	CALL FOR INPUT
Name of submitter	Larissa Albino
Affiliated organization of submitter	Future Climate Group
Email of submitter	larissa.albino@futureclimate.com
Date of submission	21/07/2026

Document reference number and title: (Recommendation from the MEP to SBM020)

Draft Methodological tool: Reversal risk assessment

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
1	-	Paragraphs 17–18, Equation (1), and Note/Question 01	The proposed rationale for adding the natural and human-induced reversal risk ratings should be revised. Statistical independence is neither necessary nor sufficient to justify simple addition. The two ratings are defined as estimated fractional losses of credited greenhouse gas stocks over a 100-year period. Simple addition is appropriate only where: (a) both ratings use the same greenhouse gas reservoir, denominator and time horizon; (b) losses have mutually exclusive causal attribution; (c) the same carbon loss cannot be included in both ratings; and (d) the ratings have been calibrated as additive expected losses. Where natural and human-induced drivers can affect the same carbon stock, the same unit of stored carbon cannot be lost twice. Dependence is especially relevant for compound events in which a human driver changes the probability or severity of a natural disturbance. This is material in the Brazilian context, where drought, fire ignition, fragmentation, land-use pressure and forest-management conditions may interact. A purely additive calculation could either double count the same loss or omit the additional loss caused by interactions between drivers. The preferred approach should therefore be a joint expected-loss model. A simplified formula should only be permitted where its assumptions are demonstrated and validated.	Replace Equation (1) and the related text with: "The parameter Fbuffer,i,t shall represent the expected fractional loss of credited greenhouse gas stocks arising from the joint distribution of all applicable natural and human-induced reversal risks over the applicable 100-year period: Fbuffer,i,t = E[Ljoint,i,100y] where Ljoint,i,100y is the joint fractional loss of credited greenhouse gas stocks in reservoir i over the applicable 100-year period, taking into account the probability, severity, timing, interaction and overlap of the applicable reversal risks. Natural and human-induced reversal risk ratings may be added only where the activity participant or the applicable default-value methodology demonstrates that: (a) the ratings use the same denominator and time horizon; (b) the underlying losses have mutually exclusive causal attribution; (c) no carbon loss is counted more than once; and (d) no material interaction exists between the relevant drivers. Where risks independently affect the remaining greenhouse gas stock, the following simplified survival formulation may be used: Fbuffer,i,t = 1 − (1 − Ratingnatural,i) × (1 − Ratinghuman,i) Where material dependencies or compound drivers exist, a validated joint-probability, conditional-probability or simulation-based approach shall be applied."

Document reference number and title: (Recommendation from the MEP to SBM020)

Draft Methodological tool: Reversal risk assessment

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
2	-	Paragraphs 19–22, Equations (2) and (3), and Note/Question 1	Wildfire should not automatically be treated as an exclusively natural reversal risk. The physical hazard may be influenced by drought, temperature and other natural or climate-related conditions, while ignition, fuel accumulation, fragmentation, access, land management and suppression capacity may be substantially human-induced. Treating the entire wildfire loss as natural while separately assigning human-induced risk for land management, governance or land-use pressure could double count the same event. Conversely, excluding anthropogenic ignition and landscape management from the wildfire calculation could underestimate human-induced reversal risk. The distinction is particularly important for Brazil. In many Brazilian landscapes, fire risk results from the interaction of climatic conditions with human ignition, agricultural practices, infrastructure, forest edges, enforcement capacity and fire-management arrangements. The applicable risk cannot always be credibly attributed to only one category. The tool should therefore distinguish among: (a) the underlying biophysical fire hazard; (b) anthropogenic ignition and vulnerability factors; and (c) the additional severity arising from their interaction. Each resulting carbon loss should be counted only once.	Add the following text after paragraph 19: "Wildfire shall not be presumed to constitute an exclusively natural reversal risk. The assessment shall distinguish, to the extent supported by available evidence, between: (a) climate-related and biophysical wildfire hazard; (b) human-induced ignition, exposure and vulnerability; and (c) the interaction between natural and human-induced drivers. The same wildfire-related carbon loss shall not be included in more than one reversal risk rating. Where robust causal attribution is available, the applicable loss shall be allocated between the relevant risk categories. Where robust attribution is not available, wildfire shall be treated as a compound risk and assessed through a joint-loss approach that reflects dependency between the natural and human-induced drivers. The Methodological Expert Panel shall publish a causal-attribution protocol describing the evidence, spatial data and decision rules to be applied."

Document reference number and title: (Recommendation from the MEP to SBM020)

Draft Methodological tool: Reversal risk assessment

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
3	-	Paragraph 22, Equation (3), Appendix 1, and Note/Question 02	The human-induced reversal risk factor should represent the expected fractional loss, over 100 years, of the credited incremental biomass stock attributable to human-induced drivers in the relevant biomass-supply area. It should not be based on a single global or multi-national percentage. Relevant drivers vary substantially across and within jurisdictions and may include: (a) observed vegetation loss and degradation; (b) biomass harvesting pressure; (c) agricultural and infrastructure expansion; (d) rising land-use opportunity costs; (e) accessibility and proximity to roads or markets; (f) activity finance and management; (g) tenure and resource-right security; (h) enforcement and governance capacity; and (i) social instability, crime or conflict. Values should therefore vary geographically. This is particularly important for Brazil, where national or even state-level averages may conceal major differences among biomes, forest frontiers, rural production systems and local governance conditions. The preferred spatial unit should be the biomass-supply area from which non-renewable biomass would reasonably have been sourced in the absence of the activity. Administrative defaults should be used only where they reasonably represent that area. Because human-induced risks can change much more rapidly than biophysical risks, the values should be periodically reassessed rather than fixed for the full five-year validity period of the tool.	Add the following requirements after Equation (3): "The human-induced reversal risk factor Rhuman,i shall be determined from empirical and forward-looking evidence concerning the expected fractional loss of the credited greenhouse gas stocks attributable to human-induced drivers over the applicable 100-year period. The determination shall: (a) use the geographic biomass-supply area as the preferred spatial unit; (b) incorporate observed vegetation loss, degradation and biomass extraction, where applicable; (c) incorporate forward-looking evidence concerning land-use pressure, opportunity costs, accessibility, governance, enforcement, asset ownership, activity management and social or political instability; (d) distinguish temporary disturbance from permanent or long-term loss of the credited biomass stock; (e) disclose the data period, model assumptions, uncertainty and principal drivers; and (f) be reassessed at least every two to three years, or earlier following a material change in land use, governance, policy or economic conditions. Default values shall vary between and within jurisdictions where material differences in human-induced reversal risk are demonstrated. National or subnational administrative defaults may be used only where they reasonably represent the relevant biomass-supply area."

Document reference number and title: (Recommendation from the MEP to SBM020)

Draft Methodological tool: Reversal risk assessment

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
4	-	Paragraph 22, Equation (3), Appendix 1, Tables 1–3, and Note/Question 02	The currently blank human-induced reversal risk columns in Appendix 1 should not be populated with arbitrary percentages before the MEP has developed and publicly documented a calibration method. A central methodological concern is potential double counting with the fNRB Tool. The fraction of non-renewable biomass already represents the proportion of biomass harvest that exceeds natural regeneration. If human-induced reversal risk is estimated from the same biomass-removal, forest-loss or degradation processes without an explicit adjustment, the same underlying pressure may affect both: (a) the number of A6.4ERs issued; and (b) the percentage of those A6.4ERs deducted for reversal risk. $R_{human,i}$ should therefore capture the prospective risk that the credited marginal biomass gain is subsequently lost, and only to the extent that this risk is not already reflected in the baseline, fNRB value or emission-reduction calculation. The appropriate default is not a single universal percentage. A tiered hierarchy should be used, with the most geographically and causally representative evidence taking precedence. Where data are limited, the fallback should be conservative, but it should not automatically be zero. Before adopting numerical values, the MEP should publish the underlying dataset, attribution rules, calibration results and uncertainty analysis for stakeholder review.	Add the following provisions to paragraph 22 and Appendix 1: "Human-induced reversal risk values shall be selected according to the following hierarchy: Tier 1: an approved biomass-supply-area-specific estimate; Tier 2: an approved subnational default; Tier 3: an approved national default; Tier 4: a conservative default derived from jurisdictions or areas with comparable ecological, socioeconomic and governance conditions. The selected value shall represent the prospective risk of loss of the credited incremental biomass stock and shall exclude human-induced risks already reflected in: (a) the applicable baseline; (b) the fraction of non-renewable biomass; (c) the calculation of emission reductions; or (d) another parameter of the applicable mechanism methodology. Default values shall be based on a conservative estimate of expected loss, taking account of model and data uncertainty. Where practicable, the applicable default shall correspond to a one-sided upper confidence estimate rather than an unadjusted central estimate. A value of zero shall not be applied solely because jurisdiction-specific data are unavailable. Before numerical default values are adopted, the Methodological Expert Panel shall publish the underlying data, causal-attribution method, model specification, validation results and uncertainty analysis for public review."

Document reference number and title: (Recommendation from the MEP to SBM020)

Draft Methodological tool: Reversal risk assessment

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
5	-	Paragraph 22, Equation (3), Appendix 1, and Note/Question 03	The default human-induced reversal risk reduction factor, Mhuman,i, should be zero. A positive reduction factor should be permitted only where a specific mitigation measure produces a demonstrated and independently verifiable reduction in the applicable human-induced reversal risk. The existence of a law, policy, protected-area designation, contract, monitoring programme or institutional arrangement should not, by itself, justify a positive reduction factor. The assessment must demonstrate effective implementation, adequate and continuing finance, geographic coverage, enforceability and measurable outcomes. The measure must also be additional to the credited activity. In the case of an activity reducing non-renewable biomass consumption, the reduction in biomass demand resulting from the improved cooking technology or fuel is the principal credited intervention. That same effect cannot also be used to reduce the buffer contribution. Similarly, an effect already reflected in the baseline or fNRB value cannot be credited again as a reversal-risk-reduction measure. In Brazil, measures such as fire-management arrangements, strengthened territorial governance or enhanced monitoring should receive a positive factor only where they are operational in the relevant biomass-supply area and their effect on residual reversal risk can be demonstrated. Factors may vary geographically, but the variation should reflect the measured performance of the mitigation measure, rather than a general ranking of jurisdictions.	Add the following provisions after the definition of Mhuman,i: "The default value of Mhuman,i shall be zero. A non-zero human-induced reversal risk reduction factor may be applied only where the activity participant demonstrates that the applicable mitigation measure: (a) is additional to the intervention for which A6.4ERs are issued; (b) is not already reflected in the baseline, fNRB value, emission-reduction calculation or another methodological parameter; (c) has a demonstrated causal relationship with the applicable human-induced reversal risk; (d) is effectively implemented throughout the relevant geographic area; (e) is legally enforceable or subject to credible implementation arrangements; (f) is adequately financed for the period over which the reduction is claimed; (g) is supported by independently verifiable implementation and outcome data; and (h) is periodically reassessed. The human-induced reversal risk reduction factor shall be calculated as: $Mhuman,i = 1 - Rhuman,residual,i / Rhuman,gross,i$ where: $Rhuman,gross,i$ is the human-induced reversal risk in the absence of the qualifying mitigation measure; and $Rhuman,residual,i$ is the human-induced reversal risk remaining after implementation of the qualifying mitigation measure. The value applied shall reflect the lower confidence bound of the demonstrated proportional risk reduction. A law, policy, designation, contractual commitment or monitoring system shall not justify a non-zero factor without evidence of effective implementation and measurable risk-reduction outcomes. The factor shall be reduced or withdrawn where the qualifying measure is discontinued or its demonstrated performance is not maintained."