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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	-	General/20 (including footnote 16)	The tool uses the “absolute reversal” method from Wu et al. (2026) to calculate default values for natural reversal risks, and states that “This approach (...) is appropriate for Article 6.4 activities that reduce non-renewable biomass consumption.” The tool explicitly states that this includes clean cooking activities. 4C would like to bring the following concerns to the attention of the MEP regarding the appropriateness of this approach for clean cooking activities: (1) The uncertainty around the calculated default values as outcomes of this approach is very high. Multiple factors contribute to this, such as: (a) The disturbance probability model that is used only explains 43% of the historical variance and is likely to perform even less reliably when extrapolated into the future. (b) Several of the key components feeding into the model, such as severity values, stand-age reset after a disturbance, etc. appear to be either unsupported assumptions or case-study specific values that are not validated outside the specific study area (or, in some cases, not clearly traceable to their cited studies). (2) The approach used, including the input parameters for the model, is very forest-oriented. Much of the woodfuel used in LMICs originates from trees outside closed canopy forests (e.g., shrublands, rangelands, crop/forest mosaic, etc.). This is the approach used in the MoFuSS model, which has already been accepted for use in Article 6 activities. In contrast, the modelling approach used to calculate the reversal risk default values does not align with where people actually harvest wood. As an example, the disturbance severity values used in the model for tropical rainforest come from a specific study in the Amazon (Bullock and Woodcock: https://doi.org/10.1016/j.scitotenv.2020.142839). Given the forest density and the inaccessibility of large parts of the Amazon, it is unlikely that the disturbance severity value from this study is representative for areas around the globe where people actually harvest wood for cooking.	Given that the resulting values are proposed as default factors, we would ask the MEP to withhold applying these values for activities that reduce non-renewable biomass consumption until it can be fully verified that this approach, as currently specified, is suitable for setting defaults for reversal risks in clean cooking activities.
2	Appendix 2. Methods used for deriving…	1.2.1. Grid-based reversal risk estimates in global forests; paragraphs 13, 14	The reversal risk factor is defined as “the estimated loss of credited greenhouse gas stocks over a 100-year period that is attributable to an applicable reversal risk type in an applicable greenhouse gas	Our principle suggestion is that MEP not apply these default values to Article 6 activities that reduce non-renewable biomass consumption. However, if the default values are applied, then we request the MEP to clarify the extent to

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			reservoir". Following the definition, it seems logical that the estimated loss of credited GHG stocks takes into account regrowth, and that the reversal risk factor is the estimated net loss. When a disturbance happens, GHGs are released in the atmosphere. However, they are not necessarily permanently released, given that regrowth can (partly) absorb the emitted GHGs (i.e., non-permanence is not permanent). 4C agrees that there is a climate impact at every reversal, but also underlines that regrowth reduces the net loss of GHGs over time. This method seems to overestimate these losses by not taking into account the regrowth over a 100 year period: For a stand disturbed in one decade and recovered by the following decades, the estimated loss of GHGs ignores this regrowth. The estimated loss is accounted as an absolute loss that occurs at the disturbance (or the end of the 10 year period where the disturbance happened), whereas the net loss over a 100-year period would be lower than the absolute loss given the regrowth in the following years and decades. Additionally, we note that the methodological identification of a "reversal" as assessed once, at the end of each decadal time-step, introduces a timing artifact. A disturbance occurring early in a decade is evaluated against nearly a full decade of subsequent regrowth, while an equally severe disturbance occurring late in the same decade is evaluated with negligible regrowth time before the same threshold check. This means two disturbances of identical severity can be classified differently: one as recovered, the other as a "reversal".	which the default values account for regrowth and present explicit evidence about the effect of binning in decadal timesteps as opposed to running a 100-year simulation that considers continual processes of disturbance and regrowth rather than simulating discrete 10-year time steps.

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3	4. Applicability	12	This section states that the tool is only applicable to activities reducing non-renewable biomass consumption (clean cooking projects). There is general consensus among scientists who study biomass fuels in LMICs that fuels are sourced from many land cover categories (e.g., tropical dry forest, rangelands, shrublands, crop/forest mosaic, etc. (see Ghilardi and Bailis, 2024 for details: https://cdm.unfccc.int/Sunset_CMS_ControlledSlots/public_inputs/sunsetcms/storage/contents/stored-file-20240624161613578/Report_on_Updated_fNRB_Values_20%20June%202024.pdf). However, the default values proposed in this tool are based entirely on studies that estimate reversal risks in forests, with several key studies focused exclusively on closed-canopy tropical forests (Pugh et al, 2019; Bullock and Woodcock, 2021). We'd argue that this approach, though possibly valid for project activities centered in closed canopy forests, is not applicable in the majority of activities that target non-renewable biomass consumption, which are situated in other types of landscapes. Specifically, disturbance-driven biomass losses are taken from Bullock and Woodcock, which was focused on disturbance in the Amazon. It is inappropriate to assume those findings would apply to areas where woodfuel projects are most likely to be implemented. While we are unaware of empirical work in this area, we'd hypothesize that fires are likely to be less much severe in dry forests, shrublands, rangelands, and crop/forest mosaic because canopy cover is lower, which inhibits the spread of fire and people are generally present, and therefore able to mitigate fires more easily.	We suggest withholding the application of these values or any non-permanence adjustment for activities reducing non-renewable biomass consumption until studies can be undertaken that better characterize the severity of disturbance and risk of reversals in landscapes most impacted by woodfuel production.

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4	5. Reversal risk assessment	22	MEPs Question 02: On what basis should the MEP determine default values for human-induced reversal risks? What is an appropriate choice for these values? Should the values vary across jurisdictions (e.g., to reflect variation in relevant factors related to land use and land-use change), and why or why not? While they have similarities, we should not make the mistake of thinking that clean cooking projects are exactly the same as forest carbon projects. A forest carbon project directly protects or manages a defined carbon stock. Its purpose is to keep that carbon stored in the forest. Future loss of that forest carbon is therefore a reversal risk. A clean cooking project has a different objective. It reduces fuelwood consumption and it does not manage the forest or control future land-use decisions. Natural disturbances, such as wildfire, can release the carbon benefit created by reduced fuelwood use. These are genuine reversal risks because they occur without a deliberate decision. Human-induced land-use change is different. If another actor later clears the forest, this is a new decision by a separate actor: it is similar to a renewable energy project that leaves fossil fuels underground. If someone later extracts and burns that gas, it is not considered a reversal of the renewable energy project. The same principle should apply to clean cooking. The project should be responsible for unintended losses of the mitigation benefit, but not for independent future land-use decisions outside its control. We therefore argue that human-induced reversal risks should be excluded from clean cooking carbon projects.	Exclude human-induced reversal risks from clean cooking carbon projects. No default values should be calculated until studies can be undertaken that better characterize the severity of disturbance and risk of reversals in landscapes most impacted by woodfuel production.

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5	5. Reversal risk assessment	22	MEP's Question 03: On what basis should the MEP determine default values for human-induced reversal risk reduction factors? What is an appropriate choice for these values? Should the values vary across jurisdictions (e.g., to reflect variation in relevant factors related to land use and land-use change), and why or why not? We argue that human-induced reversal risks should be excluded (see above) from clean cooking carbon projects, and therefore human-induced risk factors and risk reduction factors don't need to be determined.	Exclude human-induced reversal risks from clean cooking carbon projects. In addition, human-induced risk factors and risk reduction factors should not be determined until studies can be undertaken that better characterize the severity of disturbance and risk of reversals in landscapes most impacted by woodfuel production.
6	5. Reversal risk assessment	18	MEP's Question 01: The MEP seeks feedback on how to combine natural and human-induced reversal risk factors. Please note that the MEP will consider whether this approach or any alternatives may be more appropriate for combining natural and human-induced reversal risk ratings, subject to how these terms are calculated in the revised draft methodological tool. The MEP notes that reversal risk ratings may be additive if they are statistically independent and from the same probability distribution; an alternative approach may be more appropriate if natural and human-induced reversal risk ratings are statistically dependent. Stakeholders are requested to provide comments on how any recommendations about the determination of human-induced reversal risks or human-induced reversal risk reduction factors should inform the calculation of Fbuffer,i,t. We argue that human-induced reversal risks should be excluded (see above) from clean cooking carbon projects, and therefore only natural reversal risk factors should be taken into account.	Exclude human-induced reversal risks from clean cooking carbon projects.