Via Email

To: Supervisory-Body@unfccc.int
Title: Input to A6.4-SB005-AA-A09 annotated agenda and related annexes
Date: May 23rd, 2023

Open Letter to UNFCCC Supervisory Body in response to the recent publication [A6.4-SB005-AA-A09] "Information Note: Removal activities under the Article 6.4 Mechanism" published 19th May 2023.

We believe that the information published by UNFCCC's Secretariat Information Note on activities under the Article 6.4 Mechanism dated 19th May 2023 took too narrow a view and did not sufficiently take all previous comments into account. This letter seeks to provide additional background and respond specifically to the summaries provided in the Information Note.

IPCC's AR6 report concluded that atmospheric carbon dioxide removal (CDR) is required to meet net zero GHG emissions and the targets outlined in the Paris Agreement.[1] Technology development of engineering-based CDR pathways is a rapidly growing field that must be considered applicable given appropriate conditions precedent for technology maturity, economics and the proper evaluation of societal development goals.

Technologically mature engineering-based pathways provide a potential mitigation scale unachievable with nature-based solutions and do not carry the same environmental risks associated with the loss of carbon stock due to climate change as present with many nature-based solutions. Furthermore, risks associated with engineering CDR technologies highlighted in the Information Note such as water or renewable energy demand are not appropriately generalized across all CDR technology pathways.

Engineering CDR easily fits within the A6.4 framework through (a) mitigating GHG emissions while fostering sustainable economic growth; (b) facilitating public and private participation in the mitigation of GHG emissions by both public and private entities; (c) enabling emission reduction development participation across borders; (d) mitigating and reducing overall global GHG emissions.

As such we respectfully request the UNFCCC Supervisory Body conduct an expert review regarding engineering removals as considered under eligibility types in the Article 6.4 mechanism.

We further request the UNFCCC engage its expert advisory group with a transparent and public input forum including all interested public input organizations that submitted responses and suggest the UNFCCC revisit the existing comments and incorporate them into the summary more clearly.

[1] IPCC, 2023: *Climate Change 2023: Synthesis Report.* A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, (in press)

Specific responses to the Information Note:

"Based on the public input from stakeholders and other sources consulted, table 3 summarizes the pros and cons of the eligibility of different types of activities under the A6.4 mechanism."

Following a thorough review of all responses submitted to UNFCCC, we do not believe that this statement accurately reflects the input provided to the UNFCCC. It is further noted here that the expert advisory panel was not consulted prior to the publication of this document.

"Engineering-based removal activities are technologically and economically unproven, especially at scale, and pose unknown environmental and social risks."

We believe this statement to be factually inaccurate and misleading.

1. This statement demonstrates a fundamental misunderstanding of the differentiation of engineering-based removals and fails to differentiate both removal strategies as well as CO_2 utilization pathways along with any appropriate consideration of risk mitigation.

2. It is factually inaccurate to state that engineering-based removal activities are technologically unproven.[2,3,4] UNFCCC should consider transparent technology readiness levels (TRL) for engineering-based activities to be included under A6.4. As TRLs advance, those activities should become available under A6.4. Limitations of emerging technologies under A6.4 will significantly hinder their development and commercialization.

3. It is misleading to state that engineering-based removal activities are economically unproven, independent of scale. At the present time there are numerous companies seeking to reduce their carbon footprint that have committed advance purchase agreements facilitating economic returns for those projects. While it is true that at the present time the economics of large-scale engineering CDR pathways have yet to be demonstrated at the required scale, the statement ignores the cost reduction curves of technology learning-by-doing and unnecessarily limits the application of the technology under A6.4 once a pathway or technology is economically proven.

4. It is factually inaccurate to state that engineering-based CDR activities pose unknown environmental and social risks. Environmental and social risks associated with engineering-based CDR activities are dependent on the technology and CO_2 disposal pathways. While there are some technologies and pathways that pose unknown risks, there are others that are well understood and qualified. UNFCCC should create a mechanism for addressing these concerns prior to adoption under A6.4. Furthermore, there are specific environmental and social regulations that are already in place which are generally applicable for issues that managing carbon require. Opportunities exist within

[2] https://www.wri.org/insights/direct-air-capture-resource-considerations-and-costs-carbon-removal

[3] Möllersten, Kenneth & Naqvi, Raza. (2022). Technology Readiness Assessment, Costs, and Limitations of five shortlisted NETs • Accelerated mineralisation, Biochar as soil additive, BECCS, DACCS, Wetland restoration.

[4] Jude O. Asibor, Peter T. Clough, Seyed Ali Nabavi, Vasilije Manovic, A country-level assessment of the deployment potential of greenhouse gas removal technologies, Journal of Environmental Management, Volume 323, 2022.

the UNFCCC framework to ensure that those standards are applied globally either through national law and/or international finance risk management requirements - specifically, UNFCCC should demonstrate a commitment to supporting the development of world class standards.

5. The logic of this summary provided in the Information Note, for instance, that any technology that is not already at scale should not be eligible under A6.4 goes against the "all of the above" approach needed to mitigate GHG emissions and meet the goals for net zero and the Paris Agreement.

"These activities do not contribute to sustainable development, are not suitable for implementation in the developing countries and do not contribute to reducing the global mitigation costs, and therefore do not serve any of the objectives of the Article 6.4 mechanism."

We believe this statement to be factually inaccurate and misleading. Specifically, we reject the assumption that nascent and emerging CDR technologies cannot or will not contribute to sustainable development, that they do not serve any of the objectives of A6.4 mechanism and that they do not or will not contribute to reducing global mitigation costs.

Furthermore, we believe that the failure to include engineering CDR pathways in A6.4 will exacerbate the economic divide between developed and underdeveloped countries and will create a framework that will limit significant economic development in developing countries by focusing the investment and development of durable CDR infrastructure (widely estimated to be in the USD trillions of economic development by 2050) in developed countries.

1. Anything that measurably and demonstrably reduces atmospheric carbon dioxide concentration while avoiding social and economic harm should be considered and included under a framework appropriate for each technology development pathway.

2. We request further explanation and evidence information as to the assertion that these activities do not contribute to the SDGs. Specific attention should be given towards evaluating how the development and deployment of engineering CDR technologies can create jobs, economic growth, address hunger shortages, expand the affordability of clean energy, decarbonize hard to abate industries and infrastructure and mitigate global GHG emissions.

3. We request further explanation and evidence information as to why engineering CDR is not suitable for implementation in developing countries. We believe that engineering CDR pathways can be deployed widely using modular-scale technologies which can be deployed in the developing world creating jobs and economic growth in the immediate-term.

We welcome the opportunity to work with the UNFCCC team to find a more balanced and responsible path forward in addressing the risks and opportunities at issue.

Signed,

Matthew Atwood, CEO