OCEAN VISIONS
Advancing Solutions for Ocean-Climate Restoration

May 25th, 2023

Re: Ocean Visions Submission to UNFCCC Article 6.4 Supervisory Body Fifth Meeting:

Dear Supervisory Body:

We want to commend your important work setting the foundations for the inclusion of Ocean-based Carbon Dioxide Removal (Ocean CDR) technologies and methods as part of the portfolio of climate solutions potentially eligible under article 6.4 mechanisms. I write representing Ocean Visions, a non-profit organization that catalyzes innovation at the intersection of the ocean and climate crises. We facilitate multi sector collaborations, working with leading research institutions, the private sector, and public-interest organizations to fully explore and advance responsible and effective ocean-based climate solutions. In short, we work to stabilize the climate and restore ocean health.

We want to present some observations and reactions to your last Information note (A6.4-SB005-AA-A09), hoping that a more balanced perspective can be reached when considering the current technical merits and future potential of what your note classified as engineered solutions and Ocean CDR in particular.

First, we want to stress that removals are not a replacement for decarbonization. In accord with the Paris Agreement and the Intergovernmental Panel on Climate Change (IPCC), reducing emissions must be the main priority right now. Yet due to our slow pace of decarbonization over the past several decades, we must acknowledge following IPCC recommendations, that decarbonization alone is no longer sufficient to prevent the world from surpassing the 1.5, and even 2.0, degrees Celsius threshold. Gigaton-scale CDR must now accompany decarbonization to stabilize, and ultimately reverse, planetary warming. Advancing all mitigation options and consolidating removals as a complementary tool in the climate solutions mix is not a matter of choice, but a matter of responsibility.

Second, we recommend avoiding the classification between biological and engineered solutions, because most removal approaches are a hybrid of natural processes and engineering. Perpetuating this dichotomy contributes to negative perceptions and prejudices that come before the assessment of the merits of each option. For the purposes of the Article

6.4 mechanism, it would be more efficient to establish a clear set of criteria that each technology should meet to be eligible, instead of creating arbitrary categories that do not contribute to the robustness of the analysis.

Third, the comparison of pros and cons between engineering based and land-based activities (table 39, pp 18-19) appears to lack objectivity and balance and is not accurate with regards to the quality of each method and the current state of science and technology for removals. For example, when referring to engineering based activities, there are several co-benefits that are not mentioned, including, as in the case of some Ocean CDR technologies, the potential to locally mitigate the impacts of ocean acidification. The table also points to the "technologically and economically unproven" character of these technologies. This blanket statement ignores the state of advance of several of these technologies, with some already running pilot facilities in various parts of the world and is further contradicted in the same table when acknowledging that there are already removals happening through these methods.

It is also important to point out that the comparison of current total removal volumes between land-based solutions and engineered solutions should not be taken as evidence of the advantage of one over the other. However, it is important to acknowledge transparently the disadvantages of the different approaches, this is missing in the evaluation of land-based activities (page 19), the note does not mention the potential for social conflict and competition over natural resources as negative considerations. In addition, the only negative aspect mentioned for land-based removals is the potential of carbon stored through those methods to be released back to the atmosphere, which would defeat the purpose of achieving durable removals.

Fourth, we are concerned about the assertion that engineered removals "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" (table 3, p 18). Engineered carbon removals are a diverse group of technologies and if developed responsibly, they can contribute positively to at least three Sustainable Development Goals: good jobs and economic growth (SDG 8); industry, innovation, and infrastructure (SDG 9); and climate action (SDG 13). Some Ocean CDR technologies could also contribute to SDG 14 (life below water) by positively impacting ocean health.

It is not accurate to claim that "engineered removals" are not suitable for developing economies. There are already notable cases of public and private efforts to advance removal technologies in some of those countries. Ocean Visions, in partnership with the UN Decade of Ocean Science for Sustainable Development, is working with key stakeholders in developing countries to support capacity building and knowledge transfer to accelerate Ocean CDR research and development that could potentially lead to implementation at scale. In terms of mitigation costs, removal costs per ton of CO_2 are expected to go down over time as different technologies are scaled up, following a basic technology cost curve. It is important to emphasize that these are

nascent technologies, their current pricing of these durable CDR options is not indicative of their expected cost structure once deployed at scale. An important parallel can be drawn with solar photovoltaic technologies and the dramatic drop in their cost over time.

Engineered removals serve the objectives of the Article 6.4 mechanism as they promote mitigation of greenhouse gas emissions via enhancement of “sinks” while also promoting sustainable development; they are open to the participation of both public and private entities; can contribute mitigate emissions through removals in host countries; and can deliver an overall mitigation of global emissions. Leaving these technologies outside the 6.4 mechanism would have a major impact in the willingness of countries to invest in them and would render difficult the process of including effective, durable CDR as a valid mechanism for NDCs with standardized technical and financial provisions.

To conclude, Ocean Visions believes we must work together to accelerate and scale Ocean CDR research and development, facilitating an enabling environment, and determining effectiveness and safety under conditions agreed by the international community. The establishment of rules and guidelines for a standardized and well-regulated financial mechanism under Article 6.4 could be crucial to the future viability of engineered carbon removals. At this point in the climate crisis, with the severity of impacts we are seeing accelerate, we must keep all tools on the table until such time as they can be conclusively ruled out, or in. It is imperative to collaboratively advance all potential climate solutions and then deploy at scale the most promising ones, based on the best available scientific knowledge, comparative risk assessment, and socioeconomic benefits.

Sincerely,

Brad Ack
CEO, Ocean Visions