

A6.4-MEP008-A03

Draft Standard

Addressing non-permanence and reversals

Version 02.2

DRAFT



United Nations
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Climate Change

COVER NOTE

1. Procedural background

1. The Supervisory Body of the Article 6.4 mechanism, at its tenth meeting, approved its workplan for 2024 and requested the Methodological Expert Panel (MEP) to prepare recommendations on products related to addressing reversals.
2. In particular, the Supervisory Body requested the MEP to prepare recommendations on the following products relating to the recommendation on removals:
 - (a) Guidance on post-crediting period monitoring, reporting, and remediation of reversals, post-reversal action and host Party roles;
 - (b) Guidance on late, incomplete, or missing monitoring report submissions and treatment of activities for which a reversal results in removals level that falls below baseline;
 - (c) Reversal risk assessment tool;
 - (d) Guidance on avoidable and unavoidable reversals and reversal compensation.
3. At its first meeting, the MEP initiated its work on the above issues and agreed to recommend that, due to the overlap and interdependencies between the four separate elements listed in paragraph 2, as well as additional removal-related issues in the “Recommendation: Activities involving removals under the Article 6.4 mechanism” on which the Supervisory Body requested input, the four elements mentioned above should be incorporated into a single integrated standard on addressing non-permanence and reversals.
4. The Supervisory Body, at its eleventh meeting, agreed with the recommendation of the MEP to consolidate the four related issues and to develop a standard on addressing non-permanence and reversals covering these issues.¹
5. The Supervisory Body, at its fourteenth meeting, adopted the “Standard: Requirements for activities involving removals under the Article 6.4 mechanism” (A6.4-STAN-METH-002, hereinafter referred to as the “Removals Standard”)² and made specific recommendations to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA). At that meeting, the Supervisory Body also requested the MEP to continue its work on the above issues on the basis of the adopted Removals Standard. Subsequently, the CMA took note of the adoption of the document by the Supervisory Body.

¹ See document A6.4-SB011-A02: Workplan of the Methodological Expert Panel 2024.

² See <https://unfccc.int/sites/default/files/resource/A6.4-STAN-METH-002.pdf>.

6. At its fifteenth meeting, the Supervisory Body adopted the work plan for the MEP for 2025. The workplan also includes the development of a “Tool: Reversal risk assessment”, including:
 - (a) Whether upper limits are needed with respect of the risk rating (overall) or specific risk factors (within the tool), including options and science-based rationales for upper limit(s);
 - (b) Risk rating that constitutes a negligible risk;
 - (c) Any further categorization of risk; and
 - (d) How remediation measures are taken into account in the risk assessment tool.
7. At its seventh meeting, the MEP continued to work on the draft standard and released for public consultation a draft standard, consisting of two alternative proposals. Specifically, the MEP was divided as to whether it is necessary to address some requirements in a standard directed to activity participants and some requirements in a standard directed to mechanism methodologies or whether all requirements to address non-permanence and reversals can be provided in a standard directed to activity participants. To reflect the different views and options, the MEP elaborated three different Appendices for the purpose of seeking public inputs, with one option consisting in Appendix one and Appendix two and the other option consisting in Appendix three.
8. The call for public inputs opened for a three (3) week period from 15 July to 4 August 2025. The MEP received 112 inputs, which are publicly available on the UNFCCC website³. The secretariat prepared an internal compilation and synthesis of stakeholder inputs.
9. At its seventeenth meeting, the Supervisory Body noted the MEP’s ongoing work on implementation of the “Standard: Requirements for activities involving removals under the Article 6.4 mechanism” related to addressing non-permanence and reversals. The Supervisory Body requested the MEP to prepare a single recommendation, identifying options where necessary. The Supervisory Body underlined that, while the MEP is invited to explore the full range of potential approaches to operationalize the requirements of the Removals Standard for consideration of the Supervisory Body, it shall stay within the mandate set by the previous decisions of the Supervisory Body including the Removals Standard. In relation to the request for clarification concerning the role of the host Party in the Removals Standard, the Supervisory Body acknowledged that there is no need for specific focus on “host Party roles” and decided to remove the “host Party roles” from Table 1 of the MEP workplan.

2. Purpose

10. The purpose of this document is to address the mandate provided by the Supervisory Body to develop a standard on addressing non-permanence and reversals, while considering the guidance provided by the Supervisory Body at its seventeenth meeting.

³ See <https://unfccc.int/process-and-meetings/the-paris-agreement/article-6/article-64-pacm/stakeholder-engagement/calls-for-input/2025-non-permanence-reversals>

3. Key issues and proposed solutions

3.1. Summary of public comments addressed in the recommendation by the MEP

11. At its eighth meeting, the MEP continued to work on the draft reversals standard and considered stakeholder inputs received during the public consultation. The MEP considered the large number of inputs received, with appreciation for stakeholders' engagement, and revised the draft standard accordingly. The following non-exhaustive list of changes may be of particular interest to stakeholders:
- (a) A new option for mechanism methodologies to apply a materiality threshold for determining that a release of stored greenhouse gases is not a reversal. This flexibility maintains environmental integrity and allows mechanism methodologies to avoid situations where a small loss of greenhouse gas storage triggers a notification and mandatory reporting requirements that are unnecessary due to the natural recovery of greenhouse gas storage within a monitoring period. This provision is implemented in paragraph 39 of Appendix 1;
 - (b) An update to the definition of a "negligible risk of reversal". The draft standard released for public consultation proposed a range of views that would establish the definition as meaning a loss of no more than between 0.1 per cent and 5 per cent of A6.4ERs over a 100-year period. This document includes a narrower range of views, from 0.5 per cent to 2.5 per cent over a 100-year period and recommends that the Supervisory Body select a value from within this range. This provision is implemented in paragraph 3(g) of Appendix 1;
 - (c) A refined approach to allow for alternative approaches to reversal-related monitoring and reporting requirements under a limited set of conditions. These alternative approaches apply where it is practically infeasible to account for reversals in the way set out in the standard. The MEP also further clarified in the text that alternative approaches may only be used where this ensures, with a high level of confidence, that potential reversals from Article 6.4 activities are fully remediated in the crediting period and post-crediting monitoring period and do not cause instances of moral hazard. These provisions are implemented in section 5 of Appendix 1;
 - (d) An updated approach to determine the contribution to the Reversal Risk Buffer Pool Account. The draft standard released for public consultation did not clarify that the reversal risk assessment tool would be applied exclusively to changes in storage in greenhouse gas reservoirs, which is now clarified here. These provisions are implemented in section 6.5 of Appendix 1;
 - (e) A single approach to implement the fraction of total A6.4ER issuance transferred to the Adaptation Fund (to implement share of proceeds (SOP)) and the fund for cancellation to support overall mitigation in global emissions (OMGE). In the draft standard released for public consultation, the MEP proposed two alternative options (Option 1 and Option 2). The current document now implements one option (formerly Option 1). These provisions are implemented in sections 6.6 and 6.7 of Appendix 1; and
 - (f) More flexibility with regard to the timelines for submitting reversal-related reports. In response to public comments, Appendix 2 includes longer grace periods until

reports are considered missing and provides a more flexible option to request for the extension of submission deadlines, including an automatic 90-day extension in cases of force majeure or the unavailability of a DOE. These provisions are implemented in sections 2 and 2.1 of Appendix 2, and are summarized in Table 1 and Table 2 in Appendix 2.

12. In addition to the changes referenced in paragraph 11 above, the MEP also takes note of the following matters:

- (a) Applicability conditions. The MEP clarifies that the list of examples of activities to which this draft standard would apply should not be interpreted to prejudice either the approval of any applicable mechanism methodology or the eligibility of such activities for registration under the Article 6.4 mechanism. They are listed only to clarify whether this standard would apply to the activity type if the Supervisory Body were to approve it for registration under the Article 6.4 mechanism. This provision is implemented in section 3 of Appendix 1;
- (b) Annual reversal reports. The MEP notes that many public comments addressed the requirements of annual reversal reports and seeks to clarify that the annual reversal reports would be simple forms that ensure ongoing communication between Article 6.4 activities and the Supervisory Body. Annual reversal reports would either list the notifications of potential reversal events already provided to the secretariat during the previous calendar year, or a declaration that none occurred. No additional reporting would be required, and to minimize the burden on activity participants annual reversal reports could be verified as part of subsequent monitoring reports. These provisions are implemented in section 1.3 of Appendix 2;
- (c) Treatment of reversals below baselines. The MEP has elaborated a single approach to addressing reversals below baselines. These provisions are implemented in section 4.3 of Appendix 2;
- (d) Provisions for activity de-registrations. The MEP has elaborated a single approach to activity de-registration requirements. These provisions are implemented in section 4.4 of Appendix 2; and
- (e) Other changes. The MEP has made numerous other technical and editorial changes in response to stakeholder input. These provisions are implemented throughout the document and referenced elsewhere in the cover note where notable.

13. The MEP also took note of the comments received on procedural matters, including requests for additional calls for input, webinars, and other opportunities for stakeholder engagement.

3.2. Summary of public comments not addressed in the recommendation by the MEP

14. The MEP notes that some comments were not addressed in the revision of the documents and the recommendation by the MEP because they:

- (a) Were found to be not aligned with the Removals Standard (see paragraph 15 of this cover note);

- (b) Relate to other standards that have already been adopted by the Supervisory Body (see paragraph 16 of this cover note); or
 - (c) Relate to ongoing and future work by the Supervisory Body and the MEP on other regulatory documents (see paragraph 17 of this cover note).
15. A summary of comments not aligned with the Removals Standard includes, non-exhaustively, the following:
- (a) Use of the terms avoidable/unavoidable versus intentional/unintentional reversals. Paragraphs 9(e) and 9(f) of the Removals Standard define reversals using the terms avoidable and unavoidable reversals. Some comments supported the adoption of the terms intentional and unintentional reversals;
 - (b) Use of the terms 'acceptable risk of reversal' instead of 'negligible risk of reversal'. Paragraph 28(a) of the Removals Standard uses the term 'negligible risk of reversal'. Some comments supported the adoption of the term 'acceptable risk of reversal';
 - (c) Duration of post-crediting period monitoring and reporting. Paragraphs 26 and 28 of the Removals Standard do not provide a fixed period for post-crediting period monitoring and reporting. Some comments suggested using a maximum fixed period for post-crediting monitoring and reporting;
 - (d) Reversal-related reporting requirements. Section 4.6.2 of the Removals Standard requires activity participants to report observed events that could lead to a reversal, submit preliminary assessment reports that determine whether a reversal has occurred, and submit a monitoring report to quantify the amount and classify the type(s) of reversals that occur. Some comments suggested not to include provisions requiring notification of observed events, preliminary assessment reports, and/or monitoring reports. Some comments also raised concerns about the overall burden of these reporting requirements; and
 - (e) Addressing reversals. Paragraph 38 and section 4.6.3.1 of the Removals Standard require activity participants to conduct reversal risk assessments by using the reversal risk assessment tool and contribute A6.4ERs to a Reversal Risk Buffer Pool Account. Some comments suggested the inclusion of alternative reversal risk assessment mechanisms that would not require the use of the reversal risk assessment tool or contributions to the Reversal Risk Buffer Pool Account.⁴
16. Some comments relate to other standards that have already been adopted by the Supervisory Body. This includes, non-exhaustively, the following:
- (a) Leakage standard: Some comments suggested that international leakage not be considered or recommended alternative approaches to calculating leakage.

⁴ The MEP notes that some suggestions in this category may be aligned with the Removals Standard and are part of ongoing MEP work, as referenced in paragraph 17(c) of this cover note and indicated in section 3.2.1 of Appendix 2.

17. Some comments also referred to work that is ongoing or will be undertaken. This includes, non-exhaustively, the following:
- (a) Large-scale crediting programmes: Some comments flagged that the current provisions are not applicable or practicable for large-scale crediting programmes. The MEP notes that the proposed standard is only applicable to projects and that the Supervisory Body has requested the MEP to work on a concept note on large-scale crediting programmes. The MEP will consider these comments in preparing the concept note;
 - (b) Reversal risk assessment tool: Some comments related to the estimation of reversal risk using the reversal risk assessment tool and raised the concern about their ability to comment on the treatment of reversal risks without publication of a draft reversal risk assessment tool. The MEP notes that the Supervisory Body has requested the MEP to expedite work on a reversal risk assessment tool and will consider the comments in elaborating the tool; and
 - (c) Use of insurance programs, host Party guarantees, and other reversal-risk-related management provisions. Some comments suggested the use of mechanisms for addressing reversal risks that were not elaborated in the draft document and which are consistent with the Removals Standard. The MEP notes that the Supervisory Body has requested the MEP to work on a concept note addressing options for implementing paragraph 62 of the Removals Standard, as indicated in paragraph 57(b) of this cover note.

3.3. Structure and scope of documents to address non-permanence and reversals

18. In its work on the mandates provided by the Supervisory Body, as per paragraphs 6 and 9 above, the MEP prepared a document that provides direction to mechanism methodologies on how to implement the requirements of the Removals Standard. This content is found in Appendix 1 to this document.
19. In its work on the mandates provided by the Supervisory Body, as per paragraphs 6 and 9, the MEP agreed that for several issues, a single solution could be applicable to all types of Article 6.4 activities that are subject to reversal risks. This content is found in Appendix 2 to this document.
20. The MEP did not achieve full consensus in respect to the progression of the Standard: Addressing non-permanence and reversals. A member of the MEP requests that the Supervisory Body consider concerns that the draft standard would preclude participation by land-based activities due to the required consistency with the Removals Standard for the reasons listed below and believes that amendments to the Removals Standard would allow more equal participation opportunity to both technological and land-based activity types without lessening the credibility of the outcome. There are four main areas where concerns are held in this respect, including in particular:
- (a) Requirement for standard monitoring reports to be used for reversals monitoring and reporting, with specifications that could trigger frequent monitoring, reporting and verification into the long-term, incurring substantial cost that would disincentivise participation by the land sector;
 - (b) Requirement to undertake post-crediting monitoring and reporting on an indefinite basis in the absence of achieving termination of post-crediting monitoring from

- demonstration of negligible risk of reversal of stored GHGs or remediation according to paragraph 28(b) of the Removals Standard;
- (c) Requirement to include avoidable reversals within the risk rating calculation, which would be difficult to undertake and would inappropriately elevate the risk rating for land sector activities;
 - (d) Requirement of immediate registry suspensions under certain conditions related to observed events, which would create considerable investment risk.
21. The other members of the MEP noted that the MEP was mandated to work within the scope of the Removal Standard and was not requested to provide feedback on the Removals Standard as part of this work.
22. The other members of the MEP further note that the draft standard responds to the mandate from the Supervisory Body to implement the Removals Standard and observe that the draft standard was improved by incorporating stakeholder input to provide additional flexibility to Article 6.4 activities, including in the land sector. These elements include:
- (a) Simplified methods for monitoring and reporting in the post-crediting monitoring period, including methods to establish that no reversals have occurred for the purposes of monitoring (section 6.1 of Appendix 1);
 - (b) A recommendation that the Supervisory Body request the secretariat to develop a simplified template for monitoring reports used in the post-crediting monitoring period (paragraph 61 of the cover note);
 - (c) A materiality threshold to ensure that land-sector projects are not required to report immaterial and temporary losses of greenhouse gas storage as potential or actual reversals (paragraph 39 of Appendix 1); and
 - (d) The potential for additional options to terminate post-crediting period monitoring and reporting obligations, as mandated by the Supervisory Body's request to develop a concept note on this topic (paragraph 57 of the cover note) and as indicated in the draft standard that additional approaches consistent with paragraph 62 of the Removals Standard may be developed in the future (section 3.2.1 of Appendix 2).

3.4. Appendix 1 (direction for mechanism methodologies)

3.4.1. Negligible risk of reversal

23. Paragraph 28 of the Removals Standard provides that activity participants may request to terminate their obligations to conduct post-crediting period monitoring if they can demonstrate that their storage of greenhouse gases or precursors of greenhouse gases is at a negligible risk of reversal. In paragraph 3(g) of Appendix 1, the MEP agreed to define negligible risk of reversal as a maximum percentage loss of the emission reductions and/or net removals for which A6.4ERs have been issued, as calculated over 100 years starting from no earlier than the end of the last active crediting period for an activity. The MEP notes that, in further work on the reversal risk assessment tool, additional work may be needed to address considerations related to the likelihood of reversal, the magnitude

of potential reversals, and the interactions between likelihood of reversal and magnitude of potential reversals.

24. The MEP noted that the percentage chosen is a normative policy decision. The MEP recommends the Supervisory Body choose a value within the range between 0.5 to 2.5 percent. The MEP further notes that a relatively lower percentage provides a relatively higher confidence that no reversals may occur but may make it also more difficult to terminate monitoring through the demonstration of negligible risk. The MEP further notes that the percentage chosen has implications on the remaining risk that the buffer pool needs to cover, with relatively larger percentages causing the buffer pool to bear a relatively larger risk.
25. To assist the Supervisory Body in its decision-making process, the MEP notes related definitions taken by other relevant actors in other circumstances. The MEP further notes that the Intergovernmental Panel on Climate Change defines the term “virtually certain” as indicating at least a 99 per cent probability in the context of describing the degree of certainty in findings of the IPCC assessment process, analogous to a choice of no more than 1 percent.⁵

3.4.2. Identification of applicable greenhouse gas reservoirs

26. Section 5 of Appendix 1 provides a procedure for how mechanism methodologies shall identify relevant greenhouse gas reservoirs for the purposes of applying the mechanism’s reversal risk assessment tool and allowing for alternative approaches to reversal-related monitoring and reporting requirements under a limited set of conditions.
27. The MEP considered the concerns expressed by the Supervisory Body with respect to the exemptions proposed in the “Concept note: Applicability of removal guidance to emission reduction activities and vice versa” and implemented a refined approach of the proposal in Appendix 1. The MEP retained the three criteria included in the concept note in which a simplified approach may be used but added footnotes to further clarify the approach, including a specific example. The MEP also noted that the three conditions must be fulfilled in conjunction which means that they only apply to a limited set of situations. Furthermore, the proponents of mechanism methodologies shall appropriately justify that the conditions apply, which shall be assessed by the MEP and the Supervisory Body. This ensures that the provisions cannot be interpreted in ways that were unintended.
28. The MEP further notes that in circumstances where these conditions apply it is practically infeasible to account for reversals in the way set out in the standard. This raises the concern that certain types of activities, such as efficient cookstove projects, would otherwise not qualify to register under the mechanism. The MEP also further clarified in the text that alternative approaches may only be used where this ensures, with a high level of confidence, that potential reversals from Article 6.4 activities are fully remediated in the crediting period and post-crediting monitoring period and do not cause instances of moral hazard. The MEP also clarified that the reversal risk assessment tool shall be applied by all activities subject to reversal risks.

⁵ IPCC (2010) Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on the Consistent Treatment of Uncertainties:
<https://www.ipcc.ch/site/assets/uploads/2018/05/uncertainty-guidance-note.pdf>.
The MEP notes that these definitions are still in active use by the IPCC.

3.4.3. Quantification of emission reductions and/or net removals and reversals

29. Section 6 of Appendix 1 provides a procedure for how to quantify an Article 6.4 activity's emission reductions and/or net removals as well as how to quantify any reversals that may occur. Paragraph 9 of the Removals Standard defines a reversal in relation to section 4.4 of the Removals Standard ("Accounting for removals"). Accordingly, the MEP implemented a set of equations operationalizing section 4.4 of the Removals Standard to address the following components:
- (a) Net change in storage of a greenhouse gas or precursors of greenhouse gases: Equation 1 specifies how to calculate the net change in storage during the activity's active crediting period, which is calculated in relation to an activity's baseline scenario. Equation 2 specifies how to calculate the net change in storage in the post-crediting monitoring period, which, as a default matter, is not calculated in relation to an activity's baseline scenario. Together, both equations provide a formal definition of what a reversal is and how to quantify the amount of a reversal;
 - (b) Net change in greenhouse gas emissions: Equation 3 specifies how to calculate the net change in emissions in the Article 6.4 activity scenario, in the Article 6.4 activity's baseline scenario, and due to leakage;
 - (c) Total A6.4ERs issuance: Equation 4 specifies how to calculate the total number of A6.4ERs to be issued with respect to an Article 6.4 activity's emission reductions and/or net removals, drawing on the earlier equations and accounting for any crediting deficit as discussed below;
 - (d) Crediting deficit: Because the net change in storage and net change in emissions can lead to a calculation of negative A6.4ER issuance, it is necessary to track any such crediting deficits and include them in the calculation of future credit issuance. Equations 5, 6, and 7 specify how to calculate and update the crediting deficit;
 - (e) A6.4ER contributions to the Reversal Risk Buffer Pool Account: Equation 8 specifies how to calculate the number of total A6.4ERs that would be contributed to the buffer pool, based on the application of the reversal risk assessment tool;
 - (f) A6.4ER contributions to the Adaptation Fund and contributions to overall mitigation in global emissions: Equations 9 and 10 specify how to calculate the fraction of total A6.4ERs that would be contributed to the Adaptation Fund (to implement the share of proceeds requirement, or SOP) and to the account for cancellation towards delivering overall mitigation in global emissions (OMGE), respectively;
 - (g) A6.4ER issuance to activity participants: Equation 11 specifies how to calculate the number of A6.4ERs issued to activity participants, net of the contribution to the Reversal Risk Buffer Pool Account, the Adaptation Fund (SOP), and the account for cancellation toward delivering OMGE.
30. In elaborating the provisions identified in paragraph 29(f) above, the MEP included in Appendix 1 to its draft standard finalized for public comments at its seventh meeting two alternative options to calculate the fraction of A6.4ERs to be contributed to the Adaptation Fund (SOP) and OMGE. Alternative option 1 calculated the share of A6.4ERs contributed to the Adaptation Fund and OMGE using the total number of issued A6.4ERs as the denominator, whereas alternative option 2 calculated the share using a subset of the total number of issued A6.4ERs, net of the buffer pool contribution, as the denominator.

31. The MEP further analysed these options and sought legal advice on this matter from the secretariat. The MEP noted that the provisions in the CMA decisions and the Removals Standard do not address the forwarding of A6.4ERs from the pending account to the Reversal Risk Buffer Pool Account. The MEP further noted that paragraph 58 and 67 of the RMPs (decision 3/CMA.3) refer to the contribution for the Adaptation Fund to be applied “at issuance”. Additional provisions set out in the transaction procedure in paragraph 37 of the Annex I to decision 7/CMA.4 specify that first all A6.4ERs are issued into a pending account. Subsequently, five percent of “issued A6.4ERs” are forwarded or first transferred to the Adaptation Fund (paragraph 39), two percent of “issued A6.4ERs” are cancelled to deliver OMGE (paragraph 40), and the “remaining” A6.4ERs are forwarded or first transferred to holding accounts of activity participants or Parties involved (paragraph 41). Based on these considerations, it appears that the share of SOP and OMGE should be determined based on the total number of A6.4ERs issued into the pending account, which corresponds to the Alternative Option 1 included in the document prepared at MEP 007. This is consistent with the legal advice by the secretariat. Based on this analysis, the MEP implemented this option in Appendix 1. In its further work on the reversal risk assessment tool, the MEP will consider any implications for determining contributions to the Reversal Risk Buffer Pool Account.
32. In elaborating the provisions identified in paragraph 31 above, the MEP also noted that neither the relevant Article 6.2 and Article 6.4 decisions by the CMA⁶ nor the Removals Standard explicitly address the question of whether a contribution to the Reversal Risk Buffer Pool Account is a forwarding or a first transfer of A6.4ERs. In the draft standard, the MEP included an approach that is consistent with the approach for SOP and OMGE in decision 4/CMA.4, i.e. that mitigation contribution A6.4ERs are to be forwarded to the Reversal Risk Buffer Pool Account without effecting a first transfer and that the forwarding of authorised A6.4ERs is to be effected as a first transfer. The MEP requests the Supervisory Body to confirm that this approach is appropriate.
33. In elaborating the provisions identified in paragraphs 29(e) and 29(f), the MEP also noted that the requirements for quantifying the contribution of A6.4ERs to the Reversal Risk Buffer Pool Account, the Adaptation Fund, and the account for cancellation towards delivering OMGE could be implemented in one or more higher-level regulatory documents, such as the standard “Article 6.4 activity standard for projects” (A6.4-STAN-AC-002),⁷ the procedure “Article 6.4 activity cycle procedure for projects” (A6.4-PROC-AC-002),⁸ and/or the procedure “Article 6.4 mechanism registry” (A6.4-PROC-REGS-001).⁹

3.4.4. Identification and quantification of reversals

34. Section 7 of Appendix 1 provides a procedure for how to identify reversals, quantify reversals, and classify reversals as avoidable or unavoidable. It also provides direction to mechanism methodologies to specify the data and methods that activity participants should use to prepare monitoring reports and to conduct monitoring and reporting in the post-crediting monitoring period.

⁶ See Decisions 2/CMA.3, 3/CMA.3, 6/CMA.4, 7/CMA.4, 4/CMA.6, 5/CMA.6 and 6/CMA.6.

⁷ See <https://unfccc.int/sites/default/files/resource/A6.4-STAN-AC-002-v01.0.pdf>.

⁸ See <https://unfccc.int/sites/default/files/resource/A6.4-PROC-AC-002.pdf>.

⁹ See <https://unfccc.int/sites/default/files/resource/A6.4-PROC-REGS-001.pdf>.

35. Paragraph 39 of Appendix 1 also provides the option for mechanism methodologies to determine a materiality threshold that applies to observed events involving the release of stored greenhouse gases. This provision allows mechanism methodologies to conservatively quantify the removals expected within a monitoring period on an ex-ante basis. If an observed event leads to a release of greenhouse gases that is smaller than this threshold, then the observed event is deemed not to constitute a reversal and the activity participant does not need to notify the secretariat of the observed event or prepare a preliminary assessment report. The MEP notes that these provisions only apply, however, to activity types that generate ongoing net removals without ongoing interventions by the activity participant.

3.5. Appendix 2 (direction for activity participants)

3.5.1. Reversal-related notifications and reports

Table 1. Summary of reversal-related reporting requirements

Requirement	Purpose	Timing of submission	Whether verification is required
Notification	Inform the Supervisory Body of a potential reversal	Within 30 days of the end of an observed event	No
Preliminary assessment report	Determine whether a reversal has occurred	Within 90 days of the end of an observed event	Yes, but only if the preliminary assessment report concludes that a reversal has not occurred
Monitoring report	Quantify amount and classify the type of reversal	Within 365 days of the end of an observed event	Yes
Annual reversal report	Ensure regular communication with activity participants	Annually, due 31 March each year	Yes, and verification can be done ex post as part of the verification of a monitoring report

36. Section 1.2 of Appendix 2 provides a procedure on how to identify potential reversal events and prepare a preliminary assessment report to determine whether a reversal has occurred. If a preliminary assessment report indicates that a reversal has occurred, a monitoring report is required to determine the amount and type of the reversal.

37. Consistent with section 4.6.2 of the Removals Standard, section 1.2 of Appendix 2 provides for the temporary suspension of an affected activity's registry account functionality when a potential reversal event is detected and the restoration of that registry account functionality once an activity participant either:

- (a) Confirms that no reversal has occurred through a verified preliminary assessment report; or
- (b) Remediates any actual reversals per the provisions of section 4 of Appendix 2.

38. Because monitoring reports could be relatively infrequent for some activity types, section 1.3 of Appendix 2 also requires activity participants to prepare annual reversal

reports. In cases where no reversals or potential reversal events occurred in the calendar-year period covered by an annual reversal report, an annual reversal report may simply state this conclusion. In cases where a reversal or potential reversal event occurred, the reversal report will list the relevant events and notifications. No other information is required.

39. The MEP notes that the purpose of the annual reversal report is to require a regular form of communication with Article 6.4 activities. To reduce the burden on activity participants, the annual reversal report(s) may be included within the next monitoring report for verification.
40. The MEP also noted that the volume of information that must be included in monitoring reports during the post-crediting monitoring period is significantly more limited than is required during the crediting period. In this regard, the MEP recommends that the secretariat develops a separate template for monitoring reports for the post-crediting monitoring period that is simpler than the form for monitoring reports for the crediting periods (A6.4-FORM-AC-021).

3.5.2. Late, incomplete or missing report submissions

41. Section 2 of Appendix 2 defines late and missing preliminary assessment report submissions, annual reversal reports, and monitoring reports, along with a procedure for how the secretariat will review submissions for completeness. Section 2 of Appendix 2 also provides for a series of escalating consequences that shall apply in cases of late and missing monitoring reports.
42. Late reports trigger the temporary suspension of an activity participant's registry account functionality, which can be restored by the submission of the required reports before the reports are classified as missing. Because a preliminary assessment report is required whenever there is an observed event that could potentially lead to a reversal, and that observed event separately triggers the same temporary suspension of an activity participants' registry account functionality, no additional consequence is imposed for late preliminary assessment reports.
43. The consequences for missing reports are as follows. In the event of a missing preliminary assessment report, the activity participant is required to prepare a full monitoring report. In the event of a missing annual reversal report or a missing monitoring report, the Article 6.4 activity will be deemed to have experienced avoidable reversals equivalent to the total number of A6.4ERs issued with respect to the activity's emission reductions and/or net removals and the activity participant is obligated to remediate this reversal according to the provisions of section 4.2 of Appendix 2.

3.5.3. Post-crediting period monitoring and reporting

44. Section 3 of Appendix 2 describes activity participants' obligations to conduct post-crediting period monitoring of greenhouse gas reservoirs and reporting related to any potential or actual reversals.
45. Consistent with section 4.3 of the Removals Standard, the obligation to monitor and report in the post-crediting period is ongoing until activity participants can demonstrate either that the stored greenhouse gases or their precursors have a negligible risk of reversal or that the potential future reversal of this storage has been remediated. As a result, the time

period for post-crediting period monitoring and reporting may be indefinite. Some MEP members are of the view that the post-crediting period monitoring could be limited in time. However, the MEP notes that the Removals Standard does not provide for a definite limit for the maximum duration of monitoring and therefore this option was not included.

46. Section 3 of Appendix 2 also provides a procedure for when and how activity participants may request the Supervisory Body to terminate their post-crediting period monitoring and reporting obligations.
47. As elaborated in Section 3.2.1 of Appendix 2, activity participants may cancel A6.4ERs, with the number of A6.4ERs cancelled equal to the total number of A6.4ERs issued with respect to the activity's emission reductions and/or net removals. Cancellation of authorized A6.4ERs is required for any authorized A6.4ERs issued with respect to the activity's emission reductions and/or net removals. Activity participants are eligible to undertake these provisions at any point in the post-crediting monitoring period.
48. As elaborated in Section 3.2.2 of Appendix 2, activity participants may demonstrate that their stored greenhouse gases or greenhouse gas precursors are subject to a negligible risk of reversal, using methods identified by mechanism methodologies consistent with section 7.4 of Appendix 1. Activity participants are eligible to undertake these provisions only after a minimum period of time has elapsed in the post-crediting monitoring period, as defined by mechanism methodologies consistent with section 7.4 of Appendix 1.

3.5.4. Post-reversal actions

49. Sections 4.1 and 4.2 of Appendix 2 provides a procedure for how unavoidable and avoidable reversals shall be remediated. Unavoidable reversals are remediated by cancelling A6.4ERs in the Reversal Risk Buffer Pool Account, with the number cancelled equal to the amount of the unavoidable reversals expressed in tonnes of carbon dioxide equivalent. Avoidable reversals are remediated in the same manner, with the additional requirement that activity participants shall replenish the buffer pool with an equal number of A6.4ERs. For both avoidable and unavailable reversals, remediation requires the cancellation of authorized A6.4ERs for reversals involving authorized A6.4ERs.

3.5.5. Reversals below baselines

50. Section 4.3 of Appendix 2 addresses the situation in which a reversal reduces greenhouse gas storage below baseline levels (a "reversal below baseline"). It clarifies that the Reversal Risk Buffer Pool Account only remediates greenhouse gas storage losses for which A6.4ERs have been issued.
51. Section 4.3 of Appendix 2 further clarifies that A6.4ERs will not be issued to Article 6.4 activities for any enhancements to greenhouse gas storage that are below baseline levels. Article 6.4 activities that experience a reversal below baseline levels may continue to enhance greenhouse gas storage and return to baseline levels, and A6.4ERs will be issued for greenhouse gas storage enhancements above baseline level as usual.

3.5.6. De-registration of activities

52. Section 4.4 of Appendix 2 provides a procedure for how Article 6.4 activities subject to risk of reversals can de-register. De-registration requires the cancellation of A6.4ERs, with the number of A6.4ERs cancelled equal to the total number of A6.4ERs issued with respect to the Article 6.4 activity's emission reductions and/or net removals.

53. When an activity de-registers, the secretariat shall cancel A6.4ERs in the Reversal Risk Buffer Pool Account, with the number of A6.4ERs cancelled equal to the total A6.4ER contributions made to the Reversal Risk Buffer Pool Account with respect to the Article 6.4 activity. The activity participant shall make the rest of the necessary cancellations.

3.5.7. Insurance coverage for reversals

54. The MEP notes that paragraph 59 of the Removals Standard provides that activity participants should obtain and maintain sufficient coverage under an insurance policy or comparable guarantee products to cover the risk that avoidable reversals occur. The MEP was unable to identify any comparable types of insurance products. Accordingly, the MEP has not included a requirement that activity participants obtain insurance or other comparable guarantee products to cover activity participants' avoidable reversal risks.
55. The MEP further proposes to address separate, insurance-related issues in the context of remediating potential future reversals in the concept note requested from the Supervisory Body pursuant to paragraph 57(b) below.

4. Impacts

56. The proposed recommendation will provide further clarity on the requirements with regard to addressing non-permanence and reversals.

5. Subsequent work and timelines

57. The MEP will continue working on some elements of the mandates provided by the Supervisory Body, including:
- (a) A reversal risk assessment tool that addresses:
 - (i) Whether upper limits are needed in respect of the overall risk rating or specific risk factors are to be included within the tool, including options and science-based rationales for upper limit(s);
 - (ii) Risk rating that constitutes a negligible risk;
 - (iii) Any further categorization of risk; and
 - (iv) How remediation measures are taken into account in the risk assessment tool.
 - (b) A concept note on options for the implementation of paragraph 62 of the "Standard: Requirements for activities involving removals under the Article 6.4 mechanism".
58. The MEP notes that the proposed standard is only applicable to projects and not to large-scale crediting programmes. The MEP further notes that several public comments raised that provisions in the current standard are not applicable or practical for large-scale crediting programmes, such as jurisdictional approaches for reducing emissions from deforestation. After finalising a concept note on large-scale crediting programmes, this standard could be amended in the future to address large-scale crediting programmes.
59. The MEP notes that many public comments referred to the challenge for private sector entities to assume responsibility for monitoring and compensating for long or undefined periods in the case of project-level activities. In this respect, the MEP notes that this

standard does not yet incorporate any possible alternative approaches for addressing reversals in the post-crediting monitoring period that will be explored within the mandate provided to develop a concept note by the Supervisory Body referred to in paragraph 57(b) of this cover note. The MEP further notes that the standard could be amended, following the finalisation of the concept note, to incorporate such approaches.

60. Similarly, the MEP notes that many public comments referred to the role of host Parties in addressing reversals, such as in assuming long term liability and the linkage between reversals under the Article 6.4 mechanism and reporting requirements under the Paris Agreement. Because the Supervisory Body has clarified that the potential role of host Parties is not within the MEP's mandate for the current agenda item, the draft standard does not address host Party roles. However, the MEP further notes that the standard could be amended to address host Party roles following the preparation of the concept note referred to in paragraph 57(b) of this cover note.

6. Recommendations to the Supervisory Body

61. The MEP recommends the Supervisory Body to:
- (a) Consider the range of values proposed for defining a negligible risk of reversal, specify a single value to be adopted for the definition of a negligible risk of reversal, and adopt the draft standard "Addressing non-permanence and reversals in mechanism methodologies" included in Appendix 1;
 - (b) Agree on the "Elements for inclusion in relevant regulatory documents" included in Appendix 2 and request the secretariat, in consultation with the MEP, to incorporate these elements into a draft revision of the "Standard: Article 6.4 activity standard for projects" (A6.4-STAN-AC-002), the "Procedure: Article 6.4 activity cycle procedure for projects" (A6.4-PROC-AC-002), the "Procedure: Article 6.4 mechanism registry" (A6.4-PROC-REGS-001), and the "Standard: validation and verification standard for projects (A6.4-STAN-AC-003)" for consideration by the Supervisory Body at a future meeting;
 - (c) Request the secretariat to review and update, in consultation with the MEP, all cross-references made between Appendix 1 and Appendix 2 to reflect the approved "Standard: Addressing non-permanence and reversals in mechanism methodologies" and to reflect the appropriate elements of the revised Standards and Procedures referenced in paragraph 61(b);
 - (d) Confirm that the approach implemented in section 6.6 and 6.7 of the draft standard is appropriate that mitigation contribution A6.4ERs are to be forwarded to the Reversal Risk Buffer Pool Account without effecting a first transfer and that the forwarding of authorised A6.4ERs is to be effected as a first transfer, consistent with the approach for OMGE and SOP; and
 - (e) Request the secretariat to develop a simplified template for monitoring reports for the post-crediting monitoring period.

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Appendix 1. Draft Standard: Addressing non-permanence and reversals in mechanism methodologies

1. Introduction

1.1. Scope

1. This standard sets out the requirements for mechanism methodologies to address non-permanence and reversals. It will be applied by proponents of mechanism methodologies in developing methodologies and by the UNFCCC Secretariat, the Methodological Expert Panel (MEP) and the Supervisory Body in assessing and considering mechanism methodologies for approval.

1.2. Entry into force

2. This document enters into force on # date #.

2. Definitions

3. The following definitions shall apply:

- (a) **Active crediting period:** The first crediting period of an Article 6.4 activity and any subsequent crediting period that has been renewed;
- (b) **Avoidable reversals:** Reversals caused by factors over which the activity participants have influence or control;
- (c) **Carbon stock:** The quantity of carbon in a greenhouse gas reservoir;
- (d) **Crediting deficit:** A net increase in greenhouse gas emissions resulting from an Article 6.4 activity caused by factors other than reversals¹
- (e) **Greenhouse gas reservoir:** A component or components of the global climate system where a greenhouse gas or a precursor of a greenhouse gas is stored. For the purposes of the Article 6.4 mechanism, this term excludes the atmosphere and includes the biosphere, geosphere, and hydrosphere;
- (f) **Legal requirements:** Laws, statutes, regulations, court orders, decrees, consent agreements, executive orders, permitting conditions or any other legally binding mandates, noting that regulatory environments may vary;
- (g) **Negligible risk of reversal:** A risk of reversal that would result in a loss of no more than $[X]^2$ percent of all the A6.4ERs issued with respect to the total emission reductions and/or net removals achieved by the activity during its active crediting period,³ calculated over a 100-year timeframe starting from no earlier than the end of the last active crediting period;
- (h) **Observed event:** An indication of any occurrence involving the release of stored greenhouse gases that could potentially lead to a reversal;

¹ See section 6.4 of this Appendix.

² See section 3.4.1 of the cover note. The MEP recommends the SBM adopt a value within the range between 0.5 to 2.5 percent.

³ Consistent with section 6.3 of this Appendix.

- (i) **Post-crediting monitoring period:** The period that follows the last active crediting period, during which time activity participants monitor greenhouse gas reservoirs for reversals and no A6.4ERs shall be generated;
- (j) **Reversal:** A net loss in the storage of a greenhouse gas or a precursor of a greenhouse gas for which A6.4ERs have been issued, calculated across all applicable greenhouse gas reservoir(s) over a period of time covered by a monitoring report;
- (k) **Reversal risk assessment tool:** A methodological tool that is used to determine the fraction of the total number of A6.4ERs to be contributed to the Reversal Risk Buffer Pool Account and whether an activity faces a negligible risk of reversal;
- (l) **Reversal Risk Buffer Pool Account:** A registry account, administered by the secretariat in its role as administrator of the Article 6.4 mechanism registry, from which A6.4ERs are cancelled to remediate reversals;
- (m) **Unavoidable reversals:** Reversals caused by factors over which the activity participants have no influence or control.

3. Applicability

- 4. This version of the standard is applicable to proposed mechanism methodologies for activities undertaken at the project level. The standard may be amended in the future to also cover methodologies addressing mitigation actions at other scales (e.g., programmes of activities, policies, sectoral approaches).
- 5. None of the types of activities or examples mentioned in paragraphs 6 and 7 is intended to prejudice whether an activity or example is or should be eligible for registration under the Article 6.4 mechanism. They are listed only to clarify whether this standard would apply to the activity type if the Supervisory Body were to approve it for registration under the Article 6.4 mechanism.
- 6. The standard applies to mechanism methodologies for activities involving emission reductions with reversal risks and activities involving removals with reversal risks. This includes, but is not limited to, the following types of activities:
 - (a) Activities increasing carbon stocks or reducing the loss of carbon stocks, relative to the baseline, in any of the greenhouse gas reservoirs of the biosphere;⁴
 - (b) Activities increasing the storage of greenhouse gases or precursors of greenhouse gases, relative to the baseline, in products or materials;⁵
 - (c) Activities increasing the storage of greenhouse gases or precursors of greenhouse gases, relative to the baseline, in geological reservoirs;⁶

⁴ This includes, for example, afforestation, reduced deforestation, peatland rewetting, agricultural practices to enhance soil organic carbon, activities reducing the consumption of non-renewable biomass.

⁵ This includes, for example, capture of carbon dioxide from the atmosphere and its storage in construction materials, such as concrete, or the storage of carbon in biochar or in harvested wood products.

⁶ This includes, for example, capturing carbon dioxide from the atmosphere and storing it in a geological reservoir or capturing greenhouse gases from point sources (e.g., cement production plants, biomass combustion) and storing them in a geological reservoir.

- (d) Activities accelerating, relative to the baseline, natural processes by which minerals react with carbon dioxide in the atmosphere and lock it away as carbonates;⁷
 - (e) Activities increasing, relative to the baseline, the capacity of the hydrosphere to store greenhouse gases or precursors of greenhouse gases;⁸
 - (f) Activities preventing the release of greenhouse gases from fossil fuels that in their natural deposits or during storage after extraction would, in the baseline scenario, interact with the atmosphere.⁹
7. The following types of activities are deemed not to be subject to reversal risks:
- (a) Activities reducing the combustion of fossil fuels that, in their natural deposits or during storage after extraction, do not interact with the atmosphere;¹⁰
 - (b) Activities reducing greenhouse gases other than carbon dioxide through processes not related to storage in a greenhouse gas reservoir.¹¹

4. General principles and requirements

4.1. Principles

8. The following principles shall be applied in the context of addressing reversals to ensure that information provided is a true and fair account. These principles shall be the basis for and guide the development of mechanism methodologies:
- (a) **Relevance:** Data, parameters, assumptions, and methods used for addressing reversals shall not be misleading and only verifiable data and parameters that may have an impact on how reversals are addressed shall be included;
 - (b) **Completeness:** All relevant information to address reversals shall be provided;
 - (c) **Consistency:** The application of methods ensures consistent results across similar circumstances;
 - (d) **Accuracy:** Bias and uncertainties in both quantitative and non-quantitative information shall be reduced as far as it is practical;
 - (e) **Transparency:** Sufficient and appropriate information shall be disclosed to allow intended users to make decisions with reasonable confidence. Transparency relates to clearly stating all data, parameters, assumptions and methods applied; referencing background material; stating documentation changes; and stating and justifying all data, parameters, methods and assumptions made such that the outcomes can be reproduced.

⁷ This includes, for example, enhanced weathering.

⁸ This includes, for example, storing carbon dioxide in the water column of oceans or enhancing the alkalinity of oceans.

⁹ This includes, for example, closing abandoned oil wells, extinguishing coal mine fires, or preventing fires from gas and oil wells.

¹⁰ This includes, for example, renewable energy generation, energy efficiency improvements, and fossil fuel switching.

¹¹ This includes, for example, landfill gas capture and utilisation, abatement of nitrous oxide emissions from nitric acid production, reduction of N₂O emissions from fertilizer application, or reduction of methane emissions from rice cultivation or enteric fermentation.

4.2. General requirements

9. Mechanism methodologies shall ensure conservativeness in addressing reversals. This shall apply to all data, parameters, assumptions, and methods used in the analysis (e.g., assumptions made in the risk assessment). The degree of conservativeness shall be based on the overall level of uncertainty. All sources of uncertainty shall be considered, including uncertainty in data, parameters, assumptions, and methods.
10. Proponents of mechanism methodologies shall ensure that the provisions in mechanism methodologies to address reversals consider all national or sub-national policies, including legal requirements, that are applicable to the relevant Article 6.4 activity.

5. Identification of applicable greenhouse gas reservoirs

11. Mechanism methodologies shall identify all applicable greenhouse gas reservoirs:
 - (a) That may be affected by Article 6.4 activities covered by that methodology; and
 - (b) For which changes in the storage of a greenhouse gas or a precursor of a greenhouse gas are eligible for the issuance of A6.4ERs.
12. Mechanism methodologies shall require activity participants to apply the reversal risk assessment tool to the greenhouse gas reservoirs identified in paragraph 11 to determine the fraction of the total number of A6.4ERs to be contributed to the Reversal Risk Buffer Pool Account.
13. The proponents of a mechanism methodology may propose alternative approaches to the provisions listed in paragraph 15 if these alternative approaches ensure, with a high level of confidence, that reversals from Article 6.4 activities are fully remediated in the crediting period and post-crediting monitoring period and ensure that the alternative approaches do not cause instances of moral hazard.¹² These approaches may only be proposed if all of the following conditions are satisfied for the applicable greenhouse gas reservoir:
 - (a) That activity participants using the mechanism methodology have no control over the greenhouse gas reservoir;¹³
 - (b) That the greenhouse gas reservoir is not in the same location as where the mitigation activity is implemented; and
 - (c) That changes observed in the greenhouse gas reservoir cannot be attributed to the mitigation activity.¹⁴

¹² Moral hazard issues do not arise because proponents of mechanism methodologies may propose alternative approaches only where activity participants have no direction or influence over the relevant greenhouse gas reservoirs, which is required to satisfy paragraph 13(a). In contrast, moral hazard issues would be present if activity participants have direction or influence over the relevant greenhouse gas reservoirs. In that case, however, proponents of mechanism methodologies would not be allowed to propose alternative approaches because they would fail the requirements of paragraph 13(a).

¹³ In this context, control means that the activity participants have direction and influence on the greenhouse gas reservoir through financial, policy, management or other instruments.

¹⁴ This could apply, for example, to a cookstove efficiency project that reduces demand for non-renewable biomass, and that biomass is collected by individuals from forests on publicly held lands located a few kilometres from their residences. Neither the cookstove project owner nor the participating households have control over the forests from which biomass is sourced. The public entity could implement forest management practices that enhance biomass stocks, unrelated to the impacts of the project; similarly, the public entity could implement harvesting that would reduce biomass stocks, once again affecting the reservoir but unrelated to the impacts of the project.

14. When a proponent of a mechanism methodology proposes alternative approaches for any of the provisions listed in paragraph 15, they shall provide appropriate justification for why the conditions set out in paragraph 13 apply to each relevant greenhouse gas reservoir.
15. Proponents of mechanism methodologies may propose alternative approaches to any of the following provisions, so long as those alternative approaches meet the conditions of paragraphs 13 and 14:
 - (a) General requirements for the identification and quantification of reversals (section 7.1 of this document);
 - (b) Frequency of submitting monitoring reports (section 7.2 of this document);
 - (c) Monitoring and reporting in the post-crediting period (section 7.4 of this document);
 - (d) Reversal-related notifications and reports (section 1 of Appendix 2);
 - (e) Post-crediting period monitoring and reporting (section 3 of Appendix 2); and
 - (f) Post-reversal actions (section 4 of Appendix 2).
16. None of the alternative approaches proposed per paragraph 15 shall limit or exempt Article 6.4 activities from following any other requirements, including, without limitation:
 - (a) The “Tool: Reversal risk assessment”;¹⁵
 - (b) The “Tool: Article 6.4 sustainable development tool” (A6.4-TOOL-AC-001);¹⁶ and
 - (c) **Any** monitoring and reporting obligations unrelated to the management of non-permanence and reversals.
17. A summary of the provisions that are eligible for alternative approaches and their relationship to the Removals Standard and the “Concept note: Applicability of removal guidance to emission reductions and vice versa” (A6.4-MEP007-A03)¹⁷ is shown in Table .

Table 1. Summary of alternative approaches that may be considered

Issue	Concept note ¹⁷	Removals Standard	Provisions eligible for alternative approaches
Monitoring	Section 3.2.3	Section 4.1	Section 7.1 of this document Section 7.2 of this document Section 7.4 of this document Section 1 of Appendix 2
Reporting	Section 3.2.4	Section 4.2	Section 7.1 of this document Section 7.2 of this document Section 7.4 of this document Section 1 of Appendix 2
Post-crediting period monitoring and reporting	Section 3.2.5	Section 4.3	Section 7.4 of this document Section 1 of Appendix 2 Section 3 of Appendix 2
Addressing reversals	Section 3.2.8	Section 4.6.2; and Section 4.6.3	Section 4 of Appendix 2

¹⁵ This document is under development.

¹⁶ <https://unfccc.int/sites/default/files/resource/A6.4-TOOL-AC-001.pdf>.

¹⁷ <https://unfccc.int/sites/default/files/resource/A6.4-MEP007-A03.pdf>.

6. Quantification of emission reductions and/or net removals and reversals

18. Mechanism methodologies shall quantify emission reductions and/or net removals, and any reversals, consistent with the equations set out in this section as follows:
- Mechanism methodologies shall apply all subsections of this section for use during an Article 6.4 activity's crediting period; and
 - Mechanism methodologies shall apply section 6.1 for use during an Article 6.4 activity's post-crediting monitoring period.

6.1. Net change in storage of a greenhouse gas or a precursor of a greenhouse gas

19. Mechanism methodologies shall include equations that determine, for use during the Article 6.4 activity's crediting period, the net change in storage resulting from the Article 6.4 activity over the period of time covered by a monitoring report t , consistent with the following equation:¹⁸

$$\Delta S_t = \sum_i [(S_{i,activity,end,t} - S_{i,activity,start,t}) - (S_{i,baseline,end,t} - S_{i,baseline,start,t})] \quad \text{Equation (1)}$$

Where:

- | | | |
|--------------------------|---|--|
| ΔS_t | = | The net change in storage of a greenhouse gas, or a precursor of a greenhouse gas, resulting from the Article 6.4 activity across all applicable reservoirs i over the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e) |
| $S_{i,activity,end,t}$ | = | The quantity of a greenhouse gas, or a precursor of a greenhouse gas, stored in the greenhouse gas reservoir i in the Article 6.4 activity scenario at the end of the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e) |
| $S_{i,activity,start,t}$ | = | The quantity of a greenhouse gas, or a precursor of a greenhouse gas, stored in the greenhouse gas reservoir i in the Article 6.4 activity scenario at the start of the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e) |
| $S_{i,baseline,end,t}$ | = | The quantity of a greenhouse gas, or a precursor of a greenhouse gas, stored in the greenhouse gas reservoir i in the baseline scenario at the end of the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e). |
| $S_{i,baseline,start,t}$ | = | The quantity of a greenhouse gas, or a precursor of a greenhouse gas, stored in the greenhouse gas reservoir i in the baseline scenario at the start of the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e). |
| i | = | The greenhouse gas reservoir(s) identified in paragraph 11 above and included in the activity boundary of an Article 6.4 activity |
| t | = | The number of the Article 6.4 activity monitoring report during the Article 6.4 activity's crediting period, with $t = 1$ for the report of the first monitoring period |

¹⁸ Note that ΔS_t may be determined by monitoring different parameters than those in this equation as long as this delivers an equivalent outcome. For example, in the case of carbon capture and storage in geological reservoirs, the flux of carbon injected in the reservoir may be a key parameter to estimate the stock, rather than directly measuring the stock within the reservoir. Similarly, in the land-use sector, the increment in stocks rather than the total stocks may be measured. For some activities, where direct measurements are infeasible, it may be appropriate to use mass balances and/or modelling approaches.

20. A reversal occurs during an Article 6.4 activity's active crediting period when the net change in storage is less than zero ($\Delta S_t < 0$) in the monitoring report for any monitoring period after the first one (i.e., for $t \geq 2$), with the quantity of the reversal specified by ΔS_t .¹⁹
21. For monitoring reports used to quantify reversals during an Article 6.4 activity's post-crediting monitoring period, mechanism methodologies shall include equations that determine the net change in storage resulting from the Article 6.4 activity over the period of time covered by a monitoring report k in the post-crediting monitoring period, consistent with the following equation:

$$\Delta S_{PC,k} = \sum_i [(S_{i,activity,end,k} - S_{i,activity,crediting})] \quad \text{Equation (2)}$$

Where:

$\Delta S_{PC,k}$	=	The net change in storage of a greenhouse gas, or a precursor of a greenhouse gas, resulting from the Article 6.4 activity across all applicable reservoirs i over the period of time covered by a monitoring report k in the post-crediting monitoring period, expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e)
$S_{i,activity,end,k}$	=	The quantity of a greenhouse gas, or a precursor of a greenhouse gas, stored in the greenhouse gas reservoir i in the Article 6.4 activity scenario at the end of the period of time covered by a monitoring report k in the post-crediting monitoring period, expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e)
$S_{i,activity,crediting}$	=	The quantity of a greenhouse gas, or a precursor of a greenhouse gas, stored in the greenhouse gas reservoir i in the Article 6.4 activity scenario at the end of the Article 6.4 activity's last active crediting period, expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e)
i	=	The greenhouse gas reservoir(s) identified in paragraph 11 above and included in the activity boundary of an Article 6.4 activity
k	=	The number of the Article 6.4 activity monitoring report during the post-crediting monitoring period, with $k = 1$ for the first monitoring report in the post-crediting monitoring period

22. For monitoring reports used to establish that no reversal has occurred in the post-crediting monitoring period, mechanism methodologies may include provisions to establish that no reversal has occurred ($\Delta S_{PC,k} \geq 0$) without quantifying the amount of greenhouse gases or their precursors stored in each applicable greenhouse gas reservoir ($S_{i,activity,end,k}$).
23. For the purpose of paragraphs 21 and 22, a reversal occurs during an Article 6.4 activity's post-crediting monitoring period when $\Delta S_{PC,k} < 0$.
24. The approach set out in paragraphs 21 and 22 will in most instances result in a conservative quantification of reversals. In few instances, the approach may need to be

¹⁹ Note that although the net change in greenhouse gas storage could be negative for $t = 1$ ($\Delta S_1 < 0$), this would not constitute a reversal because no A6.4ERs would have been issued to the Article 6.4 activity

amended or revised to ensure conservativeness.²⁰ In such instances, the mechanism methodology shall include provisions for amending or revising the approach accordingly.

6.2. Net change in emissions of greenhouse gases

25. Mechanism methodologies shall include equations that determine the net change in emissions resulting from the Article 6.4 activity over the period of time covered by a monitoring report t . This shall not include any emissions from losses of storage from the greenhouse gas reservoir(s) included in Equation 1 above.²¹ The net change in emissions shall be determined consistent with the following equation:

$$\Delta E_t = \sum_s AE_{s,t} + \max\left(0, \sum_j LE_{j,t}\right) - \sum_s BE_{s,t} \quad \text{Equation (3)}$$

Where:

ΔE_t	=	The net change in greenhouse gas emissions, from sources other than any losses in storage from the greenhouse gas reservoir(s) included in Equation 1, resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e)
$AE_{s,t}$	=	Greenhouse gas emissions from source s included in the activity boundary, occurring in the Article 6.4 activity scenario over the period of time covered by a monitoring report t and expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e)
$LE_{j,t}$	=	Greenhouse gas emissions from leakage source j resulting from the Article 6.4 activity over the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e). ²²
$BE_{s,t}$	=	Greenhouse gas emissions from source s in the baseline scenario over the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e).
s	=	Emission sources included in the activity boundary in the Article 6.4 activity scenario and baseline scenario, other than emissions from losses in carbon storage from the greenhouse gas reservoir(s) included in Equation 1
j	=	Leakage sources considered in the mechanism methodology in the Article 6.4 activity scenario and, where applicable, the baseline scenario

²⁰ For example, a single geological reservoir could be used by different activities, including activities registered under other carbon crediting programmes or covered by emissions trading schemes. In these instances, the methodology may need to include additional provisions to allocate any losses to the different activities. Another example could be an afforestation activity where reversal could occur if no further carbon is accumulated in the Article 6.4 scenario whereas further carbon would be accumulated over time in the baseline, i.e. in the absence of the Article 6.4 activity.

²¹ For example, in the case of an afforestation activity, such emissions may include emissions from road transportation or fertilizer application but do not include any carbon dioxide emissions from loss of above-ground biomass, as the latter is included in the term ΔS_i in Equation 1. In the case of a direct air carbon capture and storage activity, such emissions could include emissions from consumption of electricity required for the operation of the capture plant.

²² Note that the maximum of zero and the sum of all leakage emissions is used in Equation 3 because, in accordance with paragraph 10 of the standard “Addressing leakage in mechanism methodologies”, leakage shall be set to zero if the sum of all sources of leakage results in a net decrease in greenhouse gas emissions or increase in greenhouse gas removals.

t = The number of the Article 6.4 activity monitoring report during the Article 6.4 activity's crediting period, with $t = 1$ for the first monitoring report

6.3. Total A6.4ER issuance

26. Mechanism methodologies shall include equations that determine the total number of A6.4ERs to be issued for an Article 6.4 activity over the period of time covered by a monitoring report t , consistent with the following equation:

$$A6.4ER_{total,t} = \Delta S_t - \Delta E_t - CD_{t-i} \quad \text{Equation (4)}$$

Where:

$A6.4ER_{total,t}$ = The total number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t

ΔS_t = The net change in storage of a greenhouse gas, or a precursor of a greenhouse gas, resulting from the Article 6.4 activity across all applicable reservoirs over the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO₂e)

ΔE_t = The net change in greenhouse gas emissions, from sources other than any losses in storage from the greenhouse gas reservoir(s) included in Equation 1, resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and expressed in metric tonnes of carbon dioxide equivalent (tCO₂e)

CD_{t-i} = A net increase in greenhouse gas emissions resulting from an Article 6.4 activity caused by factors other than reversals (a "crediting deficit"), applicable to the monitoring report $t-1$ and expressed in metric tonnes of carbon dioxide equivalent (tCO₂e)

t = The number of the Article 6.4 activity monitoring report during the Article 6.4 activity's crediting period, with $t = 1$ for the first monitoring report

6.4. Crediting deficit

27. Mechanism methodologies shall include equations that determine any crediting deficit resulting from the Article 6.4 activity over the period of time covered by a monitoring report t (CD_t), consistent with the following equations:

$$A6.4ER_{total,t} \geq 0, \text{ then } CD_t = 0 \quad \text{Equation (5)}$$

$$\text{If } A6.4ER_{total,t} < 0 \text{ and } \Delta S_t \geq 0, \text{ then } CD_t = -1 \times A6.4ER_{total,t} \quad \text{Equation (6)}$$

$$\text{If } A6.4ER_{total,t} < 0 \text{ and } \Delta S_t < 0, \text{ then } CD_t = \max(0, CD_{t-1} + \Delta E_t) \quad \text{Equation (7)}$$

Where:

$A6.4ER_{total,t}$ = The total number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t .

ΔS_t	=	The net change in storage of a greenhouse gas, or a precursor of a greenhouse gas, resulting from the Article 6.4 activity across all applicable reservoirs over the period of time covered by a monitoring report t , expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e)
ΔE_t	=	The net change in greenhouse gas emissions, from sources other than any losses in storage from the greenhouse gas reservoir(s) included in Equation 1, resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e)
CD_t	=	A net increase in greenhouse gas emissions resulting from an Article 6.4 activity caused by factors other than reversals (a “crediting deficit”), applicable to the monitoring report t and expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e).
CD_{t-1}	=	A net increase in greenhouse gas emissions resulting from an Article 6.4 activity caused by factors other than reversals (a “crediting deficit”), applicable to the monitoring report $t-1$ and expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e).
t	=	The number of the Article 6.4 activity monitoring report during the Article 6.4 activity’s crediting period, with $t = 1$ for the first monitoring report.

28. When the crediting deficit is greater than zero, it reflects a net increase in greenhouse gas emissions resulting from an Article 6.4 activity due to factors other than reversals. A crediting deficit can occur when the net change in storage (ΔS_t) over the period of time covered by a monitoring report t is positive, but smaller than a net increase in emissions over the same time period (i.e., $\Delta E_t \geq \Delta S_t$).²³ A crediting deficit can persist from one period of time to the next, so long as A6.4ER issuance is too small to compensate for the crediting deficit. If a crediting deficit persists at the end of the last active crediting period, any such deficit will remain unaddressed.
29. Crediting deficits affect future A6.4ER issuance requests and are adjusted, as applicable, at each A6.4ER issuance request. When there is a crediting deficit from the period of time covered by a monitoring report $t-1$, any non-zero A6.4ER issuance for the period of time covered by the monitoring report t will be reduced and the crediting deficit updated accordingly. This can happen in three ways:
- If total A6.4ER issuance is greater than or equal to zero ($A6.4ER_{total,t} \geq 0$), then Equation 5 applies. This indicates that the quantity of emission reductions and/or net removals in the period of time covered by the monitoring report t was sufficient to eliminate the crediting deficit, if any, from the period of time covered by the monitoring report $t-1$. If the crediting deficit from the period of time covered by the monitoring report $t-1$ is positive, then the A6.ER issuance for the period of time covered by the monitoring report t is reduced by the same quantity; and if the crediting deficit from the period of time covered by the monitoring report $t-1$ is zero, then the A6.ER issuance for the period of time covered by the monitoring report t is unchanged. In either case, the crediting deficit for the period of time covered by the monitoring report t is zero;
 - If total A6.4ER issuance is less than zero ($A6.4ER_{total,t} < 0$) and the net change in storage is greater than or equal to zero ($\Delta S_t \geq 0$), then Equation 6 applies. In this

²³ For example, this could occur where an afforestation activity maintains previously achieved carbon stocks but does not further enhance carbon stocks, while still causing emissions from road transportation. This could also occur if a bioenergy project with carbon capture and storage or a direct air capture project stores carbon dioxide in a subsurface geologic reservoir while emitting a greater quantity of carbon dioxide to the atmosphere from its operations.

case, there is a crediting deficit for the period of time covered by the monitoring report t equal to the total A6.4ER issuance ($A6.4ER_{total,t}$) multiplied by negative 1. This situation occurs when there is no reversal and therefore an overall increase in total greenhouse gas storage ($\Delta S_t \geq 0$), but the combination of any net change in greenhouse gas emissions and any previous crediting deficit is greater than the net change in greenhouse gas storage (i.e., $\Delta E_t + CD_{t-1} \geq \Delta S_t$);

- (c) If both the total A6.4ER issuance and the net change in storage are less than zero ($A6.4ER_{total,t} < 0$ and $\Delta S_t < 0$), then Equation 7 applies. This situation results in a different formula for the calculation of the crediting deficit because the net loss in greenhouse gas storage ($\Delta S_t < 0$) is addressed by operations of the Reversal Risk Buffer Pool Account, rather than through reductions in subsequent A6.4ER issuance.

30. The initial crediting deficit at the start of the first monitoring period $t = 1$ of an Article 6.4 activity (CD_0) is set to zero by definition.

6.5. A6.4ER contributions to the Reversal Risk Buffer Pool Account

31. Mechanism methodologies shall include an equation that determines the number of mitigation contribution A6.4ERs to be forwarded or authorised A6.4ERs to be first transferred, as applicable, to the Reversal Risk Buffer Pool Account, as follows:

$$A6.4ER_{buffer,t} = \sum_i [\max(0, \Delta S_{i,t}) \times F_{buffer,i,t}] \quad \text{Equation (8)}$$

Where:

$A6.4ER_{buffer,t}$	=	The number of A6.4ERs that are issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and to be forwarded or first transferred, as applicable, to the Reversal Risk Buffer Pool Account
$\Delta S_{i,t}$	=	The net change in storage of a greenhouse gas, or a precursor of a greenhouse gas in greenhouse gas reservoir i , resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and expressed in metric tonnes of carbon dioxide equivalent (tCO ₂ e)
$F_{buffer,i,t}$	=	The fraction of the net enhancement in storage of a greenhouse gas or a precursor in reservoir i , resulting from the Article 6.4 activity over the period of time covered by monitoring report t , as determined by the reversal risk assessment tool, and used for the purpose of determining the number of A6.4ERs to be forwarded or first transferred, as applicable, to the Reversal Risk Buffer Pool Account
i	=	The greenhouse gas reservoir(s) identified in paragraph 11 above and included in the activity boundary of an Article 6.4 activity
t	=	The number of the Article 6.4 activity monitoring report during the Article 6.4 activity's crediting period, with $t = 1$ for the first monitoring report

32. Mechanism methodologies may propose alternative approaches to determine $A6.4ER_{buffer,t}$ if:

- (a) The outcome is aligned with the approach in equation 8; or
- (b) The proponent of the mechanism methodology justifies, with appropriate evidence, that a different approach that applies to Article 6.4 activities involving more than one greenhouse gas reservoir will result in a conservative treatment of reversal risks.

6.6. A6.4ER contributions to the Adaptation Fund

33. Mechanism methodologies shall include an equation that determines the total number of mitigation contribution A6.4ERs to be forwarded or authorised A6.4ERs to be first transferred, as applicable, to an account held by the Adaptation Fund in the mechanism registry for assisting developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation, as follows:

$$A6.4ER_{SOP,t} = A6.4ER_{total,t} \times SOP \quad \text{Equation (9)}$$

Where:

- $A6.4ER_{SOP,t}$ = The total number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and to be forwarded or first transferred, as applicable, to an account of the Adaptation Fund in the mechanism registry
- $A6.4ER_{total,t}$ = The total number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t
- SOP = The share of proceeds designated to support the Adaptation Fund
- t = The number of the Article 6.4 activity monitoring report during the Article 6.4 activity's crediting period, with $t = 1$ for the first monitoring report

34. The term SOP shall be set to:

- (a) Zero percent for Article 6.4 activities located in least developed countries (LDCs) and small islands developing states (SIDS) for which host countries have chosen to apply the exemption granted by 6/CMA.6 para. 20; or
- (b) 5 percent for Article 6.4 activities located in all other host countries, pursuant to paragraph 58 of Annex I of decision 3/CMA.3.

6.7. A6.4ER contributions to overall mitigation in global emissions

35. Mechanism methodologies shall include an equation that determines the number of mitigation contribution A6.4ERs to be forwarded or authorised A6.4ERs to be first transferred, as applicable, to the account for cancellation towards delivering overall mitigation in global emissions, as follows:

$$A6.4ER_{OMGE,t} = A6.4ER_{total,t} \times OMGE \quad \text{Equation (10)}$$

Where:

- $A6.4ER_{OMGE,t}$ = The number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and to be forwarded or first transferred, as applicable, to the account for cancellation towards delivering overall mitigation in global emissions
- $A6.4ER_{total,t}$ = The total number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t
- $OMGE$ = The contribution to deliver overall mitigation in global emissions
- t = The number of the Article 6.4 activity monitoring report during the Article 6.4 activity's crediting period, with $t = 1$ for the first monitoring report

36. The term *OMGE* shall be set at a minimum of 2 percent, pursuant to paragraph 95 of Appendix 1 of decision 3/CMA.3.

6.8. A6.4ER issuance to activity participants

37. Mechanism methodologies shall include an equation that determines the number of mitigation contribution A6.4ERs to be forwarded or authorised A6.4ERs to be first transferred, as applicable, to the accounts of activity participants as follows:

$$A6.4ER_{activity,t} = A6.4ER_{total,t} - A6.4ER_{SOP,t} - A6.4ER_{OMGE,t} - A6.4ER_{buffer,t} \quad \text{Equation (11)}$$

Where:

$A6.4ER_{activity,t}$	=	The number of Article 6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and to be forwarded or first transferred, as applicable, to accounts of the activity participants
$A6.4ER_{total,t}$	=	The total number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t .
$A6.4ER_{SOP,t}$	=	The total number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and to be forwarded or first transferred, as applicable, to an account of the Adaptation Fund in the mechanism registry
$A6.4ER_{OMGE,t}$	=	The number of A6.4ERs to be issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and to be forwarded or first transferred, as applicable, to the account for cancellation towards delivering overall mitigation in global emissions
$A6.4ER_{buffer,t}$	=	The number of A6.4ERs that are issued with respect to emission reductions and/or net removals resulting from the Article 6.4 activity over the period of time covered by a monitoring report t and to be forwarded or first transferred, as applicable, to the Reversal Risk Buffer Pool Account.
t	=	The number of the Article 6.4 activity monitoring report during the Article 6.4 activity's crediting period, with $t = 1$ for the first monitoring report

7. Identification and quantification of reversals

7.1. General requirements

38. Mechanism methodologies shall specify the data and methods required to:
- Detect changes in the quantity of greenhouse gases or their precursors stored in all applicable greenhouse gas reservoirs, consistent with section 6.1;
 - Quantify changes in the quantity of greenhouse gases or their precursors stored in all applicable greenhouse gas reservoirs in the Article 6.4 activity scenario and the baseline scenario, consistent with section 6.1;
 - Determine whether a reversal has occurred, consistent with section 6.1; and
 - Classify any reversal as being avoidable, unavoidable, or partially avoidable and partially unavoidable, consistent with section 7.3.

39. For the purpose of identifying whether any observed event involving the release of stored greenhouse gases has led to a reversal, mechanism methodologies may include provisions to conservatively calculate the total removals expected to occur within the monitoring period in which the observed event took place. If the total expected removals within the monitoring period are larger than the sum of emissions from all observed events involving the release of stored greenhouse gases within the same monitoring period, then methodologies may determine that no reversal is deemed to have occurred for the purpose of notifying the Supervisory Body of observed events involving the release of stored greenhouse gases. The provisions of this paragraph shall only apply to activity types that generate ongoing net removals without ongoing interventions by the activity participant,²⁴ and shall not be applied to any other matters, such as quantification of emission reductions and/or net removals.
40. For the purpose of preparing preliminary assessment reports, mechanism methodologies shall require activity participants to submit a monitoring report in cases where it is ambiguous as to whether an observed event of greenhouse gas release constitutes a reversal.
41. For the purpose of preparing monitoring reports only for the post-crediting monitoring period and only in cases where no reversal is reported, mechanism methodologies may establish provisions for activity participants to demonstrate that no reversal has occurred (i.e., to show that $\Delta S_{PC,k} \geq 0$) rather than quantify the amount of the net change in storage ($\Delta S_{PC,k}$).

7.2. Frequency of submitting monitoring reports

42. Mechanism methodologies shall specify the minimum frequency at which monitoring reports must be submitted during the crediting periods and post-crediting monitoring period. The minimum frequency shall be between one and five years and be based on the nature, the type, and the risk of reversals. A less frequent requirement from within this range (i.e., a larger gap between monitoring reports) is appropriate where the quantification of emission reductions or net removals is associated with considerable costs²⁵ and/or where emission reductions or net removals can only be observed over longer time periods.²⁶ The minimum frequency may also change over time, while being within the above specified range.

7.3. Determination of whether reversals are avoidable or unavoidable

43. Mechanism methodologies shall include provisions to classify reversals as avoidable or unavoidable, taking into the account the type of activities eligible under the methodology. Where necessary, mechanism methodologies shall also include a procedure to apportion the total amount of reversals into a portion of avoidable reversals and a portion of unavoidable reversals.

²⁴ This includes, for example, many forestry activities.

²⁵ For example, costs for sampling the carbon content at plots in the land-use sector.

²⁶ For example, changes in soil organic carbon following changes in land-use practices may only be observable over longer time periods.

44. Mechanism methodologies shall classify the following types of reversals, inter alia, as avoidable:
- (a) Reversals resulting from the management of the Article 6.4 activity and any other wilful actions by the activity participants;²⁷
 - (b) Reversals resulting from mismanagement, neglect or illegal actions by the activity participants, including as a consequence of bankruptcy, insolvency, or default;
 - (c) Reversals resulting from the intentional use of a product or material, in which a greenhouse gas or a precursor of a greenhouse gas was stored under an Article 6.4 activity, such that a greenhouse gas is released to the atmosphere;²⁸
 - (d) Reversals that have occurred following a failure to implement the risk mitigation plan that is attributable to the activity participants; and
 - (e) Reversals deemed to have occurred when an annual reversal report or a monitoring report is missing, as defined in section 2.3 of Appendix 2.
45. Mechanism methodologies shall classify the following types of reversals, inter alia, as unavoidable:
- (a) Reversals resulting from natural disturbances and extreme events;²⁹
 - (b) Reversals resulting from declared war, undeclared war, or acts of terrorism;
 - (c) Reversals resulting from changes in policies or legal requirements that prevent the activity participants from implementing risk mitigation plans; and
 - (d) Reversals resulting from illegal action by third parties that cannot be controlled, influenced or managed using legal means by the activity participants.
46. Reversals caused by any factors that were not identified in an Article 6.4 activity's reversal risk assessment(s), as updated, shall be classified as avoidable reversals by default and may only be classified as unavoidable with due justification (e.g., in cases of clear "force majeure").

7.4. Monitoring and reporting in the post-crediting monitoring period

47. Mechanism methodologies may identify conditions under which activity participants may or shall update their monitoring plan for the post-crediting monitoring period, e.g., updates to monitoring techniques or approaches.
48. Mechanism methodologies shall define a minimum period for monitoring during the post-crediting monitoring period, after which activity participants may submit a request for termination of monitoring during the post-crediting monitoring period through demonstration of a negligible risk of reversal. The minimum period shall be informed by, inter alia, a consideration of the mitigation activity type and its associated reversal risks.

²⁷ For example, harvesting of trees, slash burns, land conversion, changes in land management practices that were not described in the PDD, induced seismicity or fractures in geological reservoirs due to injection practices.

²⁸ For example, combustion of biomass previously stored in buildings.

²⁹ For example, wildfires, accidental fires in the built environment, pests and disease infestation, droughts, hurricanes, floods, landslides, earthquakes, and volcanic eruptions.

49. Mechanism methodologies shall define a set of conditions or criteria that must be satisfied in order for activity participants to demonstrate negligible risk of reversal,³⁰ considering the mitigation activity type and its associated reversal risks. The conditions or criteria shall ensure that the greenhouse gases or their precursors that are stored by the Article 6.4 activity within the applicable greenhouse gas reservoir(s) have reached and will remain in a steady state or, where relevant, are stabilized for at least 100 years from the year of demonstration of negligible risk of reversal.

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³⁰ For example, in the case of sub-surface CO₂ storage, such conditions and criteria may pertain to the behaviour of the stored CO₂ in the geological reservoir. For biochar, conditions and criteria may pertain, inter alia, to restrictions on applications that could result in the release of the carbon stored in biochar (such as through combustion) and criteria on the characteristics of the biochar.

Appendix 2. Elements for inclusion in relevant regulatory documents

1. This Appendix sets out requirements that are directed to activity participants and DOEs. The elements in this Appendix shall be included, as applicable, in the:
 - (a) “Standard: Article 6.4 activity standard for projects” (A6.4-STAN-AC-002)¹;
 - (b) “Procedure: Article 6.4 activity cycle procedure for projects” (A6.4-PROC-AC-002)²;
 - (c) “Procedure: Article 6.4 mechanism registry” (A6.4-PROC-REGS-001)³; and/or
 - (d) “Standard: Article 6.4 validation and verification standard for projects” (A6.4-STAN-AC-003)⁴.

1. Reversal-related notifications and reports

1.1. Overview of reversal-related notifications and reports

2. This section establishes requirements in relation to the following types of notifications and reports:
 - (a) Notifications of observed event: The purpose of this notification is to inform the Supervisory Body about an observed event;
 - (b) Preliminary assessment report: The purpose of this report is to determine whether an observed event has resulted in a reversal;
 - (c) Annual reversal report: The purpose of this report is to indicate whether, at any point in the previous calendar year, any observed events occurred or, if none occurred, to document that outcome;
 - (d) Monitoring report: During the crediting periods of an Article 6.4 activity, the purpose of this report is to quantify emission reductions and/or net removals for issuing A6.4ERs or to quantify any reversals. For these periods, the provisions on monitoring reports in this document complement provisions on monitoring reports in other regulatory documents by elements that are relevant to activities that are subject to risks of reversals. During the post-crediting monitoring period, the purpose of this report is to demonstrate that no reversal has occurred or, if reversals have occurred, to quantify the amount of reversals.

¹ See <https://unfccc.int/sites/default/files/resource/A6.4-STAN-AC-002.pdf>.

² See <https://unfccc.int/sites/default/files/resource/A6.4-PROC-AC-002.pdf>.

³ See <https://unfccc.int/sites/default/files/resource/A6.4-PROC-REGS-001.pdf>.

⁴ See <https://unfccc.int/sites/default/files/resource/A6.4-STAN-AC-003.pdf>.

Table 1. Summary of reversal-related reporting requirements

Requirement	Purpose	Timing of submission	Whether verification is required
Notification	Inform the Supervisory Body of a potential reversal	Within 30 days of the end of an observed event	No
Preliminary assessment report	Determine whether a reversal has occurred	Within 90 days of the end of an observed event	Yes, but only if the preliminary assessment report concludes that a reversal has not occurred
Monitoring report	Quantify amount and classify the type of reversal	Within 365 days of the end of an observed event	Yes
Annual reversal report	Ensure regular communication with activity participants	Annually, due 31 March each year	Yes, and verification can be done ex post as part of the verification of a monitoring report

1.2. Observed events that could lead to a reversal

3. Activity participants shall notify the secretariat of any observed event involving the release of stored greenhouse gases that could potentially lead to a reversal within 30 days of becoming aware of the observed event. This notification shall include:
 - (a) A description of the observed event;
 - (b) The date(s) of the occurrence of the observed event, including a statement indicating whether the event is ongoing at the time of notification;
 - (c) The location of the event; and
 - (d) Any additional information as required by the mechanism methodology.
4. If the secretariat becomes aware of a potential reversal event affecting an Article 6.4 activity, but has not received a notification from the activity participants pursuant to paragraph 3, the secretariat shall notify the activity participants of its understanding and request that, within 30 days, the activity participants either provide a notification pursuant to paragraph 3 or an explanation of why no such notification is required. All notifications and explanations provided under this paragraph shall be made publicly available.
5. When the secretariat receives a notification pursuant to paragraph 3 or 4, the secretariat shall suspend the activity-specific registry operations of issuance, transfer, cancellation, and retirement of A6.4ERs, except for transfers of A6.4ERs to the Reversal Risk Buffer Pool Account. The same registry operations shall be reinstated when an activity participant satisfies the requirements of paragraphs 8 or 11, as applicable.
6. In the event of notification to the secretariat pursuant to paragraph 3 or 4, activity participants shall prepare a preliminary assessment report to determine whether the observed event has resulted in a reversal and submit the preliminary assessment report to the secretariat. The preliminary assessment report shall include:
 - (a) A description of the activities and methods used to monitor for potential reversals;
 - (b) A determination of whether a reversal has occurred; and

- (c) The data collected to inform the preliminary assessment report's conclusions, including remote sensing data where applicable. Activity participants may elect to summarize the applicable data in the preliminary assessment report, provided that the complete data are made available to the Supervisory Body as part of the preliminary assessment report's submission.
7. Preliminary assessment reports shall be submitted to the secretariat within 90 days of the end of the observed event.
8. When a preliminary assessment report concludes, on the basis of transparent and verifiable evidence, that a reversal has not occurred, it shall be verified and submitted through a DOE. After conducting a completeness check, the secretariat shall forward the preliminary assessment report to the Supervisory Body along with a recommendation on whether the Supervisory Body should approve it:
- (a) If the Supervisory Body approves a preliminary assessment report that concludes a reversal has not occurred, it shall notify the activity participants of such approval and shall instruct the mechanism registry administrator to resume the registry operations suspended by operation of paragraph 5;
- (b) If the Supervisory Body does not approve a preliminary assessment report, the activity participant shall follow the requirements of paragraph 10.
9. When a preliminary assessment report concludes that a reversal has occurred, it shall not be verified and shall be submitted directly by an activity participant. In this case, the preliminary assessment report shall serve only as notice that a monitoring report is required, and no further actions are required from the secretariat or Supervisory Body.
10. If the Supervisory Body does not approve the preliminary assessment report, or if the preliminary assessment report concludes that a reversal has occurred, the activity participant shall submit, through the DOE, a verified monitoring report to the Supervisory Body within 365 calendar days of the end of the observed event. The verified monitoring report shall:
- (a) Include a description of the monitoring activities and methods used;
- (b) Identify the location of the event in the form of Keyhole Markup Language files or similar formats as one or more polygon(s) or by specifying the coordinates of the geographic boundary using a known coordinate system;
- (c) Quantify the amount of the reversal by using the upper bound of the uncertainty interval at a 90 per cent confidence level, with a description of how the amount was quantified;
- (d) Include data, records, and logs related to the observed event of greenhouse gas release. If the data set is too large, a summary of the data and an indication of how the full data set can be accessed may be provided in the monitoring report;
- (e) Classify the reversals as being avoidable, unavoidable, or partially avoidable and partially unavoidable. In cases where the reversals are partially avoidable and partially unavoidable, the monitoring report shall quantify the amount of avoidable reversals and the amount of unavoidable reversals, with the sum equal to the amount of the total reversals;
- (f) Review the activity's reversal risk assessment and, if necessary, revise the percentage contribution the activity makes to the Reversal Risk Buffer Pool Account; and

- (g) Review the Article 6.4 activity's compliance with the requirements of the Sustainable development tool, including by taking into account any negative environmental or social impacts caused by the reversal and developing or updating plans to prevent the recurrence of reversal-related negative environmental and social impacts.
11. Upon the Supervisory Body's determination that a verified monitoring report submitted pursuant to paragraph 10 has correctly quantified the magnitude of the reversal and characterized the type of reversal the following actions shall be taken:
- (a) The secretariat shall take the actions described in section 4.1 of this Appendix to address the avoidable and/or unavoidable reversals identified in the verified monitoring report;
 - (b) The activity participant shall take the actions described in section 4.2 of this Appendix to address the avoidable reversals identified, if any, in the verified monitoring report; and
 - (c) Following the satisfactory completion of the actions described in subparagraphs (a) and (b) as applicable, the secretariat shall reinstate all registry operations that were previously suspended by operation of paragraph 5.

1.3. Annual reversal report

12. Activity participants shall submit to the secretariat, by 31 March each year, an annual reversal report that indicates whether, at any point in the previous calendar year, any observed events involving the release of stored greenhouse gases that could potentially have led to a reversal.
13. Annual reversal reports shall be prepared following any guidance provided in the applicable mechanism methodology regarding the appropriate data and methods for determining whether any such observed event has occurred.
14. If an annual reversal report indicates the presence of any such observed events, it shall identify and list them along with the corresponding notification(s) provided to the secretariat pursuant to paragraphs 3 or 4.
15. If the annual reversal report indicates the absence of any such observed event, it shall state the basis for this conclusion.
16. Annual reversal reports shall be verified either:
- (a) Prior to their submission to the secretariat; or
 - (b) Retroactively as part of the verification of monitoring reports, such that the verification of a monitoring report also covers all previously unverified annual reversal reports that pertain to the time period covered by the verified monitoring report.

2. Late, incomplete or missing report submissions

17. Monitoring reports, preliminary assessment reports, and annual reversal reports shall be submitted to the Supervisory Body on or before their respective deadlines.

18. Activity participants may make a request to extend a deadline by submitting a request to the Supervisory Body through the secretariat. The secretariat shall review any request and take the following actions:
 - (a) When a request is made because the activity participant's process for DOE contracting evidence the unavailability of DOEs or because of force majeure, the secretariat shall automatically approve a single, 90-day extension of the applicable deadline; and
 - (b) For all other requests, including requests for extensions beyond those granted under subparagraph (a), the secretariat shall recommend that the Supervisory Body grant the extension for any request that is justified with appropriate evidence or deny the request;
 - (c) All requests and grants of extension or denials of requests shall be made publicly available.
19. The Supervisory Body may develop additional guidance and consequences to address matters not elaborated here, including to address any patterns of late, incomplete or missing submissions that may arise in practice.

2.1. Late report submissions

20. A monitoring report, preliminary assessment report, or annual reversal report that is not submitted on or before its deadline shall be designated as late.
21. Whenever a monitoring report, preliminary assessment report, or annual reversal report has been designated as late, the secretariat shall provide an automated electronic notice to activity participants that the monitoring report, preliminary assessment report, or annual reversal report has not been received on time and has therefore been designated as late.
22. Whenever a monitoring report has been designated as late, the secretariat shall suspend the activity-specific registry operations of issuance, transfer, cancellation and retirement of A6.4ERs, except for transfers of A6.4ERs to the Reversal Risk Buffer Pool Account. If an activity participant submits a late monitoring report before it is designated as missing pursuant to paragraph 32, the secretariat shall reinstate all registry operations that were previously suspended by operation of this paragraph.
23. Whenever an annual reversal report has been designated as late and it has not been submitted within 30 calendar days since the notification referenced in paragraph 21, the secretariat shall suspend the activity-specific registry operations of issuance, transfer, cancellation and retirement, except for transfers of A6.4ERs to the Reversal Risk Buffer Pool Account. If an activity participant submits a late annual reversal report before it is designated as missing pursuant to paragraph 34, the secretariat shall reinstate all registry operations that were previously suspended by operation of this paragraph.

2.2. Incomplete report submissions

24. The secretariat shall, subject to the guidance of the Supervisory Body, conduct within seven days a completeness check in accordance with the completeness check checklist for following submission types, as applicable:
 - (a) Monitoring report submissions;
 - (b) Preliminary assessment report submissions that conclude an observed event has not led to a reversal; and
 - (c) Annual reversal report submissions.

25. A preliminary assessment report that concludes that a reversal has occurred shall automatically be deemed to be complete. The secretariat shall not perform a completeness check for this submission type.
26. If the secretariat, during the completeness check, identifies issues of an editorial nature or consistency in the submission, it shall request by email the activity participants or the DOE, copying the activity participants, as applicable, to submit revised documents and/or information. In this case, the activity participants or the DOE, as applicable, shall submit the requested documents and/or information within seven days of receipt of the request. If the activity participants or the DOE, as applicable, does not submit the requested documents and/or information by this deadline, the secretariat shall conclude that the request submission is incomplete unless the activity participants or the DOE, as applicable, provides a justification by this deadline, consistent with the requirements of paragraph 18, for not submitting the requested documents and/or information on time. In this case, the deadline shall be extended accordingly.
27. Upon conclusion of the completeness check stage, the secretariat shall notify the activity participants or the DOE, as applicable, of the conclusion of the completeness check stage. If the submission does not meet the requirements of the completeness check, the secretariat shall also communicate the underlying reasons to the activity participants or the DOE, as applicable, and make them publicly available on the UNFCCC website. In this case, the activity participants or the DOE, as applicable, may resubmit the monitoring report, preliminary assessment report, or annual reversal report with revised documentation. The deadline for any such resubmission shall be 60 days from the date of notification.
28. Upon positive conclusion of the completeness check stage, the secretariat shall, subject to the guidance of the Supervisory Body, conduct within 21 days a substantive check in accordance with the substantive check checklist for submissions of monitoring reports, preliminary assessment reports, and annual reversal reports.
29. If the secretariat, during the substantive check, identifies issues of a substantive nature or missing basic information, it shall request by email the activity participants or the DOE, copying the activity participants, as applicable, to submit revised documents and/or information. In this case, the activity participants or the DOE, as applicable, shall submit the requested documents and/or information within 60 calendar days of receipt of the request. If the activity participants or DOE, as applicable, does not submit the requested documents and/or information by this deadline, the secretariat shall conclude that the request submission is incomplete unless the activity participants or DOE, as applicable, provides a justification by this deadline for not submitting the requested documents and/or information on time. In this case, the deadline shall be extended accordingly.
30. Upon conclusion of the substantive check stage, the secretariat shall notify the activity participants and, where applicable, the DOE of the conclusion of the substantive check stage. If the submission does not meet the requirements of the substantive check, the secretariat shall conclude that the submission is incomplete and communicate the underlying reasons to the activity participants and, where applicable, the DOE, and make them publicly available on the UNFCCC website. In this case, the activity participants or the DOE, as applicable, may resubmit the monitoring report, preliminary assessment report, or annual reversal report with revised documentation. The deadline for any such resubmission shall be 60 days from the date of notification.
31. Any submission deadline established pursuant to paragraph 30 shall be subject to the provisions for late, incomplete and missing report submissions.

2.3. Missing report submissions

32. A monitoring report shall be considered missing if it has not been received within 180 calendar days of the date of the notice referenced in paragraph 21.
33. A preliminary assessment report shall be considered missing if it has not been received within 60 calendar days of the date of the notice referenced in paragraph 21.
34. An annual reversal report shall be considered missing if it has not been received within 90 calendar days of the date of the notice referenced in paragraph 21.
35. Whenever a monitoring report or annual reversal report is designated as missing, the Article 6.4 activity shall be deemed to have experienced avoidable reversals. The secretariat shall provide electronic notice to the activity participant and inform the activity participant that it shall mitigate the avoidable reversals following the provisions of section 4 of this document.
36. The quantity of the avoidable reversals designated in paragraph 35 shall be deemed to be equal to the total number of A6.4ERs issued with respect to the Article 6.4 activity, cumulatively from the Article 6.4 activity's start date through the date that the monitoring report or annual reversal report is designated as missing, inclusive of the number of A6.4ERs forwarded or first transferred, as applicable, to:
 - (a) The activity participants;
 - (b) The Reversal Risk Buffer Pool Account;
 - (c) The mechanism registry account held by the Adaptation Fund; and
 - (d) The mechanism registry account for cancellation towards delivering overall mitigation in global emissions.
37. Whenever a preliminary assessment report is designated as missing, the observed event in question will be deemed to have resulted in a reversal and a monitoring report submission shall be required pursuant to the terms of paragraph 10.
38. Table 2 summarizes the consequences of late or missing report submissions, as described above.

Table 2. Summary of consequences of late or missing report submissions

Report	Consequence of late report	Timing of consequence (late)	Consequence of missing report	Timing of consequence (missing)
Preliminary assessment report	None	Not applicable	Require monitoring report	60 days after notice
Monitoring report	Registry functionality suspended	Immediate	Avoidable reversal (deemed)	180 days after notice
Annual reversal report	Registry functionality suspended	30 days after notice	Avoidable reversal (deemed)	90 days after notice

3. Post-crediting period monitoring and reporting

3.1. General obligations and duration of monitoring and reporting in the post-crediting monitoring period

39. For Article 6.4 activities that are subject to reversal risks, activity participants shall continue to monitor applicable greenhouse gas reservoirs in the post-crediting monitoring period, applying the provisions of sections 1 and 2, as applicable, to:
- (a) Assess and determine whether any reversals have occurred;
 - (b) Quantify the amount of any such reversals; and
 - (c) Ensure remediation of reversals subject to the provisions of section 4.
40. The post-crediting monitoring period shall start on the first day after the end of the last active crediting period. The post-crediting monitoring period shall continue indefinitely or until one of the conditions in section 3.2 below is satisfied.
41. Activity participants may use a third party to perform monitoring in the post-crediting monitoring period for the Article 6.4 activity.
42. Activity participants may at any time update their monitoring plan for the post-crediting monitoring period as part of a request for a post-registration change, subject to any conditions and provisions included in the mechanism methodology.
43. Activity participants shall submit, through a DOE, a monitoring report for the post-crediting monitoring period no later than the date it is due, with the due date determined according to the minimum frequency for the submission of monitoring reports as specified in the mechanism methodology. If a monitoring report is submitted before the due date (an “early submission”), the due date for the next monitoring report shall be the date of the early submission plus the timeframe corresponding to the minimum frequency, as applicable on the date of the early submission.

3.2. Termination of monitoring and reporting in the post-crediting monitoring period

3.2.1. Remediation of potential future reversals⁵

44. Activity participants may request to terminate their monitoring and reporting obligations in the post-crediting monitoring period if they have mitigated all potential reversals for all A6.4ERs issued to the Article 6.4 activity for emission reductions and/or net removals that are subject to a risk of reversal (i.e., considering all issuances to the Article 6.4 activity from the start of the first crediting period), as referred to in section 6.3 of Appendix 1, directly through the cancellation of a corresponding number of A6.4ER units from any Article 6.4 activity to a dedicated cancellation account in the mechanism registry for the purpose of remediation of future reversals. For any authorised A6.4ERs issued to the Article 6.4 activity, the cancellation shall be made using authorised A6.4ERs.
45. Once an activity participant has cancelled A6.4ERs pursuant to paragraph 44, it may, through a DOE, request the Supervisory Body to terminate its monitoring and reporting obligations in the post-crediting monitoring period at any time during the post-crediting monitoring period. Within 28 days of receiving such a request, the secretariat shall determine whether it complies with paragraph 44. If the secretariat determines that the requirements of paragraph 44 have been satisfied, it shall notify the DOE and activity

⁵ Note that additional approaches consistent with paragraph 62 of the Removals Standard may be developed in the future.

participants that the Article 6.4 activity is relieved of all obligations under section 3.1 and make this information available on the UNFCCC website.

3.2.2. Negligible risk of reversal

46. At any time after the minimum post-crediting monitoring period defined in an activity's mechanism methodology has elapsed, activity participants may submit, through a DOE, a request to the Supervisory Body to terminate post-crediting period monitoring and reporting, accompanied by a verification of the conditions and information required. The request shall demonstrate that:
- (a) The stored greenhouse gases, or precursors of greenhouse gases, are at a negligible risk of reversal, as defined in paragraph 3(g) of Appendix 1, calculated over at least a 100-year timeframe starting from the year of submission of the request; and
 - (b) All conditions or criteria set in the mechanism methodology for termination of post-crediting period monitoring have been fulfilled.
47. To demonstrate negligible risk of reversal, activity participants shall:
- (a) Provide evidence in the form of modelling or other methods, where relevant, about the long-term stability⁶ of stored greenhouse gases, or precursors of greenhouse gases, within the applicable greenhouse gas reservoirs in the presence of all reversal risks that exist or are reasonably foreseeable based on current scientific evidence after termination of the monitoring and reporting in the post-crediting monitoring period for the Article 6.4 activity;
 - (b) Apply a conservative approach to ensure that the reversal risks are very unlikely to be underestimated, taking into account the overall uncertainty in their quantification;
 - (c) Implement conservativeness in determining the reversal risks (e.g., through conservative assumptions, parameters, discounts) based on the level of uncertainty (e.g., assuming higher risk values in case of higher uncertainties);
 - (d) Consider all causes of uncertainty, including uncertainty in data (e.g., measurements), parameters (e.g., representativeness of default values), assumptions (e.g., projection of the future sequence of events within the project boundary or space affected by the mitigation activity), and methods (e.g., models used in quantifying the reversal risk factors and the reversal risk rating);
 - (e) Use the higher or lower bound, as appropriate, of the uncertainty interval at a 95 per cent confidence level to ensure conservativeness; and
 - (f) Confirm the outcome of the negligible risk demonstration by sensitivity analysis. A negative outcome of the sensitivity analysis indicates that the risk of reversal cannot be classified as negligible.
48. Upon submission of a request for termination of post-crediting period monitoring through demonstration of negligible risk of reversal as per paragraphs 46 and 47, the secretariat shall, subject to the guidance of the Supervisory Body, perform a completeness check.

⁶ As defined in the methodology.

49. Complete requests for termination of monitoring and reporting in the post-crediting monitoring period submitted to the secretariat shall be posted on the UNFCCC website for public comments for a period of 30 days.
50. Within 60 days of the completion of the public review process, the secretariat shall make a draft recommendation to the Supervisory Body to approve or reject the Article 6.4 activity's request for termination of monitoring and reporting in the post-crediting monitoring period.
51. The Supervisory Body may request additional information from the activity participant, including based on inputs received during the public comments period, which the participant shall communicate within 30 days of receiving the request. If the activity participant fails to respond within this timeframe, the request for termination of monitoring and reporting in the post-crediting monitoring period shall be considered to be withdrawn.
52. If the request for termination of monitoring and reporting in the post-crediting monitoring period is approved by the Supervisory Body, activity participants shall be relieved of all obligations under section 3.1. The secretariat shall inform the DOE and the activity participants of the approval and publish the decision by the Supervisory Body together with documentation for demonstration of negligible risk of reversal assessment for the Article 6.4 activity on the UNFCCC website.
53. When a request for termination of monitoring and reporting in the post-crediting monitoring period through demonstration of negligible risk of reversal is rejected by the Supervisory Body, the activity participants shall not submit a further request for termination of monitoring and reporting in the post-crediting monitoring period through demonstration of negligible risk of reversal for at least three years.

4. Post-reversal actions

4.1. Remediating unavoidable reversals

54. When the secretariat has received a complete and verified monitoring report indicating that unavoidable reversals have occurred, the secretariat, as the registry administrator, shall cancel A6.4ERs held in the Reversal Risk Buffer Pool Account as follows:
 - (a) The number of A6.4ERs cancelled shall be equal to the amount of the unavoidable reversals, as expressed in tonnes of carbon dioxide equivalent;
 - (b) The number of each type of A6.4ERs cancelled (whether Mitigation Contribution Units or authorized A6.4ERs) shall be based on the proportion of Mitigation Contribution Units or authorized A6.4ERs issued for the Article 6.4 activity's emission reductions and/or net removals at the time of the reversal;
 - (c) The cancellation of A6.4ERs from the Article 6.4 activity experiencing the reversal shall be prioritised over A6.4ERs from other Article 6.4 activities, until no such A6.4ERs are available in the Reversal Risk Buffer Pool Account; and
 - (d) According to further criteria that may be specified at a future point in time.
55. The mechanism registry shall indicate that the A6.4ERs were cancelled for the purpose of remediating unavoidable reversals and publish the serial numbers of A6.4ERs cancelled.

4.2. Remediating avoidable reversals

56. When the secretariat has received a complete and verified monitoring report indicating that avoidable reversals have occurred, or when an activity is deemed to have experienced

avoidable reversals subject to section 2.3, the secretariat, as the registry administrator, shall cancel A6.4ERs held in the Reversal Risk Buffer Pool Account as follows:

- (a) The number of A6.4ERs cancelled shall be equal to the amount of the avoidable reversals, as expressed in tonnes of carbon dioxide equivalent;
 - (b) The number of each type of A6.4ERs cancelled (whether mitigation contribution A6.4ERs or authorized A6.4ERs) shall be based on the proportion of mitigation contribution A6.4ERs or authorized A6.4ERs issued for the Article 6.4 activity's emission reductions and/or net removals at the time of the reversal;
 - (c) The cancellation of A6.4ERs from the Article 6.4 activity experiencing the reversal shall be prioritised over A6.4ERs from other Article 6.4 activities, until no such A6.4ERs are available in the Reversal Risk Buffer Pool Account; and
 - (d) According to further criteria that may be specified at a future point in time.
57. The mechanism registry shall indicate that the A6.4ERs were cancelled for the purpose of remediating avoidable reversals and publish the serial numbers of the A6.4ERs cancelled.
58. When avoidable reversals occur, activity participants shall forward or first transfer, as applicable, A6.4ERs to the Reversal Risk Buffer Pool Account as follows:
- (a) The number of A6.4ERs forwarded or first transferred shall be equal to the amount of the avoidable reversals, as expressed in tonnes of carbon dioxide equivalent; and
 - (b) The number of each type of A6.4ERs cancelled (whether mitigation contribution A6.4ERs or authorized A6.4ERs) shall be based on the proportion of mitigation contribution A6.4ERs or authorized A6.4ERs issued for the activity's emission reductions and/or net removals, cumulatively from the Article 6.4 activity start date through the time of the reversal; and
 - (c) According to further criteria that may be specified at a future point in time.

4.3. Reversals below baseline

59. Only the fraction of a reversal that corresponds to a net change in storage of greenhouse gases or their precursors for which A6.4ERs have been issued shall be remediated through the provisions of sections 4.1 and 4.2. Reversals below an Article 6.4 activity's baseline, as determined by mechanism methodologies, shall not be remediated through the provisions of sections 4.1 and 4.2.
60. When an Article 6.4 activity experiences a reversal below its baseline, as determined by mechanism methodologies, A6.4ERs shall not be subsequently issued for a net change in storage of greenhouse gases or their precursors, unless the sum of the quantity of greenhouse gases or their precursors stored in all applicable greenhouse gas reservoirs in the Article 6.4 activity scenario is greater than or equal to the sum of the quantity of greenhouse gases or their precursors stored in all applicable greenhouse gas reservoirs

in the Article 6.4 activity's baseline, as determined by mechanism methodologies, with both sums expressed in tonnes of carbon dioxide equivalent.⁷

4.4. De-registration of activities

61. When an activity participant makes a request to de-register a registered Article 6.4 activity that is subject to reversal risks, the following steps shall be taken:
- (a) The activity participant shall cancel A6.4ERs, with the number of A6.4ERs cancelled equal to the number of A6.4ERs that have been issued with respect to emission reductions and/or net removals from that activity to date, except for those A6.4ERs that were contributed to the Reversal Risk Buffer Pool Account; and
 - (b) The secretariat, acting as the registry administrator, shall cancel A6.4ERs held in the Reversal Risk Buffer Pool Account, with the number cancelled equal to the number of A6.4ERs that have been issued with respect to emission reductions and/or net removals from that activity to date and that were contributed to the Reversal Risk Buffer Pool Account.

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Document information

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02.2	16 September 2025	MEP008, Annex 3. Editorial changes removing duplication and enhance clarity.
02.1	11 September 2025	MEP 008, Annex 3. Editorial change to correct cross reference in the document.
02.0	10 September 2025	MEP 008, Annex 3. To be considered by the Supervisory Body at SBM 018. This version takes into account the inputs received in response to the call for input on this draft document.
01.0	15 July 2025	MEP 007, Annex 4. A call for input on this document will be issued following the conclusion of MEP 007 meeting. The input received will be considered by the MEP for the further development of this document at MEP 008. If no input is received, this document will be considered by the SBM at its next meeting.

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⁷ For example, the greenhouse gases stored in a greenhouse gas reservoir in an Article 6.4 activity could be 30 tCO₂e at the start of the period covered by a monitoring report and fall to 10 tCO₂e at the end of that period due to an unavoidable reversal, while the baseline storage is 20 tCO₂e throughout the period. In this case, the reversal due to the decline from 30 to 20 tCO₂e would be remediated by the Reversal Risk Buffer Pool Account, while the reversal due to the decline from 20 to 10 would not. To address this latter reversal, the activity participants would only be able to request for issuance of A6.4ERs for enhancements in stored greenhouse gases above 20 tCO₂e.