation could compromise ecosystem health and food and water security⁷.

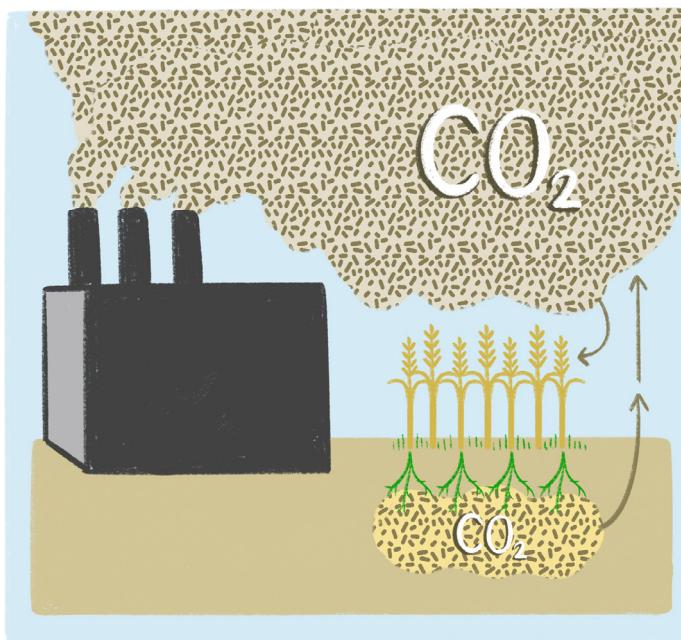
There are also proposals to genetically manipulate crops and trees to absorb more carbon or reflect more sunlight.⁸ These proposals go a step further, combining both the risks of geoengineering and the risks of genetic manipulation. There are even research projects that aim to genetically engineer the whole soil microbiota to force it to absorb more carbon. Yet the genetic engineering of crops and trees has associated

adverse impacts that could exacerbate the multiple crises we are experiencing with respect to climate, environment and biodiversity.

Another greenwashing narrative concerns ecosystem restoration. This could be beneficial if the restoration efforts respect that it must be done together with the peoples who already live on these lands and in support of their communities, respecting their right to Free, Prior and Informed Consent (FPIC) and recognizing their historical conservation efforts. However, restored ecosystems have dynamic natural carbon cycles, both sequestering and emitting CO₂; they do not have the capacity to absorb additional CO₂ emissions.⁹

Industrial and financial markets are sizing up soils and oceans as the next carbon sinks

The soil grab: Soils, like forests, are also living ecosystems that breath; they absorb and emit carbon. When eroded – due to the use of heavy machinery, synthetic fertilizers and agrochemicals in industrial agriculture – soils can emit more carbon than they have absorbed, releasing the naturally stored carbon that was fixed when the soils were balanced and rich in natural soil microbiota (eg the soils that can be found in peasant and agroecological systems).



Because soils – like forests and other living ecosystems – do not store carbon permanently, profiting from carbon offsets also requires transforming agriculture into a new 'carbon farming' model. Companies like Bayer-Monsanto, John Deere and other big digital

⁷ Summary for Policy Makers, WGIII AR6. https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport_small.pdf

⁸ Geoengineering Monitor. Enhanced Photosynthesis (Technical Briefing), 2021: <https://www.geoengineeringmonitor.org/2021/04/enhanced-photosynthesis/>

⁹ Doreen Stabinsky. Fossil futures built on a house of cards, Friends of the Earth International, 2022. <https://www.foei.org/publication/fossil-futures-built-on-a-house-of-cards/>

Where geoengineering rears its ugly head

agribusiness players are stepping forward to offer themselves as brokers for highly problematic and unproven ‘soil offsets’ proposing the use of their proprietary digital advisory services for ‘precision agriculture’. New science on soil carbon sequestration, however, suggests that soil carbon storage capacity has been vastly overestimated.¹⁰ Soil offsets do not take into account the high energy costs of the use of digital tools and big data behind this model. Furthermore, the agricultural soil grab for carbon markets seriously threatens peasant communities and their livelihoods.

The ocean grab: The post-Paris Agreement prospect of new carbon markets has also fuelled a push for marine geoengineering technologies. From ocean fertilization to large-scale massive plantations of macroalgae, these are also now being framed as nature-based climate solutions (NBCS). Yet ocean fertilization is not permitted (except for legitimate scientific research) under the UN’s London Convention on ocean dumping – so their promoters have changed the names of these experiments, referencing ‘ocean pasture’, ‘ocean nourishment’ or ‘artificial whale poo,’ instead, for example.¹¹

In the same way, mega-scale cultivation of macroalgae such as kelp is often called ‘marine forests’ – and it is indeed similar to tree monoculture plantations, entailing many of the same problems. Large monocultures of macroalgae threaten the natural marine environment by attracting diseases and by displacing biodiversity and the vital food chain that natural macroalgae is embedded in. As with large tree plantations and their impacts on Indigenous and rural communities, industrial kelp monocultures are a threat to the sound ecosystems of artisanal algae cultivators and to their livelihoods. Furthermore, scientific articles indicate that kelp’s capacity to sequester carbon seems to be very poor¹². Covering large parts of the sea with kelp and sinking such massive amounts of dead kelp to the bottom carries many uncertainties and potential impacts.¹³ Microalgae, kelp and seaweed farming often pop up in deliberations on “blue carbon” across UN fora.

The word ‘geoengineering’ is rarely mentioned openly in UNFCCC negotiations and processes. Rightfully so, as there should be no place in climate diplomacy for technologies involving fantastical claims, which have not been proven. However, specific geoengineering proposals that mostly fall under carbon removals have recently made their way into UNFCCC processes and negotiations that civil society, social movements, and government negotiators alike need to be aware of.

Article 6.4 is building the market for an explosion of geoengineering techniques

Within the Paris Agreement, Article 6 establishes three approaches, through which countries can pursue ‘voluntary cooperation’ to reach their climate targets. Article 6.4 is intended to replace the Kyoto Protocol’s Clean Development Mechanism (CDM). Although the Paris Agreement does not mandate a new market mechanism, current negotiations about this article are focused on creating and implementing a new market mechanism through which a company’s emissions reductions in one country can be credited and sold to a company in another country. To this end, a Supervisory Body was created by the ‘Conference of the Parties serving as the Meeting to the Parties of the Paris Agreement’ (CMA), which could serve to pre-approve and register emissions reduction projects (along with the country where the project is implemented).

Article 6.4 has been critiqued, among other aspects, for allowing CDM carbon emissions reduction projects to transition into the Paris Agreement’s new mechanism while continuing to use dated methodologies that were accepted under the CDM methodologies, so long as they meet the criteria currently being discussed for the new Article 6.4 methodologies. The practical consequences of this exemption, which lasts until the end of 2025, could be severe: Carbon Market Watch predicts that if all projects are transitioned in this way, the world could face the nightmare scenario of up to 2.8 billion of (highly speculative) junk credits being issued.¹⁴

¹⁰ C. Terrer, et al. A trade-off between plant and soil carbon storage under elevated CO₂, *Nature*, 24 March 2021, <https://www.nature.com/articles/s41586-021-03306-8>; Damian Carrington. One of Earth’s giant carbon sinks may have been overestimated – study, *The Guardian*, 24 March 2021, <https://www.theguardian.com/environment/2021/mar/24/soils-ability-to-absorb-carbon-emissions-may-be-overestimated-study>

¹¹ Adam Vaughan. Scientists want to restore the oceans with artificial whale poo, *New Scientist*, 22 February 2022, <https://www.newscientist.com/article/2309262-scientists-want-to-restore-the-oceans-with-artificial-whale-poo/>

¹² John Barry Gallagher et al. Seaweed ecosystems may not mitigate CO₂ emissions. *ICES Journal of Marine Science*, Volume 79, Issue 3, April 2022.

¹³ John Barry Gallagher. Kelp won’t help: why seaweed may not be a silver bullet for carbon storage after all, *The Conversation*, 11 March 2022, <https://theconversation.com/kelp-wont-help-why-seaweed-may-not-be-a-silver-bullet-for-carbon-storage-after-all-178018>

¹⁴ Carbon Market Watch. FAQ Deciphering Article 6 of the Paris Agreement, <https://carbonmarketwatch.org/2021/12/10/faq-deciphering-article-6-of-the-paris-agreement/>

Many new types of what are considered ‘carbon removal technologies’ have been proposed for acceptance under the criteria of the Article 6.4 Supervisory Body. If accepted, this would leave the door wide open to a host of risky geoengineering techniques, which are not even proven to permanently remove carbon from the atmosphere and could add new climate risks.

The list of technologies and removal activities that would qualify to be registered by the Supervisory Body is currently being proposed by an informal working group on methodologies¹⁵. A [September 2022 information note from the Supervisory Body on Article 6.4 Mechanism](#) mentioned that the following geoengineering activities are being considered, among others:

“Bio-sequestration” methods

- Soil carbon sequestration in croplands
- Soil carbon sequestration in grasslands

Engineering/chemical methods (geoengineering techniques)

- Direct air removal (DAC)
- Enhanced rock weathering (EW)
- Ocean alkalization (OA)
- Ocean fertilization (OF)

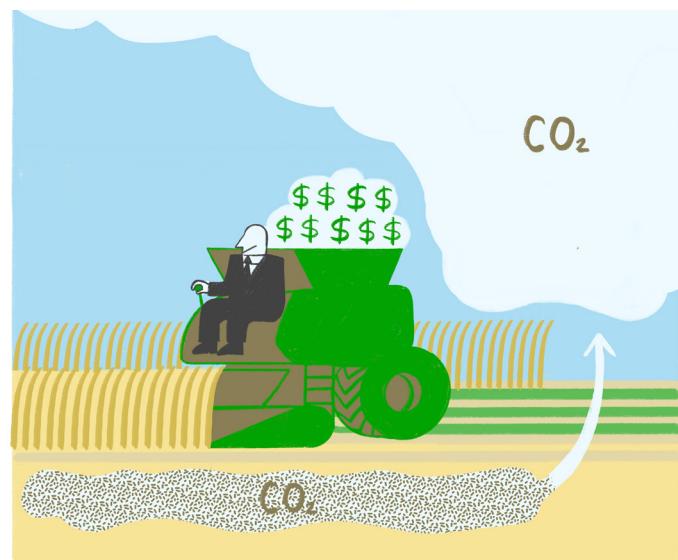
A global carbon market risks creating pressure to use newly developed energy infrastructure in the Global South to reduce carbon emissions of the Global North.

Storage of theoretically removed carbon is supposed to be covered by other geoengineering-related techniques that have previously been accepted in the CDM, such as carbon capture and storage (CCS), carbon capture use and storage (CCUS), and bioenergy with carbon capture and storage (BECCS) – all of which have shown to be highly problematic. They were found to be very inefficient and expensive – and mostly survived on public subsidies¹⁶ – and to have significant ecological risks, including a sharp increase in the number and length of pipelines that would be needed. The demand for land and water for BECCS competes with food

production and communities’ livelihoods, making it a threat to food security and food sovereignty.

However, while marine geoengineering techniques like ocean alkalization, ocean fertilization and enhanced weathering are being considered as potential options in Article 6.4, other international bodies have issued strong cautions against these practices and are considering further regulation. Ocean fertilization is already strictly controlled under a treaty that regulates dumping at sea, the London Convention and its London Protocol (LC/LP), because it poses a range of risks to marine ecosystems. Recently the LC/LP indicated that enhanced rock weathering and ocean alkalization will be coming under investigation and could soon be regulated by the LC/LP because of the risk these techniques pose to marine life. It seems relevant for the UNFCCC to exercise the same caution with these technologies.

It is concerning that in the [September 2022 information note](#) some of the statistics about the carbon capture capacity of these technologies appear to be directly adopted from industry sources. In the section on BECCS, the information note “assumed that the carbon capture and storage (CCS) component has 80 per cent efficiency in capturing and storing the carbon contained in the biomass combusted”. However, only in rare cases has CCS technology captured 80% of CO₂ and some of the biggest CCS projects in the world have underperformed by 50%.¹⁷ Ostensibly, even before it becomes operational as a mechanism, Article 6.4 is becoming a market for geoengineering and false solutions – and one that is being strongly influenced



by those who stand to make money from this market. The engineering/chemical removal methods listed also pose major problems for reducing carbon emissions.

¹⁵ Supervisory Body on Article 6.4 Mechanism. A6.4-SB002-AA-A06 ‘Information note Removal activities under the Article 6.4 mechanism’ V. 01.0 <https://unfccc.int/sites/default/files/resource/a64-sb002-aa-a06.pdf>

¹⁶ Charles Harvey & Kurt House. Every Dollar Spent on This Climate Technology Is a Waste, New York Times, 16 August 2022, <https://www.nytimes.com/2022/08/16/opinion/climate-inflation-reduction-act.html>

¹⁷ Bruce Robertson. Carbon capture remains a risky investment for achieving decarbonisation, IEEFA, 2 September 2022, <https://ieefa.org/resources/carbon-capture-remains-risky-investment-achieving-decarbonisation>

These technologies are all highly energy intensive and would most likely increase the emissions of GHG across their full life cycles and/or compete for the use of renewable energy. Furthermore, increased energy production and infrastructure should be prioritized for communities and the needs of populations, rather than being used for geoengineering projects. A global carbon market risks creating pressure to use newly developed energy infrastructure in the Global South to reduce carbon emissions of the Global North.

There are also concerns about the proposed structure for fees for participation in the mechanism, which is designed so that there is no fee to register carbon removal activities in the [least developed countries](#) and small island developing states. While the intention may be to make up for climate colonialism in the past, waiving the registration fee creates a risk that regions like Africa are more frequently approached by those peddling false climate solutions. This could increase the potential for landgrabs in the Global South. Already, most geoengineering projects on the African continent are initiated and funded by institutions in the Global North, reproducing dynamics of climate colonialism.¹⁸

New dubious schemes to ‘fight climate change’ emerge every day and creating a new carbon market will further fuel the explosion of false solutions and promote investments in geoengineering techniques.

Article 6.4 is taking shape quickly and we need to ensure that carbon markets are rejected, with false solutions being removed from the associated list of removal activities.

Marine geoengineering at UNFCCC

According to the UN, the ocean is not just ‘the lungs of the planet’ but also ‘its largest carbon sink’ as it “absorbs 25 percent of all carbon dioxide emissions and captures 90 percent of the additional heat generated from those emissions.”¹⁹ This narrative has stirred huge interest from geoengineering promoters, mainly Global North actors, who want to utilize the Earth’s ‘untapped’ and ‘unexplored’ oceans for carbon sequestration. All around, we see new billionaire-sponsored consortiums, like Oceans Visions,²⁰ being formed; and academic institutions like the National Academies of Sciences, Engineering and Medicine coming up with strategies²¹ with a view to finding technological ‘fixes’ to increase the ocean’s carbon absorption.

As described above, developments in marine geoengineering also include the canny rebranding of techniques that have long been criticized by the science and academic community, civil society and communities alike. For example, the Centre for Climate Repair at Cambridge has blatantly breached the London Convention regulations and CBD moratorium to conduct real-world experiments in 2021 to see if they can artificially encourage phytoplankton growth by dumping “artificial whale feces” into the ocean.²²

Within the UNFCCC, ocean and climate links have been discussed in recent years in various non-negotiating events and dialogues. While not a negotiation track, these thematic dialogues provide inputs into relevant processes, and influence the framing of issues that are subsequently negotiated. Along with the inclusion of marine geoengineering techniques to be potentially eligible for carbon credits, through Article 6.4 for example, this push for ‘blue carbon’ markets is extremely concerning.

Inputs into the Ocean and Climate Dialogue, held in June 2022 at SBSTTA 56, included the promotion of nature-based solutions as measures that could be included in climate action policy and financing, and calls for measuring the carbon sequestration and storage capacity of oceans. There were proposals to include the sequestration capacity of ‘blue carbon’ ecosystems, sea grass, mangroves and salt marshes into national greenhouse gas inventories, and for those to be considered for offsetting emissions from shipping and ports. There were also proposals to create ocean-based financing that could establish ‘blue bonds’, potentially financed by the Global Environment Facility (GEF) and World Bank. A panelist from Deutsche Bank asked for mixed public-private grants to minimize the risk for industries investing in this nascent ‘blue economy for climate.’

The Oceans and Climate dialogues will continue at each COP, and it was indicated that they would be used to gather ideas from the shipping industry, which is now pushing for a Global Blue New Deal and the financialization of the oceans.

It is important to note that the 2022 dialogue was very poor at listening to and acknowledging fisher and coastal communities, who should be recognized for their contribution to caring for marine ecosystems and preventing further climate change.

¹⁸ Anja Chalmin. *Geoengineering Activities on the African Continent*, Geoengineering Monitor, 2021, <https://www.geoengineeringmonitor.org/2021/01/geoengineering-activities-on-the-african-continent/>

¹⁹ United Nations. *UN Ocean Conference event page*, 2022, <https://www.un.org/en/conferences/ocean2022/about>

²⁰ *Ocean Visions*. *Ocean Vision website*, 2022, <https://www.oceanvisions.org/>

²¹ National Academies of Sciences, Engineering and Medicine. *A Research Strategy for Ocean Carbon Dioxide Removal and Sequestration*, 2021, <https://www.nationalacademies.org/our-work/a-research-strategy-for-ocean-carbon-dioxide-removal-and-sequestration>

²² Clare Roth. *Artificial whale poop could save the planet — here’s how*, DW, 28 March 2022, <https://www.dw.com/en/artificial-whale-poop-could-save-the-planet-heres-how/a-61247529>

More stealth routes for geoengineering proposals in climate negotiations

There are a number of tracks in the UNFCCC and Paris Agreement negotiations, some of which are below the political radar, that should be carefully monitored as possible entry points for bringing geoengineering proposals into decisions and into the projects and activities of different bodies and processes.

Voluntary cooperation in Article 6.8

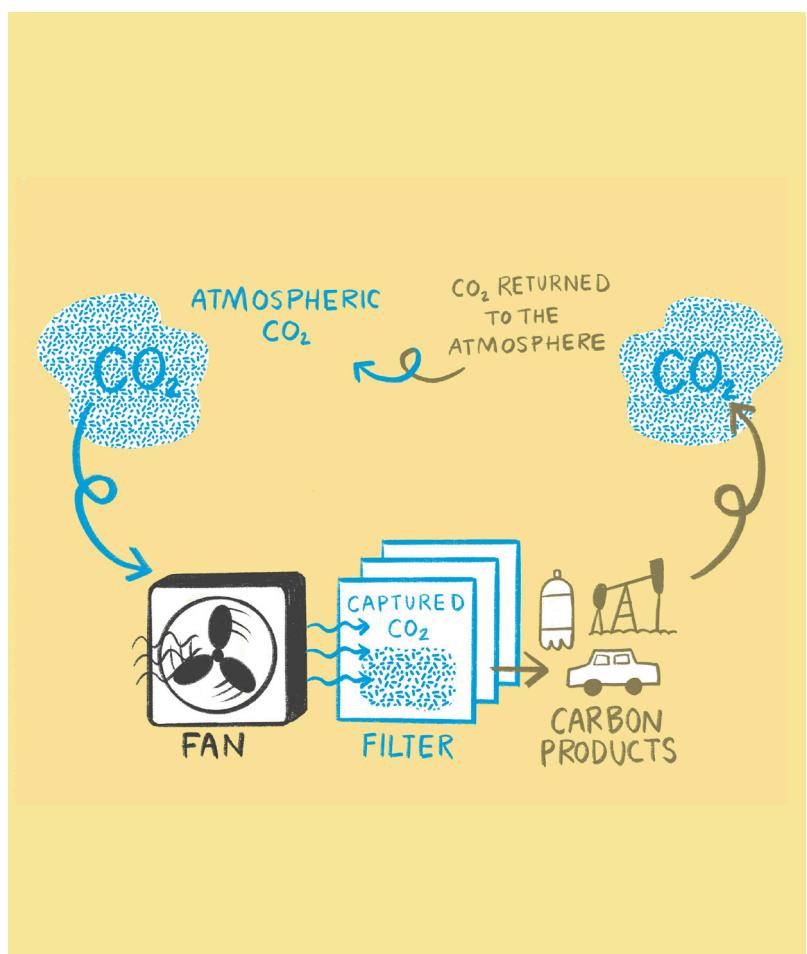
Intended as a counterweight to the market focus of Article 6.4, Article 6.8 of the Paris Agreement is expected to enable voluntary cooperation through technology transfer and sharing, capacity building, etc. However, without clear criteria excluding geoengineering proposals in voluntary cooperative actions, Mitigation Measures, a priority area in the work programme of Article 6.8, could become a route to develop and deploy dangerous technologies that claim to reduce GHG emissions. The consideration of several carbon removal techniques in the market-based mechanism under Article 6.4 should not spill over to non-market approaches, and voluntary cooperation should explicitly exclude geoengineering proposals.

Global stocktake

The stocktaking process, through which UNFCCC Parties collectively assess implementation of the long-term goals and objectives of the Paris Agreement, could also open routes for geoengineering proposals to gain acceptance. With proposals for CCS, DAC and other carbon removal techniques being put forward in the technical dialogues on mitigation and means of implementation – dialogues meant to provide science-based inputs to the global stock take (GST) – there is cause for concern that the global stocktake could become another entry point for geoengineering.

Response measures

Impacts of the Implementation of Response Measures is a UNFCCC stream that has generally been ‘below the radar’ of civil society members who follow the climate negotiations. This track focuses on beneficial or detrimental, social, economic, political, and environmental impacts of the implementation of climate actions, such as the increased deployment of renewable energy technologies resulting in the transformation of entire economies. Fossil fuel-producing countries have invested much energy in this track over the years, as both a defensive and proactive approach, as the global shift away from fossil fuel dependence could be contrary to their national interests. It is no surprise that proposals such as CCS, DAC and other carbon removal technologies, which are advanced by fossil fuel interests, have surfaced more openly in recent deliberations under this stream.



What we demand in the climate negotiations

The following demands are critical to the development and implementation of real solutions to climate change at the UNFCCC's COP-27 in Egypt, in November 2022:

- Real actions and real solutions are needed to keep global temperature rise below 1.5oC, meaning that UNFCCC must focus on ensuring the deep and rapid reduction of emissions of greenhouse gases, not on ways to mask or compensate for continued emissions such as carbon markets.
- None of the geoengineering technologies proposed will reduce emissions or address any of the root causes of climate change. Promoting carbon removals through geoengineering delays and distracts from the rapid reduction of emissions that the world needs.
- All geoengineering proposals are speculative, cannot be deployed at scale and pose significant risks to environment and human rights, including to the rights of Indigenous Peoples and local communities, the rights of peasant and farmers' communities, and food sovereignty.
- The UNFCCC and its bodies must recognize and honour the precautionary decisions on geoengineering technologies adopted at the Convention on Biological Diversity and the London Convention/London Protocol, and should not sanction activities that are being restricted and under the scrutiny of other UN fora.
- No geoengineering techniques – including BECCS, direct air removal (DAR), enhanced rock weathering (ERW), ocean alkalization (OA) and ocean fertilization (OF) – should be approved to be registered as potential removals technologies under the mechanisms of Articles 6.4 and 6.8 of the Paris Agreement.
- No marine geoengineering proposals should be considered under the Ocean and Climate dialogues.
- Because of the multiple threats to food security, food sovereignty and to peasant and indigenous livelihoods, agricultural soil should not be integrated into carbon markets.

With these demands, and continued vigilance by civil society, we can prevent global institutions from falling for false solutions such as geoengineering, and champion real ones.

More information on geoengineering:

Geoengineering Monitor

<https://www.geoengineeringmonitor.org/>

Briefings on each geoengineering technology

<https://www.geoengineeringmonitor.org/cat/briefings-and-factsheets/>

The Big Bad Fix, The Case Against Climate Geoengineering

Biofuelwatch, ETC Group, HBF, 2017

<https://www.etcgroup.org/content/big-bad-fix>

Contacts

Neth Daño, ETC group,
neth@etcgroup.org

Silvia Ribeiro, ETC group,
silvia@etcgroup.org

November 2022

Funded by the Rosa-Luxemburg-Stiftung New York Office with support from the German Ministry for Economic Cooperation and Development (BMZ).

The publishers are solely responsible for the content of this publication; the opinions presented here do not reflect the position of the BMZ.