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3 February 2025

RE: 15th Meeting of the Article 6.4 Supervisory Body (SBM015), comments to annotated agenda and related annexes

To: Secretariat of the Article 6.4 Supervisory Body

The organisations signed onto this submission strongly oppose carbon trading in Article 6 of the Paris Agreement. We are deeply concerned by the non-transparent and exclusive process displayed at COP 29 in Baku, Azerbaijan, with closed-door meetings allowing for a handful of countries to unilaterally finalize the Article 6 texts. This opaque process has enormous implications for decision-making in an already flawed carbon market system that rewards polluting industries and parties. As organizations that do not have an interest in or stand to profit from this scheme, we strongly urge the Supervisory Body to take our recommendations and cautions seriously.

We have fundamental concerns regarding the inclusion of greenhouse gas removals under Article 6.4, specifically around the risks that removal technologies pose. In relation to any further work undertaken by the Subsidiary Body (SB) 6.4 on activities involving removals, we would like to remind SB 6.4 members of the **de facto moratorium on all climate-related geoengineering¹ under the UN Convention on Biological Diversity (UN CBD)**, which includes all land-based and marine Carbon Dioxide Removal (CDR) technologies and in October 2024, was reaffirmed at the most recent UN CBD COP16 in Cali, Colombia, furthermore urging parties to ensure its implementation.

In addition, the **London Convention/London Protocol (LC/LP)** effectively prohibits ocean fertilisation and is considering bringing additional marine geoengineering techniques, including ocean alkalinity enhancement and biomass sinking, under regulation. The governing bodies of the LC/LP *“are of the view that there are risks of adverse environmental impacts of these techniques with limited knowledge of their effectiveness, and as such activities, other than legitimate scientific research, should be deferred.”*² In providing exemptions for scientific research, both Conventions (LP/LC) explicitly exclude experiments with a commercial aspect or that involve selling carbon offsets.

¹ Convention on Biological Diversity, Climate-related Geoengineering and Biodiversity, <https://www.cbd.int/climate/geoengineering/>; Convention on Biological Diversity, Decision X/33 para. 8 (w)

² 45th Consultative Meeting of Contracting Parties to the London Convention and the 18th Meeting of Contracting Parties to the London Protocol (LC 45/LP 18), Marine geoengineering - statement <https://www.imo.org/en/MediaCentre/MeetingSummaries/Pages/LC-45-LP-18.aspx>

Both carbon offset projects and geoengineering experiments and technologies continue to target Indigenous Peoples' territories, and threaten to violate the inherent and collective rights of Indigenous Peoples. Rigorous and robust protections for respecting the rights of Indigenous Peoples as outlined in the **United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) including free, prior and informed consent (FPIC)** must be upheld.

Therefore, endorsing any of these techniques for commercial use in carbon markets under Article 6 would contravene the aforementioned provisions. Article 6 must not allow carbon trading and/or CDR activities that are prohibited or restricted by, or that threaten to breach States' obligations under, the decisions and regulations of other UN bodies or sister conventions, and other multilateral instruments.

The definition of activities involving removals remains problematic, as it is unclear what will be considered a removal. Further, it does not exclude highly speculative technologies, including risky methods such as marine geoengineering, carbon capture and storage, direct air capture with carbon storage, bioenergy with carbon capture and storage, and carbon storage in products. Many of these techniques are largely theoretical, often serving to justify continued fossil fuel production and business-as-usual practices, while also posing potential risks to both the environment and communities.

Some of the key problems with land-based and marine CDR include:

1. Marine Carbon Dioxide Removal proposes large-scale intervention in delicate ocean ecosystems that are already severely stressed by over-exploitation, pollution and climate change – with potentially grave consequences for communities, ocean biodiversity, food chains, fisheries, and even the oceans' natural capacity to sequester carbon. While approaches vary, they have in common the enormous scale of intervention required to have a meaningful impact on the climate. Ocean fertilisation and ocean alkalinity enhancement, for example, would require utilising approximately 10% of the oceans' surface,³ while seaweed cultivation would require the equivalent of a 100m belt around 63% of the world's coastline to sequester 0.2% of emissions.⁴

Additionally, massive infrastructure and supply chains would have to be developed to meet the extraction, processing, and transportation requirements associated with these technologies, which would come with high energy and CO₂ emissions costs. We note that four times as many marine carbon dioxide removal/geoengineering field experiments were proposed between 2019 and 2023 as during the previous five-year period.⁵ Many of these

³ Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, High Level Review of a Wide Range of Proposed marine Geoengineering Techniques, <http://www.gesamp.org/publications/high-level-review-of-a-wide-range-of-proposed-marine-geoengineering-techniques>

⁴ National Academy of Sciences, A Research Strategy for Ocean-based Carbon Dioxide Removal and Sequestration, <https://nap.nationalacademies.org/catalog/26278/a-research-strategy-for-ocean-based-carbon-dioxide-removal-and-sequestration>

⁵ CIEL. 2024. Risks of Geoengineering: Accelerating Biodiversity Loss and Compounding Planetary Crisis.

projects are driven by commercialization via carbon markets, namely the pre-selling of carbon removal credits.

Crucially, none of these approaches has been proven effective in the long-term removal and storage of CO₂, and there are no reliable means to monitor, report or verify the CO₂ that would be sequestered. The impacts of marine CDR are inherently transboundary and impossible to restrict to a certain location.

2. Land-based Carbon Dioxide Removal technologies are proposed to remove CO₂ from the atmosphere at an industrial scale. However, all land-based CDR options require, in varying combinations, vast areas of land, energy, biomass, water, fertilizer, minerals and other resources.⁶ New large-scale industries would be needed if land-based CDR was to be rolled out at a climate-relevant scale, which is likely to lead to more emissions rather than reduce emissions. None of the proposed land-based CDR options has been proven effective, let alone at scale. Given the demand for land, water, biomass, energy, water and resources, many land-based CDR technologies would compete with other land uses, such as food production, natural ecosystems and other vital uses, compromising the rights and livelihoods of communities.⁷

In addition to the many negative social, environmental, and human rights impacts of land-based CDR and the additional emissions arising during the removal process, the fate of the captured CO₂ is highly uncertain. Many land-based CDR technologies, like bioenergy with carbon capture and storage (BECCS), rely on carbon capture and storage (CCS) or carbon capture use and storage (CCUS) to trap and inject carbon dioxide underground or in products. However, CCS has a long track record of failure, including overstated capture rates and problems with underground pressure management, has mainly been used to date for enhanced oil recovery (EOR), and poses risks to communities and the environment.⁸ Direct air capture, an energy- and input-intensive technology unproven at scale that purports to remove CO₂ from the ambient air, similarly relies on the carbon dioxide injection and storage techniques that have encountered problems in CCS projects to date, and poses other concerns.

https://www.ciel.org/wp-content/uploads/2024/10/CIEL_briefing_The-Risks-of-Geoengineering_October2024.pdf

⁶ Dooley, K., Christiansen, K.L., Lund, J.F. *et al.* 2024. Over-reliance on land for carbon dioxide removal in net-zero climate pledges. *Nat Commun* 15, 9118.
<https://doi.org/10.1038/s41467-024-53466-0>

⁷ Friends of the Earth International. 2021. A Leap in the Dark: The Dangers of Bioenergy with Carbon Capture and Storage (BECCS), https://www.foei.org/wp-content/uploads/2021/01/Friends-of-the-Earth-International_BECCS_English.pdf

⁸ See for instance:

<https://www.theguardian.com/environment/2021/jul/20/a-shocking-failure-chevron-criticised-for-missing-carbon-capture-target-at-wa-gas-project>; see generally, Institute for Energy Economics and Financial Analysis (IEEFA), Carbon Capture Crux: Lessons Learned, <https://ieefa.org/sites/default/files/2022-09/The%20Carbon%20Capture%20Crux.pdf>. See also, Geoengineering Monitor, CCS and DAC continue to fail to deliver despite over a century of R&D, <https://www.geoengineeringmonitor.org/ccs-and-dacc-continue-to-fail-to-deliver-despite-over-a-century-of-rd>

CCUS and storage in products should generally not be considered a removal activity under the Article 6.4 mechanism as most products have a short lifespan, after which greenhouse gases will be re-emitted into the atmosphere, which does not comply with the requirement for the permanence of storage or reducing emissions.

Ultimately, engineered removal projects, and their inclusion in carbon markets, give the illusion of technological and market fixes to the climate crisis, enabling the continuation and expansion of the fossil fuel industry, and giving a free pass to big polluters.

These unproven, risky technologies will only add uncertainty to carbon markets and offsets that are already fraught with problems, are fundamentally flawed mechanisms, and fail to advance meaningful climate action.

Endorsements:

Biofuelwatch
Center for International Environmental Law
Heinrich Boell Foundation
Indigenous Environmental Network