



25 February 2010

VCS Association

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Dear Sir,

Re: Comments on Infinite Earth's Proposed New Baseline and Monitoring Methodology for REDD - Conservation Projects that Avoid Planned Land Use Conversion in Peat Swamp Forests"

Please find attached Carbon Planet's comments (CP-CAR).

A total of 10 CP-CARs have been raised based on the document entitled "Baseline and monitoring methodology for conservation projects that avoid planned land use conversion in peat swamp forests", version 5.1 - January 2010.

The CP-CAR document addresses issues associated with the Methodology's approach to addressing market leakage, calculation of VCUs, defining project area/boundary and carbon stock changes, and general errors with equations and their corresponding parameters.

We commend the VCS association and express appreciation for providing the public with the opportunity to comment on methodologies as part of the global stakeholder consultation.

Yours faithfully

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CP-CAR 01: General

The following comments require some corrections:

- (i) On p. 8, Table B, Column 3 has the heading option Included/excluded with “Yes” or “No” inputs. It is not clear which of the option “yes” or “no” is applied to until the information in the final column Justification/Explanation of choice has been read. It is recommended that the “Excluded” option in the third column be removed to avoid confusion
- (ii) On p. 10, paragraph f, it states “For highly variable landscapes the option exists to carry out a systematic unbiased sampling to determine the percentage of the project area occupied by each stratum.” It is not clear what this sentence articulates
- (iii) It is stated on p. 10, point f, line 2, that “At each plot, based on the site specifications found, the plot shall be assigned to one of the strata identified in paragraph f. “ However, the strata identification is not in paragraph f
- (iv) On p. 10, Step 2, the Methodology has suggested stratification based on the project activity, however, clarification is required for the following: a) It is not clear whether it is ex post stratification or ex ante, b) There is no specification about the project activities which would distinguish various strata, and c) The stratification according to the project activity is suggested but not used anywhere
- (v) On p. 12, Eq. 1, $C_{B,it}$ has been given the units of tCO_2-e . However, as $C_{B,it}$ is the sum of peat emissions and carbon stock changes in aboveground biomass under the baseline stratum, i at time, t , where the unit for t is defined as years, the correct units for $C_{B,it}$ would be $tCO_2-e yr^{-1}$. This also applies to parameters of Eq. 2: $\Delta C_{B,AG,it}$ and $E_{B,p,it}$
- (vi) On p. 13, Eq. 4, It is not clear to the reader why a parameter is labelled with an ‘E’ or a ‘C’ if both can be termed a “carbon stock change”. In addition, the parameters: $E_{timber,it}$, $E_{B,BiomassBurn,it}$, $R_{B,growth,it}$, $E_{harvest,it}$ as well as $\Delta C_{B,AG,it}$, are labelled as “sum of carbon stock changes”. This terminology does not make it clear whether a carbon stock change refers to the carbon stock remaining in the project area after the change, or it is the carbon that leaves the project area as a result of the change. The parameters $E_{timber,it}$, $E_{B,BiomassBurn,it}$, $R_{B,growth,it}$, $E_{harvest,it}$ have been considered in the following calculations on the subsequent pages as the carbon leaving the project boundary. This is basically a carbon emission and hence it would be more appropriate to define these parameters as “carbon emissions” instead of “carbon stock changes”. As such, the delta sign on $\Delta C_{B,AG,it}$ would not be required
- (vii) On p. 17, for Eqs. 14 through 16, the brackets are distorted and need to be fixed. This also occurs on p. 20 for Eq. 22
- (viii) On p. 21, AIM Step 1, the Methodology states “Estimate biomass of each tree using the allometric equation method that relates DBH or DBH and height to biomass (see Allometric equation method below).” In addition to the DBH and height, crown area is also mentioned as one of the variable for biomass allometric equation method (see parameter description for Eq. 22 on p. 20). However it is missing from the sentence above.



- (ix) On p. 60, Section 5.2, paragraph 1, line 6, states “... successful and E_{it}^{LUC} in Eq. 73 below should be zero.” The parameter E_{it}^{LUC} is not in the Eq. 73, rather in Eq. 74
- (x) On p. 63, Eq. 80, the parameter symbol in the equation for total carbon damage caused by logging and the symbol in the parameter description ($C_{Damage,ik}$) do not match
- (xi) On p. 70, Eq. 98 has not used the average biomass combustion efficiency, CE, as in Eq. 96.
- (xii) On p. 74, Eq. 106, the parameter $MC_{B,AG,it}$ is not defined in the corresponding parameter description. Instead, $MC_{B,BB,AG,it}$ is presented
- (xiii) The Table of Contents does not display the sub-headings, which makes it difficult for the reader to find particular sub-sections within a main section when required.

CP-CAR 02: Project Area, Project Boundary and Eligible Area

- (i) On p. 8 in point b, the Methodology states that “The original project boundary is fixed over the project life. Even if unforeseen circumstances arise within the project boundary such as deforestation, degradation, fire, or other land use change, the project boundary cannot be shifted.” However, the Methodology expects that there could be cases of fire in the project area during the crediting period. If such an event would occur in the crediting period, it is recommended that the affected area be excluded from the project area to avoid over accounting
- (ii) On p. 60, Eq. 74 calculates the emissions that occur within the project boundary and includes emissions due to fire in stratum i , at time t . This is then subtracted from the baseline emissions by applying Eq. 73 on p. 59 to determine the overall emission reductions. If the area disturbed by fire is not discounted from the total area in the subsequent year, the baseline accounting will be not be able to accommodate the affected area’s change in carbon stock due to fire, and it will therefore treat this area similar to an area not affected by fire, thus leading to an over accounting of emissions
- (iii) On p. 56, the last dot point on the page states that “If the actual boundary falls outside of the project boundary as defined in the PDD, these lands shall not be accounted as a part of the project activity.” It is not clear - what is the actual boundary? It should be obvious to the Project Proponent that any area outside the project boundary should not be considered as a part of the project area. Is this sentence therefore necessary to say that an area outside the project boundary is not considered as the project area?
- (iv) On p. 57, the first dot point states “Input the measured geographical positions into the GIS system and calculate the eligible area of each stratum.” The term “eligible area” has not been defined in the document. Instead, for the rest of the document, “project area” has been used, and this term also needs to be defined.



CP-CAR 03: Sampling Method for Peat Depth Mapping

On p. 10, paragraph 2, line 14, the Methodology states that “a peat depth map shall be created from sample points across the project area”. However, the Methodology is neither explicit on the sampling technique, design and intensity, nor suggestive of any document that could provide relevant information. In addition, it expects that the sampling design and method for the peat depth map shall be outlined in the PDD.

To be a comprehensive Methodology, it should provide detailed guidance for the sampling design and method of the peat depth mapping. This would establish a standard among the Project Proponents using the Methodology.

CP-CAR 04: Estimation GHG Emissions from Biomass Burning for Land Clearing

On p. 17, Eq. 14, the Methodology defines $C_{B,AC,it}$ as the “estimated above-ground biomass carbon stock before burning in the baseline scenario for stratum i , time t ; t C” In the preceding paragraph it also states that this carbon stock is ultimately burnt. However, Eq. 14 also features a factor denoted as $PBB_{B,it}$ which represents the average proportion of $C_{B,AC,it}$ burnt under the baseline scenario. As the Methodology states in the same paragraph that “all biomass that is not extracted as timber is assumed to be burned and therefore ... the proportion burned in baseline ($PBB_{B,it}$) is assumed to be 1”. If this assumption holds and $PBB_{B,it}$ equals 1, it is not clear why $PBB_{B,it}$ is required in Eq. 14.

CP-CAR 05: Estimation of Mean Carbon Stocks in Aboveground Biomass (MCB,AG, it)

- (i) It is stated at the beginning of p. 23, AIM Step 2, “Create a relationship between a combination of the height and/or crown area and the biomass of each tree observed. Options include: ...” This step suggests to create a relationship between tree parameters (height and crown area) and the biomass. While it is suggested on p. 21, AIM Step 1, that height and crown area are obtained from the ground measurement on the sample plots, the Methodology does not say from where the biomass data should come from. Ground estimation of biomass requires destructive sampling as suggested on p. 26, Allo Step 2, for validating the chosen allometric equation for biomass
- (ii) On p. 31, Eq. 50 applies PBH which is defined as “average proportion of aboveground carbon stock removed during harvest H under the baseline scenario for stratum i , time t ; dimensionless”. The Methodology does not provide a guideline on how to measure or select this factor.



CP-CAR 06: Estimation of GHG Emissions from Harvesting Aboveground Biomass on Baseline Future Land Use ($E_{\text{harvest},it}$)

On p. 31, it is not clear why Eq. 52 employs (1-PBH) and $PBB_{BH,it}$ in the same equation. This appears to be repetitive. According to p. 30, Section 5.2.4, it is stated that “It is assumed that any biomass in the tree pool that is not harvested as timber at the end of the rotation period is burned to clear the land for the next rotation cycle.”. This means that the biomass not removed from the land after harvesting is burnt, which is equal to (1-PBH). According to the Methodology, $PBB_{BH,it}$, is defined as the “average proportion of remaining aboveground carbon stocks burnt at harvest H under the baseline scenario in stratum i, time t; dimensionless”. It is not clear why $PBB_{BH,it}$ is included if (1-PBH) is present.

CP-CAR 07: Leakage

ex ante $C_{REDD} = C_{BSL} - LK$ Eq. 69

$C_{ACTUAL} = C_{BSL} - C_{PRJ}$ Eq. 73

ex post $C_{REDD} = C_{ACTUAL} - LK$ Eq. 114

$VCUs = (C_{REDD,t2} - C_{REDD,t1}) - BRR - ML$ Eq. 115

- (i) In Eq. 69, p. 45 in section 7, the Methodology provides a general equation for estimating the ex ante net reduction in emissions from deforestation due to ceasing deforestation (C_{REDD}) expressed as the baseline emissions (C_{BSL}) minus the leakage (LK). On p. 42, the Methodology provides a procedure for estimating leakage due to activity shifting based on the historical rate of degradation and buffers the leakage by the amount of area which is actually planned for clearing under the baseline scenario. However, leakage should not be based on the historical rate, rather it should be assessed in terms of current land use change that has been triggered by the implementation of the project. It is not understood why leakage has been considered an ex ante phenomenon
- (ii) In the VCS (2008b) guidelines on p. 22, point 18, “Leakage is defined as any increase in greenhouse gas emissions that occurs outside a project’s boundary (but within the same country), but is measurable and attributable to the project activities.” Based on this definition, leakage is associated with the project implementation. Before a project starts, there is no need to assess leakage as it cannot be attributable to a non-existent project. As such, the estimation of leakage and applying it within an ex ante estimation is not correct. In addition, contradicting this



on p. 40 under Methodology procedure (third paragraph, line 4), it is stated that “Activity shifting leakage shall be assessed for five full years beyond the date at which deforestation was projected to occur in the baseline.”

- (iii) The Methodology has, however, accurately applied leakage due to activity shifting in the ex post calculation for REDD project (Eq. 114), and has also taken into account any emissions from land use change in the project area after implementation of the project, (see Eq. 73)
- (iv) In the parameter descriptions, time factor has not been mentioned in these equations, however is present in the other sets of equations throughout the Methodology
- (v) The Methodology identifies leakage due to both activity shifting outside the project area, and market leakage. However, on p. 88, these leakages are incorporated in different equations (Eq. 114 and 115). It is not logical or justifiable to apply market leakage (ML) in the equation used to estimate the VCU's issued at time t (Eq. 115). It would have been appropriate to combine both leakages and apply in the equation that calculates leakage (LK). In addition, Eq. 115 includes the factor for market leakage (ML) but does not provide a method to estimate market leakage. This is despite the fact that the Methodology has acknowledged on p. 89 that for the VCS double approval process a project specific analysis of market leakage is required
- (vi) On p. 40 in the section Methodology procedure (see paragraph 4), “No increases in GHG emissions caused by displacement of activities associated with the project are expected ... if all pre-projects activities are displaced to degraded non-forest land ...” The paragraph suggests that leakage will not occur if pre-project activities are displaced to non-forest land. This statement is correct, however, it would be easier to understand if “pre-project activities” were defined as “baseline activities”. In addition, if the Methodology included a definition for the leakage area (as no definition is provided), and furthermore, defined the leakage area as forest land outside the project boundary, this paragraph would not be necessary
- (vii) On p. 42 in section 7.1 Area of activity shifting leakage, it is stated in paragraph 1, line 5, that “However, if the baseline agent of deforestation manages strata not found within the project boundary, then $m_{BL} > m_{LK}$ (there will be additional strata to include in the leakage analysis).” In order to confirm with the statement in the bracket, the expression “ $m_{BL} > m_{LK}$ ” should be “ $m_{BL} < m_{LK}$ ”.
- (viii) On p. 82, section 7 Leakage, contains the exact copy of the section provided on pp. 40-45. In the scenario where there is no major change in text, to save repetition, it is recommended to simply refer to the previous section.



CP-CAR 08: Monitoring of the project implementation

On p. 58 in section 2.3 Monitoring frequency, the Methodology suggests an annual monitoring frequency. It is not clear what parameters are monitored annually and how the results obtained from the monitoring be incorporated in the net GHG calculation. In addition, in the subsequent section 2.4, the Methodology also has suggested five years monitoring period for measuring growth of individual trees.

CP-CAR 09: Estimation of GHG Emissions Due to Logging

On p. 62, Step 1, it is suggested in step 1a to measure the dimensions of commercial logs. In the case when illegal logging has happened, and consequently, some or all logs have been removed - the Methodology does not account for this likely scenario and does not provide a method for estimating the emission from illegal logging whereby no (or fewer) commercial logs remain on the forest floor.

CP-CAR 10: Ex ante and Ex post Estimation Calculation of Actual GHG Emissions

Avoided

$$VCUs = (C_{REDD,t2} - C_{REDD,t1}) - BRR - ML \quad \text{Eq. 115}$$

On p. 88, it is stated that Eq. 115, calculates the VCUs that can be issued at time t*=t2 (the date of verification) for the monitoring period T= t2 - t1. According to the Voluntary Carbon Standard (2008a), p. 8, a VCU is defined as one tonne of CO2 equivalent GHG emission reduction. Therefore, the VCUs for a particular year will be equal to the emission reductions of that year. The VCUs for a particular monitoring period, will be the addition of the VCUs for the individual years within that monitoring period. It is not clear why in Eq. 115, the net anthropogenic GHG emissions avoided in t1 is subtracted from the net anthropogenic GHG emissions in t2, to give the amount of VCUs that can be issued in the monitoring period, T.

--- END OF CP-CARs ---

References

VCS (2008a). Voluntary Carbon Standard 2007.1, accessed 27 July 2009 from <http://www.v-c-s.org/policydocs.html>.

VCS (2008b). Guidance for Agriculture, Forestry and Other Land Use Projects, accessed 27 July 2009 from <http://www.v-c-s.org/afl.html>.