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| **CDM: Form for submission of queries from DOEs to the**  **Afforestation and Reforestation Working Group regarding**  **the application of approved A/R methodologies**  **(Version 01.1)** | | | | |
| ***(To be used by DOEs for presenting questions/proposals/amendments related to the applicability of approved A/R methodologies)*** | | | | |
| Name of the entity (DOE) submitting this form: | DNV Climate Change Services AS | | |
| **Reference number** and **title** of the approved A/R methodologies: | AR-ACM0003 - "Afforestation and reforestation of lands except wetlands" | | |
| Title/Subject (give a short title or specify the subject of your submission, maximum 200 characters): | Clarifications on: 1) A/R rate in the baseline under AR-ACM0003; 2) Estimation of carbon stocks at the start of the A/R CDM project activity (CTREE\_BSL); 3) Application EB50 Annex23 | | |
| Attach CDM-AR-PDD example of project activity where applicability raises problem: | Yes, is attached. | | |
| Date and signature for the DOE: | 31 January 2013 | | |
| **Submitted queries**  Please use the space below to substantiate the queries relating to the application of approved A/R methodologies. If the questions are related to a project activity under development or implementation, please describe the context in which they arose. If you are proposing amendments to approved A/R methodologies, please specify the text you want to change or introduce. If necessary, attach files or refer to sources of relevant information. | | | | |
| **If you have a question relating to the application of the approved A/R methodologies, please specify and provide reference to the exact project activity to which it applies.** | | | | |
| >>   1. Net baseline GHG removals in the case that afforestation and reforestation is present in the baseline.   According to paragraph 9 of the “Combined tool to identify the baseline scenario and demonstrate additionality in AR CDM project activities” (Version 1.0) the identification of plausible land use scenarios shall at least include “*If applicable, forestation of at least a part of the land within the project boundary of the proposed A/R CDM project at a rate resulting from: 1) Legal requirements; or 2) Extrapolation of observed forestation activities in the geographical area with similar socio-economic and ecological conditions to the proposed A/R CDM project activity occurring in a period since 31 December 1989 as selected by the PPs*”. In line with this, previous methodologies substituted recently by AR-ACM0003 (i.e. AR-AM0010 and AR-AM0005) included in their methodological options for the determination of the Baseline Net GHG Removals by Sinks, the sum of the carbon stock changes by the virtual continuation of the pre-project A/R in the baseline at a rate based on historical data in a larger region where the project is located.  According to methodology AR-ACM0003, equation (1), changes in carbon stock in tree biomass within the project boundary in the baseline scenario shall be estimated following the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”; however, this tool does not provide any specific formulae for the case in which afforestation and reforestation exists in the baseline.  Clarification is sought on how to estimate the baseline net GHG removals in projects where afforestation and reforestation is present in the baseline.   1. Application of “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in AR CDM project activities” (Version 3.0.0)   According to the tool for the “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in AR CDM project activities” (Version 3.0.0) under the stock-change method, paragraph 34, “*For the first verification, the variable CTREE,t1 in Equation (14) is assigned the value of carbon stock in the tree biomass at the start of the A/R CDM project activity, that is: CTREE,t1 = CTREE\_BSL for the first verification, where t1 = 0 and t2 = year of the first verification*”. DNV’s understanding is that this is done in order to account for the losses of existing tree carbon stocks as a result of the removal or mortality of existing trees.  However, the following clarifications are sought:  a) If as part of the site preparation trees are left standing and these existing-trees are not included in the monitoring of the tree carbon stocks, only established trees would be included in the estimates of changes of carbon stocks. So by considering the initial stock equal to CTREE\_BSL, it is being assumed conservatively that the existing trees will be lost due to mortality caused by the dominant new trees. This is conservative as usually (e.g. as it may occur in FSC certified stands) trees that are left standing are large and are left with enough space, so they will not be dominated by new trees so this carbon stock will not be lost. Therefore, project proponents are encouraged to include existing trees in their inventories as in this way they would not be factoring the hypothetical removal of existing trees. Clarification is sought on whether it could be assumed CTREE\_BSL = 0 in the case 100% of existing trees are not removed and these are not included in the monitoring of tree carbon stocks.  b) As indicated, DNV deems that assuming that the initial carbon stocks are equal to CTREE\_BSL is a way to account for the carbon losses of carbon stocks linked to the removal or mortality of existing trees. In previous methodologies which were replaced by AR-ACM0003 (e.g. AR-AM0004) or previous versions of old methodologies (i.e. AR-ACM0001 Version 04) these losses were accounted by subtracting directly the losses in carbon stocks (i.e. EbiomassLoss) to the changes in tree carbon stocks, and it was possible to neglect these emissions through the application of the “Guidelines on conditions under which GHG emissions from removal of existing vegetation due to site preparation are insignificant” (Version 1.0). Clarification is sought on whether the provisions of these Guidelines would be still applicable in order to neglect these losses, hence demonstrating that CTREE\_BSL = 0.  c) According to the subsection 9.2 regarding the Increment method, the changes in carbon stocks are determined by calculating the difference in biomass of a tree l between the previous verification t1 and the later verification t2 (c.f. equation 16) and this is expanded to a plot level, then to a stratum level and then to a project area level. From this total increment in the period from t1 to t2, the rate of change in carbon stock in tree biomass is determined, and then this is added to CTREE,t-1 in order to establish the carbon stock in tree biomass within the project boundary at a point of time in year t (c.f. Equation 27). However, it is not clear how the change in carbon stocks in tree biomass within the project boundary in year t (i.e. ∆CTREE,t) would be estimated out of equation 27 and how the CTREE\_BSL would be factored in the increment method in the first verification (i.e. CTREE,t-1 = CTREE\_BSL?). Clarification is sought on how the increment method would be applied in the first verification and how it would be applied to determine the change in carbon stocks in tree biomass within the project boundary in year t (i.e. ∆CTREE,t).  d) According to paragraph 34 of the tool, CTREE\_BSL would be equivalent to the carbon stocks at the start of the A/R CDM project activity. In the case that slash-and-burn is practiced in the baseline, the tree carbon stocks at the beginning of the A/R CDM project activity would depend on the time passed since the last slash/burn occured, so the level of carbon stocks would be variable. On the other hand, in the parameter CCSHRUB,i.t which is used to estimate the shrub carbon stocks, it is stated that “*when land is subjected to periodic slash-and-burn practices in the baseline an average shrub crown cover equal to default value of 0.5 is used in Equation (35) unless transparent and verifiable information can be provided to justify a different value*”. Clarification is sought on how would CTREE\_BSL be estimated in the case of slash-and-burn practices are present in the baseline, or whether the CTREE\_BSL is assumed to be zero since the CSHRUB\_BSL is already accounted for.   1. Application of the “Guidelines on conservative choice and application of default data in estimation of net anthropogenic GHG removals by sinks”.   According to methodology AR-ACM0003, equation (1) and (3), changes in carbon stock in tree and shrub biomass within the project boundary in the baseline and the project scenario shall be estimated following the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”. According to this tool (c.f. paragraph 16), “*for ex post estimation, the volume table or volume equation used must be demonstrated to be appropriate for the purpose of estimation of tree biomass by applying the tool “Demonstrating appropriateness of volume equations for estimation of aboveground tree biomass in A/R CDM project activities”*”. Furthermore, according to this tool (c.f. paragraph 17), *“the DOE shall assess that the product of volume (calculated using the appropriate volume equation volume table or volume equation) and the value of BEF proposed by project participants and basic wood density yields conservative estimates of aboveground tree biomass using the latest version of the “Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks””.*  According to paragraph 114 of the Project Standard (Version 2.1) “*Project participants shall ensure that the application of default data in estimation of the net anthropogenic GHG removals by sinks for the proposed A/R CDM project activity results in conservative estimates. In this estimation, project participants should follow the “Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removal by sinks*”.  Following the above requirements it is required that the application of default values is done ensuring that it leads to conservative estimates of net anthropogenic GHG removals. This may or shall be done through the application of the *“Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks”*.  According to paragraph 97 of EB67’s meeting report, “*the Board agreed to withdraw the “Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks”. Due to recent improvements in A/R methodologies and tools, these guidelines are no longer required*”.  Clarification is sought on whether the application of the *“Guidelines on conservative choice and application of default data in estimation of the net anthropogenic GHG removals by sinks”* is required in the context of the latest versions of available methodologies considering the above decision of EB67.  Furthermore, clarification is sought on whether it is reasonable the withdrawal of these guidelines considering that available default values (e.g. IPCC default values, etc.) have associated a very high uncertainty, and in the case the withdrawal is reasonable clarification is sought on what would be an acceptable conservative approach in the application of these default values. | | | | |
| **If you propose an amendment to the approved A/R methodologies, please provide justification.** | | | | |
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| **In case you propose the amendment to the approved A/R methodologies, please provide your draft below, if not included in an annex:** | | | | |
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| Date of submission of contribution: | | 01 February 2013 | | | |
| INFORMATION TO BE COMPLETED BY THE SECRETARIAT | | | | |
| Date when the form was received at UNFCCC secretariat | | |  | |
| Date of transmission to the AR WG and Executive Board | | |  | |

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**History of the document**

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| **Version** | **Date** | **Nature of revision** |
| 01.1 | 24 May 2012 | Editorial changes to include new logo and other improvements. |
| 01 | EB26, Annex 23,  6 September 2006 | Initial publication. |
| **Decision Class**: Regulatory **Document Type**: Form **Business Function**: Methodology | | |