Questions for structured call for inputs on recommendations for activities involving removals

1. Introduction and mode of work

1.1. Mandate

1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), by its decision 3/CMA.3 "Rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement", requested the Supervisory Body of the mechanism established by Article 6, paragraph 4, of the Paris Agreement (the Supervisory Body) to elaborate and further develop, on the basis of the rules, modalities and procedures of the mechanism (RMPs, contained in the annex to the decision) recommendations on activities involving removals, including appropriate monitoring, reporting, accounting for removals and crediting periods, addressing reversals, avoidance of leakage, and avoidance of other negative environmental and social impacts, in addition to the activities referred to in chapter V of the RMPs (Article 6, paragraph 4, activity cycle).

2. Further, the Supervisory Body at its sixth meeting, requested the secretariat to launch a call for public inputs for 14 days from the week of 17 July 2023.

1.2. Mode of work

3. This document contains refined questions for consideration by stakeholders, seeking their inputs on the general and specific issues related to activities involving removals.

1.3. Approach to these contents and to the structured call for inputs

4. Stakeholders providing input to the structured call for inputs should note the following:

   (a) In producing this document, the Article 6.4 Supervisory Body (SB) has taken account of the interlinkages in these contents and those of other mandated items, which are being developed in parallel. This document focuses on elements that may be particularly relevant to activities involving removals and reversal risks, with the understanding that general requirements apply to all mechanism activities, including these, unless otherwise specified. This is consistent with the approach reflected in the SB's prior recommendations, outlines, and structured call for inputs and does not prejudice the eventual placement of these elements and their relevance to all 6.4 mechanism activities, or to all removal activities, or to a subset of removal activities.

   (b) Where submitting technical proposals responding to these elements, wherever possible, stakeholders are encouraged to explain how they could be implemented (inter alia, relevant elements, procedures, timeframes, functional interrelationships), as well as to cite sources of information provided and substantiate views expressed.

2. Call for input questions by element

The needs and characteristics of non-permanent nature-based and geological permanent removals are very different. The SB is advised to devise separate rules for the two different domains. **All answers below relate to permanent removals only**, and are not applicable to nature-based methods. In some questions comparisons with nature-based removals are made.

2.1. Monitoring and reporting

5. Should the activity proponent be required to periodically update its monitoring plan every five years and/or at the end of the crediting period?

Updating of the monitoring plan during a crediting period should be done based on need. For instance, any indication that the monitoring is insufficient or that new technologies that improve monitoring are established as industry standard, may mandate an update of the monitoring plan.

6. Should monitoring reports be submitted within the first [2] [5] [X] years of activity implementation? After the first report, at least once every [2] [5] [X] years?

Monitoring reports should be submitted every year.

7. Do the "reversal notification" reports referred to in SB 003 recommendations involve, e.g. digital notification of an observed event that could lead to a possible reversal of removals; submission of notification within [90] [120] [X] days of the observation; follow-up submission of a full monitoring report within [6 months] [1 year] [X timeframe]?

There is no need to report events that could lead to a possible reversal. Any actual reversal should be reported in the yearly report. The annual report should also include an incident survey where events that could have resulted in reversals are identified.

8. To ensure and demonstrate the continued existence of removals, are activity proponents required to undertake monitoring and address reversals:

   (a) Only during active crediting period(s) or

   (b) Also [15] [X] years after the last active crediting period?

   (c) The longer of [9(a)] [9(b)] or a timeframe specified by the host Party (e.g. communicated in LoA or earlier)

Permanent removals should be monitored indefinitely.

The approach has to be differentiated depending on what type of removal is considered. A land-based removal credit represents a non-permanent mitigation activity. The non-permanence of such removals is inherent in the fact that the carbon stays above the geological layer and that the ownership of the land can change hands over short time-frames. For land-based credits, the end of the Monitoring period represents the opening of an entirely new chapter for the concerned land area. No third party takes responsibility for continued monitoring and anything can happen. A nature-based removal must therefore always be considered reversed at the end of the Monitoring period. The Monitoring period for land-based approaches should thus correspond to the time-frame the project is committed to keep the land as a removal. In effect, non-permanent removals are postponed emissions.

The implication of this is that at the end of the Monitoring period, the acquirer of land-based credits must prolong the credits or acquire new credits if it wishes to maintain the climate position achieved based on the original purchase of the land-based credit. Again, it follows that for land-based credits, the time-frame for addressing reversals is during the Monitoring period, as the CO2 should be considered released after that period).

For permanent removals (BECCS/DACCS) as well as generically for CCS, the permanence is confirmed by the scientific consensus and the fact that the CO2 is sent permanently from the biosphere/atmosphere to the geosphere. During the Monitoring period, reversals should be monitored and addressed according the applicable jurisdiction as well as counted as an emission by the storage company.

At the end of the Monitoring period, there should be a transfer of responsibility to the host nation of the storage. If there is a reversal after the transfer of responsibility, the host nation should count the reversal as an emission and take measures according the applicable jurisdiction.

Applying this approach within the EU, as an example, would rely on the ETS and CCS directives which prescribe that any CO2 emitted from a storage site shall be addressed by the purchase of an EU ETS EUA (Annex I activity). This is a logical scoping and approach for CO2 stored in the geosphere, which represents a potential point source. Since the scientific consensus is that

geologically stored CO2, including removals based on BECCS or DACCS, are in effect permanent, and since they upon insertion into the bedrock, as it were, exit the system boundary of the biosphere/atmosphere and enter the geosphere, it follows that any reversal of CO2 from the geological storage should be addressed within the already established ETS framework.

Even under pessimistic assumptions, a recent study showed that more than 99.9% of the CO2 injected for geological storage will remain after a total of 125 years including well closure after 25 years of injection (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1134212/ukcs-co2-containment-certainty-report.pdf).

Tying up removal certificates ex ante in a buffer pool is simply not a rational reflection of the risk of reversal and would only be an additional financial burden for the climate to carry.

From a methodology approach, the focus should rather be on securing that credits for geological storage are only issued in jurisdictions with state-of-the-art legislation for licensing, monitoring and liabilities, such as the EU set-up with the ETS and CCS directives.

Why transfer of responsibility does not work for land-based credits

With permanent removals, the intention is to put the physical dimension of the project to rest, to permanently lock away the CO_2. For land-based projects, the end of a project does not represent an end to the physical usage of the biomass sink. To the contrary, its existing or future owners could be expected to capitalize on the forest's continued economic value.

The difference in permanence is in itself another reason why the transfer of responsibility to the host nation of land-based projects does not make sense on a principal level. Since land-based project removals are destined to sooner or later become emissions sources, it would be unreasonable for the state to carry that expected cost, compared with the unexpected cost in the unlikely event of a reversal in case of CO2 stored geologically.

Transfer of responsibility to the host nation of land-based projects would also be to give up the idea of monitoring and blur the line between the system and project view, since the state cannot at reasonable cost monitor all the land-based project areas. This is not the case with permanent removals, where the state can continue to monitor the individual storage complexes at reasonable cost.

Finally, it would in practice constitute a way to introduce a version of Ton-Years, but financed by the tax payer rather than credit buyers.

9. Is simplified annual reporting required to ensure and demonstrate the continued existence of removals? In what cases and how long?

No simplified reporting. A robust reporting standard should be established.

10. Are measures required to address the residual risk of reversals beyond the monitoring timeframe? If so, for how long, and what are the options for, e.g. the mechanism(s), responsible entity(ies), oversight?

See question 8.

2.2. Addressing reversals

For permanent removals, as elaborated in question 8, the approach must be based on the scientific evidence that a properly built, operated and monitored geological storage facility does for all practical purposes not result in reversals. Any systems of buffer pools or insurance would therefore represent an unproportional measure of no value for neither the climate nor the customer of the removal credit.

During the Monitoring period, reversals should be monitored and addressed according to the applicable jurisdiction as well as counted as an emission by the storage company. At the end of the Monitoring period, there should be a transfer of responsibility to the host nation of the geological storage. If there is a reversal after the transfer of responsibility, the host nation should count the reversal as an emission and take measures according the applicable jurisdiction.

Applying this approach within the EU, as an example, would rely on the ETS and CCS directives which prescribe that any CO2 emitted from a storage site should be compensated by the purchase of an EU ETS EUA (Annex I activity).

2.2.1. General

11. What type of risk rating is used to calculate an activity's buffer contributions?

    (a) The results of an individual activity's risk assessment;

    (b) A standard rate determined by the 6.4SB;

    (c) Either measure could be appropriate, depending on the circumstances (in this case, what factors should determine the use of an activity-specific or standard risk rating)?

No buffer should be instituted for permanent geological removals where the storage site is constructed, operated and monitored in accordance with the most stringent rules, such as the EU 2009/31/EC directive on the geological storage of carbon dioxide, the UK's storage of carbon dioxide regulations and the US EPA's Class VI rules.

12. What are the options for circumstances/triggers and/or periodic milestones for reviewing and possibly updating activity baselines, risk assessments (so, risk ratings), and monitoring plans, including in relation to:

    (a) Verified reversals of removals; and

    (b) The stages of activity cycle implementation?

In case reversals are identified, there should be a review of the storage project and its monitoring. This is already covered by the laws and rules mentioned above.

The SB should avoid proposing or creating any extra rules for jurisdictions where state-of-art laws and rules already exist.

13. On what basis could requirements provide for the use of simplified / standardized elements or mandate the use of more frequent, full, or activity-specific elements and what are the requirements that may be relevant?

    (a) Activity type or category;

    (b) Risk rating level (e.g. above versus below a given %-based threshold);

    (c) Risk assessment contents (e.g. nature, number, variety of risk factors);

    (d) Monitoring plan (e.g. complexity, frequency, responsible entity).

No simplified rules can apply for permanent removals.

14. Should procedures take the same or different approaches to instances of reversals that are (a) intentional/planned versus (b) unintentional / unplanned?

    (a) How/would other tools to address reversals involving direct credit replacement (including use of insurance / guarantees) be used in combination with a buffer pool?

The notions of intentional or unintentional do not apply to permanent removals. There is always a climate consequence if there is an emission from the geological storage site, and, like in the case of the EU ETS, there will be a requirement to acquire EUAs.

2.2.2. Reversal risk tools—General: Buffer pools, direct credit replacement, insurance / guarantees

With reference to the answers provided above, these questions become superfluous for permanent geological storage.

15. Regarding reversal risk buffer pools, direct credit replacement, and insurance / guarantees:

    (a) What is the current practice with these reversal risk tools, including the extent and nature of their use (respectively and in combination), transaction costs and how these are financed, and potential roles of the Host Party in multi-decadal compensation requirements;

    (b) The circumstances under which the use of a given tool may be required or supplemental—for example, for intentional versus unintentional reversals, or during versus beyond the last active crediting period—and rationales.

2.2.3. Reversal risk tools: Specific

With reference to the answers provided above, these questions become superfluous for permanent geological storage.

16. What are options for robust buffer pool design, including conditions and procedures for its use, ER composition, replenishment, and administration.

17. The need for additional procedures and guidance for the 6.4SB, PPs, insurers/ guarantors to implement options for direct ER replacement, including for insurance or guarantees.

2.2.4. Treatment of uncancelled/unused buffer ERs

With reference to the answers provided above, these questions become superfluous for permanent geological storage. However, it is noted that unused resources must always belong to the project owner. This is also true for land-based systems, however with the removal being considered emitted at the end of the monitoring/crediting period.

18. Are uncancelled ERs in the buffer pool returned to the activity proponent to incentivize performance and/or automatically cancelled, and is this done periodically throughout activity cycle or only after the end of the activity lifecycle or the host Party NDC timeframe?

19. Whether the options for treatment and timing are mutually exclusive or could be applied in combination (e.g. returning some but not all ERs to proponent).

20. Possible basis for periodically returning ERs to proponents (e.g. metrics for activity performance, activity cycle milestones).

21. Procedures for the SB's periodic review and ongoing management of buffer contributions (e.g. buffer composition, stress-testing the sufficiency of risk coverage).

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