

Input to SB005 2022 Annotated Agenda and Related Annexes

25 May 2023

Supervisory Body

United Nations Framework Convention on Climate Change (UNFCCC)

By Email: Supervisory-Body@unfccc.int

RE: Input to SB005 2022 Annotated Agenda and Related Annexes

Dear Supervisory Body:

Thank you for your ongoing work to ensure that the UNFCCC carefully considers carbon dioxide removal (CDR) as an essential complement to emissions reductions to achieve our climate objectives. We are grateful for your continuing efforts to invite and incorporate stakeholder input as you develop your recommendations. To that end, we are eager to share our thoughts regarding the Information Note entitled “Removal activities under the Article 6.4 mechanism” ([A6.4-SB005-AA-A09](#) version 0.40).

We are approaching this request for stakeholder input as a current buyer of permanent CDR. Our mission is to get CDR on its best possible trajectory so that it can scale to the size needed by midcentury to limit the worst impacts of climate change. To this end, we launched Frontier, an advance market commitment to purchase \$1B of permanent, high-quality CDR by 2030. We have already seen the catalytic impact that criteria-based procurement of CDR can have, particularly in an emerging industry: since we launched Frontier a year ago, we have seen a two-fold increase in applicants, and more than five companies raised successful equity rounds after a Frontier purchase. We have also seen a wide range of new, high-potential approaches to CDR emerge in the last year, from biomass carbon removal and storage to enhanced rock weathering to biomass burial to ocean-based carbon removal.

We are especially interested in providing the following feedback to the Supervisory Body:

- **Limiting the worst impacts of climate change requires a portfolio of CDR solutions. Therefore, the Supervisory Body should use a criteria-based approach to define CDR.** We are pleased that the Supervisory Body’s Information Note aligns with climate science in acknowledging that CDR will likely be required at gigatonne scale by mid-century to limit the worst impacts of climate change. However, CDR encompasses a wide range of approaches, some of which may not yet exist, and many of which transcend historical (and arbitrary) binaries, such as “land-based” versus “engineered.” Encouraging this diversity is critical not only because of the nascent state of the field, but because of potential constraints on any single approach’s ability to scale. For this reason, Frontier developed a set of [criteria](#) to define desirable CDR to use in our own purchasing. **We strongly urge the Supervisory Body to adopt a criteria-based approach to determine the eligibility of CDR approaches under the Article 6.4 mechanism.**
- **Net-zero strategies require “like-for-like” balancing of greenhouse gas emission sources and sinks; fossil carbon dioxide emissions can only be neutralized with highly durable**

removals.¹ We are concerned that the proposed text is inconsistent with the goals of the Paris Agreement to reach net-zero emissions and limit warming to well-below 2C. As the IPCC AR6 clearly identified, the degree of warming the world experiences is a largely time-independent function of cumulative CO2 emissions, and maintaining long-term net-zero emissions is required to stabilize temperatures.² Unless a framework is in place to compensate for future re-releases, the use of less durable land-based approaches to neutralize long-lived fossil CO2 emissions will ultimately result in higher global temperatures compared to emissions reductions or highly durable removals. This concern would apply to ton-year accounting frameworks, where the academic literature clearly identifies that time value of carbon approaches are inconsistent with long-term net-zero emissions and achieving global temperature targets.³ We agree with the Supervisory Body's assertion that less durable removals are valuable, but want to underscore that they should not be treated as "like" fossil fuel emissions in a compensatory framework.

- **Like all climate solutions, engineered CDR is compatible with sustainable development if governed appropriately.** CDR has the potential to contribute to thriving economies and ecosystems around the world. We therefore disagree with the assertion in the Information Note that "engineered" approaches are inherently incapable of contributing to sustainable development. What matters from the perspective of sustainable development, or for our wider societal goals, is not the *a priori* technical attributes of any approach, but rather its social context. We believe that CDR, like any climate technology, has the potential to meaningfully contribute to sustainable development insofar as it is appropriately steered and regulated.

We are grateful for your work to advance CDR in the context of our wider climate objectives, and would be happy to discuss this further with the Supervisory Body.

Sincerely,



Jane Flegal, Market Development & Policy Lead, Stripe Climate



Stacy Kauk, Head of Sustainability, Shopify

¹ <https://www.annualreviews.org/doi/abs/10.1146/annurev-environ-112320-105050>

² <https://bg.copernicus.org/articles/17/2987/2020/>

³ <https://link.springer.com/article/10.1023/A:1024801618900>