

Call for public inputs	Draft revision of methodological tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”
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Issue No.	Issue to be addressed (including need for change)	Proposed change (including proposed text, if applicable)
1	<p>Equation (2) serves to combine uncertainties of two independent inventories, According to paragraph 10, if this combined uncertainty is above 10% a discount factor has to be applied in order to make the value conservative.</p> <p>However, it is not clear how to proceed when one of the independent inventories has an uncertainty already above 10% as according to paragraph 31 one would have to apply a discount factor to the estimate of the independent forest inventory in order to make it conservative. If this is the case, what uncertainty would one have to apply in Equation (2), a reduced one or the real one? If the latter is true, this would mean applying twice the correction factor.</p>	<p>The tool should provide a clarification on how to proceed in this case, i.e. not to correct the value of the estimate of the independent inventory.</p>
2	<p>Paragraph 13 is referring to Appendix 1 while it should refer to Appendix 2.</p>	-
3	<p>Equation (10), Note 2 states that “When land is subjected to periodic slash-and-burn cycles in the baseline, the value of this parameter is set equal to zero”. However, shouldn’t it be also acceptable in the case of periodical slashing occurring without any burning? In this case the carbon stocks would oscillate and would have highs and lows but on average the carbon stocks would be constant.</p> <p>This is applicable to other parts of the tool where it is referred to slash-and-burn.</p>	<p>Probably the tool should be more general and not refer only to slash-and-burn.</p>

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3	<p>Equation 19 provides the variance of the regression estimation which can also be expressed as:</p> $s_i^2 = s_y^2 \times (1 - (1 - \alpha) \times \rho^2)$ <p>According to Van Laar &amp; Akça (1997) the standard error of the regression estimation would be given by the simplified formula:</p> $s_{yR}^2 = s_y^2 \times \left( \frac{1 - \rho^2}{n} + \frac{\rho^2}{m} - \frac{1}{N} \right)$ <p>Where n is the number of small samples, m is the number of large samples and N is the total number of possible samples in the population. If 1/N is neglected and terms are rearranged, the equation would be as follows:</p> $s_{yR}^2 = \frac{1}{n} \times s_y^2 \times (1 - (1 + \alpha) \times \rho^2)$ <p>Therefore, the standard deviation would be expressed as:</p> $s_i^2 = s_y^2 \times (1 - (1 + \alpha) \times \rho^2)$	<p>It seems that equation 19 needs revision.</p>
4	<p>When applying a linear regression model it is important that some conditions are complied with. In order to ensure that the regression is reliable the following conditions should be complied with:</p> <ul style="list-style-type: none"> <li>✓ y and x should be related and this relation must be reasonably close to a straight line within the range of x values for which y will be estimated. If the relationship departs too much from a linear relationship, the mean value will not be reliable.</li> <li>✓ The variance of the residuals is constant (homoscedastic). Yet, for predictive purposes in certain cases certain degree of homoscedasticity may be allowed, but at least it has to be taken into account for evaluating the regression model.</li> </ul> <p>Other conditions are not critical for predictive purposes.</p>	<p>The tool should provide a short guidance or at least remind project participants &amp; DOEs of the need to take this into consideration in order to apply double sampling.</p>
5	<p>When using regression estimators it is important to ensure that the equation is not applied in large areas out of its range of validity. This is an important condition as we may have a very good equation but which is being applied to large areas out of the range of application.</p>	<p>A short guidance in order to remind project participants and DOEs of the need to analyse this too and consider it when defining their sampling plan.</p>

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6	<p>The tool now defines a conservative default BEF of 1.15, provides a conservative root-shoot-ratio and provides clear guidance on the use of basic densities. The tool for “Demonstrating appropriateness of volume equations for estimation of aboveground tree biomass in AR CDM project activities_v1.0.1” includes in paragraph 17 specific guidance on the use of default values and makes reference to the “Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks”.</p>	<p>Section 16 and 17 of the tool “Demonstrating appropriateness of volume equations for estimation of aboveground tree biomass in AR CDM project activities_v1.0.1” should be deleted in order to avoid inconsistencies with the tool presented.</p>
7	<p>Equation 4, under parameter Dj it is stated “Values are taken from Table 3A.1.9 of IPCC GPG-LULUCF 2003 unless transparent and verifiable information can be provided to justify different values”. Based on our experience, IPCC values in some cases do not refer to basic density but to specific densities which include a variable level of moisture, and they are not complete as many species and group-of-species are missing. We recommend making reference to other databases which are more complete and don't have the issues on basic densities:</p> <p>-Jérôme Chave, Helene C. Muller-Landau, Timothy R. Baker, Tomás A. Easdale, Hans ter Steege, and Campbell O. Webb. 2006. Regional and phylogenetic variation of wood density across 2456 neotropical tree species. <i>Ecological Applications</i> 16:2356–2367.</p> <p>-Zanne, A.E., Lopez-Gonzalez, G.*, Coomes, D.A., Ilic, J., Jansen, S., Lewis, S.L., Miller, R.B., Swenson, N.G., Wiemann, M.C., and Chave, J. 2009. Global wood density database. <i>Dryad</i>. Identifier: <a href="http://hdl.handle.net/10255/dryad.235">http://hdl.handle.net/10255/dryad.235</a>.</p>	<p>Improvement in valid reference values for basic densities.</p>