



Brussels, 16th June 2023

Dear Members and Alternate Members of the Article 6.4 Supervisory Body,

Carbon Market Watch welcomes the opportunity to provide inputs to the Supervisory Body on specific questions pertaining to removal activities. However, we note that the 2-week window to make submissions is extremely short and also overlaps with SB58, which many observer organisations that closely follow the Supervisory Body have attended – as a result, there may be an underrepresentation in inputs from such observer organisations, which the Supervisory Body should consider in reviewing the inputs from stakeholders.

Due to time constraints to adequately prepare inputs for the current window for inputs, we would like to note here for your consideration that Carbon Market Watch has made multiple submissions on the topic of removal activities in the context of the SB's work: [SB consultation on methodological requirements ahead of SB005](#) (6 April 2023), [SBSTA call for submissions](#) (15 March 2023), [inputs on removals ahead of SB003](#) (11 October 2022), [inputs on removals ahead of SB002](#) (9 September 2022). We had also made a [submission on removal activities ahead of SB56](#) (27 May 2022), which focused on permanence and buffer pools, among other topics.

Our inputs respond to selected questions from the [list](#).

Cross-cutting questions:

1. Discuss the role of removals activities and this guidance in supporting the aim of balancing emissions with removals through mid-century.

A key element to be reflected in this discussion is the need to clearly distinguish between mitigation impacts/outcomes based on their expected durability. If the objective is to “balance” emissions with removals, then the guidance on the role of removals under 6.4 should ensure that only removals which have a high likelihood of very long-term storage

(multiple centuries to millennia) can be considered as adequate activities under the article 6.4 mechanism.

Medium-term storage has some value when it comes to climate mitigation. Some nature-based solutions deliver very valuable benefits that are far more important than their ability to sequester carbon, such as biodiversity or adaptation and resilience benefits. However, these activities should not be included under the article 6.4 mechanism because the quantification, and long-term guarantee, of their impact is extremely difficult, and to some extent impossible to achieve. Nature based solutions should not be used to meet specific GHG targets in a manner that implies their equivalence to GHG emission reductions.

We therefore believe that any guidance on removals should clearly reflect the different ranges of durability associated with different types of storage, and no removal, particularly those with the shortest durability, should be considered as a way to “balance” emissions. In addition, mid-century is still several decades away, so this mechanism should not be aiming at balancing at all: no country, region or sector has reached low ‘residual’ emissions. The urgent focus for the coming days, years and decades is steep and sustained emission reductions.

2. What are the roles and functions of the following entities in implementing the operations referred to in this guidance: Activity proponent(s), Article 6.4 mechanism Supervisory Body (6.4SB), 6.4 mechanism registry administrator, Host Party, stakeholders?

[No response provided to this question]

3. How are these elements understood, in particular, any interrelationships in their functions, timeframes, and implementation?

(a) Monitoring period

For activities that involve storage of carbon in sinks, the duration of the monitoring period should extend well beyond the crediting period, in order to be able to “observe” any reversals, should they occur. A default monitoring period should be set, with the possibility of extending it in specific cases, either at the project proponent’s own initiative, or following a request from the Supervisory Body. The ability for project proponents to register new activities under the article 6.4 mechanism could be dependent on their proper monitoring of previously registered activities.

Monitoring should not be limited to the crediting period, nor should it be tied to the start of a crediting period or the start of a mitigation activity, as this would lead to strong differences in the length of monitoring based on credit vintages. Instead, the requirements for monitoring should be tied to the credit vintage year. For example, if monitoring is required for 50 years after the start of the mitigation activity, then a credit issued for removals achieved in year 49 will be subject to monitoring obligations for only 1 year. If, instead, monitoring is set as 50 years starting from the credit vintage date, then all mitigation outcomes from removals will be monitored for 50 years, regardless of when they occurred within a crediting period.

In addition, we recommend that the Secretariat assesses the feasibility of various options that could guarantee longer term monitoring without constituting a major burden on project proponents (e.g. by establishing long-term monitoring systems through satellite imagery, managed by the Secretariat, and funded through a share of proceeds levied on the issuance of credits that involve carbon storage).

(b) Crediting period

Crediting periods should be sufficiently short to ensure a ratchet in ambition over time, e.g. through a review of baseline levels and ongoing financial need at each crediting period renewal.

As stated above, the crediting period should not be directly tied with the monitoring period. In any case, the monitoring period should never be shorter than the crediting period.

(c) Timeframe for addressing reversals

Reversals should ideally be monitored for at 200-300 years, and the Supervisory Body should, in parallel, clearly communicate that such mitigation outcomes are *not equivalent* to emission reductions or continued emissions, given that CO₂ in the atmosphere will have a lifespan much longer than that duration. However, there are serious practical challenges related to guaranteeing monitoring over that timescale, and no system should be established on the assumption that this can truly be enforced over time.

The durability of various carbon sinks should be clearly reported and **credits issued by projects that rely on carbon storage should include a specific tag in the 6.4 registry that discloses the expected or guaranteed durability** of the mitigation benefit associated with that credit.

Cross-cutting questions:

A. Definitions:

Discuss the role and potential elements of definitions for this guidance, including “Removals”.

To define “removals”, we propose using the elegant and short checklist suggested by Tanzer and Ramirez (2019). For a process, technology or project to create removals, at the very least four principles need to be met:

1. Physical greenhouse gases are removed from the atmosphere
2. The removed gases are stored out of the atmosphere in a manner intended to be permanent
3. Upstream and downstream greenhouse gas emissions associated with the removal and storage process (such as biomass origin, energy use, what happens to any GHGs embedded in gasses or coproducts linked to process, etc.) are comprehensively estimated and included in the emission balance
4. The total quantity of atmospheric greenhouse gases removed and permanently stored is greater than the total quantity of greenhouse gases emitted to the atmosphere

For a project to be allowed to issue any mitigation outcomes, these removals must be the result of anthropogenic actions. Crediting removals that are the result of natural processes that do not involve any anthropogenic actions would not lead to additional mitigation outcomes.

B. Monitoring and Reporting:

1. What timeframes and related procedures should be specified for these elements referred to in A6.4-SB003-A03?

- a. For initial monitoring and submission of monitoring reports (paragraph 3.2.14);
 - (a) For subsequent monitoring and submission of monitoring reports (paragraph 3.2.14);

[No response provided to this question]

- (b) For monitoring and submission of monitoring reports following an observed event that could potentially lead to a reversal (paragraph 3.2.14);

When such an event is observed, the project proponent should immediately notify the Supervisory Body, within 2 months of the beginning of the event (some reversal events, e.g. fires, can last for multiple weeks). In this communication, the project proponent should communicate a timeline for the communication of a monitoring report focused on the

impacts of the reversal event. That monitoring report should be submitted to the Supervisory Body not later than 6 months following the end of the reversal event.

(c) For monitoring and reporting, including any simplified reporting, conducted after the end of the last crediting period of activities involving removals (paragraphs 3.1.10 and 3.2.13).

[No response provided to this question]

2. Discuss any further considerations to be given to the core elements for monitoring and reporting in A6.4-SB003-A03; where possible, identifying the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

[No response provided to this question]

C. Accounting for removals:

1. Discuss any further considerations to be given to the core elements for accounting for removals in A6.4-SB003-A03; where possible, identifying their applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

[No response provided to this question]

2. For activities involving removals that also result in emissions reductions, what are the relevant considerations, elements, and interactions between this guidance and the requirements for the development and assessment of mechanism methodologies, including.

All activities that rely on the storage of carbon should be subject to specific rules on monitoring for reversals, as well as provisions to minimise the risk of reversals and address these reversals when they occur. This includes activities that primarily aim to reduce emissions, including, for example, cookstove projects which generate mitigation benefits by lowering deforestation.

D. Crediting period:

Discuss any further considerations to be given to the core elements for crediting periods in A6.4-SB003-A03; where possible, identifying the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

Crediting periods should be sufficiently short to ensure a ratchet in ambition over time, e.g. through a review of baseline levels and ongoing financial need at each crediting period renewal.

E. Addressing Reversals:

In order to minimize the risk of non-permanence of removals over multiple NDC implementation periods, and, where reversals occur, ensure that these are addressed in full.

1. Discuss the applicability and implementation aspects of these approaches, including as stand-alone measures or in combination, and any interactions with other elements of this guidance:

a. Non-permanence risk buffer (pooled or activity-specific);

Buffer pools do not constitute a robust way of guaranteeing the permanent storage of carbon in a sink. At best, they can strengthen the credibility of guaranteeing storage for a medium duration of time, if properly constituted and managed.¹

It is not credible to expect buffer pools to be operated for more than a few decades, as there are many factors (political, economic, etc.) that could lead to the discontinuation of the buffer pool management. “Monitoring and compensation” approaches that rely on buffer pools and claim to guarantee the durability of storage for 100 years or more are simply not credible from an institutional point of view.

In addition, buffer pools can only be used to compensate for reversals if these reversals are observed. They are therefore inherently limited by the monitoring period tied to the projects that are covered by the buffer pool.

If the Supervisory Body chooses to rely on buffer pools to address reversals, these should be clearly communicated as a medium term risk-mitigation strategy, and not as a long-term durability guarantee.

b. Insurance / guarantees for replacement of ERs where reversals occur

¹ More information on this can be found in our previous submission here:

<https://carbonmarketwatch.org/publications/carbon-market-watch-recommendations-to-article-6-negotiators-on-removals/>

See also Badgley et al. (2022): “[California’s forest carbon offsets buffer pool is severely undercapitalized](#)”, *Frontier in Forests and Global Change*, volume 5

(commercial, sovereign, other);

[No response provided to this question]

c. Other measures for addressing reversals in full.

We recommend the Supervisory to adopt a “transparency first” approach and clearly tag 6.4ERs with their expected durability period. This should be combined with clear communications that emphasise the scientific differences between the mitigation benefits from carbon storage, compared to the mitigation benefits from emission reductions.

2. Discuss the appropriate timeframe(s) for applying the approaches, including any interactions with other elements of this guidance and the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

[No response provided to this question]

3. What risks of non-permanence need to be minimized, and how can these risks identified, assessed, and minimized?

The 6.4 mechanism methodologies should require activity proponents to consider, measure, and address all risk categories of non-permanence, including internal risk (i.e. project risk such as management or financial risk), external risk (e.g. political risk) and natural risks (fires, pests, droughts, etc.).

Quantification of those risks should be based on the latest available science. We recommend that the secretariat prepares a report summarising the current best-available science on risk quantification for carbon storage, taking into account the variability in risks for various storage types and various regions/locations. This could serve as a basis for defining specific risk quantification approaches in 6.4 methodologies.

We strongly advise against relying on existing risk quantification methodologies from the VCM, as many projects report very low risks of reversals by exploiting flexibilities in VCM methodologies. In fact, reporting of very low reversal risks is incompatible with additionality requirements in some cases, such as for conservation projects, as projects would be arguing at the same time that they are protecting a threatened area, and that the area they are protecting faces a low risk of releasing the carbon it is storing.

4. In respect of risk assessment, how should the following elements be considered in the implementation of the approaches in (a) and any other relevant elements in this guidance?

a. Level of non-permanence risk assessment, e.g., activity- or mechanism-level

Several levels of risk should be considered, as described above, and risk should be adequately combined when calculating the overall risk level for a given project. There could be interaction between various risks that make it inadequate to simply sum different risk categories over a set period of time. To this effect, we recommend that the report on risk quantification that we recommended the secretariat to prepare (see question E3 above), includes a section on how to properly quantify the combination of risks from various sources.

b. Timing for risk assessment(s)

Risk should be calculated over an appropriate length of time that should not be shorter than 100 years. This period of time should be consistent with the disclosure (tagging) that we recommend for credits (see question E1c) . For example, if some credits are tagged as having an expected durability of 200 years, then the risk estimation should have been done for a period of at least 200 years.

c. Entity(ies) responsible for risk assessment(s), e.g., activity proponent, 6.4SB, actuary

The methods prescribed for risk quantification should be sufficiently specific, and based on robust and up to date science, to ensure that there is little room for gaming. This will reduce the risk of inappropriate risk estimation, regardless of who is responsible for doing that estimation.

5. How should the following elements be considered in the implementation of the approaches in (1) above and any other relevant elements in this guidance?

a. Methods for determining the level of buffer pool contributions

Buffer pool contributions should be conservatively measured - as in overestimated rather than underestimated. This should be based on the reversal risk elements mentioned above. This includes using different time horizons for reversal risk measurement depending on the tagged “durability” of a given 6.4ER, which will lead to different relative contributions of projects to the buffer pool, depending on their claimed durability length.

b. Composition of buffer pool, including in relation to ER vintages and contributing activity types or categories

The buffer pool should ideally be structured in various sub-pools to distinguish between removal and reduction credits, as well as between credits with different expected durability. For example, it would be inappropriate to compensate for reversals of carbon stored in a sink that was expected to be stored for 500 years, by cancelling credits associated with carbon that is expected to be stored for 30 years. The variability in

expected durability of credits should be reflected in the buffer pool composition and structure.

c. Intentional and unintentional reversals

In case of intentional reversals, project proponents should no longer receive any credits from any activity they have registered under the 6.4 mechanism, until the reversal has been fully compensated.

d. Treatment of uncancelled buffer ERs, including after the end of the last crediting period of the contributing activity

All uncancelled buffer ERs should be cancelled at the end of a project's monitoring period (which should be longer than its crediting period). This is a way of guaranteeing some level of security for the longer term benefits of an activity, after the proponent stops monitoring for its impacts.

e. Specifications for ERs that cancelled for compensate for reversals, including in relation to ER vintages and contributing activity types or categories

See 5(b): "The buffer pool should ideally be structured in various sub-pools to distinguish between removal and reduction credits, as well as between credits with different expected durability. For example, it would be inappropriate to compensate for reversals of carbon stored in a sink that was expected to be stored for 500 years, by cancelling credits associated with carbon that is expected to be stored for 30 years. The variability in expected durability of credits should be reflected in the buffer pool composition and structure."

f. Replenishment in case buffer cancellations exceed contributions; slide language on re-raising baseline level of storage before new crediting

[No response provided to this question]

6. In the event of a reversal, what interactions and implementation aspects should be considered in respect of other elements of the activity cycle?

F. Avoidance of Leakage:

Discuss any further considerations to be given to the core elements for leakage avoidance in A6.4-SB003-A03; where possible, identifying the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

All types of leakage should be considered, measured, and addressed under the article 6.4 mechanism. This includes activity-shifting leakage and market leakage, and should not be limited to domestic leakage.

G. Avoidance of other negative environmental, social impacts

Discuss considerations to be given to core elements for avoidance of other negative environmental, social impacts; where possible, identifying the applicable scope, i.e., relevance to all 6.4 mechanism activities, to removals activities, or to specific removal activity categories or types.

[No response provided to this question]

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