

UNFCCC Article 6.4 Mechanism Call for Inputs –

Microsoft Submission

April 10, 2023

Introduction

Microsoft welcomes the opportunity for public consultation to the Supervisory Body regarding inputs for the development and assessment of Article 6.4 mechanism methodologies. The [Intergovernmental Panel on Climate Change \(IPCC\) has made clear](#) the need for 6 GtCO₂ removal annually by the second half of this century. The carbon removal landscape is changing rapidly, with net-zero and net-negative emission targets on the rise.

The exponential growth of the global carbon removal market demands harmonization of clear definitions; monitoring, reporting, and verification (MRV) guidance; and interoperable registries among the various governmental, intergovernmental, and non-governmental organizations in this space. Such outcomes are key to establishing a sound carbon removal market. Lack of alignment threatens to create fragmented markets with conflicting guidance on what constitutes as high quality.

[In January 2020, Microsoft committed to be carbon negative](#) by 2030, employing a reductions-first policy. Microsoft will reduce its Scope 1 and 2 emissions to near zero and its Scope 3 emissions by over half by 2030. By 2030 [Microsoft has pledged](#) to have 100 percent of its electricity consumption, 100 percent of the time, matched by zero carbon energy purchases. In addition to removing the remaining half of emissions in 2030 and thereafter, Microsoft has committed to remove all the carbon the company has emitted since it was founded in 1975. Only removal credits should count towards remediating historical or “legacy” emissions. If the UNFCCC fails to distinguish carbon removal from avoided emissions, and thus negates the ability of ambitious actors to address their historical emissions, it would represent a missed opportunity, limiting a significant lever to address global concentrations of emissions in the atmosphere.

Microsoft has [procured over one million tons of carbon dioxide removal \(CDR\)](#) each year since 2020 and is working toward a portfolio of greater than five million tons removed each year by 2030. Microsoft is procuring carbon removal credits across both nature-based and engineered pathways now. Given the long project development timelines in this space, simultaneously pursuing both nature-based and engineered removal pathways is *critical* towards meeting the long-term temperature goals of the Paris Agreement. An “all of the above” strategy is needed to meet these ambitious global goals. The carbon removal market that is needed by 2030 must be created now, and Microsoft looks forward to continuing to engage with the Supervisory Body as it takes this work forward.

General comments

These general comments pertain to the Supervisory Body’s first question for public inputs.¹ Transparency is the backbone of the Paris Agreement. Under the Agreement, emission reduction targets are *politically* binding but not *legally* binding.² This shifts pressure toward the reporting and verification mechanisms

¹ Question 1: In relation to the inputs prepared for the consideration of the Supervisory Body on requirements for the development and assessment of methodologies for the mechanism established by Article 6, paragraph 4, of the Paris Agreement, what is missing and what can be improved? https://unfccc.int/sites/default/files/resource/Call-for-input-meth-requirements_questions.pdf

² Martini, Catherine. “Transparency: The Backbone of the Paris Agreement,” Yale Center for Environmental Law & Policy, May 29, 2016, (<https://envirocenter.yale.edu/transparency-the-backbone-of-the-Paris-Agreement>).

embedded in the Agreement, with which Parties shall comply. The enhanced transparency framework in Article 13 of the Agreement will only be robust when: the Article 6.4 mechanism has clear definitions, builds consensus on what comprises a “high quality” removal credit, engenders trust that removal activities have actually resulted in a drawdown of CO₂, and finally mitigates the effects of leakage and reversals.

1. Definitions – separately track removals and avoided emissions

- To efficiently operationalize the Paris Agreement's Article 6.4 mechanism and corresponding adjustments for Internationally Transferable Mitigation Outcomes (ITMOs) under Article 6.2.³, further alignment is needed on the definitions of avoidance and removal credits within both compliance and voluntary carbon markets (VCM). Currently, removals are not consistently distinguished from credits that represent avoided or reduced emissions, particularly in the most widely used standards of the VCM. The IPCC classifies carbon dioxide removal as “anthropogenic activities removing CO₂ from the atmosphere and durably storing it in geological, terrestrial, or ocean reservoirs, or in products.” A separate labeling of avoidance credits is needed in case the two types of activities are simultaneously permissible under an Article 6.4 mechanism.
- The Voluntary Carbon Markets Integrity Initiative (VCMI) has launched a Claims Code of Practice to guide the credible use of voluntary carbon credits and associated claims. In 2022, the VCMI put its provisional Claims Code of Practice out for public consultation and received responses from over 130 organizations, 75% of which indicated a need for differentiation based on credit types (reductions vs. removals).
- To underscore this point, by 2030 Microsoft plans to purchase greater than five million tons of carbon removal each year. With 2030 fast approaching and many other corporate actors seeking to get more involved in the removal space, Microsoft seeks clear and universal rules for:
 - o a) corporate and national accountings of carbon removal⁴ and
 - o b) when CDR tonnage can and/or needs to be converted to ITMOs
- Harmonization on definitions between Article 6 of the Paris Agreement and voluntary carbon markets would facilitate a greater influx of private capital for funding mitigation measures on a global scale by both corporate entities and financial institutions. The uncertainty around Article 6 explained in this section risks stranding billions of dollars in voluntary carbon market investments over the coming decade. This risk will cause private actors to hesitate before making the necessary investments to grow the carbon removal market.
- Resolving ambiguity regarding double counting (including double use, double claiming and double issuance) between the Article 6.4 mechanism and voluntary carbon markets is direly needed in order to avoid stranding corporate and private assets currently under development. Further guidance and clarity are needed for how corresponding adjustments apply to VCM activities.

2. High quality

- Rapidly scaling the carbon removal market cannot mean sacrificing integrity. An active carbon removal market requires trust among the participants, including NGOs, corporate buyers, investors,

³ “VCM and the Paris Agreement” <https://vcmprimer.org/>

⁴ Microsoft has participated in rulemaking procedures for public sector agencies around the world on this point.

and policymakers. That trust depends on greater clarity, consistency, and transparency of carbon removal accounting principles and standards.

- In the absence of common standards and while seeking to initiate needed progress in carbon removal, Microsoft has developed and communicated its own criteria for determining high-quality removals, and recognizes that other corporate buyers have done the same. As a result, organizations are tracking outcomes in different ways that cannot be compared easily. This lack of commonality leads not only to inefficiency but also to inconsistent claims.
- Utilization of market mechanisms may reduce the cost of implementing Nationally Determined Contributions (NDCs) by as much as half by 2030.⁵ The Paris Agreement clearly established NDCs as the primary mechanism to achieve a long-term temperature target. For Microsoft and other companies to efficiently support cost-effective NDC implementation, the market needs to adopt scientifically sound, common, and transparent standards for carbon removal. Establishing such standards is an opportunity for the UNFCCC, both in the intra-national context and in support of voluntary markets. Specifically, the Secretariat should require Parties to (a) establish and publish rules detailing conditions where privately supported NDC activities will be recognized as ITMOs by the Party, (b) establish processes for reviewing proposals to make transfers of ITMOs, and (c) make timely responses to requests for privately supported NDC activities to be transferred.

3. Additionality

- Removals are additional if they would not have occurred without carbon finance. Baselines against which additionality is measured represent a counterfactual scenario for what would likely have happened without carbon finance. Any baselines should be conservative, robust and site specific.
- It is crucial to ensure increased ambition over time among emerging intra-jurisdictional climate policies and regulation. Removal activities must go above and beyond existing legislation, acknowledging that there are ample opportunities for government and private funds to be additive to one another.
- Improved Forest Management (IFM) is one CDR pathway with challenges of determining strong baselines. IFM projects should at least pass the American Carbon Registry's three-pronged additionality test: exceed current regulations, exceed common practice, and face financial technical or institutional barriers to implementation.

4. Durability

- The physical longevity of carbon storage over time, or durability, can be grouped as low (fewer than 100 years), medium (100 to 1000 years) and high (thousands of years or longer). Each durability category has its own benefits and challenges, and the development of all three categories are needed to have a chance at achieving global net-zero goals by mid-century.
- Microsoft currently considers the durability period as the time during which there is both a material reversal risk and where monitoring can reliably detect reversal events. Clear guidance on how to calculate and monitor durability is important for the integrity of carbon markets (see the "Specific Comments" section below for more on durability and reversals).

5. Leakage

⁵ The Economic Potential of Article 6 of the Paris Agreement and Implementation Challenges", IETA, University of Maryland and CPLC. Washington, D.C. License: Creative Commons Attribution CC BY 3.0 IGO.

- Microsoft provided the following leakage definition in its [Criteria for high-quality carbon removal](#):
 - o *Leakage involves the risk of displacing activities that cause GHG emissions from the project site to another geographic location (including across international boundaries) for economic reasons. Economic leakage occurs when the market demand for an emitting activity is sustained despite the development of a CDR project. Note: These concepts are distinct from physical leakage (reversals), which occur when carbon that is stored throughout the course of a carbon offset project is re-released into the atmosphere through either avoidable (for example, a failure to maintain sequestration wells) or unavoidable (for example, extreme weather events) means.*
- Microsoft suggests stronger inclusion of leakage considerations related to nature-based credits. While leakage is important for all CDR project types, leakage risk is higher in nature-based credits, especially activities where the supply of particular goods is reduced by the GHG mitigation activity. Microsoft elaborated on this in a [January 2021 briefing paper](#), calling for clear accounting of carbon removal and critical guidelines for additionality, durability, and leakage. Sufficiently accounting for activity and market leakage within, and beyond, the jurisdictional boundary of the project scope is required to meet Microsoft’s criteria for high-quality carbon removal.

Specific Comments

This section is organized to provide specific feedback on the “agreed questions” called for by the Supervisory Body and mapped to the UNFCCC documents referred to in the call for public consultation.⁶

A) Annex 10 to the SB004 annotated agenda⁷

- **2.4 Encouraging broad participation** – In this portion of Annex 10 entitled “Elaboration of the requirements in paragraph 33-39 of the RMP”, section 2.4.15. “Paragraph 33 of the RMP states the ‘mechanism methodologies shall encourage broad participation’”:
 - o Alignment with IC-VCM guidance and other voluntary methodologies (Gold Standard, Verra, American Carbon Registry, etc.) are highly encouraged to facilitate greater participation, particularly from the private sector. Failure to align with various existing methodologies is likely to result in a fragmented market with perverse incentives for entities to select methodologies with the lowest transaction cost.

⁶ UNFCCC, Article 6.4 Mechanism, Call for Inputs: “The Article 6.4 mechanism Supervisory Body is seeking inputs, based on [agreed questions](#), to the requirements for the development and assessment of mechanism methodologies (see [Annex 10](#) to the SB004 annotated agenda) and previous inputs in this area as contained in the documents referred under the document history box (see last page) of Annex 10 to the SB004 annotated agenda...This work is being carried out in response to a request of the CMA ([decision 3/CMA.3](#), paragraph 6(d)). The Supervisory Body, at its fourth meeting, requested the secretariat to launch a call for public inputs with a view to seeking further input from stakeholders (see [SB004 meeting report](#), paragraph 21). This structured public consultation is being conducted as per the request of the CMA, through its [decision -/CMA.4](#), paragraph 19.”

⁷ [SB004 Draft Recommendation: Requirement for the development and assessment of mechanism methodologies \(unfccc.int\)](#)

- The Secretariat could include upgrades to existing methodologies where needed, such as having an independent party set baselines for forestry projects and setting other minimum quality thresholds.
 - The Secretariat should publish methodologies for ITMOs to bring clarity to intra-jurisdictional accounting.
- **2.7 Avoid leakage where applicable** – Sections 2.7 and 2.8.C indicate quantifying the leakage that cannot be avoided and to deduct it from the emission reduction achieved in the Article 6.4 emission reduction (A6.4ER) activities.
 - This is important for any Improved Forest Management (IFM) activities. Microsoft recommends conservative leakage deductions particularly for any IFM or improved soil carbon activities.
 - Microsoft believes that any forestry project with a zero-leakage deduction is simply unrealistic given the dynamic nature of resource markets.
- **2.8 Definitions**
 - **2.8.b Nesting**
 - Microsoft recommends further elaboration how any voluntary mitigation measures and activities factor into inclusion of national emission reductions.
 - **2.8.C.I & II. Jurisdictional approaches**
 - In the absence of jurisdictional approaches further guidance is needed regarding how leakage should be accounted for by private actors.
- **2.10 Equitable share of mitigation benefits**
 - 2.10.33 “paragraph 33 of the RMP states that the ‘Mechanism methodologies shall contribute to the equitable sharing of mitigation benefits between the participating parties’”.
 - Further clarity is needed for what is meant by “mitigation benefits”. Specifically, guidance is needed if this only refers to emission reductions or other co-benefits. Microsoft has seen a range of profit sharing with local communities resulting from carbon removal sales. In Microsoft’s experience profit sharing ranges from 0- 80%. Microsoft recommends further guidance for increasing ambition of profit sharing back to local communities over time, particularly for nature-based activities.
- **2.11.39 Aligning with NDC and LT-LEDs**
 - Increasing clarity is needed between corresponding adjustments and ITMOs related to how voluntary carbon market activities roll up to countries’ NDCs and LT-LEDs.
- **2.12.43 Aligning with long-term temperature goals of the Paris Agreement**
 - Microsoft suggests providing additional clarity on the definitions of removals and avoidance credits as only removal credits are appropriate for mitigation of historical or “legacy” emissions. Additionally, delineation is needed among definitions for low, medium, and high durability climate mitigation measures. Microsoft anticipates increasingly high durability removal activities will be crucial for meeting LT-LEDs, while low durability, nature-based activities are available now, more easily deployable, and more affordable. Affordable emission reductions increase equity for various entities seeking to procure emission removals. Many market entrants cannot currently afford to procure high durability carbon removal like direct air capture. Thus, more affordable low durability options are critical now while high durability options scale up.

- **2.13.46 Including data sources and accounting for uncertainty** – This section states, “if it is necessary to invoke a requirement in a methodology that appears elsewhere in another methodology, this should be done by reference and not by repetition”.
 - o Microsoft supports referencing existing methodologies, where appropriate. Many market entrants will not have the capacity to distinguish, cross compare, or track multiple conflicting methodologies. The need for streamlining across various existing methodologies will be key for equitable and clear adoption of quality removals.
- **2.14 Reversals**
 - o Microsoft currently considers the durability period as the period for which there is both a material reversal risk and where monitoring can reliably detect reversal events.
 - o Low durability carbon removal, by its nature, has greater risk for reversals. Nature-based projects should be sited in areas with lower risk of reversal, when possible. Physical risks such as fires, hurricanes and droughts threaten nature-based projects. Siting carbon removal projects according to IPCC projections for climate impacts is key to reducing the risk of physical reversals in face of a globally changing climate.
 - o Buffer pools to account for non-permanence should be maintained throughout the duration of low-durability project lifetimes as should monitoring for reversals.
 - o Tonne-year accounting is not advised for low durability or nature-based carbon removals. Tonne-year accounting cannot be used to support an equivalence to permanent removal (more on Tonne year accounting section below).

B) Draft Recommendation (Annex 5)⁸ and the Information Note (Annex 6)⁹

- **Tonne-year accounting**
 - o There is a limited global carbon budget remaining to be consistent with meeting the Paris Agreement’s Article 2.1.c goal of, “holding the increase in the global average temperature to well below 2c above preindustrial levels and perusing efforts to limit the temperature increase to 1.5c above preindustrial levels.”
 - o However, tonne-year accounting should not be used to define an equivalence to permanent removal or ton of carbon emitted, because carbon that is temporarily removed and re-released to the atmosphere still uses up the remaining carbon budget.
 - o Utilizing tonne-year accounting implies that large radiative forcing decreases in the short term are equivalent to minor increases in radiative forcing over a century. This essentially implies that avoiding large impacts in the short term compensates for smaller impacts in the future. Such usage benefits entities today by not needing to reduce impacts in the present while delaying impacts to communities of the future.
 - o Nature-based removals are important for inclusion under an Article 6.4 mechanism, because they are readily available and scalable now. Microsoft recommends including nature-based activities under the Article 6.4 mechanism, but does not recommend utilizing tonne-year accounting as outlined in the proposed guidelines.

⁸ [a64-sb002-aa-a05.pdf \(unfccc.int\)](https://unfccc.int/a64-sb002-aa-a05.pdf)

⁹ [a64-sb002-aa-a06.pdf \(unfccc.int\)](https://unfccc.int/a64-sb002-aa-a06.pdf)

C) CMA (decision 3/CMA.3) Annex, section III¹⁰

- **V.A.30. Activity participants**
 - o Elaboration on activity participants is needed, particularly, regarding private entities. Further guidance is needed regarding how activity participants “that wish to register the activity as an Article 6 paragraph 4 activity” would do so.
- **V.A.31.F Activity crediting periods**
 - o It appears crediting periods do not extend beyond 30 years. If this is accurate, it would be beneficial for the Supervisory Body to clarify how to allocate crediting periods for highly durable removal pathways such as Direct Air Capture (DAC), Bio Energy Carbon Capture and Storage (BECCS), etc. which have expected durability periods in the thousands of years.
- **V.C.41 Approval and authorization**
 - o Elaboration is needed on *how* the host Party shall provide to the Supervisory Body the Article 6, paragraph 4(b) authorization of public or private entities to participate in the activity as “activity participants” under the mechanism.
- **V.F.50 Monitoring**
 - o Elaboration on monitoring periods for reversals is needed. As noted above, Microsoft currently considers the durability period as the period over which there is both a material reversal risk and where monitoring can reliably detect reversal events.
- **V.H.54. Issuance**
 - o It is not clear if the Secretariat mentioned in Article 4.12 of the Paris Agreement is the “mechanism registry administrator” mentioned in section V.H.54.
- **V.J.58 First transfer from the mechanism registry**
 - o This section mentions that there will be a transfer of five percent of the “issued A6.4ER to an account held by the Adaptation Fund”. This language could benefit from further clarity if this suggests an internal Secretariat buffer pool holding emission reductions, or, if the account held by the Adaptation Fund would hold proceeds from the sale of emission reduction credits. Transferring credits to the Adaptation Fund would avoid having to track price changes.
- **VII.66 Levy of share of proceeds for adaptation and administrative expenses**
 - o Further guidance is needed regarding which entity pays the “share of proceeds that is levied to assist developing country Parties”. It is not clear if this is the host Party or the “Activity Participants” mentioned in V.A.30.
- **VIII.69.A. Mitigation in global emissions – cancelation**
 - o It appears the cancelation account mentioned in VIII.69.A would be credits not currency (as in V.J.58), essentially creating an internal deduction of 2% for all first transfers. If this is the correct interpretation, clearer language is needed to distinguish between the two types of accounts resulting from first transfers of A6.4ERs in VIII.69A and V.J.58.
 - o Clarity is needed regarding which entity allocates the 2% retirement under VIII.69.A, the host country or the “activity participant” mentioned in V.A.30).

¹⁰ [FCCC/PA/CMA/2021/10/Add.1 \(unfccc.int\)](https://unfccc.int/PA/CMA/2021/10/Add.1)