ARTICLE 6.4 MECHANISM

A6.4-SBM013-AA-A12

Information note

Options to revise the recommendation on activities involving removals under the Article 6.4 mechanism, taking into account stakeholder inputs

Version 02.0

United Nations
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Climate Change

COVER NOTE

1. Procedural background

1. The Supervisory Body of the Article 6.4 mechanism (SBM), at its 10th meeting (SBM 10), provided guidance for further work on the methodological products for the Article 6.4 mechanism. Guidance relating to two documents developed by the SBM at its ninth meeting (A6.4-SB009-A01: Requirements for the development and assessment of Article 6.4 mechanism methodologies and A6.4-SB009-A02: Activities involving removals under the Article 6.4 mechanism) included work to improve the understanding of concerns raised by Parties at the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA 5) through a call for inputs, to be open for a period of six weeks beginning on 4 March 2024.[1] The SBM requested the secretariat to provide a compilation of the inputs received, including a high-level analysis for consideration by the SBM prior to its 12th meeting.

2. The SBM, at its 10th meeting, also requested the secretariat to organize an event to engage with Parties and stakeholders during the sixtieth sessions of the Subsidiary Bodies (SB 60), with a view to facilitating its work on methodological requirements and guidance on activities involving removals.

3. The SBM, at its 12th meeting, considered the information notes "Compilation and summary of stakeholder inputs on activities involving removals under Article 6.4 mechanism" and "Compilation and analysis of stakeholder inputs on the requirements for Article 6.4 methodologies", as contained in annex 1 and annex 2 to the annotated agenda of SBM 012[2], respectively, and requested:

    (a) The secretariat to update these information notes based on any inputs received at the Supervisory Body's engagement event, held in Bonn on 3 June 2024 at SB 60, and guidance provided by the SBM at its 12th meeting, for consideration by the SBM at its 13th meeting, compiling the inputs according to existing categories and including additional sections to cover all inputs made;

    (b) The secretariat to include in the updated information notes options to revise the documents developed by the Supervisory Body at its 9th meeting (i.e. A6.4-SB009-A01 and A6.4-SB009-A02).

    (c) The Methodological Expert Panel (MEP) to take into the inputs referred above under its work programme mandated by the Supervisory Body.

[1] The call was open from 4 March to 15 April 2024 and 36 submissions were received. See Stakeholder interactions: Further input on requirements for methodologies and activities involving removals, available at:https://unfccc.int/process-and-meetings/the-paris-agreement/paris-agreement-crediting-mechanism/calls-for-input/call-for-input-2024-stakeholder-interactions-further-input-requirements-for-methodologies-and.

[2] https://unfccc.int/event/Supervisory-Body-12.

4. The SBM engagement event at SB 60 was moderated by the Chair and Vice-Chair of the SBM.[3] It was well attended, and seven Parties or group of Parties and 10 non-Party stakeholders made oral interventions in response to questions posed by the SBM during the event.[4] The interveners are listed in appendix 3 References of the document.

2. Purpose

5. This document provides:

   (a) An updated information note (according to para.3 above; inputs not fitting in existing categories were included in section “other inputs”);

   (b) Summary and detailed inputs from Parties and non-Party stakeholders at the SBM engagement event at SB 60 (see appendix 1);

   (c) Options to revise the documents developed by the SBM at its ninth meeting (i.e. A6.4-SB009-A02) (see appendix 2).

3. Key issues and proposed solutions

6. The secretariat paraphrased and grouped the information in the submissions and oral interventions to create a synthesis for easy readability and flow of information. In this process, despite the best efforts, some relevant information may have been unintentionally omitted or not correctly represented. Readers are encouraged to consult the original submissions and oral interventions (see footnotes 1 and 2) to understand fully the background and context in which proposals are made in the submissions and interventions.

7. In-text citations in this document use acronyms and reference numbers for the written submissions (e.g. [GMT, 390] to denote Global Mangrove Trust Limited, together with its reference number 390) to facilitate easy access to the original submissions. Inputs from the engagement event include only acronyms. References to submissions from Parties are in bold font. See the appendix 3 for a list of all submissions and interventions and reference notations.

8. About options to revise the documents developed by the SBM at its ninth meeting:

   (a) Only paragraphs where changes are proposed are reproduced;

   (b) The numbering of options does not represent a hierarchy (e.g. option 1 is not necessarily preferred over option 2). Square brackets are used to indicate sub options. Curly brackets are used to include explanatory text;

   (c) Textual changes proposed that are highlighted are based on written inputs received in response to the call for inputs;

   (d) Not all inputs received have been reflected, pending further guidance from the SBM (e.g. whether the tonne-year accounting/crediting method currently excluded is to

[3] https://unfccc.int/event/aA64_sbm_engagement_parties_stakeholders_requirements.

[4] A6.4-SBM012-A01: Information note: Guiding questions for the SBM engagement event at the sixtieth session of the Subsidiary Body (SB 60). Available at: https://unfccc.int/sites/default/files/resource/a64-sbm012-a01.pdf

be further assessed). Detailed technical inputs (e.g. quantitative methods for uncertainty assessment) are also being considered by the MEP in accordance with paragraph 3 (a);

(e) Written inputs made relating to new categories (i.e. included under the section "other inputs") and inputs received during SB 60 have not been reflected in the options to revise pending further discussion and guidance by the SBM.

9. Some sentences or phrases are square bracketed but with no alternative text proposed, the alternative in that case is "no text" on the issue.

4. High-level summary

10. A total of 265 comments were received on document A6.4-SB009-A02 (removals).

11. Section 2 (Context of removals under this guidance) received 12 comments, mainly concerning the types of removal activities covered under the mechanism. These pertained to inclusion/exclusion of methane removal, engineered removal, and nature-based approaches, among others. Some comments emphasised that it is necessary to ensure that activities under the mechanism do not violate any other international agreements. Some comments suggested defining other key concepts such as durability and permanence, as well as terms related to the mechanism, such as "monitoring report," and to use them consistently throughout the document. A comment referred to the need to distinguish "high forest, low deforestation" jurisdictions.

12. Section 3.1 (Monitoring) received 42 comments, several of which were on the need for clearer guidance on terms such as "conservative" and "appropriately address uncertainty," and requirements such as the frequency of monitoring and consequences of the failure in submitting monitoring reports, and the need for guidelines for the use of modelling. Submissions expressed concern over some of the unintended consequences of using satellite methods such as the potentially sensitive data from Indigenous Peoples' territories stressing the need to require Free Prior and Informed Consent (FPIC). Other comments included prioritizing use of higher-tier methods over default values, improving guidance on the circumstances requiring the revision of the monitoring plan, and "reversal events".

13. Section 3.2 (Post-crediting period monitoring, reporting, and remediation of reversals) received 30 comments, mainly focusing on the need for further consideration and improved clarity regarding concepts such as "temporary", "short-term", "long-term", and "permanent". Other comments addressed requirements such as time frames, guidance related to procedures for assigning and transferring the obligation of monitoring, and procedures for addressing risks. A suggestion was also made to exempt activities that employ the tonne-year accounting method from the requirements in this subsection.

14. Section 3.3 (Reporting) received 20 comments, mainly seeking clarity and additional guidance, with eight of these comments focusing on paragraph 22 of document A6.4-SB009-A02.

15. Section 3.4 (Accounting for removals) received 27 comments, 15 of which were on paragraph 27 of the document. Tonne-year accounting (also abbreviated to TYA) was recommended by several stakeholders with respect to this subsection and other subsections. Comments were also made on the need to reconsider the framing and provisions of the accounting, including the calculations of net removal, reversal, and

leakage, as well as how to define the project boundary and address leakage. A suggestion was made to remove paragraph 29 of the document. Additional requirements were suggested, such as limiting the use of engineered removal to residual emissions that cannot be abated, aligning with other mechanisms.

16. Section 3.5 (Methodologies applicable for the crediting period) received two specific suggestions. One comment proposed a different time frame for applying an updated methodology, the other suggested to update only the baseline parameters during the renewal of the crediting period.

17. Section 3.6 (Addressing reversals) received the largest number of inputs totalling 109 comments, with more than half pertaining to section 3.6.3 (Addressing reversal risk and reversals). These comments mainly called for further consideration and clarification, for example on the distinction between unavoidable and avoidable reversals and the functioning of the buffer mechanism, including cancellation. Clarifications were also sought on the functioning of direct cancellation and insurance.

18. Section 3.7 (Avoidance of leakage) received four comments, two of which included specific suggestions on the text. The comments called for clarification on the types of leakage and consideration of positive leakage. One comment recommended against sector-specific or methodology-specific provisions.

19. Section 3.8 (Avoidance of other negative environmental and social impacts) received 13 comments. Multiple comments suggested the inclusion of additional elements such as human rights, Indigenous Peoples' rights, intergenerational equity, and stakeholder engagement. A reference to the Cancun Safeguard was suggested. The Integrity Council for the Voluntary Carbon Market (ICVCM) shared relevant criteria from its Assessment Framework.

20. Section 3.9 (Host Party roles) received six comments. These comments focused on the proposed arrangement under paragraph 64 (b) in the document, for example suggesting an alternative arrangement requiring the buying entity to take responsibility for permanence of removals and proposing to broaden the role to include any of the Parties involved to ensure permanence of the removals.

21. Suggestions were made to require, throughout the document, independence, and impartiality of verification.

5. Subsequent work and timelines

22. The secretariat will carry out further work following the guidance that will be received from the SBM.

6. Recommendations to the Supervisory Body

23. The SBM may wish to consider the information note together with the submissions under the call for inputs section of the mechanism website in their entirety and the inputs received at SB 60 in their entirety (see footnote 1 and 2) and options to revise SB 009 documents under appendix 2. The SBM may wish provide guidance to the secretariat for further work on the requirements on methodologies and removals.

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1. Introduction

1. The Supervisory Body of the Article 6.4 mechanism (SBM), at its tenth meeting, provided guidance for further work on the methodological products for the Article 6.4 mechanism. Guidance relating to two documents developed by the SBM at its ninth meeting (A6.4-SB009-A01: Requirements for the development and assessment of Article 6.4 mechanism methodologies and A6.4-SB009-A02: Activities involving removals under the Article 6.4 mechanism) included work to improve the understanding of concerns raised by Parties at the fifth session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA.5) through a call for inputs, to be open for a period of six weeks beginning on 4 March 2024.[1]

2. The SBM requested the secretariat to provide a compilation of the inputs received, including a high-level analysis for consideration by the Supervisory Body prior to its twelfth meeting.

3. This information note contains a summary and compilation of comments received on the document A6.4-SB009-A02 "*Activities involving removals under the Article 6.4 mechanism*."

2. Inputs received on specific sections/ subsections/ paragraphs of A6.4-SB009-A02

2.1. Context of removals under this Guidance

4. Section 2 (Context of removals under this Guidance) received 12 comments, mainly concerning the types of removal activities covered under the mechanism. These pertained to inclusion/exclusion of methane removal, engineered removal, and nature-based approaches and ensuring that activities under the mechanism do not violate any other international agreements. Some comments suggested defining other key concepts such as durability and permanence, as well as terms related to the mechanism, such as "monitoring report," and to use them consistently throughout the document. Additionally, a comment was received on the need to distinguish high forest, low deforestation (HFLD) jurisdictions.

5. **Paragraph 5** *Relevant extracts from the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) Working Group III (WGIII) definitions of activities involving removals include the following*:

   (a) Anthropogenic removals as the withdrawal of greenhouse gases (GHGs) from the atmosphere as a result of deliberate human activities. (IPCC AR6 WGIII report glossary);

   (b) Carbon dioxide removal (CO_2; CDR) as anthropogenic activities removing CO_2 from the atmosphere and durably storing it in geological, terrestrial, or ocean

[1] Call for input 2024. Stakeholder interactions: Further input on requirements for methodologies and activities involving removals, available at: https://unfccc.int/process-and-meetings/the-paris-agreement/paris-agreement-crediting-mechanism/calls-for-input/call-for-input-2024-stakeholder-interactions-further-input-requirements-for-methodologies-and.

reservoirs, or in products. It includes existing and potential anthropogenic enhancement of biological, geochemical or chemical CO_2 sinks, but excludes natural CO_2 uptake not directly caused by human activities. (IPCC AR-6 WG III technical summary).

6. [SCC, 380] recommends removing section "2.2. Context of removals under this guidance".

7. [44M, 383] considers that the mechanism should explicitly state that nature-based solutions fall under Article 6.4, as long as the activity fulfils all the mechanism requirements. All activities shall significantly increase the removal of CO_2, whether human activity is directly or indirectly involved.

8. On item, 5 (b), some distinction needs to be made regarding HFLD jurisdictions and CO_2 uptake as this is as a result of deliberate policy actions that prevent threats to forest. Ongoing removals across forest countries are a result of deliberate policy decisions, how to properly reflect and incentivise that for the long term? **[GY, 407]**

2.2. Definitions

9. Section 2.2 (Definitions) received nine comments, three of which suggested including definitions of terms not currently included.

10. **Paragraph 6.** *For the purposes of this guidance*,

    (a) ***Removals*** *are the outcomes of processes to remove greenhouse gases from the atmosphere through anthropogenic activities and destroy or durably store them;*

    (b) ***Activities involving removals*** *meet the requirements referred to in Paragraph 7. Any examples in this guidance referring to specific activity types or categories are purely illustrative and do not give effect to decisions by the Supervisory Body regarding their use under the Article 6.4 mechanism unless explicitly indicated as such.*

11. [SSC, 380] suggests removing this section.

12. [NEP, 384] suggests "Anthropogenic activities" to be located at the end of paragraph 6(a) to apply to the overall process. Removals are the outcomes of processes to remove greenhouse gases from the atmosphere and destroy or durably store them through anthropogenic activities.

13. [QB, 387] proposes adding the following definition of 'Permanence' as a new item, 6 (c): "*Permanence means that the net atmospheric effect of 1 ton of CO_2 removed is comparable to the atmospheric effect achieved through a reduction of 1 ton of CO_2 in order, as per the RMPs, to deliver real, measurable and long-term benefits related to climate change in accordance with decision 1/CP.21, paragraph 37(b). A net atmospheric effect is said to be comparable when a removal generates a climate benefit equivalent to the impact of the presence in the atmosphere of one ton of CO_2, quantified over 100 years"*.

14. [ICLRC, 400] recommends that the provision and the document as a whole be double-checked to ensure the consistent use of defined terms.

15. Intact Forests and forests under sustainable forest management, especially those in HFLD jurisdictions that fight off constant threats and human interventions to protect forests,

should be included in the definitions. The incentives should encourage the acceleration of countries to achieve higher HFLD scores - regardless of starting positions (e.g. high deforesters need to be incentivised to reduce as rapidly as possible, and not be prevented from accelerated action through disincentives to reductions being achieved in short time frames (and then less reduction potential for future baseline reference periods). **[GY, 407]**

16. Several key definitions are missing or unclear, for instance for: reversals, project design document, monitoring plan, monitoring report, full monitoring report, verified monitoring report, avoidable risk and unavoidable risk. In paragraph 14 for instance, it is not clear if the monitoring plan includes the methodologies used to monitor or the monitoring itself. In our view a monitoring plan should include the methodologies used to monitor, the relative timeframe and the actions needed in case of deviation or failure of the monitoring. (Also applicable to paragraphs 14 and 22) **[EU, 409]**

17. **[UK, 410]** proposes the following change to item 6 (a) (underlined): "*Removals are the outcomes of processes, consistent with national and international law, to remove greenhouse gases from the atmosphere through anthropogenic activities and destroy or durably store them*…".

18. The SBM should undertake further work to define *durability* in the context of climate-relevant timeframes and call for scientific input / studies on this issue. This issue would benefit from a specific call for inputs. **[AOSIS, 411]**

19. Under item 6 (a), it should be clarified that for activities involving natural ecosystems, anthropogenic activities need to be demonstrated and distinguishable from removals primarily driven by the natural carbon cycle. **[AILAC, 412]**

3. Requirements

20. Section 3 (Requirements) received two general comments.

21. [QB, 387] proposed the addition of two new sub-sections:

    (a) **3.1 Carbon accounting methods**: "*to account for removals, activity participants may either choose: (a) a ton-ton method which is based on absolute storage measurements at a point in time; or (b) a ton-year method which takes into account the time dimension of a removal and storage*."

    (b) **3.2 Permanence criteria**: "*to ensure the equivalence between a reduction and a removal and make sure that a ton of CO_2 removed is equivalent to a ton of CO_2 reduced, the activity participant shall respect the permanence criteria as defined above*."

22. Concepts such as 'appropriately', 'robust', 'statistically representative', 'conservative', 'uncertainty' need to be clarified. Also, what is considered as default methods and values, and considered higher tier methods, needs to be further elaborated so that it is clear against what requirements the SB will assess submitted methodologies. IPCC guidelines should form the basis for minimum requirements for quantification and reporting of removals. **[EU, 409]**

23. **Paragraph 7.** *Activities involving removals under the Article 6.4 mechanism shall meet the requirements contained in the sections below and in any further requirements developed and approved by the Supervisory Body for activities involving removals based*

on the requirements contained in the RMP and any further relevant decisions of the CMA, and all relevant Article 6.4 mechanism standards and procedures including the requirements for the development and assessment of article 6.4 mechanism methodologies.

24. [FA, 382] Proposed the following change: "*Activities involving removals under the Article 6.4 mechanism shall meet the requirements …including the requirements for the development and assessment of article 6.4 mechanism methodologies. Note that to improve the integrity of carbon credits issues within the 6.4 mechanism the Supervisory body only accepts the ex-post tonne-year crediting method within the Rules, Modalities, and Procedures (RMP*)".

25. [CMW, 394] proposes to revise the text as follows: "*Activities involving removals as well as emission reduction activities that face reversals risks and activities involving a combination of removals and emission reductions that face reversal risks, under the Article 6.4 mechanism shall meet the requirements contained in the sections below and in any further requirements developed and approved by the Supervisory Body.*".

3.1. Monitoring

26. Section 3.1 (Monitoring) received 42 comments, several of which were on the need for clearer guidance on concepts such as "conservative" and "appropriately address uncertainty," as well as requirements such as the frequency of monitoring, consequences of the failure in monitoring, and guidelines for the use of modelling, among others. Concerns were expressed over the collection of potentially sensitive data from Indigenous Peoples' territories and the need to require Free Prior and Informed Consent (FPIC) and the implications of using satellite methods, among others. Other recommendations included prioritizing the use of higher-tier methods over default values, need for improved guidance on the circumstances requiring the revision of the monitoring plan, and "reversal events".

27. To complement carbon removal frameworks, there needs to be effective schemes in place to govern & incentivise the continued emission-avoiding stewardship of durable carbon sinks. This link has not been clearly established yet in the VCM or national schemes. [NEP, 384]

28. [ATMO, 385] proposes to exempt biochar application to soils (and other stable matrixes) from the need to monitor reversals, since it is scientifically proven that once mixed into the soil, a defined proportion of charcoal is a permanent carbon sink mineralized over 100 years.

29. [RR, 389] proposes a broad monitoring and liability framework that takes into consideration where the main risks are, when monitoring becomes no longer required, how the liability remains, among others.

30. The section on monitoring does not contain information on the monitoring frequency. This is specified in paragraphs 24 and 25, but for clarity and consistency it should also be provided in section 3.1. [AvB, 396]

31. To maintain consistency, [AvB, 396] recommends that the IPCC guidelines are used as the minimum requirements for quantification and reporting of removals.

32. The consequences of failures in monitoring, need to be clearly pinned down. At a minimum, there should be a recognition that a reversal will generate a requirement to replace issued credits within a specific period. **[EU, 409]**

33. **[UK, 410]** suggests the SBM to clarify the consequences of late, incomplete or missing monitoring reports to give certainty to potential activity participants. In doing so, the SBM should employ an appropriately risk-averse process to the treatment of such affected 6.4ERs, because failure to monitor and/or submit a monitoring report, could lead to potentially undetected reversals. Consequences could include temporarily labelling the units with a "monitoring report outstanding" tag to convey the situation and/or the default assumption being that a reversal has occurred, if persistent non-compliance with monitoring reports occurs.

34. **Paragraph 8.** *Activity participants shall monitor removals through an appropriate application of quantification and estimation based on field measurements, remote sensing, measurement through instrumentation, or modelling, in combination as necessary. In this regard, methodologies shall contain provisions that specify the monitoring approach(es) for all parameters needed for the calculation of removals according to the types of removal activities*.

35. [IEN, 395] recommends the SBM to reconsider this section, addressing the following issues:

    (a) Project proponents are incentivized to overestimate emissions reductions. How will this be addressed? How will polluters be held accountable?

    (b) It is a conflict of interest for parties to conduct their own monitoring. How will conflicts of interest be addressed?

    (c) Remote sensing can lead to surveillance of Indigenous Peoples and the violation of self-determination and United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). How will the risk of surveillance and privacy from state and private sectors be addressed? [IEN, *395*]

36. [AvB, 396] requests clarification on what is considered "appropriate" and what the minimum requirements are.

37. [AvB, 396] suggests including specific guidelines of using and validating model results in carbon removal certification.

38. This should also include intact forest in HFLD jurisdictions. **[GY, 407]**

39. **[EU, 409]** proposes the following change to the text (underlined): *".measurement through instrumentation, in combination as necessary, and may be complemented by modelling*", since "or" implies that any of these options may be picked. In that case monitoring could be done only by modelling which they do not support. [EU, 409]

40. **[AILAC, 412]** suggests adding that the methodologies should include calculations of associated uncertainties.

41. **Paragraph 9.** *Methodologies shall contain provisions that ensure that the approaches related to the use of measurements, sampling, data from third parties, published literature, satellite data, default values or modelled data, are robust, statistically representative, and conservative, and appropriately address uncertainty*.

42. [QB, 387] proposes changing the word '*representative*' to '*significant*' or '*a quantitative confidence value*'.

43. Monitoring reports must be transparent, publicly available, and accessible through the 6.4 mechanism website. The collection of data, especially measurements, sampling, and other potentially sensitive information from Indigenous Peoples territories can only be acquired with Free Prior and Informed Consent. [IEN, 395]

44. [AvB, 396] suggests to explicitly state the requirements for what is considered conservative and how to deal with uncertainty in the calculated net removals and accounting, for example which error to include (also applicable to paragraphs 11 and 27).

45. **Paragraph 10**. *Methodologies shall contain provisions that require the calculation of removals and associated uncertainties. The methodologies shall specify the limits for the uncertainties for the calculation of removals. The methodologies shall require the activity participants to demonstrate that the calculated removals are within the limits specified in the methodologies applied. If the uncertainty of estimated removals exceeds the specified limits, owing to factors that are not under the control of the activity participants, mechanisms methodologies may specify methods for adjusting the calculated values in a conservative manner*.

46. Refer to ICVCM AF Criteria 5.2 (a) (5) and 10.1 (c). [ICVCM, 401]

47. **[UK, 410]** proposes to delete the last sentence. The uncertainty of estimated removals should be within the specified limits of the methodologies in all scenarios.

48. **Paragraph 11**. *Calculation of removals may employ conservative default values that appropriately address uncertainty, to allow flexibility in monitoring.*

49. [QB, 387] proposes changing the word '*may*' for '*shall*'. The language of that paragraph should be strengthened and that activity participants should have the obligation to employ conservative default values for monitoring purposes. [QB, 387]

50. Appropriate sources "*conservative default values*" should be defined, in the manner taken in Decision 20/CMP.1: Technical guidance on methodologies for adjustments under Article 5, paragraph 2, of the Kyoto Protocol, noting the particular importance of Appendix III. Similarly, requirements for what "*appropriately address uncertainty*" should be specified. [CI, 386]

51. [IETA, 402] proposes the following alternative to the text (underlined): "*Calculation of removals may employ default values that are demonstrated to be conservative and appropriately address uncertainty, to allow flexibility in monitoring.*". The conservativeness of default value should be demonstrated and not arbitrary. [IETA, 402]

52. [API, 405] proposes the following change to the text (underlined): *"Calculation of removals may employ default values that are demonstrated to be conservative and appropriately address uncertainty, to allow flexibility in monitoring*." This paragraph should require demonstration of conservativeness of default values.

53. **[EU, 409]** proposes the following alternative texts (underlined): "*Calculation of removals may employ conservative default values, considering the relative uncertainties and addressing the overall project uncertainty, and ensure that removals are likely not overestimated and reversals are likely not underestimated*."

54. **Paragraph 12**. *Methodologies may include provisions for the use of higher tier methods such as the use of measured values in lieu of conservative default values in the instance that the default values are demonstrated to underestimate an activity's net removals*.

55. [SSC, 380] considers that: 1) Higher tier methods should be required where the default values lead to an "overestimation" of net removals, and not "underestimation" of net removals as stated in the document; and 2) Higher tier methods such as the use of measured values should be base case. Use of default values should be the additional option allowed to be used where transparent explanation and justification can be provided for this. Wherever possible, monitoring shall be based on actual measurements. Where measurements are not possible or practical, conservative default values may be used, provided that transparent information and justification are provided for this choice.

56. The language may cause adverse selection bias, where precision will only be used when it benefits reporting. More precise measurements should be used where available regardless of directional bias (e.g. over or underestimation). [CI, 386]

57. [AvB, 396] suggests that higher tier methodologies be the default requirement and the calculation of removals using conservative default measures, indicated in paragraph 11, only be accepted if higher tier methods cannot be employed in a cost-effective way. In such case the use of default values should be duly justified, including information on why these could be considered representative values.

58. [IETA, 402] proposes the following change to the text (underlined): "*Methodologies ~~may~~ shall strive to include provisions for the use of higher tier methods such as the use of measured values in lieu of conservative default values in the instance that the default values are demonstrated to underestimate an activity's net removals*." Methodologies should favour the use of higher tier methods to enhance accuracy and robustness in removals estimates. Default values should be secondary options that can only be used when demonstrated to be conservative and appropriately address uncertainty.

59. Methodologies should favour the use of higher tier methods to enhance accuracy and robustness in removals estimates, not simply include provision for the use of higher tiers. Default values should be secondary options that can only be used when demonstrated to be conservative and appropriately address uncertainty (see their comment for paragraph 11). [API, 405]

60. Net removals in intact forest can be computed by logged forests vs unlogged forest, with the latter being the contractual (control/reference point). **[GY, 407]**

61. Methodologies should include general provisions for the use of higher Tier methods aiming at reducing uncertainties**. [EU, 409]**

62. **Paragraph 13**. *Methodologies contain provisions that require appropriate quality assurance and quality control measures, such as cross-checking the monitoring results with other sources of data and published literature, or calibration of measuring equipment at regular intervals.*

63. [CI, 386] proposes to add "*shall*" as follows (underlined): "*Methodologies shall contain provisions….*". [CI, 386]

64. It lacks an operative verb. [ICVCM, 401]

65. [IETA, 402] proposes to add "*shall*" as follows (underlined): "*methodologies shall require appropriate quality assurance and quality control measures…*", as it is missing a normative reference. [IETA, 402]

66. Methodologies should also include quality assurance and quality protocols within measurements and activity participants, such as standard operating protocols (SOPs), data measurement error checks (such as hot, cold and blind checks), and verifiable checks in data entry and analysis procedures. [API, 405]

67. It should be made a mandatory requirement by adding "*shall*" as underlined: "*Methodologies shall require appropriate quality assurance and quality control measures…*". **[EU, 409]**

68. **[UK, 410]** proposes adding "shall" as follows (underlined): "*Methodologies shall require appropriate quality assurance and quality control measures…*". to make clear it is a requirement for methodologies to contain provisions to have quality assurance/control measures in place.

69. **Paragraph 14**. *Monitoring plans shall include monitoring of measures to mitigate risks identified in the reversal risk assessment tool and Article 6.4 Mechanism Sustainable Development Tool*.

70. [SCC, 380] suggest that a more logical structure be followed: first reversal should be defined and then reversal risk and reversal risk assessment should be introduced. It is not clear what is meant by "reversal risk assessment tool" or by "reversal".

71. The Recommendation should further elaborate this paragraph and specify the periodicity of revisiting the risk assessment tool to mitigate risks of reversals. [API, 405]

72. **Paragraph 15**. *Methodologies shall contain provisions that require activity participants to submit a monitoring plan at the registration of the activity. Monitoring plan shall be reviewed and updated at the start of each crediting period, as well as in any of the following circumstances*:

    (a) When verification reveals a need for a revision of the monitoring plan;

    (b) Following any significant reversal event that reveals a risk factor that is not already included or may have been underestimated in the monitoring plan and corresponding risk assessment;

    (c) As per existing and applicable national or regional regulations as specified by the host Party.

73. The decision should specify and define the circumstances in which a verification would "reveal the need for a revision of a monitoring plan" and requirements for when a deviation from an approved monitoring plan is suggested by a host country and allowed. While we recognize that verification and regulation can cause the need for changes to monitoring plans, activity proponents also need the means to plan their activities in advance, with certainty about costs associated with monitoring. They need the means to understand what types of additional requirements might be levied upon them, ex post, and to have means of redress when these requirements are overly burdensome or are not conducted in accordance with other United Nations agreements pertaining to consent, such as the UN Declaration on the Rights of Indigenous Peoples. [CI, 386]

74. What accountability measures are in place if methodologies do not contain provisions to submit a monitoring plan or if monitoring plans are not submitted, incomplete or inadequate? All monitoring plans must be in line with the free prior and informed consent of Indigenous Peoples affected by the activity, directly or indirectly, in order to move forward. This is separate and additional to paragraph 15c). [IEN, 395]

75. The description is too broad to allow an evaluation of circumstances under which the monitoring plan needs to be revised. Is this if during the verification step it is not possible to calculate net removals with sufficient certainty? But then what would be considered sufficient certainty? [AvB, 396]

76. The description of paragraph 15 (a) is too broad. It should be clear under which circumstances verification reveals a need for a revision of a monitoring plan. The notion of "reversal event" under item 15 (b) remains unclear. (See also their comments for Section 3.6.) **[EU, 409]**

77. **[UK, 410]** proposes adding “independent third-party” (underlined) to item 15 (a) as follows: “*When <u>independent third-party</u> verification reveals a need for a revision of the monitoring plan*;” This, and other such references to verification across both methodologies and removals guidance, should refer to “independent third-party” verification. Independent verification, undertaken by a competent third-party individual and/or entity can help ensure data accuracy and provide assurance over the robustness of the monitoring and reporting process.

3.2. Post-crediting period monitoring, reporting, and remediation of reversals

78. Section 3.2 (Post-crediting period monitoring, reporting, and remediation of reversals) received 30 comments, mainly focusing on the need for further consideration and improved clarity regarding concepts such as “temporary”, “short-term”, “long-term”, and “permanent”. Additionally, comments addressed requirements such as the time frames, guidance related to procedures for assigning and transferring the obligation of monitoring, as well as procedures for addressing risks. A suggestion was also made to exempt activities that employ the tonne -year accounting method from the requirements in this subsection.

79. [QB, 387] suggests adding the following at the beginning of paragraphs 16 and 34: “*<u>To the extent that an activity participant uses a ton-ton method,</u>* …”….” since sections 3.2 and 3.6 do not apply if an activity participant uses a ton-year method.

80. [AvB, 396] poses the following questions:

    (a) There is no mentioning of differences between for instance temporary, long-term and permanent A6.4ERs, while the crediting period is max 15 years, which may be extended twice (45 years total) – RMP paragraph §31(f). After the crediting period also monitoring, reporting and remediation of reversals is needed. Are all ERs considered permanent?

    (b) What happens with the credits after the crediting and post-crediting period. Will the credits be cancelled once the post crediting period stops? What is the duration of the post-crediting period? Who decides on the duration of the post-crediting period? Will the end of post-crediting monitoring mean that the A6.4ER credits generated by the activity are cancelled? [AvB, 396]

81. The terms should be used consistently throughout the proposed document, taking into account the definitions provided by the RMP. For example, if referencing an Article 6, paragraph 4, emission reduction, it is advised to use the term *A6.4ER* (as specified in paragraph 1(b) of the RMP). [ICLRC, 400]

82. Refer to ICVCM AF criteria 9.3 (a) (1)-(5) for paragraph 16 to 19. [ICVCM, 401]

83. [IETA, 402] recommends including a reference to relevant geologic storage regulations, where applicable. This requirement may overlap with regulations that govern monitoring requirements for geological storage. [IETA, 402]

84. [YNG, 403] recommends excluding short-term removals and proposes addition of a new paragraph in Section 3.2 or 3.6: "*Short-term or temporary carbon removals shall be excluded from the Article 6.4 mechanism. Robust rules shall be developed to ensure removals are permanent for a minimum of 300 years, with full protection of indigenous peoples' rights in alignment with international law*." [YNG, 403]

85. **[BR, 408]** considers it crucial to establish a reasonable period so that the project does not have excessive obligations, even after the completion of the activity, to avoid discouraging project implementation.

86. **[EU, 409]** considers that provisions on expiry or passing of monitoring responsibility and replacement obligations to the host country need further thought.

87. **[UK, 410]** suggests the SBM, at the very minimum, to consider climate relevant timeframes and build on the best available science, other relevant evidence, market standards and relevant guidance, such as the ICVCM AF Criteria (e.g. “Permanent. Projects must compensate for any reversals that happen within 40 years”).

88. **Paragraph 16.** *Monitoring shall also be conducted after the end of the last active crediting period of the activity, to ensure that the residual risk of reversals of removals for which 6.4ERs were issued is negligible and/or that potential future reversals are remediated*.

89. [SCC, 380] notes that the current recommendation document provides for temporary crediting, similar to the long-term Certified Emission Reductions (lCER) of the Clean Development Mechanism (CDM), with the following differences:

    (a) The liability for credit replacement is open-ended in time in the recommendation document since no finite period has been mentioned. Under the A/R CDM, the lCERs must be replaced at the end of the crediting period, even if the carbon stocks are intact;

    (b) The liability for credit replacement in the current recommendation is with the seller or the host Party, whereas the same liability under the CDM lCER rules is with the credit buyer;

    (c) If temporary credits are to be issued, the A/R CDM rules can be used. However, if fungible credits are to be issued, equivalence approaches could be used. In the submissions and published literature, we find different approaches and methods for ex post incremental crediting.

90. [SCC, 380] recommends that the SBM should engage an expert analysis of these approaches and adopt a method that would best serve the objectives of the mechanism.

91. [CI, 386] suggests deleting this paragraph as post crediting monitoring is already adequately covered by other paragraphs. Further, the paragraph cannot be implemented in its current formulation, for at least three reasons: 1) It does not specify the party or entity responsible for conducting monitoring, how this responsibility is to be determined, and under what conditions it may be transferred; 2) the risk of reversals may change over time, as when regulations change, policies change, or economic circumstances change, and therefore there can be no point at which the risk can be objectively deemed "negligible" for any activity; 3) at no point can the risk of future reversals be deemed fully remediated, due to (2).

92. [CMW, 394] proposes to revise the text as follows: "*Monitoring shall also be conducted after the end of the last active crediting period of the activity, for a minimum of 100 years, to ensure that the residual risk of reversals of removals for which 6.4ERs were issued is negligible and/or that potential future reversals are remediated*". The SBM should clarify that monitoring must be conducted for a minimum of 100 years after the end of the last active crediting period of the activity. Even 100 years does not truly match permanence requirements, but it can be considered as a minimum, and is required in compliance and voluntary market, for example: California's Compliance Offset Programme, Climate Action Reserve; and Verra (long-term monitoring system under development).

93. [ORM, 398] proposes the following amendment to the text (underlined): "*Monitoring shall also be conducted after the end of the last active crediting period of the activity to ensure a risk management continuity and treatment of reversals during the Post-crediting period in accordance with the paragraphs of this section. ~~to ensure that the residual risk of reversals of removals for which 6.4ERs were issued is negligible and/or that potential future reversals are remediated~~*." The last part of the sentence referring to the "residual reversal risk" and "potential future reversals are remediated" must be clarified. The text can be rephrased if it refers to the paragraphs that follow.

94. The use of the double preposition "*and/or*" may be confusing. We support the use of "*or*" as this would allow crediting of a diverse type of removal activities, which may either reduce the risk of reversals to a "negligible" level or deploy any appropriate remedies. We note that multiple such remedies exist and some solutions (such as contractual obligations or insurance policies) are still nascent, but they may be more widely available in the near future. (Also applicable to paragraph 18.) [IETA, 402]

95. **[BR, 408]** proposes the following amendment to the text: "*Monitoring shall also be conducted after the end of the last active crediting period of the activity, at most for 5 years (in line with the frequency of monitoring report submission) to ensure that the residual risk of reversals of removals for which 6.4ERs were issued is negligible and/or that potential future reversals are remediated*." It is crucial to establish a reasonable period so that the project does not have excessive obligations, even after the completion of the activity, to avoid discouraging project implementation.

96. **Paragraph 17.** *During the post-crediting monitoring period, activity participants shall undertake monitoring, reporting, verification, and remediation measures to confirm the continued* existence *of removals and to address any reversals of removals for which 6.4 ERs were issued during the activity's active crediting period(s). No ERs will be issued for removals generated after the last active crediting period, including during the post-crediting monitoring period.*

97. [CI, 386] proposes the following changes to the text (underlined): "*During the post-crediting monitoring period, activity participants shall undertake monitoring, reporting, ~~verification,~~ and remediation measures to confirm the continued ~~existence of removals~~ atmospheric benefit of removal activity and to address any reversals of removals for which 6.4 ERs were issued during the activity's active crediting period(s). No ERs will be issued for removals generated after the last active crediting period, including during the post-crediting monitoring period".* Removal is an event or a process. It does not exist indefinitely, but its effects may yield a durable atmospheric benefit. Requiring a post-crediting verification process, when there are no longer revenues from carbon credits to finance these activities, are not realistic and would disincentivize the use of this mechanism. Monitoring, reporting and remediation measures are largely sufficient for the post-crediting period.

98. **[EU, 409]** proposes the following changes to the text (underlined): ". *to confirm the continued existence of ~~removals~~ the carbon storage and/or of increase of carbon stocks resulting from the removal activities.".* The use of 'continued existence of removals' is unclear in this sentence. What needs to be ensured is the continued existence of the carbon stocks resulting from the removal activity (in a stable carbon pool other than the atmosphere).

99. **[UK, 410]** proposes adding "independent third-party" (underlined) to the text as follows: "*During the post-crediting monitoring period, activity participants shall undertake monitoring, reporting, independent third-party verification*…".

100. **Paragraph 18**: *Activity participants may submit requests to conclude post-crediting monitoring, by demonstrating for the consideration and approval of the Supervisory Body, evidence that the removals will be stored with negligible risk of reversal and/or that potential future reversals of removals for which 6.4ERs have been issued have been remediated as though a reversal has occurred as per section 3.6.3 Addressing reversal risk and reversals of this guidance, taking into account the residual reversal risk of the activity based on its current reversal risk assessment.*

101. Various carbon removal activities will possess distinct parameters, particularly those that securely store CO_2 in stable conditions, which will influence monitoring demands. This will need to be addressed by the A6.4SB. NEP [NEP, 984] suggests that the A6.4SB are clearer that the risk of reversal for a given activity is a key component in deciding on the length of the post-crediting monitoring period and consider allowing methodologies more scope to give predefined conditions that should they be met allow for post-crediting monitoring to end without a submission to the ~~Supervisory Body~~ SBM. [NEP, 384]

102. [CI, 386] proposes the following change to the text: "*Activity participants may submit requests to conclude post-crediting monitoring~~., by demonstrating for the consideration and approval of the Supervisory Body, evidence that the removals will be stored with negligible risk of reversal and/or that potential future reversals of removals for which 6.4ERs have been issued have been remediated as though a reversal has occurred as per section 3.6.3 Addressing reversal risk and reversals of this guidance, taking into account the residual reversal risk of the activity based on its current reversal risk assessment~~*."

103. Post-crediting monitoring should be feasible and realistic in order to incentivize removals activities to occur, as well as consistent across all project types. There is no point at which reversal risk can be objectively deemed negligible, and therefore a procedure must be

developed for assigning and transferring the obligation of monitoring, as well as the procedures for addressing risks that may arise, such as through actions taken in violation of the UN agreements. [CI, 386]

104. [CWM, 394] proposes deleting this paragraph, as the conditions to allow the activity participant to make a request to entirely conclude MRV after the crediting period are currently far too open-ended.

105. The specificities of nature-based solutions should be fully considered on the operationalisation of this paragraph. [ORM, 398]

106. A word appears to be missing. The correct sentence should be: *"…evidence that the removals will be stored with negligible risk of reversal and/or that potential future reversals of removals for which 6.4ERs have been issued have been remediated as though a reversal not occurred*." [IETA, 402]

107. **[UK, 410]** proposes addition of the following text: "*If post-crediting monitoring has concluded based on an assessment that the removals are stored with negligible risk, and that assessment of negligible risk later becomes non-negligible, then the post-crediting monitoring responsibilities shall be restarted (per [refer to relevant sections/subsections]*)." If the outcome of the reversal risk assessment changes over time from negligible to non-negligible (for instance, as the activity's underlying risk profile may evolve over time), and post-crediting monitoring has concluded on the basis that the reversal risk is negligible, then the post-crediting monitoring must be restarted to account for the up-to-date reversal risk level of the removals. The reversal risk assessment tool must enable activity participants to have a dynamic understanding of the overall reversal risk level, as for instance the underlying risk factors may change over time which impacts the outcome of the risk assessment.

108. **Paragraph 19.** *Activity participants shall indicate the arrangements for monitoring, reporting, and remediating any reversals during the post-crediting monitoring period in the project design document and communicate any updates to the plan at each renewal of the crediting period and before the end of the last active crediting period.*

109. No comment was received on this paragraph.

110. **Paragraph 20**. *The Supervisory Body will develop further guidance in this regard including:*

(a) Further requirements and identification of the existing requirements that are applicable during the post crediting period for monitoring, reporting, and verification of removals and remediation of reversals, including consideration of options to use methods based on digital technologies and remote sensing;

(b) The timeframe for post-crediting monitoring, including factors that inform duration and phasing;

(c) The submissions referred to in paragraph 18 above, including inter alia on the evidence-based demonstration by the activity participant and on the consideration and approval given by the Supervisory Body.

111. [CI, 386] proposes addition of a new item ~~(e)~~: "*guidance related to procedures for assigning and transferring the obligation of monitoring, as well as the procedures for addressing risks*.".

112. [IEN, 395] proposes to remove the following text from item a): "*including consideration of options to use methods based on digital technologies and remote sensing*". The use of digital technologies and remote sensing poses a risk to Indigenous Peoples in terms of the violation of free prior informed consent (FPIC), particularly pertaining to Indigenous Peoples' ability to withdraw consent surrounding the ownership, sale, access, and/or application(s) on data about their lands and territories.

113. The timeframe for the Post-crediting Period, the related monitoring requirements, the submission modalities and evidenced-base data have to be determined with details for identification of the related financial means that are necessary to support such monitoring during the Post crediting Period and the submission as per paragraph 18. [ORM, 398]

114. **[UK, 410]** proposes the following addition to item 20 (b) (underlined): *"The timeframe for post-crediting monitoring, <u>including factors that inform duration and phasing, which provides assurance on the permanence of removals</u>*". to contextualise why post-crediting monitoring is important.

115. Post-crediting period monitoring length needs to be based on scientific input to A6.4SB. **[AOSIS, 411]**

116. [**AILAC, 412]** proposes specifying the duration of the post-crediting monitoring period obligation under item 20 (b) that is a timeframe that is viable to hold from a contractual standpoint by activity proponents. Currently this time frame is unspecified and this generates a lot of uncertainty for potential activities. It would be unwise to demand impossibly long periods of time such as 100-years which may make sense from a carbon-cycle point of view but to which no activity proponent would commit contractually to.

3.3. Reporting

117. Section 3.3 (Reporting) received 20 comments, mainly seeking clarity and additional guidance, with eight of these comments focusing on paragraph 22 of document A6.4-SB009-A02.

118. [AvB, 396] recommends reflecting the requirement of paragraph 25 in paragraph 24 since the requirement in paragraph 25 is stricter.

119. There seems to be an inconsistency in the use of the minimum time between two monitoring reports paragraph 24 prescribes: "*Based on the results of the risk assessment referred to above, the frequency may range from one to five years from the submission date of the first monitoring report*", while paragraph 25 prescribes: "*Methodologies shall contain provisions to require submission of subsequent monitoring reports (i.e. subsequent from the submission of the first monitoring report) at least every two years for activities with high reversal risk or at least every five years for those with low reversal risk*".

120. Relevance of the timing of the first and subsequent monitoring reports will very much depend on the type of carbon removal activity. Some activities will already yield results during the first years of the implementation of the activity. Others, like forest related activities (forest management, afforestation), may take longer periods of time before the activity takes substantial effect. In such cases soon and frequent monitoring appears to create an administrative overburden. [AvB, 396]

121. [ALCT, 399] proposes including a new clause in paragraphs 16 and/or 21 to reference applicable geological storage regulations: *<u>'Mechanism methodologies shall align with and</u>*

refer to existing geological storage regulations to ensure consistency with current monitoring and reporting requirements, where applicable. This alignment should simplify the process for project proponents and ensure regulatory coherence across different jurisdictions.'. The document does not currently acknowledge the existing regulations that govern geological storage of carbon dioxide. This oversight may lead to duplicative requirements for monitoring and reporting, potentially causing confusion and increasing the administrative burden on project proponents. The significance of this comment lies in its potential impact on the integrity of the monitoring system and its relevance to the broader regulatory framework. It points out a crucial overlap with existing regulations that govern monitoring requirements for geological storage of carbon dioxide, a technical area that is strictly regulated due to its long-term environmental implications. Including references to existing geological storage regulations ensures that the methodology is consistent with established standards and practices, avoiding redundancy and confusion.

122. The writing of paragraphs 18, 24 and 25 is unclear. What is the difference between para 24 and 25? There seems to be an inconsistency in the use of the minimum time between two monitoring reports. **[EU, 409]**

123. **Paragraph 21.** *Activity participants shall prepare monitoring reports after implementing monitoring operations and methods as specified in monitoring plans, including for seeking issuance of ERs.*

124. This paragraph received no comment.

125. **Paragraph 22.** *Monitoring reports shall contain:*

(a) *An outline of the monitoring plan with a description of the monitoring operations and methods used to implement the plan, and the resulting calculated removals during the monitoring period along with the associated uncertainties in the calculation;*

(b) *Field data collected, including remotely sensed data, or if the data set is too voluminous, a summary of the data and an indication of how the complete data set may be accessed;*

(c) *Records and logs of observed events that could potentially lead to the reversal of removals as well as a summary of any reversal notifications that were submitted during the monitoring period;*

(d) *Estimates of any reversals that occurred during each monitoring period, including descriptive information on how reversals occurred, whether they were avoidable or unavoidable, and remedial actions taken;*

(e) *Information on how the environmental and social impacts were assessed and addressed by applying robust environmental and social safeguards as per Section 3.8 Avoidance of other negative environmental and social impacts, as well as how the activity is fostering sustainable development through the utilization of the Article 6.4 sustainable development tool;*

(f) *Information on how reversal risks were assessed and addressed consistent with risk mitigation measures described in the reversal risk assessment tool that will be developed by the Supervisory Body.*

126. [CI, 386] proposes adding to item 22 (b) the following (underlined): "*Field data collected, including remotely sensed data, or if the data set is too voluminous, a summary of the data and an indication of how the complete data set may be accessed, including a detailed descriptions of any deviations from the previously approved monitoring plan and evidence of approval; (…)*". Such change may include, for example, what time periods these changes apply to if not the entire monitoring period.

127. [QB, 387] proposes adding the words "*Where appropriate,*" at the beginning of subparagraphs 22 (f). Should an activity participant choose to use a ton-year method, the monitoring report would not need to provide information on how reversal risks were assessed and addressed. The report would also not need to provide a summary of reversal notifications or estimates of any reversals that occurred or how they have occurred.

128. [IEN, 395] proposes the text be rediscussed and rewritten as follows: 22 (e) "*Information on how the environmental and social impacts were assessed and addressed by applying robust environmental and social safeguards as per Section 3.8 Avoidance of other negative environmental and social impacts, as well as ~~how the activity is fostering sustainable development through the utilization of the Article 6.4 sustainable development tool.~~ proof of ongoing free, prior and informed consent of impacted Indigenous Peoples in accordance with free prior informed consent as per the UN Declaration on the Rights of Indigenous Peoples (UNDRIP)*".

129. [ALCT, 399] proposes the following additional text to item 22 (e): "*Monitoring reports should detail the application of robust environmental and social safeguards, ensuring activities not only avoid negative impacts but actively contribute to sustainable development goals*." The current description lacks clarity on the integration of environmental and social safeguards. [ALCT, 399]

130. **[BR, 408]** proposes the following change to the text (underlined): "*22 (c) Records and logs of observed events that ~~could potentially lead~~ have led to the reversal of removals, if and when they occur, as well as a summary of any reversal notifications that were submitted during the monitoring period;*" Being aware that due to operational difficulties in specifying and monitoring all observed events, it would be ideal to report the incident if and when it occurs. Otherwise, there will be a significant margin for subjectivity regarding what could potentially lead to reversals in the future.

131. The first part of the sentence of item 22 (a) seems to be the monitoring plan and the second part the monitoring report. This should be clarified. **[EU, 409]**

132. In item 22 (d), the reversal should be the detected from the monitoring and not an estimation. The difference, i.e. any negative value, between the cumulative emission reductions or net removals resulting from the project activity until the end of monitoring period "p" and the cumulative emission reductions or net removals of until the end of the previous monitoring period "p-1". The cumulative emission reductions or net removals should be calculated since the beginning of the project activity**. [EU, 409]**

133. **[UK, 410]** proposes the following addition to item (d) (underlined): "*Quantitative Estimates of any reversals…*". to avoid doubt that the estimate of any reversals should be quantitative in nature, alongside any additional qualitative descriptor.

134. **Paragraph 23.** *Monitoring reports shall be prepared without a gap between the two successive monitoring periods, which may be of the same or different durations according*

to the activity participant's implementation of paragraph 22 above. The last part of the sentence "*….according to the activity participant's implementation of paragraph 22 above*", is not clear since in paragraph 22, there is no description on how activity participant's implementation affect monitoring periods duration. **[EU, 409]**

135. **Paragraph 24**. *Methodologies shall contain provisions to specify the minimum frequency of monitoring report submission, which shall be commensurate with the degree and nature of the risk of reversals determined through a risk assessment undertaken by the activity participants as per 3.6.1. Reversal risk assessment. Based on the results of the risk assessment referred to above, the frequency may range from one to five years from the submission date of the first monitoring report. Activity participants may choose a shorter period for monitoring than the specified minimum frequency. A reversal event may also trigger the preparation of a monitoring report as described in 3.6.2 Post reversal actions.*

136. [CI, 386] proposes deletion of the term "*degree and nature of*" in the phrase "*commensurate with the degree and nature of the risk of reversals determined through a risk assessment (…)*" as the term is very subjective. Post crediting monitoring periods should be consistent across all project types and should not depend on the nature of a reversal risk.

137. **[BR, 408**] proposes the following change to the text (underlined):"*(…).Based on the results of the risk assessment referred to above <u>and the nature of the activities under consideration</u>, the frequency may range from one to five years from the submission date of the first monitoring report.*"

138. **[UK, 410]** proposes the following change to the last sentence (underlined): "*A reversal event shall also trigger the preparation of a monitoring report as described in 3.6.2 Post reversal actions.*". In the event of a reversal event, a monitoring report must consequently be required per the process in section 3.6.2.

139. **Paragraph 25.** *Methodologies shall contain provisions to specify the maximum duration allowed to submit the first monitoring report from the start date of the first crediting period. Based on the results of the risk assessment referred to in section 3.6.1. Reversal risk assessment, the duration may range from one to five years from the start date of the first crediting period. Methodologies shall contain provisions to require submission of subsequent monitoring reports at least every two years for activities with high reversal risk or at least every five years for those with low reversal risk*.

140. [CI, 386] proposes deletion of the second sentence as follows: "*Methodologies shall contain provisions to specify the maximum duration allowed to submit the first monitoring report from the start date of the first crediting period. Based on the results of the risk assessment referred to in section 3.6.1. Reversal risk assessment, the duration may range from one to five years from the start date of the first crediting period. ~~Methodologies shall contain provisions to require submission of subsequent monitoring reports at least every two years for activities with high reversal risk or at least every five years for those with low reversal risk.~~*". All activities carry a risk of reversals, and these cannot be categorized into "activities with high reversals risk" and "activities with low reversal risk". [CI, 386]

141. This paragraph makes mention to the reporting frequency for activities with "high reversal risk" and reporting frequency for activities with "low reversal risk" but the Recommendation does not define how to characterize whether an activity is considered high or low reversal risk. [API, 405]

142. **Paragraph 26.** *The Supervisory Body will develop guidance on and procedures for addressing late, incomplete, or missing monitoring report submissions including remedial measures to address situations where monitoring is stopped prematurely, i.e., prior to the conclusion of the crediting period(s) and fulfilment of requirements for post-crediting period monitoring. The guidance will address options for giving effect to the remediation of reversals of removals for which 6.4ERs have been issued in such circumstances*.

143. [CMW, 394] proposes the following alternative text: "*The Supervisory Body may ~~will~~ develop further guidance to operationalise the remedial measures described in paragraphs [XX] and [YY] ~~on and procedures for addressing late, incomplete, or missing monitoring report submissions including remedial measures to address situations where monitoring is stopped prematurely, i.e., prior to the conclusion of the crediting period(s) and fulfilment of requirements for post-crediting period monitoring. The guidance will address options for giving effect to the remediation of reversals of removals for which 6.4ERs have been issued in such circumstances~~. [XX.] Late, incomplete, or missing monitoring report submissions, remedial measures shall be taken. This also applies to situations where either monitoring or the activity has stopped prematurely, for instance prior to the conclusion of the crediting period(s) and fulfilment of requirements for post-crediting period monitoring. [YY.] If an activity participant fails to submit a monitoring report on time or submits an incomplete monitoring report, the activity participant shall be unable to issue, transfer, or cancel ERs from the activity for which the monitoring report is due as well as any other activity in which they are a participant. If an activity participant provides a justification within 15 calendar days following the deadline for the submission of the monitoring report that is deemed acceptable by the Supervisory Body, then they shall be able to resume transfer or cancellation of ERs from the activity for which the monitoring report is due as well as from any other activity in which they are a participant. If an activity participant fails to provide a justification within 15 calendar days following the deadline for the submission of the monitoring report, or if this justification is deemed unacceptable by the Supervisory Body, all previously issued ERs to the activity shall be deemed avoidable reversals and shall be remediated by the activity participant accordingly.*"

144. [IEN, 395] proposes this paragraph to be rewritten. The SBM must not issue 6.4ERs where monitoring report submissions are missing or incomplete. This includes submissions where there is no proof of free prior informed consent. [IEN, 395]

3.4. Accounting for removals

145. Section 3.4 (Accounting for removals) received 27 comments out of which 15 were on paragraph 27 of the document. Tonne-year accounting (also abbreviated to TYA) was recommended by several stakeholders in this subsection and other subsections. Comments were also made on the need to reconsider the framing and provisions of the accounting, including the calculations of net removal, reversal, and leakage, as well as how to define the project boundary and address leakage. A suggestion was made to remove paragraph 29 of the document. Additional criteria were suggested, such as limiting the use of engineered removal to residual emissions that cannot be abated, aligning with other mechanisms, and restricting forest restoration activities on the basis of absence of forest land in the past. [SH, 379] recommends the SBM to consider the adoption of a tonne-year accounting framework, similar to the one adopted by [QB, 387].

146. The UN is well situated to establish a precedent discount rate, reserving flexibility to adjust it as needed in the future. (i) Ex post measurement, reporting, verification, and issuance.

(ii) Minimum storage durations, determined on a methodology-specific basis. (iii) Lashof model of accounting, not Moura Costa model. [SH, 379]

147. [RG, 388] recommends the use of tonne-year accounting (TYA) such as the one proposed by [SH, 379] in its Carbon 2.0. TYA offers solutions to such practical concerns of the investors:

(a) The price of Carbon credit is normalized to 1t CO_2 removed precisely and stored;

(b) The cost today is a discounted value of future benefits, discounting the underlying risks (environmental costs and regulatory penalties, shortfalls and reversals);

(c) All risks associated with reversals / shortfalls are attributed within “Risk premium” over and above discount rate attributable to social cost of carbon much like how probability of default is factored into bond prices as credit spreads;

(d) Therefore paying “less” for a Carbon project with large inherent risks vis a vis paying “more” for a higher quality project should be financially normalized.

148. [YNG, 403] recommends addition of a new paragraph in Section 3.4 or 3.5: "*A6.4 removal credits shall be fully fungible with and integrated into other leading carbon removal certification frameworks and markets, notably the EU Carbon Removal Certification Framework.*", in order to ensure that A6.4 credits integrate with leading markets like EU CRC-F.

149. [YNG, 403] recommends addition of a new paragraph in Section 3.4 or 3.5: "*Carbon removal activities under the Article 6.4 mechanism shall be limited to offsetting residual emissions that cannot otherwise be abated. Removals shall not be used to enable the ongoing use of fossil fuels.*"

150. [YNG, 403] recommends addition of a new paragraph in Section 3.4 or 3.5: "*Limited use of carbon dioxide removal (CDR) technologies may be permitted under Article 6.4 exclusively to offset residual emissions that cannot be eliminated and not extend fossil fuel reliance. The Supervisory Body shall develop methodologies to appropriately incorporate certain CDR with high likelihood of long-term storage, reversing the statement that engineering-based removals cannot serve Article 6.4 objectives*."

151. [YNG, 403] proposes adding a new paragraph in Section 3.4 or 3.5: "*The development and integration of engineered carbon removals into the Article 6.4 mechanism may be supported through subsidies, advance market commitments, and policy incentives, subject to the restrictions on their use outlined in [paragraph specifying the proposed change listed directly above].*

152. [WWF, 404] proposes a criterion to restrict restoration projects on the basis of the absence of any forest 20 years before the project.

153. **[UK, 410]** suggests the SBM to further delineate emissions in scope of the accounting calculation for removals eligible for crediting. Illustrative case studies to support stakeholders in understanding how this paragraph should be applied in practice would be helpful, either within the guidance or as an annex. This will be particularly helpful given this proposed approach is different to the approach for accounting removals and reversals in other carbon crediting programmes.

154. **[UKR, 414]** suggests, as the removal guidelines were not adopted by CMA5, the SBM to re-examine the issue of tonne-year accounting in light of new knowledge and practical experiences.

155. **Paragraph 27:** *Removals eligible for crediting shall exceed the applicable baseline determined in accordance with requirements for the development and assessment of Article 6.4 mechanism methodologies and are calculated for each year in the crediting period. In each given monitoring report, such calculations are done in accordance with the following:*

(a) By calculating net removals, which involves the estimation and deduction of emissions within the activity boundary that result from the implementation of the activity and/or from an event that could potentially lead to a reversal of removals, and any leakage emissions, in accordance with the applicable provisions of the Activity Standard, requirements for the development and assessment of Article 6.4 mechanism methodologies, and the applicable methodology; and

(b) By *comparing the current cumulative net removals to cumulative net removals in the previous monitoring report. Current cumulative net removals that fall below the cumulative net removals in the previous monitoring report constitute reversals.*

156. What has been described under this section is not about accounting, rather about quantification of removals. If it is not clear what is meant by "accounting", the SBM should seek clarification from the CMA. [SCC, 380]

157. [FA, 382] proposes the following change to the text (underlined): "*Removals eligible for crediting shall exceed the applicable baseline determined in accordance with requirements for the development and assessment of Article 6.4 mechanism methodologies and are calculated for each year in the crediting period <u>using the ex-post tonne-year crediting period</u>*…". The ex-post tonne-year crediting method offers significant advantages over the ex-ante tonne-tonne approach.

158. [CI, 386] suggests removing or revise significantly item 27 (b) as it is not consistent with correct accounting, in part because it confuses stocks with fluxes. If removals are defined in part 27 (a) as net negative emissions, as measured against a baseline, then a "*reversal*" only occurs when the cumulative net removals fall below zero, not when they fall below the cumulative net removals measured in the previous monitoring period.

159. Item 27 (a) does not explicitly mention a deduction for uncertainty, which is referenced in paragraph 10. It should be rearticulated to have net removals account for uncertainty as well as leakage, and potential reversals, in the manner we suggest above in relation to paragraph 11. [CI, 386]

160. [QB, 387] proposes modifying item 27 (a) to (underlined): "*by calculating net removals, …that could potentially lead to any <u>leakage emissions or, where appropriate, a reversal of removals</u>, in accordance with the applicable provisions …*". Activity participants that choose the ton-year method would not need to account for events that could potentially lead to a reversal of removals.

161. [CMW, 394] proposes the text to be revised as follows: *" (a) by calculating net removals, which involves the estimation and deduction of emissions within the activity boundary that result from the implementation of the activity and/or from an event that could potentially lead to a reversal of removals, ~~and~~ any leakage emissions, <u>as well as any emissions</u>*

occurring outside the activity boundary that are related to the implementation of the activity, including but not limited to construction materials and supply of energy, electricity, heat, or cooling, in accordance with the applicable provisions of the Activity Standard, …".

162. The description of calculating net removals needs further clarification. It misses information on how to calculate the "gross" removals to be considered in the accounting and how this is done considering the level of uncertainty in both the baseline and the activities' removals. [AvB, 396]

163. For item 27 (a), [AvB, 396] recommends to more clearly explain the different elements used for calculating the net removals and also to indicate how these net removals related to the carbon credits. A formula to describe which components need to included will likely make it more clear which components are considered in the calculations. What is missing from this formula are emissions outside the activity boundary, e.g. emissions associated with the production of for instance artificial fertilizers used in the activity and/or other life-cycle emissions associated with the activity. In our interpretation calculating the net removals includes ((+) indicates an addition, (-) a subtraction):

    (a) Gross removals (+), which are calculated as the difference between baseline and activity removals;

    (b) Emissions within the activity boundary that result from the implementation of the activity (-);

    (c) Emissions within the activity boundary that result from an event that could potentially lead to reversal of removals;

    (d) Leakage emission. This will need further elaboration on what are considered leakage emissions. Does this include emissions from indirect land-use change and possible energy substitution effects? [AvB, 396]

164. For item 27 (b), the current description of comparing cumulative net removals is not clear and can be interpreted in different ways. The claim that current cumulative net removals that fall below the cumulative net removals in the previous monitoring report constitute reversals only holds if in both monitoring periods the cumulative net removals since the start of the activity are considered. If this would be the cumulative net removals for the period covered by the monitoring report, reduced cumulative net removals compared to the previous monitoring report should be interpreted as a reduced rate of net removals, but not as reversals. To prevent confusion on this please make more specific that in all cases this relates to cumulative net removals since the start of the activity. [AvB, 396]

165. It is recommended that a detailed reference to the "*Activity Standard*" be provided to avoid any lack of clarity regarding the applicable standard. [ICLRC, 400]

166. Item 27 (c) should be eliminated and a clear definition of reversals should be provided. It states that net removals that fall below removals in previous monitoring report shall be considered reversals. This implies that removals must be ever increasing to be considered creditable, and defies the logic of removals achieved by forests, which tend to accrue at a lower rate as the forest stand ages. To illustrate this point: a reforestation activity would eventually produce reversals in its maturity, even if successfully managed to achieve mature age, and properly restore the ecological functionality of the forest. [API, 405]

167. **[BR, 408]** proposes the following change to the text (underlined): "*Removals eligible for crediting shall exceed the applicable baseline determined in accordance with requirements for the development and assessment of Article 6.4 mechanism methodologies and are calculated for each year in the crediting period or based on an annual average over the established monitoring period, according to the nature of the activity.*"

168. **[EU, 409]** suggests the following framing of distinct elements:

(a) First, some emission reductions and removals enhancement credits rely on storage of removed carbon built up - cumulatively - with reference to a baseline. The regular monitoring of the carbon stock will enable the issuance of credits on the basis of an increase in carbon storage as a result of continued emission reductions or removal enhancement during the monitoring period;

(b) Second, emissions reductions or removals enhancement need to be calculated as "net", therefore including all relevant emission sources and carbon pools. This should also be done on a regular and consistent basis;

(c) Third, addressing reversals is related but a separate question. In our view, reversal occurs where the cumulative emission reductions or net removals from a mitigation activity are lower in period X as compared to period X-1;

(d) Fourth, addressing emissions outside of the activity boundary (leakage) is also a separate question, to be addressed in the calculation of emission reductions, net removals, and of reversals.

169. **[EU, 409]** suggests that the provisions on accounting are re-considered, and a definition of reversal is provided:

(a) Net removals are calculated as: The difference between removals occurring with the implementation of the mitigation activity and removals occurring in the baseline scenario, - plus (+) the difference between emissions from other relevant sources occurring in the baseline scenario and emissions from other relevant sources occurring with the implementation of the mitigation activity - minus (-) any emission increase outside of the mitigation activity boundary linked to the activity.

(b) Reversals are calculated as: The difference, i.e. any negative value, between the cumulative emission reductions or net removals resulting from the mitigation activity until the end of monitoring period "p" and the cumulative emission reductions or net removals from the mitigation activity until the end of the previous monitoring period "p-1". The cumulative emission reductions or net removals should be calculated since the beginning of the mitigation activity. In other words, reversals are 'negative' net removals or emission reductions.

170. Reversals are quantified over a period. **[EU, 409]** recommends that the SBM further defines an appropriate minimum and maximum length of this period, taking into account different contexts.

171. **Paragraph 28.** *Removals are also calculated as per paragraph 27 for each year in the post-crediting monitoring period as indicated in paragraphs 16-18.*

172. The sentence contradicts the idea of paragraph 17 (no ERs after crediting periods). After the crediting periods, we do not monitor for removals but for the continued existence of additional carbon storage achieved by the mitigation activity. **[EU, 409]**

173. **Paragraph 29:** *Any carbon pools and greenhouse gases may be optionally excluded from accounting, if such exclusion results in a more conservative calculation of net removals, which shall be demonstrated in the PDD.*

174. [CI, 386] proposes removing this paragraph as its provision invites abuse and lack of transparency, since many activities are likely to create risk of leakage, emissions of non-CO_2 greenhouse gases, or face changing conditions in the future. Exempting pools and gases from accounting due to a one-time calculation at the inception of the project design is unadvisable.

175. **Paragraph 30.** *If an activity involving removals also results in emission reductions, relevant guidance shall be applied through a relevant methodology or a combination of methodologies applicable to the activity in accordance with the provisions to be developed by the Supervisory Body*.

176. **[AILAC, 412]** suggests indicating that for activities involving both reductions and removals, they should be disaggregated in the accounting (both in the monitoring report, as well as the verification and certification report).

3.5. Methodologies applicable for the crediting period

177. Section 3.5 (Methodologies applicable for the crediting period) received two specific suggestions. One comment proposed a different time frame for applying an updated methodology, the other suggested to update the baseline parameters.

178. **Paragraph 31.** *At the renewal of the crediting period, activities involving removals shall apply the latest version of the applicable methodology.*

179. [CI, 386] proposes the following changes to the text (underlined): "~~*At the renewal*~~ *Within 5 years, or in the second crediting period after a new version of the applicable methodology has been approved, whichever is sooner*, ~~*of the crediting period,*~~ *activities involving removals shall apply the latest version of the applicable methodology*."

180. **[BR, 408]** proposes the following change to the text: "*At the renewal of the crediting period, activities involving removals shall apply the latest version of the applicable methodology. 32 bis. If activities are already ongoing, at the renewal of the crediting period, activity participants may:*

(a) Adopt the latest version of the methodology, or

(b) Update the project's baseline and continue applying the previous methodology for a shorter period than the next credit period, to allow for a transition."

3.6. Addressing reversals

181. Section 3.6 (Addressing reversals) received the largest number of inputs totalling 109 comments, with more than half on section 3.6.3 (Addressing reversal risk and reversals). These comments mainly called for further consideration and clarifications on key concepts such as the distinction between unavoidable and avoidable reversals and the functioning

of the buffer mechanism, including cancellation. Clarifications were also sought on the functioning of direct cancellation and insurance.

182. [SCC 380] Unaddressed deficiencies in the buffer pool scheme as described in the recommendation document are as follows:

(a) A “buffer pool” does not have any collateral value unless the buffer is made up of non-reversible credits;

(b) Insurance: no actuarial basis exists for such insurance; it is a hypothetical proposal since no commercial entities can do this at present; over long period of time, the insured or insurer can disappear, judgement-proof cases can arise; who will sue whom, and under what jurisdiction and laws, is not clear;

(c) Host Party liability: governments cannot arbitrarily assume liabilities of private entities; they will need legislation to be enacted for this, which is unlikely to happen in most developing countries; this requirement defeats the objective of the mechanism to “incentivize and facilitate participation by public and private entities”;

(d) Perpetual monitoring: this is not feasible; it can incur unmanageable costs; lock-in of a land-use over indefinite period goes contrary to efficient resource use, contrary to sustainable development.

183. If temporary credits are to be issued, the A/R CDM rules can be used. However, if fungible credits are to be issued, equivalence approaches could be used. The SBM should ask for an expert analysis of these approaches and adopt a method that would best serve the objectives of the mechanism. [SCC, 380]

184. [NEP, 384] notes that different jurisdictions already have mechanisms to address liability for reversals, for instance the EU with the CCS and ETS Directives. The Article 6 rules must ensure compatibility with these rules and avoid expensive, disproportional and unnecessary reversal mechanisms. Thus, the rules developed by SBM Art 6.4 should allow for different regional solutions where such mechanisms already are in place.

185. [RG, 388] proposes the mechanism to address reversal to be extended to include the following considerations:

(a) Article 6.4 SB buffer pools could include credits from all registered projects. The credits are not retired for specific period of time and therefore may be used to remediate shortfalls;

(b) The Buffer pools therefore at any point in time represent an aggregate sum of CDRs or tonnes removed, priced at a volume weighted average price of each CDR.

186. This section will very much benefit from better definitions of what different elements include. For instance, what would be considered avoidable and unavoidable reversals. [AvB, 396]

187. Refer to ICVCM AF criteria 9.1 (a), (b), (c) and 9.4 (a) (1) for paragraph 33 to 36. [ICVCM, 401]

188. Structure of section 3.6 is unclear and would benefit from better definitions. **[EU, 409]**

189. We cannot accept that in the mechanisms to address reversal, the buffer pool is reserved exclusively for 'unavoidable' reversals, while private insurance is reserved exclusively for 'avoidable' reversals. We do not see the reason for this sharp distinction and believe that further thinking is needed. More consideration is needed on how two imperatives can be satisfied through application of a buffer pool and/or through insurance and replacement requirements:

    (a) How we can guarantee that reversals are addressed in full, since there are limitations to insurance;

    (b) How incentives to maintain removals and stocks are preserved, where full insurance is offered. **[EU, 409]**

190. It should be clearer in the text that both the buffer pool and the direct replacement obligations might be combined and be available for avoidable reversals. Buffer contributions, and contributions by activity participants to any other mechanisms to ensure replacement, need to be adequate to cover the risk of reversal. Buffers and mechanisms insuring against reversal, need to be regularly stress tested. **[EU, 409]**

191. [**AOSIS, 411]** suggests the following:

    (a) There is a need to distinguish emission reductions from removals in A6.4ER unit identifiers and to identify categories of reversal risk in A6.4ER unit identifiers to support transparency;

    (b) The SBM should consider excluding activities with a high risk of reversal over climate-relevant timeframes, to avoid jeopardizing 1.5C. The current text does not anticipate this possibility;

    (c) On issues of definitions of durability and with respect to post-crediting monitoring periods, rules need to be designed on the basis of the science, rather than putting the policy before the science. The UNFCCC needs to take a conservative approach on these issues, for credibility and to protect environmental integrity.

192. **Paragraph 32:** *Activity participants shall minimize the risk of the release of stored removals and, where such reversals of removals occur, ensure that these are addressed in full, in accordance with guidance in this document.*

193. [CI, 386] proposes the following changes to the text (underlined): "*Activity participants shall minimize the risk of ~~the release of stored removals and, where such~~ reversals of removals <u>and</u> ~~occur~~, ensure that these are addressed in full, in accordance with guidance in this document.*".

194. [QB, 387] suggests adding at the underlined text: "*Activity participants <u>shall aim to respect the permanence criteria by</u> <u>minimizing</u> the risk of the release of stored removals and, where such reversals of removals occur, ensure that these are addressed in full, in accordance with guidance in this document.*"

195. It is important to emphasize that this whole section exists so that activity participants choosing the ton-ton method respect the permanence criteria by minimizing the risks of reversals and taking actions to that effect. ~~therefore,~~ [QB, 387]

196. [IIPFCC, 392] proposes adding "*<u>including the requirements of section 3.8 paragraph 62</u>*" to the end of the paragraph. As currently drafted, the SBM's Recommendation for

"Activities involving removals under the Article 6.4 mechanism" does not in any way acknowledge or consider the collective rights of Indigenous Peoples or adequately fulfil the SBM's obligation to ensure and protect these rights, as required by the RMP.

197. The "*release of stored removals*" is incorrect language. It should be "*release of stored carbon*"**. [EU, 409]**

198. The use of a removal (or emission reduction) credit to offset emissions relies on the assurance that emissions removed are stored permanently or that there is a means for accounting for and compensating for reversals. Arrangements also need to be practical, workable and equitable, recognizing that there are limits to insurance, and to what either the business community or host countries alone can guarantee. This means that as a matter of principle:

(a) The risk of reversal needs to be reliably assessed, found to be manageable, and the removal (or emission reduction) is 'durable';

(b) There are strong incentives to store GHG permanently, and address any ongoing risks;

(c) Responsibility for replacement is clear, and mechanisms are adequate to cover any risk;

(d) Monitoring and liability provisions are both long term and credible;

(e) Potential reversals are detected early, and reversals are fully compensated until the risk is negligible. **[EU, 409]**

3.6.1. Reversal risk assessment

199. Section 3.6 (Addressing reversals) received the largest number of inputs totalling 109 comments, with more than half on section 3.6.3 (Addressing reversal risk and reversals). These comments mainly called for further consideration and clarifications on key concepts such as the distinction between unavoidable and avoidable reversals and the functioning of the buffer mechanism, including cancellation. Clarifications were also sought on the functioning of direct cancellation and insurance.

200. [QB, 387] proposes adding, at the beginning of paragraphs 34, 35 and 36: "*For activity participants choosing the ton-ton method, ….*". Activity participants choosing the ton-year method would not need to conduct a risk assessment of the activity. Thus, that paragraph only concerns activity participants that will be choosing the ton-ton method. [QB, 387]

201. **Paragraph 33.** *The risks of reversals may be avoidable or unavoidable and may include, inter alia:*

(a) Those related to activity finances and management;

(b) Those related to asset ownership, rising opportunity costs, regulatory and social instability, country-specific political risks and legal risks;

(c) Those related to fires, pests, and droughts.

202. [CI, 386] proposes removing this paragraph. Regardless of whether reversals are avoidable or unavoidable, any potential reversals will be assessed via the risk assessment

tool, reported in the monitoring reports, and addressed if needed through the use of the buffer pool. Therefore, there is no need to categorize risks as avoidable/unavoidable.

203. This paragraph needs more explanation on the different types of risks and how those will be evaluated. [AvB, 396]

204. The risk of reversal associated with particular activities or activity classes should inform the application of provisions to compensate for reversals. Recommendations should require, and guidance should establish, a level of risk of reversal beyond which projects should not be eligible to issue permanent credits. Closer consideration of, and more careful description and categorization of reversal risks, could help frame provisions on responsibility and liability for reversal. There may be:

(a) risks attributable to the project proponent, that are avoidable;

(b) *risks* attributable to the host country, that are avoidable; and

(c) *third*-party risks, or environmental risks, that may or may not be manageable and avoidable. **[EU, 409]**

205. Item 33 (c) should be more generally phrased as they are specific examples and not complete: "(c) *those related to natural disturbances and extreme events*.". **[EU, 409]**

206. **[AOSIS, 411]**, proposes to add as item 33 (d) the following: "*those related to climate change impacts*". Environmental impact assessments need to be localized and include impact of climate change, in addition to issues already mentioned in recommendations – drought, fires, pests. Reversal risk relating to climate impacts accordingly may be different in different regions, depending on removal type, and this should be acknowledged. Some interventions may also have different climate impacts depending on geographic location (e.g. albedo).

207. Clearer guidance is needed on unavoidable reversals vs avoidable reversals so that it is easier to distinguish among them because the liability risks are different and the addressing of reversals is different. [**AILAC, 412]**

208. Governance risks should also be named in 33 b), and floods, wind damage, landslides and other natural disasters and extreme events in 33 c). [**AILAC, 412]**

209. **Paragraph 34.** *Activity participants shall conduct a risk assessment at the activity level using robust methods to identify and assess the reversal risks, including to quantify and score them, for instance the nature, scale, likelihood, and duration of the risks and of potential reversals. The percent-based reversal risk rating resulting from this assessment shall inform, among other procedures, an activity's application of remediation measures referred to in 3.6.3 Addressing reversal risk and reversals.*

210. As the nature of the reversal risk is irrelevant, [CI, 386] proposes deleting the term "nature", as follows: "*Activity participants shall conduct a risk assessment at the activity level using robust methods to identify and assess the reversal risks, including to quantify and score them, for instance the ~~nature~~, scale, likelihood, ….*".

211. [IEN, 395] proposes this paragraph be rewritten to ensure that activities under Article 6.4 are made transparent and accountable if project participants are tasked with developing and detailing the risks of reversals and monitoring the outcomes.

212. It is not clear what would be considered robust methods. Also to facilitate the assessment by the SBM this should be clear. Will this be defined in the risk assessment tool? Will the application of the tool be compulsory? [AvB, 396]

213. It is not clear what robust methods are and it should be clear that the risk assessment differentiates between avoidable and unavoidable reversals. [**EU, 409]**

214. **Paragraph 35.** *Activity participants shall also develop and describe plans to mitigate and monitor the risks and steps taken. Risks that cannot be eliminated shall be addressed as described below in this document.*

215. This paragraph refers to a plan but it is not clear what type of plan this is and how it relates to the other plans in the recommendations. **[EU, 409]**

216. For clarity and avoidance of doubt, it would be valuable to explicitly state the sections and subsections of the guidance referred to in 'as described below'. **[UK, 410]**

217. **Paragraph 36.** *Activity participants shall review and revise the risk assessment every five years from the start of the first crediting period, as well as in any of the circumstances specified in paragraph 15 (a)–(c).*

218. No comment was received on this paragraph.

219. **Paragraph 37.** *The Supervisory Body will develop a reversal risk assessment tool. Methodologies may include additional guidance on the application of the tool.*

220. [CI, 386] proposes the following change to the text (underlined): "*The Supervisory Body will develop a reversal risk assessment tool, <u>to identify risks so these can be minimized</u>, monitored and managed. Methodologies may include additional guidance on the application of the tool*.".

221. [CMW, 394] proposes revising the text to "*The Supervisory Body will develop a reversal risk assessment tool<u>. The tool shall incorporate the latest peer-reviewed scientific research and shall be regularly updated, at least every 5 years, to account for new scientific findings. The tool shall require activity participants to incorporate geographical context, historical risk record, and projections for future risk development, including those related to the impacts of climate change. The tool shall also define a minimum default risk rating for activities facing a reversal risk, potentially distinguished by broader activity type. The activity-level assessment described in paragraph 34, shall complement the default risk rating, and shall not lead to an overall rating that is lower than the default risk rating. The activity-level assessment may result in the overall rating being higher than the default risk rating. DOEs shall review the results of the activity-level assessment, including by assessing the appropriateness of the underlying data as well as the risk rating, and provide recommendations to the activity participant and SBM as appropriate</u>. Methodologies may include additional guidance on the application of the tool*."

222. "*Methodologies <u>shall</u> include additional guidance*…". **[EU, 409]**

223. The risk assessment tool is necessary to define the proportion of 6.4ERs that would go into the buffer (as per para. 53), so its development should be prior to any approval or adoption of methodologies involving activities with risks of reversals. As an additional paragraph, reversals should be documented also in reference areas when methodologies incorporate these. **[AILAC, 412]**

3.6.2. Post-reversal Actions

224. This subsection received a total of 25 comments.

3.6.2.1. Reversal-related Notifications and actions

225. This subsection received 16 comments.

226. **Paragraph 38.** *The activity participant shall notify the Supervisory Body of reversals that occur within their activity boundary. Submissions of reversal-related notifications shall be made as follows:*

(a) A preliminary notification shall be provided within 30 days of an event that could potentially lead to a reversal becoming known (hereafter "observed event"), taking into account risks identified in the risk assessment and the applied methodology, including, at a minimum, the date, the location, and a short description of the event. It may be provided digitally;

(b) Activity participants wishing to demonstrate that removals for which 6.4ERs have been issued were not disturbed by the observed event prior to submitting a full monitoring report shall submit a verified monitoring report of the information referred to in paragraphs 22 (a)-(c) above, which may be provided digitally;

(c) A reversal notification as a full monitoring report referred to in paragraph 22 above shall be provided within 360 days of the observed event;

(d) In case the reversal event is still ongoing such that a delayed submission of the full monitoring report would result in more complete and accurate information, the activity participant may submit a verified monitoring report referred to in paragraph 38(b) above to request the Supervisory Body to extend deadline for submission of the full monitoring report by 90-180 days from the original submission deadline.

227. [CI, 386] proposes the following changes to the text (underlined): "*The activity participant shall notify. Submissions of reversal-related notifications shall be made as follows:*

(a) A preliminary notification shall be provided within ~~30 days~~ <u>one reporting cycle</u> of ~~an event that could potentially lead to~~ a <u>potential</u> reversal ~~becoming known (hereafter "observed event")~~, taking into account risks identified in the risk assessment and the applied methodology ~~including, at a minimum, the date, the location, and a short description of the event~~. It may be provided digitally;

(b) Activity participants wishing to demonstrate that removals …, which may be provided digitally;

(c) A reversal notification as a full monitoring report referred to in paragraph 22 above shall be provided within 360~~0~~5 days of the ~~observed event~~ <u>potential reversal;</u>

(d) ~~*In case the reversal event is still ongoing such that a delayed submission of the full monitoring report would result in more complete and accurate information, the activity participant may submit a verified monitoring report referred to in paragraph 38(b) above to request the Supervisory Body to extend deadline for submission of the full monitoring report by 90-180 days from the original submission deadline.*"~~.

228. Thirty days is insufficient to detect and quantify most types of reversals for most activities. The notification should be allowed at any time, but no later than the next reporting cycle. Many reversal risks are not manifested by a specific event but are the results of longer-term processes. As such, it is appropriate for the activity participants to document the effects of these processes on an ongoing basis, as part of their regular reporting requirements. [CI, 386]

229. It is important to be clear about how the activity boundary is set so there is no discussion whether reversals appear *within*- or outside the boundary. [AvB, 396]

230. Here the term "verified monitoring report" is mentioned. What is the difference between a verified monitoring report, a monitoring report and a full monitoring report? [AvB, 396]

231. The difference between a "*verified monitoring report*" and a "*full monitoring report*" is not clear in item 38 (b). "*Verified monitoring report*" needs to be defined. [IETA, 402]

232. It should be "*and*" instead of "*as*": "*A reversal notification and a full monitoring report ….*". [IETA, 402]

233. Item 38 (c) could be simplified by stating that a reversal notification as a full monitoring report shall be provided in next monitoring cycle no later than 360 days after the observed event. [API, 405]

234. **[UK, 410]** proposes adding the following (underlined) to item 38 (b): "*Activity participants wishing to demonstrate that removals for which 6.4ERs have been issued were not disturbed by the observed event prior to submitting a full monitoring report shall submit an independently third-party verified monitoring report of the information referred to in paragraphs 22 (a)-(c) above, which may be provided digitally*;".

235. **[UK, 410]** proposes adding the following to item 38 (d): "*If a request is made to delay submission of the full monitoring report and this is granted, an interim monitoring report shall be made by the deadline set out in 38(c) to provide an interim update*.".

236. **Paragraph 39.** *Upon submitting a preliminary notification as per paragraph 38(a) above, activity participants will be unable to issue, transfer, or cancel ERs from the activity for which notification was provided until the activity participant submits a verified monitoring report or a full monitoring report demonstrating that removals for which 6.4ERs have been issued were not disturbed by the observed event, or until the 6.4 registry administrator confirms that the reversal has been remediated as per 3.6.3 Addressing reversal risk and reversals.*

237. [CI, 386] suggests removing this paragraph. Any potential reversals will be assessed via the risk assessment tool, reported in the monitoring reports, and addressed if needed through the use of the buffer pool. Therefore, there is no need for additional measures like temporarily suspending the verification/certification process. Since many reversals could be subject to ongoing processes, and there may no point at which the risk can be expected to end, this rule unduly penalizes activity participants.

238. [ICLRC, 400] recommends the following amendment to the text (underlined): "*Upon submitting a preliminary notification …, or until the mechanism registry administrator confirms that the reversal has been remediated …*.".

239. [IETA, 402] suggests making reference to the "mechanism registry administrator", as in the RMP (underlined): "*Upon submitting a preliminary notification as per paragraph 38(a)*

above, the mechanism registry administrator will be unable to issue, transfer, or cancel ERs from the activity…", since "*activity participants*", which is synonymous to project developer, should maintain arms' length of the ability to issue, transfer, or cancel ERs. (Also applicable to paragraph 46.) [IETA, 402]

240. Although necessary, the provision under this paragraph may discourage reporting of potential reversals; it could be added that the same limitation (not being able to issue, transfer or cancel ERs) may happen if it is found that a report of a reversal was not submitted within the timeframe required by paragraph 38. [**AILAC, 412]**

241. **Paragraph 40.** *Following the submission of a full monitoring report that reflects reversals, the Supervisory Body will review the report to confirm, among other things, that the activity proponents have accurately characterized the reversal event as being avoidable or unavoidable. The Activity Participants will be notified of the outcome of the Supervisory Body's review within a timeframe to be specified by the Supervisory Body.*

242. [CI, 386] proposes the following change to the text: "*Following the submission of a full monitoring report that reflects reversals, the Supervisory Body will review the report to confirm, among other things, that the activity proponents have accurately characterized the reversal ~~event as being avoidable or unavoidable~~. The Activity Participants will be notified ….*".

243. It is recommended that the use of the capitalized term "Activity Participants" be justified or amended to ensure consistency in the use of terms throughout the proposed document. [ICLRC, 400]

244. [IETA, 402] suggests consistent use of term "activity participants" vs. "activity proponents" is not consistent. It should be "…the activity participants have accurately characterized…".

245. **Paragraph 41.** *The Supervisory Body will develop further guidance in regard to the measures in this section, including the format and procedures for notifications and reports that may be submitted digitally and treatment of notifications from third parties to the Supervisory Body of observed events that could potentially lead to reversals.*

246. **[UK, 410]** proposes the following changes to the text: "*The Supervisory Body will develop further guidance in regard to the measures in this section, including the format and procedures for notifications and reports that may be submitted digitally and to enable ~~treatment of~~ notifications from third parties to the Supervisory Body of observed events that could potentially lead to reversals.~~:~~*". In principle, third parties should be allowed to make notifications to the 6.4 SB, but the 6.4 SB should consider and develop an appropriate process to facilitate this.

3.6.2.2. Corrective actions

247. This subsection received four comments.

248. The title '*3.6.2.2. Corrective actions*' does not seem to correspond with the content in this section. **[EU, 409]**

249. **Paragraph 42.** *Following the submission of the preliminary notification referred to in paragraph 38(a), activity participants shall initiate appropriate corrective measures and*

demonstrate in requisite updates to a reversal risk assessment that accompanies a full monitoring report that reflects reversals, inter alia:

(a) Assessing how the reversal occurred and its causes;

(b) Elaborating plans to prevent further reversals such as improving control measures, storage conditions and handling procedures, and arranging further personnel training in various aspects of removal process;

(c) Reassessing adherence to applicable local and international regulations;

(d) Engaging stakeholders in accordance with the procedures of the Supervisory Body;

(e) Increasing the activity rating, resulting in increased buffer contributions, if required as per the risk assessment update.

250. [CI, 386] proposes the following change to the text (underlined): "*Following the submission of the preliminary notification referred to in paragraph 38(a), activity participants shall initiate appropriate corrective measures and demonstrate in requisite updates to a reversal risk assessment that accompanies a full monitoring report that reflects reversals. Corrective measures may include, inter alia.*".

251. [IIPFCC, 392] proposes amendment the following amendment (underlined): "*Following the submission…, inter alia: (a) Assessing how …; (b) Elaborating plans …; (c) Reassessing adherence to applicable local, indigenous and international regulations, standards, and human rights obligations, including the rights of Indigenous Peoples; (d) Engaging stakeholders and Indigenous Peoples that may be affected by any reversal, including engaging in full and effective consultation and cooperation with Indigenous Peoples through their representative institutions when any reversal may affect their lands, territories, sacred sites, and other resources, in accordance with international standards and obligations and any relevant ~~the~~ procedures of the Supervisory Body; (e) Increasing the activity rating, resulting in increased*".

252. It is not clear how the full monitoring report mentioned in this paragraph relates to the verified monitoring report indicates in ~~§~~ paragraph 38. Please explain this in the document. (See also their comment to paragraph 38.) [AvB, 396]

3.6.2.3. Preventive actions

253. This subsection received two comments.

254. **Paragraph 43.** *Activity participants shall update and submit the reversal risk assessment as per section 3.6.1. Reversal risk assessment.*

255. No comment was received on this paragraph.

256. **Paragraph 44.** *Activity participants shall also update the assessment conducted using Article 6.4 mechanism sustainable development tool to reflect the relevant underlying causes and any negative impacts, as well as plans for remediation and prevention of a recurrence, and submit this with the updated reversal risk assessment accompanying the full monitoring report submitted for reversal notification purposes.*

257. [CI, 386] proposes the addition of the following texts (underlined): "*If the Supervisory Body determines that the risk was in the control of the activity participant, activity participants shall also update the assessment conducted ….*".

258. [IIPFCC, 392] proposes amendments to the text as follows (underlined): "*Activity participants shall also update the assessment … to reflect the relevant underlying causes and any negative impacts, which shall include an assessment of any impacts that may affect the rights of Indigenous Peoples, including but not limited to potential effects on their lands, territories, sacred sites, resources and lifeways; as well as plans for remediation and prevention of a recurrence, which shall, in accordance with the standards and requirements set out in section 3.8 paragraph 62, be developed in full and effective cooperation and consultation with Indigenous Peoples when such risk reversal assessment indicates that their rights may be negatively affected, or when Indigenous Peoples find and assert to the activity participant, under their own risk assessment, that their rights may be negatively affected; and shall submit this plans for remediation and prevention with the updated reversal risk assessment accompanying…*". [IIPFCC, 392]

3.6.2.4. Activity continuation post-reversal

259. This subsection received three comments.

260. **Paragraph 45.** *Activity participants shall continue to be responsible for implementation of an activity, including while undertaking the processes required in this section.*

261. No comment was received on this paragraph.

262. **Paragraph 46.** *Activity participant shall only be permitted to issue, transfer, and/or cancel 6.4ERs related to the activity upon fulfilment of the requirements in paragraph 38 above and if the calculated removals meet the requirements in paragraph 27 above.*

263. [CI, 386] suggests removing this paragraph. Any potential reversals will be assessed via the risk assessment tool, reported in the monitoring reports, and addressed if needed through the use of the buffer pool. Therefore, there is no need for additional measures like temporarily suspending the verification/certification process. [CI, 386]

264. This paragraph should be amended to state that an activity participant shall only be permitted to issue, transfer, and/or cancel 6.4ERs related to the activity upon cancellation of an amount equivalent to reversed removals. It should not reference paragraph 27 due to its flawed definition of what constitutes a reversal. [API, 405]

265. **Paragraph 47.** *The Supervisory Body will develop further guidance on the treatment of activities for which a reversal results in calculated removals within the activity boundary that fall below the baseline level.*

266. This paragraph received one comment:

267. It is unclear if a '*reversal result'* is the same as a '*reversal*'. (See also their general comments for Section 3.6.) **[EU, 409]**

3.6.3. Addressing reversal risk and reversals

268. This subsection received a total of 56 comments.

269. [ORM, 398] proposes to change the title to "*3.6.3 Addressing Remediation in the event of Reversals*". The current title may be confusing as it is not about reversal event but remediation of reversal. [ORM, 398]

270. [ICLRC, 400] recommends that insurance instruments be considered, and their possible use added as an alternative mechanism to cover reversal risks and reversals. In many contexts insurance instruments used for removals appear to be devoid of many limitations of other instruments used to guarantee the delivery of carbon sequestration projects, such as, for example, buffer pools or temporary carbon credits.

271. **[UK, 410**] recommends the SBM to clarify and fully define what constitutes "negligible" risk and "avoidable/unavoidable reversals" so that these terms are clear and correctly interpreted and permanent and durable removals are incentivised. Ambiguous definitions could risk creating perverse incentives for activity participants. If activities are deemed to have "negligible risk" of reversal, this may allow for scenarios such as the conclusion of post-crediting monitoring and/or forgoing contribution to or use of the buffer pool. Whether activities are avoidable or unavoidable determines the remediation processes required to compensate for those reversals, such as not allowing buffer A6.4ERs to be cancelled if the reversal was avoidable. In the event of avoidable and unavoidable reversals, the liabilities incurred by activity participants which are to be remediated must also be clear.

272. In the context of any buffer pools, the most conservative approach informed by science would have to be taken. The guidance should adopt the most conservative options in all contexts. **[AOSIS, 411]**

273. **Paragraph 48.** *Reversals of removals for which 6.4 ERs have been issued will be fully remediated by taking measures described in this section. The measures are intended to effectively address reversals and maintain incentives for activity participants to proactively mitigate reversal risks and avoid reversals.*

274. "The Reversal of removals for which 6.4 ERs have been issued" should be better clarified and defined. Would it be solely when the amount of Reversal quantification exceeds the amount of the monitored Removal quantification with the consequence of affecting the issued 6.4 ERs? [ORM, 398]

275. The concept of "*reversal of removals for which 6.4 ERs have been issued*" should be better defined. In our view, this only refers to situations in which the amount of the reversal exceeds the amount of the monitored removal. In other cases, there are no consequence on issued 6.4 ERs. [IETA, 402]

276. **Paragraph 49.** *Reversals shall be remediated through the cancellation of an equivalent amount of 6.4 ERs. Measures for effecting this cancellation include the cancellation of the Reversal Risk Buffer Pool and/or the direct cancellation of 6.4 ERs from other 6.4 activities for this purpose. These measures may be used on a standalone basis or in combination.*

277. Para 49 is pointing to the use of buffer pools and/or cancellation of A6.4ERs not directly related to the CDR activity seeking credits under the A6.4 mechanism. The suitability of the following should be reflected:

    (a) A buffer mechanism and relevant % contribution levels. E.g. for CCS related activities, the Durban decision outlines i) refundability and ii) maximally 5% to be deducted towards a shared buffer pool by CCS related activities.

    (b) A6.4ERs to be cancelled that stem from different projects. Whilst this could indeed lead towards higher flexibility for project developers, the use of credits from other A6.4 activities might undermine the crucial aspects of public acceptance and thus stand against a license to operate for some CDR projects that have high aspirations regarding the purity of any offering. [NEP, 384]

278. Paragraph 49 implies that the two envisaged means of addressing reversals, buffer pools and direct cancellation, can be used on "on a standalone basis or in combination", but in paragraph 55 it is stated that the buffer pool cannot be used for avoidable reversals. [CMW, 394]

279. [ORM, 398] proposes the following amendment to the text (underlined): "*Reversal shall be remediated through the cancellation. Measures for effecting the cancellation include the cancellation of the Reversal Risk Buffer Pool as per section 3.6.3.1 and/or the direct cancellation of 6.4 ERs from other 6.4 activities for this purpose as per section 3.6.3.2.*"

280. [IETA, 402] proposes the following amendment to the second sentence (underlined): "*Measures for effecting the cancellation ~~include~~ are either the cancellation of the Reversal Risk Buffer Pool as per section 3.6.3.1, and/or the direct cancellation of 6.4 ERs from other 6.4 activities for this purpose as per section 3.6.3.2, or a combination of the two*.".

281. Reversals of authorized 6.4ERs should only be remediated through the cancellation of authorized 6.4ERs. This is an important element currently missing in the text. (Also applicable for paragraph 54.) **[EU, 409]**

282. **Paragraph 50.** *The determination of the appropriate remediation measure(s) to be applied by an activity shall be based on the level of the activity's reversal risk rating indicated in the reversal risk assessment submitted in the project design document and, if a reversal occurs, also on the avoidable or unavoidable nature of the event that led to the reversal.*

283. [CI, 386] proposes the following change to the text: "*The determination of the appropriate remediation measure(s) to be applied by an activity shall be based on the level of the activity's reversal risk rating indicated in the reversal risk assessment submitted in the project design document ~~and, if a reversal occurs, also on the avoidable or unavoidable nature of the event that led to the reversal~~.*". Furthermore, this provision is inadequately specified and needs further elaboration.

284. **Paragraph 51.** *The Supervisory Body will develop further guidance and/or procedures in regard to the measures in this section for, inter alia:*

    (a) Review by the Supervisory Body of monitoring reports that reflect reversals, including its consideration of whether an event that led to a reversal was avoidable or unavoidable as represented by activity participants, and its response to instances of possible mis-categorization of such events and subsequent notifications of the registry administrator and activity participants;

(b) Reversal Risk Buffer Pool use, operation, and composition, including the treatment of uncancelled Buffer 6.4 ERs and options for addressing buffer insufficiency;

(c) Direct cancellation of 6.4 ERs from other 6.4 activities in lieu of contributing to and using the Reversal Risk Buffer Pool, including the threshold for a reversal risk rating that constitutes a negligible reversal risk and would qualify an activity to apply these procedures, as well as the basis and procedures for the Supervisory Body's initial and periodic review and approval of the sufficient coverage of insurance policy or comparable guarantee products for insuring the activities that apply these procedures;

(d) The nature of 6.4 ERs from other 6.4 activities that are cancelled to remediate reversals as per the requirements in this section, including whether they are issued in respect of removals and/or emission reductions.

285. [NEP, 384] welcomes careful consideration regarding the characteristics of A6.4ERs envisioned to contribute towards addressing reversals in full. Specifically, it is questionable if an A6.4ER stemming from a reduction-based mitigation project shall be eligible to contribute towards reversal remediation of a carbon removals project.

286. [CI, 386] proposes the following change to the text: "*Following the Supervisory Body's review of a full monitoring report that reflects reversals, the Supervisory Body will notify the registry administrator of the results of its review, after which the registry administrator shall effect a cancellation of Buffer 6.4 ERs equal to the amount of ~~unavoidable~~ reversals requiring remediation. ~~Where possible, reversals should be remediated with 6.4 ERs from the same vintages.~~*".

287. On item 51 (a), it can be analysed by the SBM during the review of the first Monitoring Report, including the risk assessment, with a list of events that potentially led to a Reversal and their "unavoidable" or "avoidable" nature being taken into consideration (whether the risk can be bypassed or not by appropriate measures). This pre-approval based on the nature of the risk would have the benefit of reducing the timeframe for reviewing when the risk occurs. [ORM, 396]

288. On item 51 (c), the criticality of the risk may vary considering the activities. It would be in the interest of the activity participants to have specific "negligible reversal risk" threshold determined per methodologies considering the activities. [ORM, 396]

289. On item 51 (b) The development of further guidance should be prioritised. Clear rule-based processes on how the Reversal Risk Buffer Pool will be operated are necessary, or activity participants may face excessive uncertainty and risk. [IETA, 402]

3.6.3.1. Buffer pool operations and contributions

290. This subsection received 20 comments.

291. Refer to ICVCM AF criterion 9.4 (a) (4) and (5) for paragraph 52 to 56. [ICVCM, 401]

292. **Paragraph 52.** *The Article 6.4 Supervisory Body shall establish a Reversal Risk Buffer Pool which serves to insure against the general risk of, and to remediate, unavoidable reversals under the 6.4 mechanism. Activity participants applying guidance in this document for activities involving removals shall contribute 6.4 ERs to the Reversal Risk Buffer Pool, which are cancelled in the event of an unavoidable reversal.*

293. EBC-C-Sink (EBC, 2020) is cited and it is proposed that, instead of applying a buffer pool, the requirement to monitor the H/Corg ratio of the applied biochar and a default factor of 75% of the generated CO_2-removal potential to calculate permanent removal in the relevant Methodology be introduced. [ATMO, 385]

294. [CI, 386] proposes removing the words "*unavoidable*".

295. [AvB, 396] requests further clarifications on the following:

    (a) What happens to credits in the buffer pool once post-crediting monitoring for activities on which they are based stop?

    (b) Will the associated credits in the buffer pool also be cancelled, like the AR 6.4. credits from which they are taken. In our opinion this should be the case because those credits cannot longer be guaranteed.

296. **[BR, 408]** proposes the following change to the text (underlined): "*The Article 6.4 Supervisory Body shall establish a Reversal Risk Buffer Pool which serves to insure against the general risk of, and to remediate, unavoidable reversals and avoidable reversals, under specific conditions, under the 6.4 mechanism. Activity participants applying guidance in this document for activities involving removals shall contribute 6.4 ERs to the Reversal Risk Buffer Pool, which are cancelled in the event of an unavoidable reversal or avoidable reversals, under specific conditions, in a way to prevent perverse incentives towards inadequate risk management.*"

297. The buffer created for addressing unavoidable reversals should have contributions from all Article 6.4 activities and not only removal activities, in the recognition that unavoidable reversals are due to a great extent to increased climate risk. In the case the pooled buffer is not enough to cover reversals, a combined host party-purchasing party contribution of would need to occur, and not exclusively for host parties as mentioned in para 64 b). As a last resort, OMGE credits could be counted to compensate for reversals. **[AILAC, 412]**

298. **Paragraph 53.** *Upon issuance of 6.4ERs, an amount of 6.4ERs proportionate to the issuing activity's reversal risk rating shall be forwarded to the Reversal Risk Buffer Pool, which is a holding account that aggregates all contributions of Buffer 6.4 ERs. The Reversal Risk Buffer Pool account is overseen by the Supervisory Body and is administered and shall only be accessed by the Article 6.4 mechanism registry administrator.*

299. [YNG, 403] recommends changing "*an amount of 6.4ERs proportionate to the issuing activity's reversal risk rating*" to: "*a minimum of 10% of 6.4ERs issued for nature-based solution (NBS) activities, proportionate to the activity's scientifically-determined reversal risk rating, shall be forwarded to the Reversal Risk Buffer Pool, which is a holding account that aggregates all contributions of Buffer 6.4 ERs. Activity participants shall be required to replenish the Buffer Pool following any reversals. Any unused Buffer 6.4 ERs shall be automatically cancelled at the end of the activity's final crediting period to maintain the Pool's integrity*", thereby requiring industry-standard 10%+ buffer pools for NBS credits and mandate replenishment, cancellation of unused buffers and proposes. [YNG, 403]

300. **Paragraph 54.** *Following the Supervisory Body's review of a full monitoring report that reflects reversals, the Supervisory Body will notify the registry administrator of the results of its review, after which the registry administrator shall effect a cancellation of Buffer 6.4*

ERs equal to the amount of unavoidable reversals requiring remediation. Where possible, reversals should be remediated with 6.4 ERs from the same vintages.

301. [CI, 386] proposes the following change to the text: "*Following the Supervisory Body's review of a full monitoring report that reflects reversals, the Supervisory Body will notify the registry administrator of the results of its review, after which the registry administrator shall effect a cancellation of Buffer 6.4 ERs equal to the amount of ~~unavoidable~~ reversals requiring remediation. ~~Where possible, reversals should be remediated with 6.4 ERs from the same vintages~~*.".

302. [CMW, 394] proposes the text to be revised as follows. "*Following the Supervisory Body's review of a full monitoring report that reflects reversals, the Supervisory Body will notify the registry administrator of the results of its review, after which the registry administrator shall effect a cancellation of Buffer 6.4 ERs equal to the amount of ~~unavoidable~~ reversals requiring remediation. Where possible, reversals should be remediated with 6.4 ERs from the same vintages and shall be remediated with 6.4 ERs from an activity of the same or higher durability as determined by the activity's reversal risk assessment*." (See their comment to paragraph 55 for the rationale.)

303. If buffer pool credits are cancelled if the associated post-crediting monitoring stops, the mechanism should prevent that Buffer AR 6.4 credits with a vintage that is likely to be cancelled soon (because the post-crediting monitoring stops) are cancelled in lieu of remediating unavoidable reversals. The cancellation of older vintage buffer credits would undermine the credibility of the mechanism. A mechanism that prevents this must be considered. [AvB, 396]

304. Paragraph 54 rightly indicates that where possible reversals should be mediated with buffer A6.4ER credits of the same vintages, but what if that is not possible? We suggest the SBM includes in the mechanism a certain offset percentage in case older vintage Buffer A6.4ER credits are cancelled for remediating reversals of younger vintage A6.4 ER credits. This is needed to take into consideration that older buffer credits may be due for cancellation sooner than newer buffer credits. [AvB, 396]

305. It is unclear why only ERs equal to the amount of unavoidable reversals requiring remediation shall be cancelled. It should instead be ERs equal to the amount of unavoidable as well as avoidable reversals. [API, 405]

306. **[UK, 410]** proposes adding the following to the second sentence (underlined): "*Where possible, reversals should be remediated with 6.4 ERs from the same vintages, same type of 6.4ERs (e.g. mitigation contribution A6.4ERs or authorized A6.4ERs) and have been generated from equivalent or similar activities*.".

307. **Paragraph 55.** *Buffer ERs shall not be cancelled to remediate avoidable reversals.*

308. [CI, 386] suggests deleting this paragraph.

309. [CMW, 394] proposes the paragraph to be replaced by the following text: "*Regarding the cancellation of Buffer 6.4 ERs as per paragraph 54, if the reversals were unavoidable and exceed the activity's aggregate contribution of Buffer 6.4 ERs such that full remediation of reversals cannot occur, the registry administrator shall forward 6.4 ERs from the activity to the Reversal Risk Buffer Pool equal to the amount of remaining reversals requiring remediation. Regarding the cancellation of Buffer 6.4 ERs as per paragraph 54, if the reversals were avoidable, the registry administrator shall forward 6.4 ERs from the activity*

to the Reversal Risk Buffer equal to the full amount of reversals requiring remediation. If there are not enough 6.4 ERs from the activity to remediate the reversals, the mechanism registry administrator shall forward 6.4 ERs from another activity registered to the activity participant of equal or higher durability as determined by the activity's reversal risk assessment. If there are still insufficient 6.4 ERs to fully remediate the reversals, the activity participant shall forward 6.4 ERs, at its own expense, from other activities of equal or higher durability to the activity participant's activity as determined by the other activities' reversal risk assessments, to the Reversal Risk Buffer equal to the amount of remaining reversals requiring remediation."

310. The Supervisory Body should clarify why buffer ERs shall not be cancelled to remediate avoidable reversals and how these would be remediated. [API, 405]

311. **Paragraph 56.** *The Supervisory Body shall oversee a periodic stress-test of the Reversal Risk Buffer pool at least every three years to assess, inter alia, the pool's resilience for a range of plausible reversal risk scenarios affecting the activities linked to the buffer pool. In addition to regular stress-testing, the composition of the buffer pool, including the share of 6.4 ERs by vintage, region and country, activity type, and methodology, should be published annually.*

312. The periodicity at which these stress tests are applied should be based on the reversal risk of the activity type in question. Also, for novel removal methods for which we do not have enough data on the effectiveness/reversibility of storage pools, a higher periodicity might be needed until data is available. Also, it is important to find a balance between what makes sense from a conceptual and a practical point of view. [SYLV, 393]

313. [ORM, 396] proposes the following change to the text (underlined): "*In addition to regular stress-testing, the composition of the buffer pool, including the share of 6.4 ERs by vintage, region and country, activity type, methodology, <u>and the cumulative amount of cancelled 6.4 ERs for remediation associated with the nature of the unavoidable Reversal</u> should be published annually*".

314. [IETA, 402] proposes the following change to the text (underlined): "*In addition to regular stress-testing, the composition of the buffer pool <u>and the amount of cancelled 6.4 ERs for the remediation of each unavoidable reversal</u>, including the share of 6.4 ERs by vintage, region and country, activity type, methodology, should be published annually*." Information about the amount of the cancelled 6.4 ERs by each activity participant and the associated vintage, region and country, activity type, methodology or a cumulative aggregate amount of cancelled 6.4 ERs) may be in the general public interest and enhance transparency in carbon markets.

315. **[UK, 410]** proposes the following changes to the text (underlined): "*The Supervisory Body shall oversee a periodic stress-test of the Reversal Risk Buffer pool at least every three years to assess, inter alia, the pool's resilience for a range of plausible reversal risk scenarios, <u>including reasonable worst case scenarios</u>, affecting the activities linked to the buffer pool, and <u>consider and implement any potential remedial measures required to manage risks to the robustness of the pool</u>. In addition to regular stress-testing, the composition of the buffer pool, including the share of 6.4 ERs by vintage, region and country, activity type, <u>authorisation type, assessment of reversal risk</u>, and methodology, <u>shall</u> ~~should~~ be published annually.*".

3.6.3.2. Direct cancellation of 6.4 ERs

316. This subsection received 11 comments.

317. [CMW, 394] points out that "*direct replacement*" should be better defined and clearer requirements for its use must be indicated for it to remain a standalone option for remediation.

318. [ORM, 398] proposes to change the title to "*3.6.3.2 Direct cancellation of 6.4 ERs from other 6.4 Activities*" to be more specific as the current title may be confusing with other type of remediation.

319. The possibility and procedure to directly cancel A6.4ERs from other 6.4 activities need justification. This possibility poses a risk of negative impact on activities that have been implemented properly and their legitimate results. Consequently, this could adversely affect relationships, projects, and transactions involving those legitimate A6.4ERs, as well as bona fide parties. [ICLRC, 400]

320. **Paragraph 57.** *Reversals of removals for which 6.4 ERs have been issued shall be remediated through the cancellation of an equivalent amount of 6.4 ERs from other 6.4 activities in the following circumstances:*

(a) Activity participants implementing an activity with negligible reversal risk, as evidenced by the risk assessment, indicate in the project design document that the activity will forego use of the Reversal Risk Buffer Pool throughout all active crediting periods and the post-crediting monitoring period;

(b) *Activity participants are required to address reversals of removals found to be avoidable, even when the activity is contributing to the Reversal Risk Buffer Pool*.

321. [CI, 386] suggests deleting this paragraph. All removals carry risks of reversals; there are no removals for which the risk of reversal can be objectively deemed negligible so references to "negligible reversal risk" should be deleted throughout the recommendations.

322. [ORM, 398] proposes the following revision to the text (underlined): "*Reversals of removals for which 6.4 ERs have been issued shall be remediated through the cancellation of an equivalent amount of 6.4 ERs from other 6.4 activities in one of the following circumstances:"* to clarify that circumstances (a) and (b) are not cumulative.

323. [ORM, 398] proposes the following revision to the text (underlined): "*Activity participants implementing an activity with negligible reversal risk, as evidenced by the risk assessment and approved by the SBM, indicate in the project design document that the activity will forego use of the Reversal Risk Buffer Pool throughout all active crediting periods and the post-crediting monitoring period*;" The threshold for determining "negligible reversal risk" should be established using methodologies that take into account the type of activities. The qualification of "negligible risk" must be considered and approved by the SBM based on the risk assessment rating. Direct cancellation would be possible after the SBM approves the qualification of negligeable risk, not only as evidenced by the risk assessment.

324. The text should clarify that circumstances 57 (a) and 57 (b) are not cumulative. Therefore, the chapeau should read: "*Reversals of removals for which 6.4 ERs have been issued*

shall be remediated through the cancellation of an equivalent amount of 6.4 ERs from other 6.4 activities in one of the following circumstances:" [IETA, 402]

325. [IETA, 402] proposes the following change to item 57 (a): "*Activity participants implementing an activity with negligible reversal risk, as evidenced by the risk assessment, indicate in the project design document that the activity will forego use of the Reversal Risk Buffer Pool for either one or more ~~throughout all active~~ crediting periods, and the post-crediting monitoring period, or a combination of them*;"

326. While it is understood that item is intended to describe the treatment of reversals that are considered "avoidable", activity participants and market actors would benefit for more clarity as it is not clear what "6.4 ERs from other 6.4 activities" will be cancelled and who will be liable (the activity participant who suffered the reversals, other market participants, or the host Party?). [IETA, 402]

327. **Paragraph 58.** *In order to apply the option referred to in paragraph 57(a) above, activity participants shall obtain and maintain sufficient coverage under an insurance policy or comparable guarantee product approved by the Supervisory Body to insure the continued implementation of the activity in the instance that reversals occur which require remediation, which shall be submitted with the project design document*.

328. The SBM must provide clear liability guidelines including the regulation of insurance schemes and buffering pools. In least-developed countries the risk of reversals shall be accounted. Having clear guidelines around liability would set the A6.4 mechanism apart from other standards, streamlining the market and allowing broader participation, especially from least-developed-countries. [44M, 383]

329. [CI, 386] suggests deleting this paragraph. All removals carry risks of reversals; there are no removals for which the risk of reversal can be objectively deemed negligible so references to "negligible reversal risk" should be deleted throughout the recommendations.

330. **Paragraph 59.** *Following the Supervisory Body's review of a full monitoring report submitted that reflects reversals and involves the circumstances described in paragraph 57 (a) or (b) above, the Supervisory Body will notify the registry administrator of the results of its review. No more than 30 days following this communication, the 6.4 mechanism registry administrator will confirm with the activity participants the cancellation of 6.4ERs from other 6.4 activities equal to the amount of reversals requiring remediation, and indicating the purpose of cancellation in the 6.4 Registry.*

331. No comment was received on this paragraph.

3.6.3.3. Avoidable versus unavoidable reversals

332. **Paragraph 60.** *The Supervisory Body will develop further guidance on avoidable and unavoidable reversals, including how they are distinguished and demonstrated.*

333. [CI, 386] suggests deleting this paragraph.

334. [CMW, 394] proposes to replace the paragraph with the following text: "*The Supervisory Body will develop further guidance on avoidable and unavoidable reversals, including how they are distinguished and demonstrated. An avoidable reversal is a reversal over which the activity participant has influence or control. This includes poor project management,*

removal or redefinition of a portion of the activity area, harvesting and tillage. An unavoidable reversal is a reversal over which the activity participant has no influence or control. This includes hurricanes, earthquakes, flooding, drought, fires, tornados and winter storms, and human-induced events such as acts of terrorism, crime, or war. Encroachment by outside actors (e.g. logging, mining, or fuelwood collection) are considered unavoidable when demonstrably unforeseeable and out of the activity participant's control."

335. [CMW, 394] proposes to incorporate in paragraph 40, or after either paragraphs 33 or 60 the following paragraphs:

    (a) [#.] *The Article 6.4 mechanism registry shall publicly tag activities that have experienced reversals, distinguishing if these were avoidable or unavoidable. The Article 6.4 mechanism registry shall also publicly tag any activity participant having ever caused an avoidable reversal;*

    (b) *[#.] Any reversal presumed or proven to be avoidable shall be investigated by a DOE and by the Supervisory Body, in order to determine additional corrective measures, which may include discounting issuance for the activity participant's activity or even banning the activity participant from participating in the 6.4 mechanism, depending on factors such as the severity of the avoidable reversal and whether the activity participant has caused other avoidable reversals, including in other activities;*

    (c) *[#.] The Supervisory Body will develop further guidance on avoidable and unavoidable reversals, including on corrective measures to be taken in the event of avoidable reversals*.

336. Determining the guidance for qualification of unavoidable and avoidable risk should be a priority. This needs to be clearly defined and linked to the ability to bypass the risk by implementing appropriate measures. The methodologies should identify what would be considered as "avoidable" with the implementation of the proper measures and allow participants to propose specific measures. [ORM, 398]

337. [ALCT, 399] proposes addition of the following text: "*The Supervisory Body shall prioritize the development of specific rules-based processes that detail the criteria for determining whether a reversal is 'avoidable' or 'unavoidable.' This guidance should include the conditions under which a reversal might be considered unavoidable, such as natural disturbances beyond the control of the activity participants, and the expected actions for avoidable reversals, including measures to mitigate and rectify such reversals. Clear, standardized processes will provide activity participants with the necessary understanding to manage and allocate risks appropriately, contributing to a more reliable and attractive investment environment.".* While the document provides a basis for addressing reversals, there is a lack of detailed guidance on classifying reversals as "avoidable" or "unavoidable." This distinction is critical as it impacts the perceived risk and uncertainty faced by activity participants, which in turn could influence their willingness to engage in removal activities. Without clear rules-based processes, participants are left to navigate these complexities without consistent standards, potentially deterring investment and participation in removals projects. [ALCT, 399]

338. The development of further guidance should be prioritised. Clear rule-based processes to determine whether a reversal is "avoidable" or "unavoidable" are necessary, or activity

participants may face excessive uncertainty and risk. Individual methodologies shall identify what would be considered as “avoidable” with the implementation of the proper measures and allow participants to propose specific measures. [IETA, 402]

339. The recommendation introduces the concept of avoidable and unavoidable reversals and includes different implications for each. It should also include a respective clear definition to enhance clarity of proposed procedures pertaining to each. [API, 405]

340. There should be specific criteria on how to determine unavoidable reversals and the requirements for addressing those. Unavoidable reversals must take into account attributed effects of climate change such as increased incidence of droughts, higher temperatures, increased precipitation events and cyclones. [**AILAC, 412]**

3.7. Avoidance of leakage

341. Section 3.7 (Avoidance of leakage) received four comments, two of which included specific suggestions on the text. The comments called for clarification on the types of leakage and consideration of positive leakage. One comment recommended against sector-specific or methodology specific provisions.

342. **Paragraph 61.** *Activity participants shall address the risk of leakage and account for any remaining leakage in calculations of net removals in accordance with the requirements specified in the “Requirements for the development and assessment of article 6.4 mechanism methodologies”, including by applying the tool to be developed by the Supervisory Body for this purpose. Methodologies and related tools may include additional requirements applicable to specific types or categories of removal activities.*

343. [CI, 386] proposes deleting the second sentence as follows: “~~*Methodologies and related tools may include additional requirements applicable to specific types or categories of removal activities.*~~”.

344. [ALCT, 399] proposes addition of the following text to provides practical insights into managing leakage: “*Include examples of common leakage scenarios and outline specific mitigation strategies, enhancing the document's utility as a practical guide for project developers*". The section on leakage prevention is crucial but could be strengthened by specifying examples of potential leakage scenarios and mitigation strategies.

345. The A6.4 SBM should also give consideration to the occurrence of positive leakage (for example, as restoration of degraded agricultural lands may shift the landscape developmental path towards a greener, forest-based economy, which may generate removals beyond the accounting boundary of the activity) as a path for reversal risk mitigation. [IETA, 402]

346. The Recommendation states that participants shall address the risk of leakage. It should also specify which types of leakage must be considered (i.e. activity-shifting, market-based, international). The Recommendation could also explore the consideration of positive leakage (for example as restoration of degraded agricultural lands may shift the landscape developmental path towards a greener, forest-based economy, which may generate removals beyond the accounting boundary of the activity and therefore represent a positive leakage) as a path for reversal risk mitigation. [API, 405]

3.8. Avoidance of other negative environmental and social impacts

347. Section 3.8 (Avoidance of other negative environmental and social impacts) received 13 comments. Multiple comments suggested the inclusion of additional elements such as human rights, Indigenous Peoples' rights, intergenerational equity, and stakeholder engagement. A reference to the Cancun Safeguard was suggested. The Integrity Council for the Voluntary Carbon Market (ICVCM) shared relevant criteria from their Assessment Framework.

348. [IIPFCC, 392] proposes amendment to the section title to "*3.8 Avoidance of other negative environmental, human rights, Indigenous Peoples rights, and social impacts*". [IIPFCC, 392]

349. The language concerning safeguards, respecting, promoting, and considering human rights including the rights of Indigenous Peoples, and avoiding negative impacts, must be based on the agreement reached in Glasgow. Human rights should be upheld and negative impacts should be avoided, and there is no need to caveat this requirement or constrain the development of robust safeguards with a reference to national prerogatives. It is important to ensure full and adequate resources to Indigenous Peoples and Local Communities to participate in A6.4 Environmental and Social Safeguard Risk Assessments. Free, prior, informed consent (FPIC) needs to be an ongoing process involving regular and open dialogue, ensuring that Indigenous Peoples have all necessary information and the capacity to participate fully and effectively throughout the process. [WWF, 404]

350. This paragraph could reference the Cancun Safeguards which are recognized as robust safeguards for Natural Climate Solutions. [API, 405]

351. **[BR, 408]** proposes (addition of the) following subsection: "*3.8.V. Afforestation or reforestation project activities*

(a) #. An afforestation or reforestation project activity is eligible under the Article 6.4 mechanism only if the land area has been absent of native forest and ecosystems at least 15 years before the submission of the project;

(b) #. In addition to the above requirement, no land area subject to deforestation after 2020 will be eligible for reforestation project activities under the Article 6.4 mechanism for 30 years;

(c) #. Assessment of eligibility on these criteria will be carried out by using the definition of native forest and ecosystems adopted by the host Party for the purpose of the Article 6.4 mechanism;

(d) *#. The Supervisory Body shall review the efficacy of clause X by 2050*."

352. The CDM rules established the date of 12/31/1989 as the limit for there to have been some type of forest. The challenge at hand would require updating the criteria so that it allows for much needed incentive to afforestation/reforestation activities in already degraded areas while not creating a perverse incentive for increased deforestation. With this view, our suggestion is that a simple criterion be adopted, whose restriction should be focused on the absence of native forests and ecosystems 15 years before the project. Notwithstanding the above, no area of native vegetation subject to deforestation after 2020

will be eligible for future restoration projects under the SDM for 30 years. The efficacy of this clause would be reviewed in 2050**. [BR, 408]**

353. [**CfRN, 413]** suggests the SBM to consider and reflect more explicitly in its recommendation the existing social and environmental safeguards and other operational provisions related to REDD+ already agreed by the COP under the UNFCCC. There should be no backsliding with regards to the rules and provisions already in place under the UNFCCC.

354. **Paragraph 62:** *Activity participants shall apply robust social and environmental safeguards to minimize and, where possible, avoid negative environmental and social impacts of the activity:*

(a) In accordance with requirements contained in Article 6.4 mechanism activity Standard, including the application of the Article 6.4 mechanism sustainable development tool, guidance on local and global stakeholder consultation and where applicable, the Appeals and Grievance Procedure; and

(b) Any other applicable provisions developed by the Supervisory Body to avoid negative environmental and social impacts of an activity involving removals.

355. [QB, 387] suggests adding the underlined text: "Any other applicable provisions developed by the Supervisory Body to avoid negative environmental and social impacts of an activity involving removals, including provisions to ensure intergenerational commitments and equity (i.e. post-crediting period monitoring and verification) for landowners and activity participants due to credited removals."

356. The language in paragraph 62 concerning safeguards is too general and needs to be reinforced as follows: "*Activity participants shall apply robust social and environmental safeguards not only ~~to minimize and, where possible~~, avoid negative environmental and social impacts of the activity but also to demonstrate positive outcomes of the activity for biodiversity, ecosystem restoration, Indigenous Peoples as well as local communities where relevant for the activity: (a) In accordance with requirements contained in Article 6.4 mechanism activity standard…; and (b) Any other applicable provisions developed by the Supervisory Body to avoid negative environmental and social impacts of an activity involving removals; (c) For an activity involving the use of land or biomass, activity participants shall demonstrate that the activity does no harm to the environment and generates a positive outcome for biodiversity and ecosystem restoration, in accordance with provisions to be developed by the Supervisory Body*." [CMW, 394]

357. [IIPFCC, 392] proposes the following amendment to the text (underlined): "*Activity participants shall apply robust social, ~~and~~ environmental, human rights, and Indigenous Peoples rights safeguards to ~~minimize and, where possible,~~ avoid negative environmental, human rights, Indigenous Peoples rights, and social impacts of the activity:*

(a) In accordance with requirements contained in Article 6.4 mechanism activity standard, including the application of the Article 6.4 mechanism sustainable development tool; guidance on local and global stakeholder consultation, which must include full and effective consultation and cooperation with Indigenous Peoples through their representative institutions prior to commencement and during implementation of any activity which may affect their lands, territories, sacred sites, and other resources; and ~~where applicable~~, the independent Appeals and Grievance Procedure; and

(b) In accordance with international standards and human rights obligations, including, but not limited to, the right to health; the right to a clean, healthy and sustainable environment; and the rights of Indigenous Peoples to self-determination, to their lands, territories and resources, and to free, prior and informed consent; and

(c) In accordance with the requirements of subparagraphs (a) and (b), above, such safeguards shall include appropriate mechanisms:

(i) To engage with and provide notice to stakeholders and Indigenous Peoples during the development stages of any activity, prior to the commencement of any activity, during implementation, and if and when there are any changes to the activity or its implementation;

(ii) To evaluate and assess potential negative environmental, social, and human rights risks and impacts on stakeholders and the rights of Indigenous Peoples prior to the commencement of any activity; and

(iii) For monitoring, reporting, and oversight of activity development and implementation, including for assessing adherence to the requirements of this section, mitigating any potential negative impact or risk identified under subitem (ii), and ensuring appropriate and timely responses and corrective measures as may be required or requested by stakeholders and Indigenous Peoples that may be affected by any activity; and

(iv) In accordance with any other applicable provisions developed by the Supervisory Body to avoid negative environmental, human rights. Indigenous Peoples rights, and social impacts of an activity involving removals."

358. To reinforce the role of stakeholder engagement in sustainability practices, [ALCT, 399] proposes the following text: "*Activities must involve comprehensive stakeholder engagement processes to identify and mitigate potential negative environmental and social impacts*.". This paragraph should explicitly mention the need for stakeholder engagement in avoiding negative impacts.

359. The ICVCM sets out sustainable development requirements for all types of activities in Criterion 7. Sustainable Development Benefit and Safeguards. For each of the criteria 7.2-7.8, the AF requires a risk assessment, measures to minimize or avoid risk and inclusion of that information in validated design documents prior to registration and monitoring reports. For JREDD+ activities, the AF requires adherence to the Cancun Safeguards. For details on how the ICVCM AF approaches sustainable development benefits and safeguards, please refer to ICVCM submission to the Article 6.4. Supervisory Body related to the SD Tool, submitted on 1 December 2023. [ICVCM, 401]

360. [**UK, 410]** suggests addition of the following text (underlined): "*Activity participants shall apply robust social and environmental safeguards to minimize and, where possible, avoid negative environmental and social impacts of the activity, and promote positive environmental and social impacts where possible:".*

361. **Paragraph 63.** *In addition to above requirements, the Supervisory Body will develop further requirements in respect of specific removal activity categories or types taking into account national and international best practices in environmental and social safeguards, which activity participants shall also apply.*

362. [IIPFCC, 392] proposes the following amendment to the text (underlined): "*In addition to above requirements, the Supervisory Body will develop further requirements in respect of specific removal activity categories or types, taking into account indigenous, national, and international best practices, standards, and obligations with respect to ~~best practices in~~ environmental, human rights, Indigenous Peoples rights, and social safeguards, which activity participants shall also apply.*" (See also their comments for paragraphs 32 and 62) [IIPFCC, 392]

3.9. Host Party roles

363. 15.16. Section 3.9 (Host Party roles) received 6 comments. These comments focused on the proposed arrangement under 64 (b), for example suggesting an alternative arrangement requiring the buying entity to take responsibility and proposing to broaden the role to include any of the Parties involved.

364. **Paragraph 64.** *Subject to further guidance that will be developed by the Supervisory Body, based on the RMP and guidance in this document, a host Party may specify to the Supervisory Body arrangements voluntarily provided by the host Party for the following:*

(a) Requiring the activity participants to comply with existing and applicable national or regional regulations inter alia specifying the frequency, timing, and/or basis for updating and submitting an updated monitoring plan, in addition and subject to and consistent with the guidance in this document, as referred to in paragraph 15(c) above;

(b) Where the host Party assumes the role of an activity participant in the post crediting monitoring period, providing a sovereign guarantee to apply corresponding adjustments in respect of any amount of reversals incurred, as an alternative measure to those described in Section 3.6.3. Addressing reversal risk and reversals, in a manner consistent with Article 6.2 guidance and further guidance to be developed by the Supervisory Body in this regard.

365. [QB, 387] suggests inserting, at the beginning of sub-paragraph 64 (a): "*For activity participants choosing the ton-ton method*, ….".

366. [CMW, 394] suggests that one way to more equitably spread costs and liability for future MRV and reversals would be to ensure that buying entities take on responsibility by requiring the following:

(a) When ERs are authorised for NDC use, the acquiring Party should bear the cost of future MRV and remediation rather than the host Party. It is inappropriate for an acquiring Party to use an ITMO towards its NDC, and then never have to bear any responsibility for the underlying mitigation going forward, which it would have to do if it were undertaking actual domestic mitigation. Requiring the acquiring Party to bear liability will either incentivise the purchase of ITMOs from activities with a lower reversal risk or will require the acquiring Party to reflect the truer cost of purchasing ITMOs from activities with a higher reversal risk;

(b) When ERs are authorised for IMP/OP, the acquiring entity should also bear some or the full cost of MRV and remediation for the same reason detailed above.

367. [IETA, 402] suggests removing the word "*host*" and making "*Host Party*" "*Party*" as Parties other than the host Party may decide to voluntary require activity participants to comply

with additional regulation as per para. 64(a) in order to accept the use A6.4 ERs related to the activity towards its NDC or in its domestic policies. Likewise, a Party other than the host Party may assume the role of an activity participant in the post-crediting monitoring period to de-risk investment in the activity. This guidance should not unnecessarily restrict these options as Parties may develop innovative arrangement under cooperative approaches. [IETA, 402]

368. **[EU, 409]** proposes splitting item 64 (b) into two issues:

(a) Elaborating the role of the host party, including further guidance for cases where a Party assume the role of an activity participation in the post crediting monitoring period;

(b) Ensuring that reversals arising from authorized A64ERs can only be remediated by authorized A64ERs.

369. [**AOSIS, 411]** suggests deleting item 64 (b). The SBM needs to reconsider the appropriateness of allowing Host Party sovereign guarantees to apply corresponding adjustments in the post-crediting period as a remedy for reversals. Corresponding adjustments may not be an effective measure for deterring or addressing reversals in some situations, for example, where 1) NDCs are not ambitious and/or overachievement is likely or expected in any event, or 2) a Party's inventory emissions are substantial and the relevant accounting adjustment would not be visible as a practical matter in assessing whether its NDC has been achieved. In these situations, an additional corresponding adjustment to address reversals will have little effect on behavior or on actual emissions (for example, by driving further reductions by the Host Party to make up for reversals), and so will not deter reversals or fully address reversals as a practical matter. Replacement with similar or more permanent reductions would be more effective. Further, it is also possible that the existence of a Host Party sovereign guarantee option might create a perverse incentive for less ambitious NDCs, despite the requirements of Article 4. It is also important to avoid a dynamic in which a Host Party might be induced by activity participants to provide a sovereign guarantee that might prove challenging or infeasible for it to meet, if, for example, if a large-scale reversal occurs.

370. **[CfRN, 413]** suggests that this section be redrafted. This section lacks balance and deserves careful consideration, especially when referring to a transfer of responsibility from private sector entities to host Parties' national governments.

3.10. Other inputs

371. SBM should aim to take a balanced approach such that rigorous criteria for environmental integrity is applied at the activity level considering that reversal risk may be present, while ensuring that nature-based removal activities do not become unviable for activity proponents. The latter are beneficial for environmental integrity at the global scale due to co-benefits. More nature-based removal activities based on national circumstances are needed to ramp up restoration of degraded lands and mangroves, reforestation, regeneration, revegetation, productive restoration with agroforestry and silvopastoral systems, all with appropriate safeguards. National level activities can reduce the risks of leakage, as well as secure monitoring and reporting. (AILAC, 412)

372. SBM should differentiate requirements for nature-based solutions from technological removals where necessary. Distinction of anthropogenic vs. non-anthropogenic removals

is key, considering that some technologies have a negative social and/or environmental impact, which is not necessarily the case of nature---based removals. (AILAC, 412)

373. SBM should create a system for risk assessment in which the activity participants, host party and the acquiring party can share responsibility, as appropriate, in a transparent way. It makes sense to cover risks with a joint responsibility of a global buffer, host and purchasing country, and OMGE as a last resort. (AILAC, 412)

374. When analyzing the criteria related to the inclusion of removals in Article 6.4, it becomes clear that most of the general criteria for baseline defined in Glasgow (COP26) and in the document "Standard: Article 6.4 activity standard for projects" do not make sense for the forestry context. The removals document of SB6.4 does not provide any specificity of baseline, which leaves room for the adoption of what was defined in COP26. Therefore, it is essential to have specific criteria for determining the baseline of forestry projects. (BR,408)

375. Re-examine the issue of tonne-year accounting in light of new knowledge and practical experiences. retain tonne-year accounting as optional method under removal guidance while collecting data and information on its practicalities and implementation challenges with a view of re-evaluating the appropriateness of the method after initial 3-5 years. (UKR, 414)

376. Such expert input could cover systems analysis that incorporates interactions across multiple CDR methods in pathways assessed by the global scientific community (IPCC), expertise in accounting frameworks compared with scientific model conventions, understanding the sustainable development tradeoffs and synergies of multiple CDR methods, assumptions embedded in scenarios in terms of energy requirements, sustainability requirements, infrastructure requirements, and scale up rates of different CDR methods, technical and economic potentials of different CDR methods across different world regions, physical science in terms of the climate feedbacks on forests and other land biomes, including climate impacts on future disturbances on forest stock (fires, insects, wind throw). (AOSIS, 411)

377. SBM should undertake further work to define durability in the context of climate-relevant timeframes and call for scientific input / studies on this issue. SBM should distinguish emission reductions from removals in A6.4ER unit identifiers, identify categories of reversal risk in A6.4ER unit identifiers. (AOSIS, 411)

378. **(CfRN,413)** states that eligibility of forest removals in the Article 6.4 mechanism should be subject to complying with the rules, procedures, and minimum requirements already decided by the COP for REDD+, namely:

(a) Removals are generated against a national-level benchmark or baseline, that consider all relevant emissions and removals;

(b) Removals are estimated maintaining consistency with anthropogenic emissions and removals as contained in countries' national greenhouse gas inventories;

(c) Removals include all significant activities and carbon pools, noting that significant activities and carbon pools should not be excluded;

(d) Removals are estimated following IPCC latest guidance and guidelines.

379. The CDM rules established the date of 12/31/1989 as the limit for there to have been some type of forest. The challenge at hand would require updating the criteria so that it allows for much needed incentive to afforestation/reforestation activities in already degraded areas while not creating a perverse incentive for increased deforestation. With this view, **(BR,408**) suggests that a simple criterion be adopted, whose restriction should be focused on the absence of native forests and ecosystems 15 years before the project start. Notwithstanding the above, no area of native vegetation subject to deforestation after 2020 will be eligible for future restoration projects under the SDM for 30 years. The efficacy of this clause would be reviewed in 2050.

Appendix 1. Inputs received at the SBM engagement event during SB 60

1. The Supervisory Body of the Article 6.4 mechanism (SBM) held an engagement event, moderated by the Chair and Vice-Chair of the SBM, at the sixtieth sessions of the subsidiary bodies under United Nations Framework Convention on Climate Change in Bonn, Germany, on 3 June 2024. Parties and non-Party stakeholders made interventions, described in this annex, in response to questions posed by the SBM. (See the appendix for reference notations)

1. Question 8. Should further guidance differentiate requirements for different types of nature-based and technological removals?

1.1. Summary of inputs on whether further guidance should differentiate requirements for different types of nature-based and technological removals

2. The SBM should not discount or disregard any method or type of technology that can potentially constrain available options for ambitious NDC implementation [**UKR**]. Generic principles and requirements should be technology-neutral [**CHE, EU,** YOUNGO]. Differentiation of requirements should be made since nature-based and technological removals are different [**AOSIS, COL, BRA, TUV, CAN**, ENGO, BINGO].

1.1.1. Detailed inputs on whether further guidance should differentiate requirements for different types of nature-based and technological removals

3. [**AOSIS**] said many types of CDR are recognized in the IPCC reports, each with its own unique risks and challenges. The IPCC WGIII report at C.11.1 notes that: “CDR methods vary in terms of their maturity, removal process, time scale of carbon storage, storage medium, mitigation potential, cost, co-benefits, impacts and risks, and governance requirements.” Ultimately, the guidance will have to be tailored to different types of CDR. Recommendations for nature-based removals would be treated differently from, for example, tech-based removals.

4. [**AOSIS**] emphasized that we need to look at climate-relevant time frames in developing recommendations. Activities used to offset emissions need to permanently reduce emissions or sequester CO_2 over climate-relevant time frames—here an assurance from the SBM would be helpful. Carbon emissions from fossil fuels remain in the atmosphere for hundreds of thousands of years. But carbon emissions removed by biological methods (land use for example) in contrast only remain stored for decades to centuries. So, there is a key distinction that has to be maintained between emission reductions and removals.

5. Non-permanent removals cannot offset permanent fossil emissions, due to the different timescales between the short-term carbon cycle and geological reservoirs. Hence, they are not equivalent, or fungible. It is very important that the Article 6.4 guidance and system reflect this lack of fungibility, so that buyers are aware of the length of the impacts of their actions and the inherent limitations of removal units. [**AOSIS**] has been emphasizing the need to treat emission reductions and removals differently, and to reflect these differences, for example in unit identifiers, reversal risk tags and tags of categories of risk.

6. The only way to offset a tonne of CO_2 emitted is by an equivalent tonne of CO_2 permanently removed from the atmosphere. There is an asymmetry in how the climate system responds to emissions and removals, with emissions thought to be more effective at raising CO_2 concentrations than an equivalent removal is at lowering them. Anything less than permanent reduction, if used as an offset, will take us farther away from the 1.5 C temperature goal. Activities with a high risk of reversal are problematic and should not be accepted for registration under Article 6.4, for reasons of environmental integrity. By this we mean activities that may not have sufficient permanence over climate-relevant time frames—which is to say time frames that impact the climate. Not all categories of activities are suitable for crediting under Article 6.4 and the SBM needs to make this plain. Categories of activities to be credited also need to be uncontroversial, for the credibility of the mechanism. Article 6.4 is to set an example for other standards; it needs to set a high bar and cannot be ensnared in controversies. [**AOSIS**]

7. [**CHE**] expressed the view that guidance with type-specific requirements will always have something that would not be liked by someone. It is hard to write generic removal guidance, yet that remains the only option.

8. [**CfRN**] expressed the view that the two types of activities should be differentiated. However, the SBM should only focus on technology-based solutions because the nature-based solutions are already covered by Article 5.2.

9. [**COL**] said the risk management and social and environmental impacts are so different that the two types of removals cannot be treated with common requirements. There is little commonality between the activities of CCS and reforestation for example.

10. [**EU**] said they are of the view that the same generic principles and high-level requirements should apply to all types of mitigation activities. The operationalization of these requirements should, however, consider differences between mitigation activities. This should apply for differentiating between nature-based and technological removals and for differences among mitigation activities (e.g. agroforestry, peatland restoration and DACCS). As the guidance only sets out high-level requirements, we believe that it is not necessary to differentiate between different technologies in the guidance, but rather in its operationalization. Nature-based removals and technological removals have their own distinct characteristics and challenges. Differentiation in specific areas is therefore necessary to reflect these differences. For example, tools to assess reversal risk may substantially differ between nature-based and technological removals, given the differences in the nature of the carbon reservoirs and the associated reversal risks.

11. [**BRA**] said further specific guidance would be useful to address the fundamentally different types of removals in a way as to ensure they are equally robust in their methodological approaches, but not to lead to a differentiation between activities, which might imply that some activities are better than others.

12. [**UKR**] said that all types of activities are valid. Scientific knowledge should be applied without prejudice. However, the activity type should have been implemented as part of the host Party NDC and it should be recognized that removals are not as effective as emission reductions. The SBM should not discount any method, type of technology, or various tools that can facilitate climate finance.

13. [**SAU**] said the rules should be easy to understand and should allow both emission reductions and removals. However, different capacities exist in different countries. Under

the post-crediting monitoring requirements, the low risk of technological removals should be recognized.

2. Question 9. Could elements of the removal guidance apply also to emission reductions, and what are they? And how might they be applied?

2.1. Summary of inputs on the application of removal guidance to emission reductions

14. Requirements on addressing non-permanence and reversals applies to both emission reductions and removals [**EU, CHE, UK**, BINGO, YOUNGO]. Some elements can be similar across the two [**AILAC**]. Emission reductions and removals are different [**CfRN**].

2.1.1. Inputs on the application of removal guidance to emission reductions in detail

15. [**CfRN]** said technology removals and nature-based removals are different scientifically and methodologically. Project-level accounting does not work for nature-based solutions unless there is a national reference level and there are national GHG inventories. Article 5.2 is fully implemented by many rainforest countries and there have been about 13 gigatonnes of reductions achieved. So, methodologies for nature-based removals have already been agreed by Parties; therefore, the SBM should focus on developing methodological approaches for the technological removals.

16. [**CHE**] said there is interaction of requirements for emission reductions and removals. For emission reductions the RMPs need to be followed; for removals the CMA mandate is to recommend rules covering all activity types.

17. [**EU**] said non-permanence applies to both emission reductions and removals.
The methodological guidance applies to both removals and emission reductions and some emission reductions projects are subject to reversal risks and must therefore also apply relevant elements of the removal's guidance.
They suggest that there is only one guidance on methodologies, that applies to all projects, which integrates also the elements related to removals that are currently in the recommendation on removals and the issue of non-permanence is addressed through respective standards and tools, applicable to all projects

18. [BINGO] said reversal applies equally to emission reductions and removals.

3. Question 10. How might the responsibility to address reversal risk be best attributed to or shared between participants, including Activity Participants, Host Party, and the acquiring Party?

3.1. Summary of Inputs on the responsibility to address reversal risk

19. Responsibility should be shared by the host Party and the acquiring Party [**AILAC, BRA, TUV**]. The responsibility of the host Party is different (e.g. regulatory work). Transfer of a private entity's responsibility to the national government is not possible **[CfRN**].

20. Use of commercial insurance is not feasible to cover such liability [**CHE**]. Activity participants cannot be responsible forever. What is implied by 'remediation' is not clear. Fair sharing of responsibility between the host country, the project participants and the buyer of carbon credits is important [**EU**].

21. Long post crediting period monitoring is untenable for private entities; even short ones will affect the investment grade of the projects resulting in higher costs, or potentially even no investment in removals. Ongoing reporting by Parties in their inventories could be a solution to reversals (i.e. reversals get accounted in the inventories). Sovereign buffer and sovereign responsibility could work. So, some type of responsibility assigned to a Party stakeholder appears necessary. [BINGO]

3.1.1. Inputs on the responsibility to address reversal risk in details

22. [**CfRN**] said the responsibility of a host Party is very different. Transfer of private entity liability to the national government is not feasible. The section on reversals lacks balance.

23. [**CHE**] said reversal responsibility is a complex issue. It is also not insurable, as we heard in the professional insurers conference in Switzerland (in the week prior to the SBM engagement event).

24. [**EU**] said guidance should further elaborate the remediation element to address reversals in full and over long time periods. There is a need to clarify whether carbon credit replacement refers to credits without non permanence risk and arrangements for backstop. It is appropriate that project developers bear the risk for intentional reversals. But what if project developer is bankrupt? In that case, a backstop would be needed.

25. [**BRA**] said responsibility to address reversal risk should be shared between participants in a fair and reasonable way. It is not reasonable that a host Party bears the bulk of the risk of reversals for an indefinite period of time, for example, when other stakeholders, such as activity participants and acquiring Parties, should also be involved in minimizing, avoiding and addressing such reversals if and when they occur. A cooperative approach must remain cooperative when dealing with unintended outcomes.

26. **[EU]** noted that fair sharing of responsibility between the host country, the project participants and the buyer of carbon credits is important. They note that host countries will account for any future reversals, if the emission reductions or removals are covered by the NDC, are visible in national GHG inventories and are appropriately accounted for when accounting for NDCs. This should be borne in mind when developing approaches for sharing the responsibility for compensating reversals in full. It is critical that any reversals are compensated in full until the risk for reversals is negligible. For intentional reversals, including in case of negligence, the primary responsibility to compensate for reversals should be with the mitigation activity proponents. However, an appropriate backstop is needed to ensure that reversals are compensated in full in case the mitigation activity proponents are not able to do so (e.g. due to bankruptcy). For unintentional reversals, they could be compensated for in different ways, and combinations of approaches (including pooled buffer reserves or temporary crediting) may be used.

27. **[EU]** further notes that responsibility for monitoring for reversals should be borne by project developers, the owners of A6.4ERs and, as a last resort, host countries over the length of the project and including during a post-crediting period until the risks are negligible. Responsibility and liability for the risk of reversals, as well as actual reversals, should be borne by project developers, the owners of A6.4ERs and, as a last resort, participating countries. In all cases, the mechanism registry account of the activity proponent shall be frozen such that all issuances/ transfers/ retirements of any credits from the proponent, including those from other projects and previously issued removals, are halted until all reversals are fully addressed.

28. [**AILAC**] said reversal responsibility is a big issue and was highlighted by AILAC. The responsibility should be on both the Parties as well as on the activity participants.

29. [**TUV**] said each party has responsibility. Corresponding adjustments can be used if multiple Parties are involved.

30. [ENGO] said the rules must clearly and fully address reversals and include monitoring well beyond the crediting period. This is an issue that is not adequately addressed in the recommendations by the SBM.

31. [BINGO] said responsibility should be allocated clearly. However, long post crediting period monitoring is untenable for private entities; even short period of monitoring will affect the investment grade of the projects resulting in higher costs, or potentially even no investment in removals. The alternative is tonne-year accounting or temporary credits. Other solutions could be ongoing reporting by Parties in their inventories, sovereign buffers, and sovereign responsibility. So, some type of responsibility assigned to a Party stakeholder appears necessary. And under the Paris Agreement, the host Parties will have to track and monitor the reversals.

32. [YOUNGO] said responsibility should be on the activity participants first and then be transferred to the host country, as decided on a methodology-by-methodology basis. Permanence time frame needs to be hundreds of years, as in the EU Carbon Removal Certification Framework.

4. Question 11. How is reversal risk to be addressed, and which tools are most appropriate in what circumstances?

4.1. Summary of inputs on addressing reversal risk

33. Removal activities without sufficient permanence over climate relevant time frames should not be accepted. Tonne-year accounting is rejected by the scientific community [**AOSIS,** YOUNGO].

34. Reversals should be recorded in national inventories. Some percent of credits can be banked for unknown issues and can later be cancelled if not needed. Buffers are complex and not relevant in a sector-wide accounting. Financial insurance could be considered [**CfRN**].

35. **[EU]** stated that reversals need to be addressed in full. There should be incentives in place to maintain additional carbon storage created by a mitigation activity.

36. There is a need to clarify what constitutes a negligible risk and what constitutes an avoidable reversal [**UK**]. From an operational perspective, both avoidable and unavoidable reversals should be treated equally [YOUNGO].

37. It is not enough to look only at reversal risk. There are risks of leakage, risks related to MRV, and risk of adverse environmental and social impacts [**TUV**]. Over reliance on reversal risk assessment should be avoided [BINGO].

38. The precedent of the CDM, where, in some cases, for removals (CCS), the host Party takes responsibility for reversals in the long term, should be taken into account [BINGO].

39. The SBM should keep a watch on knowledge accumulated on tonne-year accounting and apply it if found suitable in future [**UKR**].

40. Reversal risk should be focused on GHG emissions, not on financial implications. All tools should be available, and the one that fits the circumstances should be allowed to be used [**BRA**].

41. While recognizing the limits and criticism of tonne-year accounting, the approach could have potential to address reversals. Canada has recognized tonne-year accounting in its regulations and hopes the SBM can come back to this approach in future [**CAN**].

42. [ENGO] said the risk of reversal is faced by many activities. More conversation is needed, especially on impacts on indigenous peoples. A lot of these technologies are unproven and there is a risk of technology lock-in; most of the carbon capture and storage so far has been for enhanced oil recovery.

4.1.1. Detailed inputs on addressing reversal risks

43. [**AOSIS**] stated that reference to tonne-year accounting in response to this question seems misplaced. Tonne year accounting has been rejected by the scientific community, according to comments submitted to the SBM by a lead author of the IPCC WGI Report. His comments, submitted on 3 March 2023, stated that temporary crediting is the only crediting method suitable for temporary storage and the liability for release of removed emissions. He emphasized the point that a tonne-year approach undermines the long-term climate target, because temporary carbon storage does not provide long-term climate benefits—and actually implies additional climate damage if used as an offset. This IPCC commenter also stated that the tonne-year approach has been debunked for over 20 years.

44. **[CfRN**] said all reversals should be recorded in the GHG inventory of the relevant period. Consistent recording and Biennial Transparency Reports (BTRs) can address reversals. Some percent of credits can be banked for unknown issues and can later be cancelled if not used for addressing the contingent issues. Buffers are complex and not relevant in a sector-wide accounting context. Financial insurance could be used; buyers could be reimbursed so they can buy replacement credits.

45. [**UK**] said clarity is needed on what constitutes a negligible risk and what constitutes an avoidable reversal.

46. Attention to reversal risks must be primarily focused on addressing the GHG emissions generated by the reversal rather than the purely financial aspects of the projects and should achieve a fair distribution of responsibility. A context-specific approach should be taken, which means that all tools should be available, but the ones considered more suitable should be allowed for the specific activities they are supposed to address [**BRA**].

47. [**TUV**] said SBM should not only look at reversal risk but also at leakage risk, MRV risk, and environmental/social impact risks. Buffers do not work; in the event of enormous bush fires, no buffer can address reversal. The same is true for tonne-year accounting; there are issues around it.

48. [**UKR**] said there is a growing body of scientific evidence that to achieve the 1.5-degree goal Parties would need to remove emissions, obviously in accordance with their social economic conditions. Removals are not as effective as emission reductions in terms of

their climate impact, a fact that needs to be reflected in the methodological work of the SBM. At the same time there is need to attract finance for removals through carbon finance. The SBM should be technology-agnostic, and regarding reversal risk, knowledge on tonne-year accounting is accumulating. The SBM should track this knowledge and apply it if found suitable. Different submissions have been made on this topic.

49. **[EU]** stated that reversals need to be addressed in full. There should be incentives in place to maintain additional carbon storage created by a mitigation activity. The appropriate tools may vary based on the type of activity and its specific context. If a pooled buffer reserve is used, it is important that the contributions to the buffer reserve reflect the long-term reversal risk of the underlying mitigation activities and that all relevant risks are considered when determining the contribution. Temporary crediting offers a robust approach for addressing reversal risks and ensuring environmental integrity. However, the replacement of the credits when they expire needs to be ensured over a long-time horizon. Other alternatives for issuance deductions (e.g. discount) are less robust and should not be used as a standalone approach, because they do not incentivize durable storage of the carbon and effective quantification of the reversals.

50. [**CAN**] said they recognize the criticisms and limits of tonne-year accounting that AOSIS presented. However, there is a potential for this approach, as also expressed by UKR, for driving ambition by addressing reversal and leakage and other issues. But [CAN] also recognizes that there is a limit to the experience that different methodologies and crediting systems have had with the tonne-year approach. Canada has recognized the tonne-year approach as eligible under their offset crediting system but is in the very early stages of considering and developing it further. It is hoped that in the future the SBM can come back to the matter of tonne-year accounting. We do not necessarily need to develop a timeline for this.

51. [ENGO] said reversal is faced by many activities. More conversation is needed around this issue. There are different risks between technology-based and nature-based removals; they have different impacts on indigenous peoples who have specific and inherent rights, and the questions of permanence and leakage are particularly relevant. It is unclear to us what would constitute a technological or engineered removal. A lot of these technologies are unproven and there is a risk of technology lock-in as pointed out by our colleagues from **TUV**. Referring to CCS, most of it has been for enhanced oil recovery.

52. [BINGO] said the buffer method already exists and can be further elaborated. However, risk assessment should not be overly relied upon to determine the level of buffer contribution. The debate around remediating the reversals through buffers, monetarily or in credits, needs to be examined. The alternative would be the use of temporary crediting or tonne-year accounting, both of which entail additional complexities and risks. Insurance is a new area and an interesting solution using market-based risk prices. And we have the precedent of the CDM, where, in some cases, for removals (CCS), the host Party takes responsibility for reversals in the long term. We invite the secretariat, the SBM and the methodology expert panel to seek a dialogue with market participants to better understand the challenges and the solutions.

53. [YOUNGO] said from an operational perspective, both avoidable and unavoidable reversals should be treated equally. Means of addressing reversals could be buffers, financial compensation, insurance, or direct replacement. Tonne-year accounting should be avoided as it has been rejected previously by Parties and experts.

Appendix 2. Options for revision of A6.4-SB009-A02

1. {The SBM, at its 12th meeting, requested the secretariat to propose options to revise the documents developed by the Supervisory Body at its 9th meeting (i.e. A6.4-SB009-A01 and A6.4-SB009-A02).This section is prepared in response to that mandate and shall be read in conjunction with the A6.4-SB009-A01 - Recommendation: Requirements for the development and assessment of Article 6.4 mechanism methodologies (v.01.1) and A6.4-SB009-A02 - Recommendation: Activities involving removals under the Article 6.4 mechanism (v.01.1) }

1. Context of removals under this Guidance

2. {No change proposed for paragraphs 1-5}

2. Definitions

3. **Paragraph 6.** For the purposes of this guidance:

   (a) ***Removals*** *are the outcomes of processes, consistent with applicable national and international law, to remove greenhouse gases from the atmosphere and destroy or durably store them through anthropogenic activities.*

4. *{text in paragraph 6 (a) is also rearranged to place "anthropogenic activities" at the end of the sentence to distinguish removals primarily driven by natural carbon cycle}*

5. {No change proposed for paragraph 6(b)}

3. Requirements

6. **Paragraph 7.** *Activities involving removals, as well as emission reduction activities that face reversals risks, under the Article 6.4 mechanism shall meet the requirements contained in the sections below and in any further requirements developed and approved by the Supervisory Body for activities involving removals based on the requirements contained in the RMP and any further relevant decisions of the CMA, and all relevant Article 6.4 mechanism standards and procedures including the requirements for the development and assessment of article 6.4 mechanism methodologies*.

4. Monitoring

7. **Paragraph 8.** *Activity participants shall monitor removals through an appropriate application of quantification and estimation, based on field measurements, remote sensing, measurement through instrumentation, in combination as necessary, that may be complemented by modelling. In this regard, methodologies shall contain provisions that specify the monitoring approach(es) for all parameters needed for the calculation of removals according to the types of removal activities*.

8. **Paragraph 9.** *Methodologies shall contain provisions that ensure that the approaches related to the use of measurements, sampling, data from third parties, published literature, satellite data, ~~default values or~~ and modelled data, are reliable, ~~robust, statistically representative , and~~ conservative and ~~appropriately~~ address associated uncertainty~~ies~~*.

9. {default values are covered under paragraph 11}

10. **Paragraph 10**. *Methodologies shall contain provisions that require the calculation of removals and associated uncertainties. The methodologies shall specify the limits for the uncertainties for the calculation of removals. The methodologies shall require the activity participants to demonstrate that the calculated removals are within the limits specified in the methodologies applied. ~~If the uncertainty of estimated removals exceeds the specified limits, owing to factors that are not under the control of the activity participants, mechanisms methodologies may specify methods for adjusting the calculated values in a conservative manner.~~*

11. **Paragraph 11**. *Calculation of removals may employ ~~conservative~~ default values that are demonstrated to be conservative ~~that~~ and appropriately address overall uncertainty of the activity, to allow flexibility in monitoring but also to ensure that removals are likely not overestimated, and reversals are likely not underestimated.*

12. **Paragraph 12**. *Methodologies shall strive to ~~may~~ include provisions for the use of higher tier methods, like the tier 2 and tier 3 methods included under* 2006 IPCC Guidelines for national greenhouse gas inventories, *such as including the use of measured values in lieu of conservative default values in the instance that the default values are demonstrated to underestimate an activity's net removals*.

    {A tier represents a level of methodological complexity. Usually, three tiers are provided. Tier 1 is the basic method, Tier 2 intermediate and Tier 3 the most demanding in terms of complexity and data requirements. Tiers 2 and 3 are sometimes referred to as higher tier methods and are generally considered to be more accurate on condition that adequate data are available to develop, evaluate and apply a higher tier method (source: 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories)}

13. **Paragraph 13**. *Methodologies shall contain provisions that require appropriate quality assurance and quality control measures, such as cross-checking the monitoring results with other sources of data and published literature, or calibration of measuring equipment at regular intervals.*

14. **Paragraph 14**. *~~Monitoring plans shall include~~ Methodologies shall contain provisions for monitoring of measures to mitigate risks identified in the reversal risk assessment tool and Article 6.4 Mechanism Sustainable Development Tool, including in relation to free prior and informed consent of Indigenous Peoples affected by the activity, directly or indirectly*.

15. **Paragraph 15**. *Methodologies shall contain provisions that require activity participants to submit a monitoring plan at the registration of the activity. Monitoring plan shall be reviewed and updated at the start of each crediting period, as well as in any of the following circumstances*:

    (a) When independent third-party verified [report] [monitoring report] approved by the Supervisory Body reveals a need for a revision of the monitoring plan;

    (b) Following any significant reversal ~~event~~ that reveals a risk factor that is not already included or may have been underestimated in the monitoring plan and corresponding risk assessment;

    (c) As per existing and applicable national or regional regulations as specified by the host Party.

4.1. Post-crediting period monitoring, reporting, and remediation of reversals

16. **Paragraph 16.** *Monitoring shall also be conducted after the end of the last active crediting period of the activity, [to ensure the continuity of the management of the risk and treatment of reversals during the post-crediting period,] so as to ensure that the residual risk of reversals of removals for which 6.4ERs were issued is negligible ~~and/~~or that potential future reversals are remediated*.

17. {Many submitters suggested specifying a period that is the sum of monitoring period and post crediting monitoring period. Suggested total period includes 40 years, 50 years, 100 years, among others}

18. **Paragraph 17.** *During the post-crediting monitoring period, activity participants shall undertake monitoring, reporting, independent third-party verification, and remediation measures, to confirm the continued* existence *of [removals] [the carbon storage and/or of increase of carbon stocks resulting from the removal activities] and to address any reversals of removals for which 6.4 ERs were issued during the activity's active crediting period(s). No ERs will be issued for removals generated after the last active crediting period, including during the post-crediting monitoring period.*

19. **Paragraph 18**: *Activity participants may submit requests to conclude post-crediting monitoring, for the consideration and possible approval of the Supervisory Body, by demonstrating through evidence that:*

    (a) the removals will be stored with negligible risk of reversal; and~~/or~~

    (b) any residual reversal risk of the activity, based on its current reversal risk assessment, that may potentially lead to future reversals of removals for which 6.4ERs have been issued, have been remediated as per section 3.6.3 Addressing reversal risk and reversals [in advance] [as though a reversal has occurred]. ~~of this guidance~~, ~~taking into account the~~.

20. {No changes are proposed to paragraph 19}

21. **Paragraph 20**. *The Supervisory Body will develop further guidance in this regard including:*

    (a) Further requirements and identification of the existing requirements that are applicable during the post crediting period for monitoring, reporting, and verification of removals and remediation of reversals, including consideration of options to use methods based on digital technologies and remote sensing;

    (b) The timeframe for post-crediting monitoring, including factors that inform duration and phasing which provides assurance on the permanence of removals, taking into account expert scientific inputs;

    (c) The submissions referred to in paragraph 18 above, including inter alia on the evidence-based demonstration by the activity participant and on the criteria for consideration and approval given by the Supervisory Body to ensure that there is high confidence in the conclusion and that the conclusion remains valid over [the climate relevant time frames] [long timeframes].

4.2. Reporting

22. {No changes are proposed to paragraph 21}

23. **Paragraph 22.** *Monitoring reports shall contain:*

(a) *~~An outline of~~ The monitoring plan with a description of the monitoring operations and methods used to implement the plan, and the resulting calculated removals during the monitoring period along with the associated uncertainties in the calculation;*

(b) *Field data collected, including remotely sensed data, or if the data set is too voluminous, a summary of the data and an indication of how the complete data set may be accessed;*

(c) *Records and logs of observed events that ~~could potentially lead~~ have led to the reversal of removals, if and when they occur, as well as a summary of any reversal notifications that were submitted during the monitoring period;*

(d) *Quantitative [estimates] [information] of any reversals that occurred during each monitoring period, including descriptive information on how reversals occurred, whether they were avoidable or unavoidable, and remedial actions taken;*

(e) *Information on how the environmental and social impacts were assessed and addressed by applying robust environmental and social safeguards as per Section 3.8 Avoidance of other negative environmental and social impacts, as well as how the activity is fostering sustainable development through the utilization of the Article 6.4 sustainable development tool;*

(f) *Information on how reversal risks were assessed and addressed consistent with risk mitigation measures described in the reversal risk assessment tool that will be developed by the Supervisory Body.*

24. **Paragraph 23.** *Monitoring reports shall be prepared without a gap between the two successive monitoring periods, which may be of the same or different durations. ~~according to the activity participant's implementation of paragraph 22 above~~.*

25. **Paragraph 24**. *Methodologies shall contain provisions to specify the ~~minimum~~ default frequency of monitoring report submission, ranging from one to five years from the submission date of the first monitoring report, based on the nature of the activities under consideration and ~~which shall be~~ ~~commensurate with~~ ~~the degree and nature of~~ the risk of reversals determined ~~through a risk assessment undertaken by the activity participants~~ as per the section 3.6.1. Reversal risk assessment. ~~Based on the results of the risk assessment referred to above,~~ Activity participants may choose a shorter period for monitoring than the specified minimum frequency. A reversal event ~~may~~ shall also trigger the preparation of a monitoring report as described in 3.6.2 Post reversal actions.*

26. **Paragraph 25.** *Methodologies shall contain provisions to specify the maximum duration allowed to submit the first monitoring report from the start date of the first crediting period. Based on the results of the risk assessment referred to in section 3.6.1. Reversal risk assessment, the duration may range from one to five years from the start date of the first crediting period. ~~Methodologies shall contain provisions to require submission of subsequent monitoring reports at least every two years for activities with high reversal risk or at least every five years for those with low reversal risk~~.*

27. **Paragraph 26:** *The Supervisory Body will develop guidance on and procedures for addressing late, incomplete, or missing monitoring report submissions including remedial measures to address situations where monitoring is stopped prematurely, (i.e., prior to the conclusion of the crediting period(s) and fulfilment of requirements for post-crediting period monitoring). [The guidance may include measures such as specifying that the registry administrator shall be unable to issue, transfer, or cancel ERs from the activity for which the monitoring report is due as well as any other activity in which they are a participant]. The guidance will address options for giving effect to the remediation of reversals of removals for which 6.4ERs have been issued in such circumstances*.

4.3. Accounting for removals

28. **Paragraph 27 option 1:** *Removals eligible for crediting shall exceed the applicable baseline determined in accordance with requirements for the development and assessment of Article 6.4 mechanism methodologies and are calculated for each year in the crediting period or based on an annual average over the established monitoring period, according to the nature of the activity. In each given monitoring report, such calculations are done in accordance with the following:*

    (a) By calculating net removals [after accounting for related uncertainties], which involves the estimation and deduction of emissions within the activity boundary that result from the implementation of the activity and/or from an event that could potentially lead to any leakage emissions or, where applicable, a reversal of removals, in accordance with the applicable provisions of the Activity Standard, requirements for the development and assessment of Article 6.4 mechanism methodologies, and the applicable methodology; and

    (b) By comparing the current cumulative net removals to cumulative net removals in the previous monitoring report. Current cumulative net removals that fall below the cumulative net removals in the previous monitoring report constitute reversals.

29. **Paragraph 27 option 2.** *Calculating the net removals includes ((+) indicates an addition, (-) a subtraction):*

    (a) Gross removals (+), which are calculated as the difference between baseline and activity removals;

    (b) Emissions within the activity boundary that result from the implementation of the activity (-);

    (c) Emissions within the activity boundary that result from an event that could potentially lead to reversal of removals (-);

    (d) Leakage emission (-).

30. **Paragraph 27 option 3.** *Removals and reversals are accounted as follows*:

    (a) Net removals are calculated as the difference between removals occurring with the implementation of the mitigation activity and removals occurring in the baseline scenario:

        (i) Plus (+) the difference between emissions from other relevant sources occurring in the baseline scenario and emissions from other relevant sources occurring with the implementation of the mitigation activity;

(ii) Minus (-) any emission increase outside of the mitigation activity boundary linked to the activity.

(b) *Reversals are 'negative' net removals or emission reductions and are calculated as the difference between:*

(i) *The cumulative emission reductions or net removals resulting from the mitigation activity until the end of monitoring period "p"; and*

(ii) *The cumulative emission reductions or net removals from the mitigation activity until the end of the previous monitoring period "p-1";*

(c) Under Paragraph 29 (b), the cumulative emission reductions or net removals should be calculated from the beginning of the mitigation activity. Reversals shall be quantified over a period. The Supervisory Body will develop further guidance on appropriate minimum and maximum length of this period, considering different contexts and types of removal activities.

31. **Paragraph 28.** ~~*Removals are also calculated as per*~~ *Requirements of paragraph 27 shall be applied for each year in the post-crediting monitoring period as indicated in paragraphs 16-18, mutatis mutandis.*

32. **Paragraph 29:** *Any carbon pools and greenhouse gases may be optionally excluded from accounting, if it is demonstrated that such exclusion results in a more conservative calculation of net removals* ~~*which shall be demonstrated in the PDD*~~*.*

33. **Paragraph 30.** *If an activity involving removals also results in emission reductions, the accounting of removals and emission reduction should be disaggregated in the monitoring and verification reports. Relevant guidance shall be applied through a relevant methodology or a combination of methodologies applicable to the activity in accordance with the provisions to be developed by the Supervisory Body*.

4.4. Methodologies applicable for the crediting period

34. **Paragraph 31.** *At the renewal of the crediting period, activities involving removals shall apply the latest version of the applicable methodology.*

35. **Paragraph 31** *bis. If activities are already ongoing, at the renewal of the crediting period, activity participants may:*

(a) Adopt the latest version of the methodology; or

(b) Update the project's baseline and continue applying the previous version of the methodology for a shorter period than the length of the next crediting period, to allow for a transition.

4.5. Addressing reversals

36. **Paragraph 32:** *Activity participants shall minimize the risk of [the release of stored carbon] [reversals of removals] and, where such reversals of removals occur, ensure that these are addressed in full, in accordance with guidance in this document.*

4.5.1. Reversal risk assessment

37. **Paragraph 33.** *The risks of reversals, [attributable to activity participants, host Party and third parties], may be avoidable or unavoidable and may include, inter alia:*

    (a) Those related to activity finances and management;

    (b) Those related to asset ownership, rising opportunity costs, regulatory and social instability, country-specific political risks, governance risks and legal risks;

    (c) Those related to natural disturbances and extreme events such as fires, pests, and droughts, floods, wind damage, landslides;

    (d) Those related to climate change impacts.

38. **Paragraph 34.** *Activity participants shall conduct a risk assessment at the activity level ~~using robust methods~~ to identify and assess the reversal risks, including to quantify and score them, for instance the ~~nature~~ scale, likelihood, and duration of the risks and of potential avoidable and unavoidable reversals. The percent-based reversal risk rating resulting from this assessment shall inform, among other procedures, an activity's application of remediation measures referred to in [3.6.3 Addressing reversal risk and reversals].*

39. **Paragraph 35.** *Activity participants shall also develop and describe ~~plans~~ measures to mitigate and monitor the risks ~~and steps taken~~. Risks that cannot be eliminated shall be addressed as described ~~below~~ under [3.6.3 Addressing reversal risk and reversals]. ~~in this document.~~*

40. {No changes are proposed to paragraph 36}

41. **Paragraph 37.** *The Supervisory Body will develop a reversal risk assessment tool to identify risks with a view to minimize, monitor and manage them. The tool shall incorporate the latest peer-reviewed scientific research and shall be regularly updated, at least every 5 years, to account for new scientific findings. The tool shall require activity participants to incorporate geographical context, historical risk record, and projections for future risk development. The tool shall also define a minimum default risk rating for activities facing a reversal risk, potentially distinguished by broader activity type. Methodologies [shall] [may] include additional guidance on the application of the tool.*

4.5.2. Post reversal actions

4.5.2.1. Reversal-related Notifications and actions

42. **Paragraph 38.** *The activity participant shall notify the Supervisory Body of reversals that occur within their activity boundary. Submissions of reversal-related notifications shall be made as follows:*

    (a) A preliminary notification shall be provided within [30] days of [an event that could potentially lead to a reversal becoming known (hereafter "observed event")] [a potential reversal] taking into account risks identified in the risk assessment and the applied methodology, including, at a minimum, the date, the location, and a short description of the event. It may be provided digitally;

(b) *Activity participants wishing to demonstrate that removals for which 6.4ERs have been issued were not disturbed by the [observed event] [potential reversal] prior to submitting a ~~full~~ monitoring report shall submit an independently third-party verified ~~monitoring~~ report of the information referred to in paragraphs 22 (a)-(c) above, which may be provided digitally;*

(c) *A reversal notification ~~as~~ and a ~~full~~ monitoring report referred to in paragraph 22 above shall be provided within 365~~0~~ days of the [observed event] [potential reversal];*

(d) *In case the reversal event is still ongoing such that a delayed submission of the ~~full~~ monitoring report would result in more complete and accurate information, the activity participant may submit a verified ~~monitoring~~ report referred to in paragraph 38(b) above to request the Supervisory Body to extend deadline for submission of the full monitoring report by 90-180 days from the original submission deadline. If a request is made to delay submission of the monitoring report and this is granted, an interim report shall be made by the deadline set out in 38(c) to provide an interim update*.

43. {One submitter stated that 30 days is insufficient to detect and quantify most types of reversals for most activities. The notification should be allowed at any time, but no later than the next reporting cycle. Many reversal risks are not manifested by a specific event but are the results of longer-term processes}

44. **Paragraph 39.** *Upon submitting a preliminary notification as per paragraph 38(a) above, ~~activity participants~~ mechanism registry administrator will be unable to issue, transfer, or cancel ERs from the activity for which notification was provided until the activity participant submits a verified ~~monitoring~~ report or a ~~full~~ monitoring report demonstrating that removals for which 6.4ERs have been issued were not disturbed by the observed event, or until the ~~6.4~~ mechanism registry administrator confirms that the reversal has been remediated as per 3.6.3 Addressing reversal risk and reversals.*

45. **Paragraph 40.** *Following the submission of a full monitoring report that reflects reversals, the Supervisory Body will review the report to confirm, among other things, that the activity ~~proponents~~ participants have accurately characterized the reversal ~~event~~ as being avoidable or unavoidable. The activity participants will be notified of the outcome of the Supervisory Body's review within a timeframe to be specified by the Supervisory Body.*

46. **Paragraph 41.** *The Supervisory Body will develop further guidance in regard to the measures in this section, including the format and procedures for notifications and reports that may be submitted digitally and to enable ~~treatment of~~ notifications from third parties to the Supervisory Body of [observed events that could potentially lead to reversals] [potential reversals].*

4.5.2.2. Corrective actions

47. **Paragraph 42.** *Following the submission of the preliminary notification referred to in paragraph 38(a), activity participants shall initiate appropriate corrective measures and demonstrate in requisite updates to a reversal risk assessment that accompanies a ~~full~~ monitoring report that reflects reversals. Corrective measures may include, inter alia:*

(a) *Assessing how the reversal occurred and its causes;*

(b) *Elaborating plans to prevent further reversals such as improving control measures, storage conditions and handling procedures, and arranging further personnel training in various aspects of removal process;*

(c) *Reassessing adherence to applicable local and international regulations;*

(d) *Engaging stakeholders in accordance with the procedures of the Supervisory Body;*

(e) *Increasing the activity rating, resulting in increased buffer contributions, if required as per the risk assessment update.*

4.5.2.3. Preventive actions

48. {No changes are proposed to paragraph 43}

49. **Paragraph 44.** *If the Supervisory Body determines that the risk was in the control of the activity participant, activity participants shall also update the assessment conducted using Article 6.4 mechanism sustainable development tool to reflect the relevant underlying causes and any negative impacts, as well as plans for remediation and prevention of a recurrence, and submit this with the updated reversal risk assessment accompanying the full monitoring report submitted for reversal notification purposes.*

4.5.2.4. Activity continuation post-reversal

50. {No changes are proposed to paragraph 45}

51. **Paragraph 46.** *Activity participant shall only be permitted to issue, transfer, and/or cancel 6.4ERs related to the activity upon fulfilment of the requirements in paragraph 38 above and if the calculated removals meet the requirements in paragraph 27 above.*

52. **Paragraph 47.** *The Supervisory Body will develop further guidance on the treatment of activities for which a reversal ~~results~~ in calculated removals within the activity boundary ~~that~~ fall below the baseline level.*

4.5.3. ~~Addressing~~ *Remediation in the event of reversals* ~~reversal risk and reversals~~

53. **Paragraph 48.** *Reversals of removals for which 6.4 ERs have been issued shall ~~will~~ be fully remediated by taking measures described in this section. The measures are intended to effectively address reversals and maintain incentives for activity participants to proactively mitigate reversal risks and avoid reversals.*

54. **Paragraph 49.** *Reversals shall be remediated through the cancellation of an equivalent amount of 6.4 ERs (e.g. reversals of authorized 6.4ERs should only be remediated through the cancellation of authorized 6.4ERs). Measures for effecting this cancellation ~~include~~ are either the cancellation of the Reversal Risk Buffer Pool as per section 3.6.3.1 and/or the direct cancellation of 6.4 ERs as per section 3.6.3.2 from other 6.4 activities for this purpose, ~~These measures may be used on a standalone basis~~ or a ~~in~~ combination of the two.*

55. **Paragraph 50.** *The determination of the appropriate remediation measure(s) to be applied by an activity shall be based on the level of the activity's reversal risk rating indicated in the reversal risk assessment ~~submitted in the project design document~~ and, if a reversal*

occurs, ~~also on the~~ whether it was avoidable or unavoidable. ~~nature of the event that led to the reversal~~.

56. **Paragraph 51.** *The Supervisory Body will develop further guidance and/or procedures in regard to the measures in this section for, inter alia:*

(a) Review by the Supervisory Body of monitoring reports that reflect reversals, including its consideration of whether an event that led to a reversal was avoidable or unavoidable as represented by activity participants, and its response to instances of possible mis-categorization of such events and subsequent notifications of the registry administrator and activity participants;

(b) Reversal Risk Buffer Pool use, operation, and composition, including the treatment of uncancelled Buffer 6.4 ERs and options for addressing buffer insufficiency;

(c) Direct cancellation of 6.4 ERs from other 6.4 activities in lieu of contributing to and using the Reversal Risk Buffer Pool, including the threshold for a reversal risk rating that constitutes a negligible reversal risk and would qualify an activity to apply these procedures, as well as the basis and procedures for the Supervisory Body's initial and periodic review and approval of the sufficient coverage of insurance policy or comparable guarantee products for insuring the activities that apply these procedures;

(d) The nature of 6.4 ERs from other 6.4 activities that are cancelled to remediate reversals as per the requirements in this section, including whether they are issued in respect of removals and/or emission reductions.

57. {several submitters emphasise the importance of defining "negligible" risk and "avoidable/unavoidable reversals", some suggest that threshold for determining "negligible reversal risk" should be established using methodologies that take into account the type of activities, others propose to delete the references to negligible risk}

4.5.3.1. Buffer pool operations and contributions

58. **Paragraph 52.** *The Article 6.4 Supervisory Body shall establish a Reversal Risk Buffer Pool under the 6.4 mechanism, which serves to insure against the general risk of, and to remediate, unavoidable reversals and avoidable reversals, under specific conditions. Activity participants applying guidance in this document for activities involving removals shall contribute 6.4 ERs to the Reversal Risk Buffer Pool, which are cancelled in the event of an unavoidable reversal or avoidable reversals, under specific conditions, in a way to prevent perverse incentives towards inadequate risk management.*

59. { One submitter stated that the buffer created for addressing reversals should have contributions from all Article 6.4 activities and not only removal activities. In case pooled buffer is not enough to cover reversals, a combined host party-purchasing party contribution need to occur. As a last resort, OMGE credits could be counted to compensate for reversals}

60. {No changes are proposed to paragraph 53}

61. **Paragraph 54.** Following the Supervisory Body's review of a full monitoring report that reflects reversals, the Supervisory Body will notify the registry administrator of the results of its review, after which the registry administrator shall effect a cancellation of Buffer 6.4 ERs equal to the amount of ~~unavoidable~~ reversals requiring remediation. Where possible,

reversals should be remediated with 6.4 ERs from the same vintages, *same type (e.g., mitigation contribution A6.4ERs or authorized A6.4ERs), [and have been generated from equivalent or similar activities] [and have been generated from an activity of the same or higher durability as determined by the activity's reversal risk assessment].*

62. **Paragraph 55 option 1.** *[Buffer ERs shall not be cancelled to remediate avoidable reversals].*

63. **Paragraph 55 option 2** *Regarding the cancellation of Buffer 6.4 ERs as per paragraph 54, if the reversals were unavoidable and exceed the activity's aggregate contribution of Buffer 6.4 ERs such that full remediation of reversals cannot occur, the registry administrator shall forward 6.4 ERs from the activity to the Reversal Risk Buffer Pool equal to the amount of remaining reversals requiring remediation. Regarding the cancellation of Buffer 6.4 ERs as per paragraph 54, if the reversals were avoidable, the registry administrator shall forward 6.4 ERs from the activity to the Reversal Risk Buffer equal to the full amount of reversals requiring remediation. If there are not enough 6.4 ERs from the activity to remediate the reversals, the mechanism registry administrator shall forward 6.4 ERs from another activity registered to the activity participant of equal or higher durability as determined by the activity's reversal risk assessment. If there are still insufficient 6.4 ERs to fully remediate the reversals, the activity participant shall forward 6.4 ERs, at its own expense, from other activities of equal or higher durability to the activity participant's activity as determined by the other activities' reversal risk assessments, to the Reversal Risk Buffer equal to the amount of remaining reversals requiring remediation.*

64. **Paragraph 56.** *The Supervisory Body shall oversee a periodic stress-test of the Reversal Risk Buffer pool at least every three years to assess, inter alia, the pool's resilience for a range of plausible reversal risk scenarios, including reasonable worst-case scenarios, affecting the activities linked to the buffer pool, and consider and implement any potential remedial measures required to manage risks to the robustness of the pool. In addition to regular stress-testing, the composition of the buffer pool, including the share of 6.4 ERs by vintage, region and country, activity type, authorisation type, assessment of reversal risk and methodology, [should] [shall] be published annually.*

4.5.3.2. Direct cancellation of 6.4 ERs from other 6.4 Activities

65. {No changes are proposed to paragraph 53}

66. **Paragraph 57.** *Reversals of removals for which 6.4 ERs have been issued shall be remediated through the cancellation of an equivalent amount of 6.4 ERs from other 6.4 activities in [one of] the following circumstances:*

    (a) Activity participants implementing an activity with negligible reversal risk, as evidenced by the risk assessment approved by the Supervisory Body, indicate in the project design document that the activity will forego use of the Reversal Risk Buffer Pool [for either one or more] [throughout all active] crediting periods, and the post-crediting monitoring period or a combination of them;

    (b) *Activity participants are required to address reversals of removals found to be avoidable, even when the activity is contributing to the Reversal Risk Buffer Pool.*

67. **Paragraph 59.** *Following the Supervisory Body's review of a ~~full~~ monitoring report submitted that reflects reversals and involves the circumstances described in paragraph 57 (a) or (b) above, the Supervisory Body will notify the registry administrator of the results*

of its review. No more than 30 days following this communication, the 6.4 mechanism registry administrator will confirm with the activity participants the cancellation of 6.4ERs from other 6.4 activities equal to the amount of reversals requiring remediation and indicating the purpose of cancellation in the 6.4 Registry.

4.5.3.3. Avoidable versus unavoidable reversals

68. **Paragraph 60.** *The Supervisory Body will develop further guidance on avoidable and unavoidable reversals, including how they are distinguished and demonstrated.*

(a) An avoidable reversal is a reversal over which the activity participant has influence or control. This includes poor project management, removal or redefinition of a portion of the activity area, harvesting and tillage;

(b) An unavoidable reversal is a reversal over which the activity participant has no influence or control. This includes hurricanes, earthquakes, flooding, drought, fires, tornados and winter storms, and human-induced events such as acts of terrorism, crime, or war. Encroachment by outside actors (e.g., logging, mining, or fuelwood collection) are considered unavoidable when demonstrably unforeseeable and out of the activity participant's control. Unavoidable reversals should take into account attributed effects of climate change such as increased incidence of droughts, higher temperatures, increased precipitation events and cyclones;

(c) *The Supervisory Body shall prioritize the development of the criteria for determining whether a reversal is 'avoidable' or 'unavoidable.*'

4.6. Avoidance of leakage

69. **Paragraph 61.** *Activity participants shall address the risk of leakage and account for any remaining leakage in calculations of net removals in accordance with the requirements specified in the "Requirements for the development and assessment of article 6.4 mechanism methodologies", including by applying the standard and tool to be developed by the Supervisory Body for this purpose. Methodologies and related tools may include additional requirements applicable to specific types or categories of removal activities.*

4.7. Avoidance of other negative environmental, social impacts and addressing human rights and Indigenous Peoples rights

70. **Paragraph 62:** *Activity participants shall apply robust social and environmental safeguards, to not only minimize and, where possible, avoid negative environmental and social impacts of the activity, but also [promote positive environmental and social impacts where possible] [to demonstrate positive outcomes of the activity for biodiversity, ecosystem restoration, Indigenous Peoples as well as local communities where relevant for the activity]:*

(a) In accordance with requirements contained in Article 6.4 mechanism activity Standard, including the application of the Article 6.4 mechanism sustainable development tool, guidance on local and global stakeholder consultation and where applicable, the Appeals and Grievance Procedure; and

(b) Any other applicable provisions developed by the Supervisory Body to avoid negative environmental and social impacts of an activity involving removals.

71. {submitters have made rich contributions to further elaborate this section or the SD tool or related methodology provisions (e.g. to reflect more explicitly the existing social and environmental safeguards related to REDD+}

72. **Paragraph 63.** *In addition to above requirements, the Supervisory Body will develop further requirements in respect of specific removal activity categories or types taking into account indigenous, national and international best practices, standards, and obligations with respect to environmental and social safeguards, human rights, Indigenous Peoples rights, which activity participants shall also apply.*

4.8. Host Party roles

73. **Paragraph 64.** *Subject to further guidance that will be developed by the Supervisory Body, based on the RMP and guidance in this document, a [host] Party may specify to the Supervisory Body arrangements voluntarily provided by the [host] Party for the following:*

(a) Requiring the activity participants to comply with existing and applicable national or regional regulations inter alia specifying the frequency, timing, and/or basis for updating and submitting an updated monitoring plan, in addition and subject to and consistent with the guidance in this document, as referred to in paragraph 15(c) above;

(b) *Where the [host] Party assumes the role of an activity participant in the post crediting monitoring period, providing a sovereign guarantee to apply corresponding adjustments in respect of any amount of reversals incurred, as an alternative measure to those described in Section 3.6.3. Addressing reversal risk and reversals, in a manner consistent with Article 6.2 guidance and further guidance to be developed by the Supervisory Body in this regard.*

74. {Submitters have provided a range of comments on this section, for example, (a) reversals arising from authorized A6.4ERs can only be remediated by authorized A6.4ERs; (b) Corresponding adjustments may not be an effective measure for deterring or addressing reversals in some situations, replacement with similar or more permanent reductions would be more effective; (c) this section is not balanced and needs further work regarding a transfer of responsibility from private sector entities to host Parties' national governments}.

4.9. Afforestation or reforestation activities

75. The following conditions apply to afforestation and reforestation activities:

(a) An afforestation or reforestation project activity is eligible under the Article 6.4 mechanism only if the land area has been absent of native forest and ecosystems at least 15 years before the submission of the project;

(b) In addition to the above requirement, no land area subject to deforestation after 2020 will be eligible for reforestation project activities under the Article 6.4 mechanism for 30 years;

(c) Assessment of eligibility on these criteria will be carried out by using the definition of native forest and ecosystems adopted by the host Party for the purpose of the Article 6.4 mechanism;

(d) *The Supervisory Body shall review the efficacy of this clause by 2050.*

Appendix 3. References

Submission date	Party or Group of Parties	Acronym	Reference number
15/04/2024 03/06/2024	Japan	**JP**	**391**
16/04/2024	Government of Guyana	**GY**	**407**
16/04/2024 03/06/2024	Brazil (Government)	**BR**	**408**
16/04/2024 03/06/2024	Submission by Belgium and the European Commission on behalf of the European Union and its Member States	**EU**	**409**
23/04/2024 03/06/2024	The United Kingdom of Great Britain and Northern Ireland	**UK**	**410**
26/04/2024 and 03/06/2024	Samoa on behalf of Alliance of Small Island States (AOSIS); St. Kitts and Nevis on behalf of AOSIS during engagement event	**AOSIS**	**411**
27/04/2024 03/06/2024	The AILAC group of countries (Colombia, Costa Rica, Chile, Guatemala, Honduras, Panama, Peru)	**AILAC**	**412**
30/04/2024 03/06/2024	Honduras on behalf of the Coalition for Rainforest Nations	**CfRN**	**413**
01/05/2024 03/06/2024	Ukraine	**UKR**	**414**
03/06/2024	Switzerland	**CHE**	
03/06/2024	Columbia	**COL**	
03/06/2024	Tuvalu	**TUV**	
03/06/2024	Indonesia	**IDN**	
03/06/2024	Saudi Arabia	**SAU**	
03/06/2024	Canada	**CAN**	

Submission date	Stakeholder	Acronym	Reference number
15/03/2024	Sky Harvest	SH	379
25/03/2024	Save Climate Campaign	SCC	380
29/03/2024	Vinay Deodhar	VD	381
11/04/2024	Forair	FA	382
11/04/2024	44.moles	44M	383
12/04/2024	Negative Emissions Platform	NEP	384
12/04/2024	Atmosfair	ATMO	385
12/04/2024	Government of Quebec	QB	386
12/04/2024	Conservation International	CI	387
12/04/2024	Rahul Goela	RG	388
12/04/2024	Rethinking Removals	RR	389
15/04/2024	Global Mangrove Trust Limited	GMT	390
15/04/2024	International Indigenous Peoples Forum on Climate Change	IIPFCC	392
15/04/2024	Sylvera	SYLV	393
15/04/2024	Carbon Market Watch	CMW	394
15/04/2024	Indigenous Environmental Network	IEN	395
15/04/2024	Eric Arets and Sven van Baren	AvB	396
15/04/2024	Climate Secure	CS	397

Submission date	Stakeholder	Acronym	Reference number
15/04/2024	ORMEX	ORM	398
15/04/2024	ALLCOT	ALCT	399
15/04/2024	International and Comparative Law Research Center	ICLRC	400
15/04/2024	Integrity Council for Voluntary Carbon Market	ICVCM	401
15/04/2024	IETA	IETA	402
15/04/2024	YOUNGO Finance & Market Working Group	YNG	403
15/04/2024	WWF	WWF	404
16/04/2024	American Petroleum Institute	API	405
16/04/2024	KOKO Networks Limited	KKN	406
03/06/2024	Environmental NGOs	ENGO	
03/06/2024	Business and industry NGOs	BINGO	
03/06/2024	Children and Youth	YOUNGO	
03/06/2024	Indigenous Peoples Organizations	IPO	
03/06/2024	UNHCR	UNHCR	
03/06/2024	Women and Gender	WoGen	

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Document information

Version	*Date*	*Description*
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23 May 2024	A6.4-SBM012-A01 - Information note: Guiding questions for the SBM engagement event at the sixtieth session of the Subsidiary Body (SB 60) (v.01.0)
16 May 2024	A6.4-SBM012-AA-A02 - Information note: Compilation and summary of stakeholder inputs on activities involving removals under Article 6.4 mechanism (v.01.1)
1 March 2024	A6.4-SB010-A05 - Information note: Further work on the methodological products for the Article 6.4 mechanism (v.01.0)
17 November 2023	A6.4-SB009-A02 - Recommendation: Activities involving removals under the Article 6.4 mechanism (v.01.1)

7 November 2023	A6.4-SB008-A14 - Draft Recommendation: Activities involving removals under the Article 6.4 mechanism (v.04.1)
16 October 2023	A6.4-SB008-AA-A15 - Draft Recommendation: Activities involving removals under the Article 6.4 mechanism (v.03.0)
14 September 2023	A6.4-SB007-A07 - Draft Recommendation: Activities involving removals under the Article 6.4 mechanism (v.02.0)
1 September 2023	A6.4-SB007-AA-A13 - Information note: Compilation of the public inputs on removal activities under the Article 6.4 mechanism
	A6.4-SB007-AA-A14 - Information note: Draft elements for the recommendation on activities involving removals
	A6.4-SB007-AA-A15 - Draft recommendation: Activities involving removals under the Article 6.4 mechanism
5 July 2023	A6.4-SB006-AA-A09 - Information note: Compilation of the public inputs on removal activities under the Article 6.4 mechanism
	A6.4-SB006-AA-A14- Information note: Draft elements for the recommendation on activities involving removals (version 01.0)
3 June 2023	A6.4-SB005-A02 – Information note: Guidance and questions for further work on removals (version 02.0)
17 May 2023	A6.4-SB005-AA-A09 – Information note: Removal activities under the Article 6.4 mechanism (version 04.0)
	A6.4-SB005-AA-A10 – Information note: Summary of the views submitted by Parties and observers on activities involving removals (version 01.0)
10 March 2023	A6.4-SB004-A02 - Information note: Guidance and questions for further work on removals (v.01.0)
28 February 2023	A6.4-SB004-AA-A04 - Information note: Removal activities under the Article 6.4 mechanism (version 3.0)
07 November 2022	A6.4-SB003-A03 - Recommendation: Activities involving removals under the Article 6.4 mechanism (version 1.0)
25 October 2022	A6.4-SB003-AA-A03 - Draft recommendation: Removal activities under the Article 6.4 mechanism (version 2.0)
	A6.4-SB003-AA-A04 - Information note: Removal activities under the Article 6.4 mechanism (version 2.0)
15 September 2022	A6.4-SB002-AA-A05 - Draft recommendation: Requirements for the development and assessment of mechanism methodologies pertaining to activities involving removals (version 1.0)
	A6.4-SB002-AA-A06 - Information note: Removal activities under the Article 6.4 mechanism (version 1.0)
08 July 2022	A6.4-SB001-AA-A05 - Concept note: Removal activities under the Article 6.4 Mechanism (version 1.0)